Ethiopian Public Health Association (EPHA)

28th EPHA Annual Conference

19 – 22 February 2017

Harar

Public Health Challenges and Responses in Ethiopia: Opportunities and Prospects

February, 2017

Addis Ababa

Abstract Book

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Oral Presentations

Message from the Executive Director

Ethiopian Public Health Association (EPHA) comprises over 6,000 ever registered members of various disciplines with diverse educational level and professional experience. EPHA has been actively involved in bringing change in the health care and developing a healthy and wealthy society through active engagement of its members. EPHA's mission is: "promoting better health for the public and maintaining professional standards through advocacy, active involvement of its members, networking and evidence generation". One of the magnificent tasks of EPHA is organizing Annual Conference that creates a benchmark for Scientific Forum among members working in Public Health and research institutions both in governmental and non-governmental settings and the Academia. In this regard, EPHA is about to conduct its 28thAnnual Conference from 19-22 February2017in Harari National Regional State, Harar town with the main theme of ***''Public Health Challenges and responses in Ethiopia: Opportunities and Prospects''.***

This year, the research topics include wide range of issues such as communicable disease (TB, HIV/AIDS, malaria etc...), Non communicable diseases, Substance use, Mental Health, Family Planning, Environmental Health, Reproductive Health, Newborn and Child Health etc. which have been submitted, reviewed and made ready for presentation. A total of 269 scientific papers (121 Oral and148 Poster) abstracts have been selected through a series of review process. Moreover, panel discussion will be held under five sub-themes including Health Sector Transformation Agenda, Existing, emerging and re-emerging public health challenges, Public health care readiness and responses, Global Health Security and Sustainable Development Goals and Universal Health Coverage.

EPHA would like to extend its heartfelt thanks to all contributors and reviewers of the scientific papers and to those who have accepted the invitation to serve as moderator and speaker of the panel discussion.

Last, but not least, EPHA would like to address its sincere appreciation to all who have exerted all sorts of efforts to make the 28thAnuual Conference a reality.

Alemayehu Mekonnen (MD, MPH)
Executive Director, EPHA

Abs 1

Prevalence and Drug Susceptibility Pattern of Group-B Streptococci (GBS) among Pregnant Women Attending Antenatal Care (ANC) in Nekemte Referral Hospital (NRH), Nekemte, Ethiopia.

Hylemariam Mihiretie

Background: Maternal colonization with GBS in the genitourinary or gastrointestinal tracts is the primary risk factor for disease. Maternal infections of GBS constitute one of the leading pathogens associated with both early and late-onset neonatal sepsis. The aim of this study was to determine the prevalence and drug susceptibility pattern of Group B *Streptococci* (GBS) among pregnant women.

Materials and Methods: A cross-sectional study was conducted in Nekemte Referral Hospital (NRH) between March and May, 2016 on a total of 180 pregnant women. Vaginal swabs were aseptically collected from each pregnant woman using sterile cotton swabs, inoculated in 1.5 ml Todd Hewitt broth (supplemented with colistin and nalidixic acid) and sub-cultured on 5% sheep blood agar. Gram staining, Bacitracin sensitivity test, CAMP test and Drug susceptibility tests were performed. Data on socio-demographic characteristics and associated risk factors were collected using structured questionnaires. Cleaned and coded data were analyzed by SPSS software version 20. P value < 0.05 was used as a significance level.

Results: The median age of the participants was 24.5 years (range: 16-38) and 86% participants were urban residents. The total prevalence of maternal GBS colonization from vaginal swab culture was 12.2% (22/180). The prevalence of GBS colonization rate was significantly higher in those pregnant women above 37 weeks of gestation [AOR, 95% CI: 2.1(1.2, 11.6), P= 0.03] and married ones [AOR, 95% CI: 3.2(1.8, 11.6), P< 0.021]. Twenty (91%) of GBS isolates were sensitive to vancomycin and the highest resistance was observed against penicillin G (77.3%).

Conclusion: The prevalence of GBS colonization in this study is significantly high and differed by gestational age and marital status. None of the GBS isolates were resistant to vancomycin but higher resistance was shown against Penicillin G. Screening of pregnant women for GBS colonization, large scale longitudinal studies with molecular characterization of GBS in both mothers and neonates is recommended.

Abs 2

Point Prevalence of Hospital Acquired Infections in Two Teaching Hospitals of Amhara Region in Ethiopia.

Walelegn Worku, MPH, Institute of Public Health, University of Gondar; Abera Kumie, PhD, School of Public Health , Addis Abeba University; Feleke Moges, PhD, School of Biomedical sciences, University of Gondar.

Background Hospital acquired infection is a major safety issue affecting the quality of care of hundreds of millions of patients every year in both developed and developing countries including Ethiopia. In Ethiopia, there is no a comprehensive research that shows the whole picture of hospital acquired infection in hospitals.

Objectives: The objective of this study is to examine the nature and extent of hospital acquired infections in Ethiopia.

Methods: A repeated cross-sectional study was conducted in two teaching hospitals. All eligible inpatient cases admitted for at least 48 hours on the day of the survey were included. The survey was conducted in wet and dry seasons of Ethiopia in April and July 2015. Physicians and nurses collected the data according to the Centers for Disease Control and Prevention (CDC) definitions of hospital acquired infections. Coded and cleaned data was transformed to STATA 13 for analysis. Univariate and multivariable logistic regression analysis were used to examine the prevalence and relations between explanatory variable to the outcome variable.

Results: A total of 908 patients were included in this survey. The median age of the patient was 27 years (inter-quartile range of 16 to 40 years). A total of 650(71.6%) of patients received antimicrobial during the survey. There were 135 patients with hospital acquired infection, with mean prevalence of 14.9 % per 100 patients (95% CI, 12.7—17.1). Culture results showed that *Klebsiella spp (22.44%)* and *Staphylococcus aureus (20.4%)* were the most commonly isolated hospital acquired infections causing pathogen in these hospitals. Ages of the patient and hospital type were statistically significant with the occurrence of hospital acquired infection.

Conclusions: High prevalence of hospital acquired infection was observed in teaching hospitals. Surgical site infection and pneumonia were the most common type of infection. Managers should give more attention to promote infection prevention practice for better control of hospital acquired infection in teaching hospitals.

Key words: Hospital acquired infection, surgical site Infections, Ethiopia.

Abs 3

Prevalence of Thrombocytopenia among Pregnant Women Attending Antenatal Care Service at Gondar University Hospital, Northwest Ethiopia.

Yigzaw Fikir Asrie

Background: Thrombocytopenia is the second most common hematological abnormality encountered during pregnancy next to anemia. The observable worry with thrombocytopenia during pregnancy is the risk of significant bleeding at the time of delivery. Obstetricians in our locality have no comprehensible guide for managing pregnant women with thrombocytopenia due to a lack of data about the frequency, severity and causes of this condition. Thus, the present study was designed to determine the prevalence of thrombocytopenia among pregnant women attending antenatal care service at Gondar University Hospital, North West Ethiopia.

Methods*:* an institutional based cross-sectional study design was used to assess prevalence of thrombocytopenia among pregnant women attending ante-natal care service at Gondar University Hospital from January to April 2015. Using convince sampling technique a total of 217 pregnant women were included in the study. A structured pretested questionnaire was used to obtain socio-demographic information, nutritional factors, obstetrics and gynecological factors, history and clinical condition. Blood samples were collected for hematological tests. Platelet count and other platelet parameters were determined by using Sysmex KX 21 automation which applies electric impedance principle (Sysmex user manual, 2002). The data were entered to Epi info version 6 software and analyzed using SPSS version 20 statistical software. Finally the frequency, proportion and summery statistic had been used to describe the study population in relation to study variables. Bivariate and multivariate statistical analysis was used to evaluate the effect of independent variable over the dependent variable. P-value < 0.05 was considered as statically significant.

Result: A total of 217 women attending antenatal care service follow-up at Gondar University hospital were involved in this study. Thrombocytopenia among 19 pregnant women in this study was showed a prevalence of 8.8%. The mean + SD platelet count was $238.85*10^9/L$ (+74.57). Being rural in residence showed a significant association with thrombocytopenia with (COR=4.3:95%CI 1.48-12.76).

Conclusion: the prevalence of thrombocytopenia was 8.8% predominant with mild type of thrombocytopenia. Thrombocytopenia was higher among pregnant women with rural residence. Therefore, pregnant women screening should include platelet count especially with those who come from rural residence.

Keywords: *Thrombocytopenia, pregnant women, ANC*

Abs 4

Asymptomatic Bacteriuria and their Antimicrobial Susceptibility Pattern among Pregnant Women Attending Antenatal Clinics at Mizan Aman Town, Southwestern Ethiopia

Abera Kumalo[1], Mezmur Tadesse [1] 1. Departement of Biomedical Sciences, College of Health Sciences, Mizan-Tepi University.

Background: Failure to identify asymptomatic bacteriuria (ASB) makes responsible for its improper clinical management. This may lead to severe health complications during pregnancy. However, little is known about antimicrobial susceptibility of ASB in Ethiopian pregnant women. Therefore, the study was conducted to assess the prevalence of ASB and its antimicrobial susceptibility pattern in the target population.

Methods: A cross-sectional study was conducted during September-December of 2015 at Mizan-Aman town, South-western Ethiopia among pregnant women (n=260) attending antenatal clinics. 10ml of clean-catch midstream urine was collected and cultured on Cysteine Lactose Electrolyte Deficient agar. Bacterial isolates were identified using Gram staining, colony morphology, and biochemical analysis. Antibiotic susceptibility was assessed by Kirby-Bauer disc-diffusion method. Logistic regression was employed for association analysis.

Results: The prevalence of urinary tract infection was 10.3%. ASB was significantly associated with second trimaster (AOR=5.61 [1.40-22.45]; $p<0.05$) and history of urinary tract infection (AOR=12.47 [3.91-39.82]; $p<0.001$). Escherichia coli were most prevalent pathogen and gram positive bacteria comprised majority of the overall isolates (63%). The Gram-negatives were more resistant with susceptibility rates of 11.8%, 29.4%, and 35.3% for ampicillin, nalidixic acid and chloramphenicol respectively. The susceptibility rates of Gram-positives were 100%, 80%, 70% for ciprofloxacin and kanamycin, co-trimoxazol and ceftriaxone and gentamycin respectively. Multidrug resistance (≥2 drugs) was seen in 81.5% of isolates.

Conclusion: The heterogeneity in antibiotic susceptibility pattern was observed. Therefore, antimicrobial susceptibility testing should be performed for management of ASB among pregnant women in South-western Ethiopia.

Key words: Asymptomatic Bacteriuria, Pregnant Women, Antenatal, Antimicrobial Susceptibility, Ethiopia.

Abs 5

Effects of Low Dose Ionizing Radiation on the Hematological Parameters in Medical Imaging and Therapeutic Technologists of Selected Governmental Hospitals, Addis Ababa, Ethiopia

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Background: Exposure to ionizing radiations including x-rays and gamma rays leads to abnormal hematological findings, cancer (including leukaemia), and birth defects in the future children of exposed parents, and cataracts. There is no published report in Ethiopia addressing the effect of low dose radiation on hematological parameters.

Objective: The objective of this study is to compare the hematological parameterssuch as (Red Blood Cell count, Red Blood Cellindices, Hemoglobin, Hematocrit levels, White Blood Cell, Platelet count and peripheral morphology) of medical imaging and therapeutic technologists and controls of selected Governmental Hospitals in Addis Ababa, Ethiopia.

Method: A comparative cross-sectional study with 182 participants was carried out from October 2015 to June 2016. Of the study participants, 91 were radiation exposed and 91 were controls. Hematological parameters were analysed using Sysmex XT-2000i. Peripheral blood morphology was done from a stained smear. Data was entered, cleaned and analyzed using SPSS version 21. Student t-test was used to compare the hematological parameter between the two groups, the exposed and the control. Bivariate correlation statistics was used to draw association between the dependent and independent variables. P values< 0.05 were considered statistically significant.

Result: Mean values of White Blood Cells (WBC), Mean Cell Hemoglobin (MCH), Mean Platelet Volume (MPV), Platelet Distribution Width (PDW), Platelet Large Cell Ratio (P-LCR), Lymphocytes, Monocytes and Basophils have shown significant difference from the control group. The mean MCH, PDW, P-LCR were higher while WBC, MPV, LYMPH, MONO, and BASO were lower in the exposed group. Atypical lymphocytes were significantly higher in the exposed group; 65/91 of the exposed and only 7 of the non-exposed group have such abnormal picture. There were larger effects on the lymphocyte and basophil subsets of exposed workers with high number of atypical lymphocytes. A smaller but not negligible effect was noted on WBCs and medium effects on MCH, PDW, MPV, P-LCR, and monocytes.

Conclusion: It is not deniable that low dose ionizing radiation is imposing impact on the haematological as well as immunological system of medical imaging and therapeutic technologists as there are larger effects on the lymphocyte and basophil subsets of exposed workers.

Key words: ionizing radiation, hematological parameters**,** atypical lymphocyte

Abs 6

Hyper Endemic Bed Bug Infestation in Ethiopian Residential Institutions: Psychological, Social and Health Impact. *Daniel Mekonnen Nigus*

Background: With the claims that bud bug does not transmit infectious diseases, most developing countries considered it as less public health problem. Despite heavy infestation of bed bug in Ethiopia, there is silence on the epidemiology and associated psychological, social and health impact assessment. Thus, this study was designed to assess the situation and open a door for further action.

Methods: This community based cross-sectional study was conducted in five Woreda Towns namely Amanuel, Merawi, Bahir Dar, Woreta and Kobo from March 2015-June 2016. The bed bug sample was collected by Health professionals. Bed bug inspection was done following the Michigan manual for prevention and control of bed bug recommendations. The presence of live or dead bed bug, eggs, shed skin and fecal stains or droppings are indicator of bed bug infestation. Data was entered in Epi info 7 and cleared and analyzed using SPSS. Frequency and percentage were used to present the data. To assess the association between presence of bed bug and independent variables, logistic regression was used. Associations between variables were determined using odds ratio and 95 % confidence interval (CI). *P* value of <0.05 was considered as statistical significance. The study was approved by Amhara Regional Ethical Review Committee.

Results: Bed bug was isolated from 154/203 (75.9%) of surveyed residential institutions. Among people infested by bud bug 134/154 (87%) report as having different kinds of psychological impact (insomnia, anxiety states, situational depression and post-traumatic stress disorder). Moreover, 128/154 (83.1%) agreed as having one or more social impacts (phobias**,** somatization**,** social isolation and aggression**)** in their life. Around 110/154 (71.4%) respondents also report different kinds of associated health problem (rash, urticarial reactions at the local site of bite, ear infection, allergen and asthma). Bahir Dar City administration is 3.4 times more infested by bed bug than Amanuel (AOR: 3.4; 95% CI: 1-11; P: 0.04). Moreover, Kobo city administration is 41 times more to have bed bug colonization in residential institutions than Amanuel, East Gojam zone (AOR: 41; 95%CI: 8-206; P: 0.001). However, the rate of bed bug infestation by the type of residential institutions were not statistically different indicating that, it is a common public problem in all residential types.

Conclusions and Recommendations: High level of bed bug infestation was found in the study area mainly in Bahir Dar, Woreta and Kobo. In Ethiopia, the problem of bed bug is a hidden private agenda that the community did not working together to tackle the problem. Significant psychological, social and health impact is noticed in the community. To clearly understand the impact of bed bug large scale cross sectional study is warranted involving expertise from humanity, social sciences and public health. Parallely, effective chemical and non chemical integrated pest management protocol is urgently needed.

Abs 7

Ecological Quality of Rivers in Ethiopia: Implications for the Post-2015 Development Agenda *Taffere Addis Wassie*

Water is a key to sustain human life, economic development and integrity of ecosystems. Cognizant of this fact, the government of Ethiopia gives high priority to water resources development as a pillar to build climate resilient economy and achieve sustainable development goals. We assessed the ecological quality status of rivers using both diatoms and physicochemical samples that were collected from agricultural, urban and forest catchments along rivers. Sectoral policies were also reviewed. The diatom compositions and assemblages extracted the pollution gradient for different land uses types. The results revealed drastic water quality deterioration in relation to urban and agricultural land use types while more severe in the urban river segments. Diatom indices were indicating poor river ecological quality status in the urban sites. The water sectoral policy mainly lacks clarity of rights and obligations of hierarchy, upstream and downstream linkage, land use planning and enforcement of regulation that needs urgent attention. In the future eutrophication and siltation of rivers thereby dams will be the major bottlenecks to achieve sustainable development goals in Ethiopia. Ecological biomonitoring tools are not developed for Ethiopian rivers. Therefore, contextualized ecological water quality monitoring tools should be developed to support water resources management decisions.

Abs 8

Organophosphate Exposure and Associated Health Effects: Evidence from Farm Workers in Low and Middle Income Countries and its Implication for SDGs. *Akeza Awealom Asgedom*

Several insects and arthropods, fungi, mollusks, and bacteria attack crops resulting in quantitative and qualitative loss. Pesticides commonly called "Plant protection products" are any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating animal or plant pests. Synthetic pesticides have been widely used in agriculture throughout the world since the 1950s. Organochlorine, organophosphate, carbamate and pyrethroid pesticides were introduced onto the world market at that time, marking the beginning of industrial agriculture or the 'Green Revolution'. The trend of expenditure and consumption of pesticides is increasing where the expenditures totaled more than $35.8 billion in 2006 and more than $39.4 billion in 2007 with more than 5 billion pound of pesticide usage in both years. Herbicides accounts (40%) of the usage followed by insecticides (29%). Developing countries use only 20% of the world's agrochemicals, yet they suffer 99% of deaths from pesticide poisoning. Phorate (extremely hazardous), Monocrotophos (highly hazardous), Dimethoate, Quinalphos, Chlorpyrifos, Fenthion that are moderately hazardous and Malathion (Slightly hazardous) are the type of organophosphate commonly used in developing countries.

The general population and farm workers are exposed to cocktails of pesticides via environmental media and can enter the body through inhalation, ingestion, and dermal contact. Many farmers in developing countries continue to be exposed to pesticides due to many factors.

The aim of this review was to see the effect of organophosphate exposure on farmer's health and explore associated factors.

A review of studies published between 2000-2016 from low and middle income countries found in Africa, Asia, North America and South America indicates that farm workers exposed to organophosphate compared to other similar non-exposed groups results in acute and chronic poisonings, inhibition of cholinesterase activity, reduced lung function, respiratory morbidity (e.g. cough), insulin resistance, reduced hemoglobin level, neurocognitive impairment, dermatological problems, parkinsonism, delay in successive event-related potentials. Lack of awareness, non-use of personal protective equipment, percentage of body covered by personal protective equipment, hygienic practice, service year, duration of application, environmental exposure/ drift exposure, grade of organophosphate and amount of active ingredient, use of banned products, ignorance and storage means of pesticide, calibration of sprayer, unsafe disposal were the factors associated with the findings.

Abs 9

Latrine Utilization and Associated Factors among Primary and Non - Primary Open Defecation Free Kebeles in Farta District, South Gondar, and Northwest Ethiopia: a Comparative Cross-sectional Study.

Alie Ayal Ejigu

Introduction: The construction of pit latrine is less cost sanitation technology to prevent the spread of infectious diseases. Community-led Total Sanitation and hygiene (CLTSH) approach has been used to bring sustainable behavioral change on latrine utilization. The aim of this study is to assess latrine utilization and associated factors among primary and non-primary open defecation free kebele households.

Methods: A community based comparative cross-sectional study was conducted from December 11/2015 to January 2/2016. We used multistage sampling technique to select 716 households that had a latrine by using systematic random sampling method. Data were collected through interview and observation, and entered using EpiInfo version 7 and analyzed with SPSS version 20. Descriptive statistics were used to describe the study population. To identify independent predictors of latrine utilization, only variables that were statistically significant during bivariate analysis were entered into multiple logistic regression models to control the effects of confounders.

Results: The overall prevalence of latrine utilization was found to be 58.8%, where 62.6% and 55.0% in primary and non-primary households, which was significantly associated with presence of elementary or secondary school children in the house[AOR: 95% CI: 3.84(2.27– 6.49)], Households residing in primary ODF kebeles [AOR: 95% CI:2.71(1.64-4.48)], distance of latrine from the house,< 6 meter [AOR: 95% CI:5.4(2.82 -10.34)], household visitation ≥3 times per month by HEWs [AOR: 95% CI:5.36 (2.71-10.63)] and latrines no need maintenance[AOR: 95% CI: 3.69(1.92–7.09)] predictors of latrine utilization.

Conclusion: The finding discloses that latrine utilization is low in this district, compared to the national target of the country 82%. Latrine utilization is significantly different between primary and non-primary open defecation free kebele households. The finding suggests that being a primary HHs can have a positive impact on latrine utilization.

Keywords: Latrine utilization, Prevalence, Associated factors, primary and Non-primary household

Abs 10

Health Seeking Behavior and Associated Factors among Chronic Heart Failure Adult Clients, Jimma University Specialized Hospital, South West Ethiopia, 2016.

Getahun Fetensa Hirko

Background: Chronic heart failure (CHF) is a chronic progressive condition where the heart fails to meet the body's circulatory demands. Health-seeking behavior is important factors determining the acceptance of health care and outcomes, especially in chronic conditions like heart failure.

Objective: The objective of this study was to assess health seeking behavior and associated factors among chronic heart failure adult clients admitted to medical and on chronic follow up clinic at Jimma University Specialized Hospital, South west Ethiopia, 2016

Methods: Facility based cross-sectional quantitative study design was conducted with a total of 335 patients admitted to medical ward and or on chronic follow up clinic of Jimma University Specialized Hospital. Consecutive sampling method was used to get the sample. Data was collected using structured questionnaire. The data was entered, into Epi-data manager version 2.0 and data entry client, data was cleared and exported to SPSS 20.0 for further analysis. Variables having p-value less than 0.25 in the bivariate analysis were entered into final model for Multivariable analysis. Variables with $p<0.05$ in the multivariable analysis were considered statistically significantly associated with health seeking behavior of Chronic heart failure

Result: Out of 335 participants 58.2% of the study participants had poor health seeking behavior. Distance from health facility was significantly associated health seeking behavior. Participants with monthly income of less than 500 ETB where less likely to adhere to good health seeking behavior [AOR (95% CI of OR) = 0.581 (0.35, 0.98)], Poor self care were less likely to adhere to good health seeking behavior at [AOR (95% CI of OR) = 0.191 (0.11, 0.33)] duration heart failure less than one year were more likely to adhere to good health seeking at [AOR (95% CI of OR) = 2.3 (1.12, 4.73) not take their medication as prescribed were more likely to adhere to good health seeking behavior at [AOR (95% CI of OR) = 8.6(1.86, 39.59)].

Conclusion and Recommendation: In this study poor health seeking behavior is experienced in more than half of participants. In general factors such as adherence to self care behaviors, attitude, duration of heart failure, income, distance, taking medication and knowledge were significant factors that determine health seeking behavior of individuals. So that nurses and managers on study area should work together on factors that affect patients' health seeking activities.

Keywords: Health seeking behavior, chronic heart failure, chronic follow up, Jimma University Specialized Teaching Hospital.

Abs 11

Predictors of Loss to Follow up among Adult Clients Attending Antiretroviral Treatment at Karamara General Hospital, Jigjiga Town, Eastern Ethiopia, 2015; A Retrospective Cohort Study.

Wubareg Seifu Jemberia

Background: - Retention in an antiretroviral clinic has been identified as a critical component of HIV/AIDS care programs. Patients who misses visits or are lost to follow up from an antiretroviral treatment clinic lacks continuous access to their medications and are unable to reach optimal adherence levels necessary for viral suppression.

Objective: The objective of this study was to determine prevalence and predictors of loss to follow up among adults ART clients attending in Karamara Hospital, Jigjiga town, Eastern Ethiopia, 2014.

Methods and materials: An Institutional based retrospective cohort study was conducted among 1439 adult people living with HIV/AIDS and attending ART clinic between 2007 and 2014 at Karamara Hospital were undertaken. Loss to follow up was defined as not taking an ART refill for a period of 3 months or longer from the last attendance for refill and not yet classified as 'dead' or 'transferred-out'. A Kaplan-Meier model was used to estimate rate of time to loss to follow up and Cox proportional hazards modeling was used to identify predictors of loss to follow up among ART clients.

Result: Of 1439 patients, 830(58.0%) were females in their sex. The mean age of the cohort was 33.5years with a standard deviation of 9.33. Around 213 (14.8%) patients were defined as LTFU. The cumulative incidence of LTFU was 26.6 (95% CI; 8.1-9.6) per 100 person months. Patients with male sex [HR: 2.1 CI; (1.3-3.4)], patients whose next appointment were not recorded [HR:1.2, 95% CI; (1.12-1.36)] and patients who did not disclose their status to any one [HR:1.8, 95% CI; (2.22-5.23)] were significantly associated with LTFU in the cox proportional model.

Conclusion and recommendation: Overall, these data suggested that LTFU in this study was high. The ART patients' next appointment should be document very well and as well the clients should be advised to adhere with treatment program as per the schedule. Defaulter tracing mechanism should be operational and strengthen in the health facility. Effective control measures should be designed for at-risk population such as male patients.

Key words: Loss to follow up, ART, Jigjiga town, predictors, Eastern Ethiopia

Abs 12

The Assessment of Knowledge, Attitude and Intention to Use Cervical Cancer Screening and its Correlates among Army Women in Ethiopia.

Belachew Kahasay Berehe; Wubegzier Mekonnen Ayale

Background: Cervical cancer is a global public health problem and it is the 4th leading cause of cancer morbidity and mortality. In Ethiopia cervical cancer is the 2nd leading cause of cancer mortality. Cervical cancer screening is an entry for an effective prevention method to avert morbidity and mortality. Poor utilization of cervical cancer screening was the prominent problem in developing countries. In Ethiopia cervical cancer screening coverage was only 0.6%. Low level of knowledge, negative attitude and low intention to use cervical cancer screening was main obstacles that hider the successfulness of cervical cancer screening. However no study was done on high risk groups such as army women. The main aim of this study is to assess the knowledge, attitude and intention to use cervical cancer screening and its correlates among army women in Ethiopia.

Methods: A cross sectional study was conducted in April, 2016 among Ethiopian army women, who assumed twenty one different posts. A total of 423 women were randomly selected for this study. A self administered questionnaire was used to collect the data. Data was entered into EPI-Info version 7 and exported into STATA version-12 for cleaning and analysis. Summary measures were computed. Bi-variate and Multivariate analysis using odds ratio along with their 95% confidence interval in binary logistic regression was done to find out crude and adjusted to ascertain strength, direction and significance of association between different socio-demographic variables and intention to use cervical cancer screening.

Results: This study showed that 288(54.00%) of women had poor knowledge about cervical cancer screening. Majority, 227(53.7%) had negative attitude towards cervical cancer screening. More than half, 218(56.6%) of respondents had no intention to use cervical cancer screening. Army women in infantry military duty, office work, earning monthly income of greater or equal to 600 ETB and having positive attitudes were AOR=2.19 95%CI (1.13, 4.23), AOR=1.95 95%CI (1.09, 3.51)), AOR=2.8495% CI (1.51, 5.32) and AOR=2.16 95% CI (1.35, 3.44) times more likely to desire cervical cancer screening compared with those working in industry, earning less than 600 ETB and having negative attitude, respectively.

Conclusion and Recommendation:. Most army women had poor knowledge, negative attitude and poor intention to use cervical cancer screening. Military duty, monthly income and attitude were factors associated with intention to use cervical cancer screening. Targeted health education messages on the use of timely cervical cancer screening should be designed for army women

Key words: Intention, Cervical cancer screening, army women, Ethiopia.

Abs 13

Quality of Life among Women Patients with Breast Cancer at Tikur Anbassa Specialized Referral Hospital, Addis Ababa, Ethiopia.

Meron Amare, Amy Østertun Geirdal, Dr Aynalem Abraha, Niguse Tadele

Background: Breast cancer is certainly the commonest form of cancer among women. For a long time the focus has been on clinical management of cancers but nowadays Quality of Life is emerging as an important health outcome which requires to be incorporated in the holistic management of patients. There were no studies conducted in Ethiopia that have investigated QOL among breast cancer survivors. Hence, this study was conducted to assess quality of life of women with breast cancer at Tikur Anbassa Specialized Referral Hospital, Addis Ababa Ethiopia.

Results/Findings: About 250 respondents were participated. On the EORTC-QLQ-C30, participants scored lower mean for quality of life scale (Mean =52.5; SD = 26.0). Functional scale scores ranged from a mean of 52.6 (SD=42.6) for role functioning to a mean of 74.1 (SD=28.59) for social functioning even though the items discriminatory ability was shown to be poor (α =0.32). Except for pain and appetite loss all symptoms scales received scores above 50 implying most of breast cancer patients were more symptomatic. Like wises among QLQ-BR23 scales, the best score was observed for future perspective [mean 82.1, SD 30.3] which indicates patients have had less worries about their future health and sexual functioning scored a high mean score (>50%). All symptom scales except for breast symptoms below 50.Methods: Hospital based cross-sectional study involving 250 breast cancer patients was conducted from May to September, 2016. Amharic version of European organization for research and treatment of cancer quality of life questionnaire QLQ-C30 and breast specific Quality of Life Questionnaire BR23 were used. The data entered to EpiData 3.0 and then exported cleaned and analyzed using SPSS version 20 software. Analysis of variance and post hoc test was performed to examine the relationship between independent variables and Quality of life.

Lessons and Recommendations: Quality of life among Ethiopian breast cancer patients was poor in comparison with the reference data and international findings. Hence, it is important that QOL assessments should be included in patient treatment protocols in which addressing those problems helps to improve the quality of life of breast cancer patients.

Abs 14

Stem Cells and Regenerative Medicine: A special Focus on Enhanced Differentiation of Stem Cells into Insulin-producing Beta Cell Like Clusters. *Gizachew Wubetu*

Background: Recently stem cells are an attractive starting source for producing pancreatic lineage derivatives to be used in treatment of DM as a form of cell replacement therapy. The present study is aimed at to investigate the effect of Histone deacetylase inhibitor (HDACi) in adipose tissue derived stem cells (ADSC) differentiation in to insulin producing cells (IPCs).

Methods: ADSCs differentiation into insulin producing cells (IPCs) was carried out using a modified differentiation cocktail of the previous protocols. First we checked insulin packaging ability of differentiated β- like clusters treated with VPA by dithizone staining and later the effect of VPA on the expression of β-cell developmental and endocrine markers were investigated by quantitative real-time polymerase chain reaction (RT-PCR). In addition, at the end of differentiation, β-cell like clusters were evaluated by immunofluorescence staining for expression of pancreatic endocrine proteins, and release of insulin in response to increasing glucose challenge by ELISA.

Result. Addition of 10 mM of valproic acid to the modified differentiation cocktail resulted change in cell morphology, dithizone positive β-cell like clusters as well as about more than 1.5 fold increase in NeuroD1 and insulin1 mRNA expression compared with cells differentiated without valproic acid. Moreover, furtherimmunohistochemical analysis confirmed that differentiatedβ-cell like clusters were expressed relevant pancreatic endocrine markers, including insulin, somatostatin and pancreatic poly peptides. We found that differentiated IPCs secreted insulin, and insulin secretion was further increased in the presence of high glucose challenge.

Conclusion: Based on these results, we conclude that inhibition of histone deacetylase could enhance β-cell like cell differentiation from ADSC and that differentiated IPCs might be an alternative beta cell source for diabetes treatment.

Abs 15

Induced Second Trimester Abortion and Associated Factors in Amhara Region Referral Hospitals, Northwest Ethiopia.

Amlaku Mulat Aweke, Hinsermu Bayu Abdi, Amare Alemu Haile

Background: Although the vast majority of abortions are performed in the first trimester, still 10–15% of terminations of pregnancies have taken place in the second trimester period globally. As compared to first trimester, second trimester abortions are disproportionately contribute for maternal morbidity and mortality especially in low-resource countries where access to safe second trimester abortion is limited. The main aim of this study was to assess the prevalence and associated factors of induced second trimester abortion in Amhara region referral hospitals, northwest Ethiopia.

Methods: Institution based cross-sectional study was conducted in Amhara region referral hospitals among 416 women who sought abortion services. Participants were selected using systematic sampling technique. Data were collected using pretested structured questionnaire through interviewing. After the data were entered and analyzed; variables which have P value < 0.2 in bivariate analysis, not collinear, were entered into multiple logistic regressions to see the net effect with 95% CI and P value < 0.05.

Results: The prevalence of induced second trimester abortion was 19.2%. Being rural (AOR = 1.86 [95% CI = 1.11–3.14]), having irregular menstrual cycle (AOR = 1.76 [95% CI = 1.03–2.98]), not recognizing their pregnancy at early time (AOR = 2.05 [95% CI = 1.21–3.48]), and having logistics related problems (AOR = 2.37 [95% CI = 1.02–5.53]) were found to have statistically significant association with induced second trimester abortion.

Conclusion: Induced second trimester abortion is high despite the availability of first trimester abortion services. Therefore, increase accessibility and availability of safe second trimester abortion services below referral level, counseling and logistical support are helpful to minimize late abortions.

Keywords: Induced Abortion, Second Trimester Abortion, Ethiopia

Abs 16

The Assessment of Level and Determinants of Unmet Need among Women of Reproductive Age Group with Disabilities in Addis Ababa.

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Background: The 2007 Census of Ethiopia revealed 32630 of the 2739551 Addis Ababa population was persons with disability among which 7,835 are reproductive aged women. Persons with disabilities are the most marginalized groups concerning reproductive health services. Unmet need for family planning in Ethiopia was estimated at 25.3% in 2011. It may be difficult to achieve sustainable development goal without a focus on including people with disabilities.

Objectives: This study is designed to assess levels and determinants of unmet need for family planning among women of reproductive age group with disabilities in Addis Ababa.

Method: Cross sectional study based on associations of persons with disabilities with stratified sampling was used to select 727 women's with disability. Data were collected using structured questionnaire by eight trained females who completed grade twelve; two of which communicate by speaking and sign language. Data were cleaned and analyzed using Epi data and Stata 12. Descriptive statistics, binary and multivariate logistic regression analyses was employed to identify factors associated with unmet need for family planning. Cut-off point for the detection of significance is $p<0.05$.

Result: Unmet need of contraception was 20% among sexually active women with disabilities (10.6% for spacing and 9.4% for limiting) making percentage of demand satisfied 68.9%. Unmet need is less likely among women aged 30-34, 0.05 (95% CI 0.04, 0.7) compared to age group 45-49. Besides women who discuss with their partner about contraception were less likely to have unmet need compared to counterparts 0.23 (95% CI 0.07, 0.7). Those women with number of living children above two are 3.3 (95% CI: 1.03, 10.7) times more likely to have unmet need compared to women with living children less or equal to two.

Conclusion and recommendation: Unmet need is found to be high among women with disabilities in Addis Ababa, therefore public and private sectors should promote targeting programs for women with disabilities and their partner for the uptake of the family planning services. Focus should be given to old aged women with disabilities and those with more than two children.

Key words: women with disability, unmet need for family planning, Addis Ababa

Abs 17

Unintended Pregnancy and Associated Factors among Married Pregnant Women in Ganji Woreda, West Wollega Oromia Region, Ethiopia.

Aderajew Nigussie Teklehaymanot

Background: Unintended pregnancy contributes to unacceptably high maternal mortality rates throughout the world and can have far-reaching health, social and economic consequences. In Ethiopia, around one third of all married women feel their pregnancy unintended. Objective: To identify prevalence of unintended pregnancies and associated factors among married pregnant women in Ganji woreda west Wollega zone, Ethiopia, A community based cross sectional study design was employed both quantitative and qualitative method. The total sample size taken was: 283 * 2 = 566 the total sample size was 566 + non response 10% (57) = 623 . Data were entered and analyzed using SPSS software version 20. logistic regression were used to describe and analyze study variables. Qualitative data collected by in-depth interview method.

Results: Out of 623 subjects, 616 responded. The response rate was 98.8%. 225(36.5%) reported unintended pregnancy. Mothers whose husbands disagree to limit family size were 2.26 times more likely to experience unintended pregnancy (OR 2.26: 95% CI, 1.23-4.14). Ever physically violated mothers by their intimate partner were 1.78 times more likely to experience unintended pregnancy compared to no violate (OR 1.78: 95% CI, 1.18-2.70). Low level knowledgeable was 3.76 times more likely to experiencing unintended pregnancy than higher level knowledgeable (OR 3.76: 95% CI, 2.37-5.96).

Conculision and Recommendations: Federal MOH should plan on the prevention of unintended pregnancy, which was missed from a national reproductive health strategy, and HSDP planned to decrease maternal and child death.& child affairs office to decrease the rumors and misconceptions related to family planning.

Health worker should provide information and counseling about each contraceptive methods in order to make informed choice and correct method use and strengthening family planning methods users.

Abs 18

Determinants of Repeated Abortion among Women of Reproductive Age Attending Health Facilities in Northern Ethiopia: A Case-Control Study.

Mussie Alemayehu Gebreselassie, Henock Yebyo, Araya Medhanyie, Alemayehu Bayray, Misganaw Fantahun, Gelila Goba

Background: Every year, an estimated 19–20 million unsafe abortions take place, almost all in developing countries, leading to 68,000 deaths and millions more injured many permanently. Many women throughout the world, experience more than one abortion in their lifetimes. Repeat abortion is an indicator of the larger problem of unintended pregnancy. This study aimed to identify determinants of repeat abortion in Tigray Region, Ethiopia.

Methods: Unmatched case-control study was conducted in hospitals in Tigray Region, northern Ethiopia, from November 2014 to June 2015. The sample included 105 cases and 204 controls, recruited from among women seeking abortion care at public hospitals. Clients having two or more abortions ("repeat abortion") were taken as cases and those who had a total of one abortion were taken as controls ("single abortion"). Cases were selected consecutive based on proportional to size allocation while systematic sampling was employed for controls. Data were analyzed using SPSS version 20.0. Binary and multiple variable logistic regression analyses were calculated with 95% CI.

Results: Mean age of cases was 24 years (±6.85) and 22 years (±6.25) for controls. 79.0% of cases had their sexual debut in less than 18 years of age compared to 57% of controls. 42.2% of controls and 23.8% of cases cited rape as the reason for having an abortion. Study participants who did not understand their fertility cycle and when they were most likely to conceive after menstruation (adjusted odds ratio [AOR]=2.0, 95% confidence interval [CI]: 1.1-3.7), having a previous abortion using medication(AOR=3.3, CI: 1.83, 6.11), having multiple sexual partners in the preceding 12 months (AOR=4.4, CI: 2.39,8.45), perceiving that the abortion procedure is not painful (AOR=2.3, CI: 1.31,4.26), initiating sexual intercourse before the age of 18 years (AOR=2.7, CI: 1.49, 5.23) and disclosure to a third-party about terminating the pregnancy (AOR=2.1, CI: 1.2,3.83) were independent predictors of repeat abortion.

Conclusion: This study identified several factors correlated with women having repeat abortions. It may be helpful for the Government of Ethiopia to encourage women to delay sexual debut and decrease their number of sexual partners, including by promoting discussion within families about sexuality, to decrease the occurrence of repeated abortion.

Keywords: Abortion, single abortion, repeated abortion, Tigray, Ethiopia

Abs 19

Dietary Diversity and Meal Frequency among Children 6-23 Months in Southern Ethiopia *Tefera Chane Mekonen*

Background: Child feeding practices are multidimensional and they change rapidly within short age-intervals. Suboptimal complementary feeding practices contribute to a rapid increase in the prevalence of undernutrition in children in the age of 6-23 months. The aim was to measure minimum dietary diversity, meal frequency and acceptable diet feeding practices and associated factors among children 6-23 months of age in Wolaita Sodo, Ethiopia.

Method: community based cross-sectional study was carried out to select 623 mothers/caregivers with 6-23 months of children reside in Wolaita Sodo town using systematic sampling from March 02-20, 2015. Data were entered to Epi-Data version 3.02 and transported to SPSS version 21 for further analysis. Binary logistic regression was used to see the association between the outcome variables and explanatory variables.

Result: the study revealed that the percentage of 6-23 months of children who meet the recommended level of minimum dietary diversity, meal frequency and acceptable diet with their 95% of CI were 27.3% (23.7%-30.8%),68.9% (65.2%-72.6%) and21.1% (17.8%- 24.3 %) respectively. Household head occupation and child age were identified as statistically significant predictors of dietary diversity. Government employee, maternal illiteracy and age of 9-11 months of children were showed negative statistical association with minimum meal frequency but girls were more likely to fulfil the requirement of meal frequency. Additionally, being housewife, government employee, middle economic class and child age of 6-8 months were found to be independent predictors and positively associated with minimum acceptable diet.

Conclusion: even though the study showed better progress as compared to the national and regional figures, child feeding practices were not adequate and not achieving WHO recommendations. Strengthening the available strategies and creating new intervention measures to improve socio-economic status, maternal literacy and increasing awareness of community for better practices of child feedings is compulsory action for the government and policy makers.

Abs 20

Maternal Undernutrition Indicators as Proxy Indicators of their Offspring's Undernutrition: Evidence from 2011 Ethiopia Demographic and Health Survey. *Alinoor Mohamed Farah*

Background: The intergenerational continuity of undernutrition is influenced by shared genetic, household socio-economic and cultural resources which will be associated with the mother and the child nutritional status, possibly to the same degree. Provided that this assumption is valid, assessing maternal nutritional status will provide an effective screening tool for their children nutrition status.

Objective: The objective is to examine whether maternal undernutrition indicators can be used as a proxy indicator of their offspring's undernutrition.

Methods: Data were obtained from the 2011 Ethiopia Demographic and Health Survey (EDHS 2011). An analytical sample of 8,505 children whose mothers are not pregnant and live with their biological mothers was included. The bivariate associations between nutritional indices of the mother and the children were analyzed with Pearson Correlation Coefficients. The sensitivity, specificity, predictive values and area under Roc curves were calculated. We performed ROC regression analysis to determine factor that affects the accuracy of maternal underweight as a screening tool. We further performed rocreg postestimation to determine where exactly the test performed best.

Results: Mean BMI of mothers with stunted children was 20.01 (95% CI: 19.86–20.16), whereas that mothers with no stunted children was 20.46 (95% CI: 20.31– 20.62). Similarly, children who experienced underweight or wasting had mothers who had consistently lower BMI than those who did not ($p < 0.001$). Maternal and child nutritional status were positively correlated at statistically significant levels. The sensitivity of maternal underweight (defined by BMI < 18.5 kg/m^2) as a predictor of child's nutritional status (<-2 z-scores) is low, failing to reach 50% for any of the child nutrition indices. In the roc regression analysis, maternal BMI (<18.5 kg/m^2) became a more accurate predictor of wasting among children whose mother are older ($\beta = -0.014$, $p=0.002$) and higher parity ($\beta= -0.035$, $p < 0.001$), and among children who are not currently breastfeeding ($\beta= -0.042$, $p = 0.006$) and from richer households ($\beta= -0.037$, $p < 0.001$).

Conclusion: Our study provides evidence that maternal undernutrition indicators are less informative in predicting their offspring's undernutrition, although maternal BMI (<18.5kg/m^2) may be a better measure of wasting among children whose mothers gave birth to four children and among children from richest households.

Abs 21

Assessment of the Cost of a Nutritious Diet in a Surplus Producing Area; the Case of Debre Markos Town, East Gojjam Zone of Amhara Region, Ethiopia.

Mihiret Alemu Kassa, Betemariam Gebre, Amy Deptford

Introduction: The choice of food by consumers is highly influenced by a large number of factors including taste, cost and convenience and, to a lesser extent, health and variety [1-2]. Economic constraints lead to the consumption of less healthy and nutritious diets which characterized by high energy density and palatability [2]. Chronic malnutrition is one of the most important public health problems in Ethiopia [7-9]. Though, Debre Markos area is surplus producing, many people resort to eating mainly what they produce, or at least what is produced in their ecological zone of residence, in order to curtail food expenditures. This study assessed the minimum cost of a nutritious diet in Debre Markos town East Gojjam zone, Amhara National Regional State, Northwest Ethiopia.

Method: *A* cross-sectional study design was applied. Both quantitative and qualitative data collection methods were employed. The data was collected through market survey, interview and FGD. One way ANOVA and binary logistics regression analysis were done by using SPSS version 20. Statistical significance was set at $p<0.05$.

Result: The annual cost of energy only, nutritious and food habit nutritious diets for the typical family with three children of either sex is estimated to be 4224.0, 39570.0 and 50525.0 ETB, respectively. The annual cost of nutritious diet for the typical family with three female and male children is estimated to be 41331.0 and 35425.0 ETB, respectively. Among the 16 selected nutritious diets lentil, lemon, sweet pea and maize are identified as the cheapest whereas cow milk, beans, millet finger and spinach identified as the most expensive sources of nutritious diet. Teff and onion are the staple foods. Vitamin B12 and calcium daily requirements were not meet by 100% for the typical family. Energy and vitamin A were identified as the limiting nutrients. *Based on a binary logistics regression analysis, both sex and age has no any significant effect on the daily requirements of* vitamin B12 with AOR of 1.585 (95% CI 0.817, 3.074) and 0.512 (95% CI 0.063, 4.163), respectively. They do not also either have any effect on the daily requirements of vitamin B12 and calcium with AOR of 2.025 (95% CI 0.639, 6.415) and 0.570 (95% CI 0.033, 9.742), respectively. Age and sex have no also any interaction effect on both the daily requirements of vitamin B12 and calcium with AOR of 1.119 (95% CI 0.890, 1.406) and 1.301 (95% CI 0.966, 1.753), respectively as well.

Conclusion: There is nutritious food availability and typical dietary habits problem in Debre Markos town. Meher/Bega season is the most expensive season while vegetables and fruits are the most expensive food groups of a nutritious diet in the study area. Age as an associated factor has significant effect on the daily cost of a nutritious diet ($p=0.000$) while sex has no any effect ($p=0.076$). Vitamin B12 and Calcium were identified as the hardest nutrients to meet daily requirements from local foods while energy and vitamin A were the limiting nutrients of the

objective function in the optimization of both a nutritious and food habit nutritious diet in the study area. Both age and sex have no any significant effect on the daily requirements of vitamin B12 and calcium.

Recommendation: Policy makers, the community at large, researchers, concerned NGOs and Debre Markos town health Office should work collaboratively and take their share in order to improve availability of nutritious diets, dietary habits, daily nutrient requirements of vitamin B12 and calcium in Debre Markos town.

Key Words: Cost of the Diet, Minimum Cost, Nutritious Diet, Typical Family, Food Habit Nutritious diet

Abs 22

Adherence to Iron and Folic Acid Supplementation and its Associated Factors among Antenatal Care Attendants in Debre Markos Town, Northwest Ethiopia

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Introduction: Iron and folic acid supplementation is the feasible and cost effective strategy to control and prevent anemia during pregnancy. In a Rapid Initial Assessment of the Distribution and Consumption of iron and folic acid tablets through Antenatal Care in Ethiopia, only <1% consumes the ideal number of tablets. The factors contributing to the low adherence are not persistent and clearly known.Therefore, this study was performed to assess adherence to Iron and folic acid supplementation and its associated factors from March 01 to March 23/ 2016.

Method and Materials: Health institution based cross-sectional study supplemented with qualitative methods was conducted on 395 systematically selected pregnant women attending Antenatal care. An interview with pre tested structured questionnaire was used to collect the data. Data were entered into Epi-data version 3.3.1 and then exported to SPSS version 20 for analysis. Bivariate and multivariable logistic regression with odds ratios along with the 95% confidence interval was computed and interpreted accordingly. A P-value <0.05 was declared as statistically significant. For the qualitative study, egiht in-depth interviews were conducted. The data were entered and analyzed using open code software.

Results: Adherence rate was 55.5% (95%CI, 50.5%-60.4%). Factors significantly associated with adherence to Iron and folic acid supplementation were: pregnant women who had; history of anemia during current pregnancy (AOR= 7.9, 95%CI = 4.44 -14.01), primary education (AOR = 4.0, 95%CI=1.88-8.54), secondary education and above (AOR=3.6, 95%CI=1.20 – 6.94), good knowledge of Iron and folic acid supplementation (AOR=2.1, 95%CI = 1.24-3.56), and early registration for antenatal care (AOR=1.8, 95%CI=1.06–3.11). Getting medical advice and forgetfulness were the leading reasons for taking and missing tablets respectively.

Conclusion: Adherence rate is low. History of anemia during current pregnancy, maternal educational status, knowledge of Iron and folic acid supplementation, and early registration for antenatal care were the predictors to Iron and folic acid supplementation adherence. Thus, increasing knowledge of women about the supplementation through adequate counseling, community education and media would increase adherence.

Key Words: Adherence, Pregnant women, Iron-folic Acid, Debre Markos

Abs 23

Prevalence of Anemia and Associated Factors among Pregnant Women Attending Antenatal Care at Debre Markos Referral Hospital, Northwest Ethiopia.

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Background: Anemia is a global public health problem affecting both developed and developing countries with major consequences for human health as well as social and economic development occurring at all stages of the life cycle; Anemia in pregnancy continues to be a common problem in many developing countries. Worldwide, it is estimated that 58.27 million women are anemic during pregnancy, of whom 55.75 million (95.7%) live in developing countries. Recent estimates suggest that up to 60% of pregnant women in developing countries may be anemic, and nearly 7% of pregnant women are severely anemic.

Objective: This study aimed at assessing the prevalence of anemia and associated factors among pregnant women attending antenatal care at Debre Markos Referral Hospital, Northwest Ethiopia, 2015

Methods: Cross-sectional study was conducted at Debre Markos Referral Hospital from august to September, 2015. A total of 290 pregnant women were included using systematic random sampling technique. Complete blood count was carried out using Mindray hematology analyzer. A thin and thick blood film was prepared and was stained with Giemsa stain for the detection and speciation of *Plasmodium* parasite species. Stool wet mount was prepared using saline and/or iodine and was examined microscopically for identification of intestinal helminthes and protozoa parasitosis. Serum and/or plasma samples were tested for HIV. Syphilis reactivity was also tested using Rapid Plasma Reagin test. The data were collected using a structured questionnaire by trained midwifives. Analysis was done by SPSS software version 20. Then results were explained by narration, tables and graphs. Associated factors were depicted by doing bivariable and multivariable analysis.

Result: The mean Hgb level of pregnant women was 12.78 and the overall prevalence of anemia was 12.8%. Of the total participants 2.5% and 10.3% were moderately and mildly anemic, respectively. Based on red blood cell morphologic classification of anemia, of the total anemic pregnant mothers, 76% had normocytic normochromic anemia and 14% had microcytic hypochromic type of anemia. Large family size (AOR = 4.13, 95% CI: 1.62, 10.52), Hookworm infection (AOR = 9.8, 95% CI: 1.51, 64.5), History of blood loss (AOR=11.9, 95%Cl:2.28,62.5) , Iron supplement (AOR=14,Cl:3.5-,58.8) and Habit of drinking coffee/tea and/or coca-cola immediately after meal(AOR= 10,Cl:1.37,74.3) remained being independent factors of anemia in pregnant women.

Conclusion: High family size, *hookworm* infection, history of abnormal blood loss, iron supplementation status, habit of drinking coffee/ tea, and/or coca-cola were the main factors of anemia. To reduce the prevalence, there is a need to strengthen health care seeking behavior of women to ensure early diagnosis and management of diseases.

Abs 24

Nutraceutical Therapy for Cancer: Emphasis on Attenuation of Cancer Stem Cells. *Gizachew Wubetu*

Background: The long-term survival of patients with hepatocellular carcinoma (HCC) remains unsatisfactory because of the presence of cancer stem cells (CSCs), which are responsible for tumor recurrence and chemoresistance after hepatectomy. Drugs that selectively target CSCs thus offer great promise for cancer treatment. Although the antitumor effects of epigallocatechin gallate (EGCG) have been reported in some cancer cells, its effects on CSCs remain poorly studied. In this study, we investigated the effects of EGCG on human hepatoma and colon CSCs.

Methods: HepG2 and HCT-116 cell lines were enriched by sphere formation and their gene-expression profiles were analyzed by quantitative real-time polymerase chain reaction. EGCG-induced growth inhibition in the parental cells was determined by WST-8 assay, and protein expression was assessed by western blotting.Cell cycle profile and apoptosis analysis was performed using flow cytometer.

Results: Sphere-derived cells grown in serum-free, nonadherent cultures showed increased expression of stem cell markers, Nek2, and ABC transporter genes, compared with parental cells grown in conventional culture. EGCG induced growth inhibition in the parental cells in a dose-dependent manner. EGCG also inhibited self-renewal in hepatoma and colon CSCs, attenuated the expression of stem cell markers and ABC transporter genes, which are putative molecules associated with treatment resistance in CSCs, and decreased the transcription of Nek2 and p-Akt, resulting in inhibition of Akt signaling. EGCG also altered cell cycle profile and apoptosis which may in part play an important role in EGCG-induced cancer cell death.

Conclusions: Overall, these results suggest that EGCG could be a useful chemopreventive agent for targeting HCC and colon CSCs, in combination with standard chemotherapies.

Abs 25

Factors Associated with Cervical Precancerous Lesion among Women Screened for Cervical Cancer in Addis Ababa, Ethiopia. *Hirut Teame Gebru*

Background: significant portion of cervical cancer burden can be prevented by early identification of the cases or eliminating or reducing the risk factors. Identifying the factors associated with cervical precancerous lesion may help us to address the cervical cancer related problem. However, studies on the issues of factors associated with cervical precancerous lesion in women are limited in Ethiopia.

Objective: The objective of this study was to determine factors associated with cervical precancerous lesion among women screened for cervical cancer in Addis Ababa.

Methods: Hospital based unmatched case control study was conducted in selected health facilities of Addis Ababa city from March to April 2016. Data was collected from 114 cases and 229 controls using interviewer administered questionnaire and entered to Epi Info version 7 and exported to SPSS version 20 for analysis. Odds ratio with its 95% confidence interval and two-tailed P value were calculated. Variables with P value ≤ 0.2 in the bivariate analysis were included in the multivariate logistic regression. Statistical significance was declared if P value < 0.05.

Result: The magnitude of cervical precancerous lesion was 12.79%. Women aged 40-49 years had 2.4 higher odds of cervical precancerous lesion compared to those aged 30-39 years (AOR=2.4, 95%CI: 1.27-4.54). Women having history of sexually transmitted infections were significantly associated with cervical precancerous lesion compared to their counterparts (AOR=3.20, 95%CI: 1.26-8.10). Similarly, those women who had two or more lifetime sexual partners (AOR= 2.17 95%CI: 1.01-4.67), and women whose husband had two or more life time sexual partners (AOR=3.03, 95%CI: 1.25, 7.33) had higher odds of cervical precancerous lesion.

Conclusions: Women with higher age, history of multiple sexual partners and sexual transmitted infections were found with higher risk of precancerous lesion. Women with higher risk of precancerous lesion should be encouraged to be screened for cervical cancer.

Key Words: cervical cancer, cervical precancerous lesion, Addis Ababa and Ethiopia.

Abs 26

Prevalence and Associated Factors of Hypertension in Ethiopia: Systematic Review and Meta-Analysis.

Aboma Motuma Abdi

Background: Hypertension is one of the leading causes of global burden of disease. This paper is intended to provide comprehensive and up to date evidence on the prevalence and associated factors of Hypertension in Ethiopia from January, 2000 to September, 2016.

Methods: A quantitative epidemiological systematic review based on published articles retrieved from different databases including MEDLINE, PubMed, and CINAHL, Google scholar, Cochrane and grey literatures. The search was restricted to population based cross-sectional studies on hypertension in Ethiopia published after 2000. It was analysis by using compressive meta-analysis version 2.2.064.

Results: A total of twenty eight articles were included in the systematic review, out of this 25 articles (n= 39, 250) with (19,808 female and 19,442 men) were selected for meta-analysis. Sample size for each paper included in the analysis range from 425 to 4356 participants. The reported rate of hypertension ranged 2.6 % to 40.5%. Among all regions the highest prevalence is reported in the capital city of Ethiopia, Addis Ababa, which was 40.1% in male and 34% in female, the lowest prevalence is reported in Oromia region and the prevalence was 3.1% in male and 4.4% in female. The meta-analysis result showed that, the pooled prevalence of hypertension was 16 **%** (12.6%-20%) within 95% CI and the median prevalence of 17 **%.** A small proportion of the people with hypertension were aware of their hypertensive status before the surveys (median, 40**%**; pooled prevalence 38.9 %(95% CI, 26% -53.7%).Subgroup analyses indicated that the prevalence of hypertension higher in urban population 20.2% than rural 9.5%. The prevalence of hypertension among males and female was (17.3%, 9.5%) respectively. This review found a high prevalence of hypertension in urban residents and different factors influencing its occurrence including overweight, family history of hypertension, age, sex, sleeping for less than 5 hours, oral contraceptive use, alcohol intake, physical inactivity, and eating vegetable three or fewer days per week, salt use, obesity, higher education, cigarette smoking, and khat were identified.

Conclusion and Recommendation: Hypertension is considerably prevalent in Ethiopia. Health promotion strategy tailored to the education on modifiable risk factors and establishment of blood pressure screening in primary health care context would help both in urban and rural areas.

Key words: Hypertension, pooled estimate of hypertension, Systematic Review on hypertension, meta-analysis on hypertension, Hypertension in Ethiopia.

Abs 27

Risk Factors for chronic Non-communicable Diseases and Prevalence of selected NCDs in Ethiopia – 2015. *Abebe Belayneh*

Introduction: As the leading cause of death globally, non-communicable diseases (NCDs) particularly cardiovascular diseases (CVDs), diabetes, chronic respiratory diseases and cancer were responsible for 38 million (68%) of the World's 56 million deaths in 2012. Almost three quarters of all NCD deaths (28 million), and the majority of premature deaths (82%) occur in low-and middle-income countries (LMIC). It is estimated that the cumulative economic losses in LMIC between 2011 and 2025 will be US$7 trillion. This figure exceeds the annual US$ 11.2 billion cost of implementing a set of high-impact interventions to reduce NCD burden. Non -communicable diseases have been a neglected area in many low–income countries, due to the heavy burden of communicable diseases, and other competing priorities. There is scarcity of published studies describing the burden of major non-communicable disease in sub –Saharan Africa. Likewise, except very few studies in some pocket areas, there was no representative NCD risk factor survey undertaken in Ethiopia. As the trend of NCD burden is increasing in the health facilities of the country, the need to conduct a comprehensive survey has been given priority by FMOH. The Ethiopia NCD STEPS survey provides baseline data of risk factors for non-communicable diseases (NCDs). The survey was conducted with the objectives of assessing behavioural and biological risk factors for major chronic non-communicable diseases (NCDs) and prevalence of selected NCDs to establish baseline information for policy and program development.

Methods: A community based cross sectional study was conducted in accordance to the WHO a step-wise approach to the surveillance of NCD risk factors. The survey was carried out between April and June 2015. The data collection processes included three steps - **Step 1**:This step comprised a questionnaire to gather demographic and behavioural characteristics of the study population, Step 2**:** Physical measurement was done to build on the core data in step 1 and to determine proportion of the study population with raised blood pressure, overweight and obesity, and Step 3**:** Biochemical measurements were undertaken to build on the core data in step 1 and step 2 to measure proportion of the study population with diabetes, raised blood glucose and abnormal lipid level. In addition to core and expanded modules, some optional modules were included in each of the three steps. Data were collected digitally using personal digital assistants (PDAs) from which data were transferred to central server using internet file streaming system (IFSS) and exported to Microsoft Excel on personal computers. Data was cleaned using SPSS and Stata and analysed using Epi Info version 3.5.4. Descriptive weighted analysis was done along with complex sample analysis, and bivariate and multivariate analysis was conducted for increased blood pressure and increased blood sugar.

Results: Totally, 9,801 study participants age 15 -69 years were involved in the survey and the response rate was 95.5%. Of the total 9,801 respondents of STEPs survey, about six in ten were women. Regarding education level by age, the younger group was more likely educated compared with respondents in the older age group. Of all the respondents 49.4 % had no formal education,

while 28.8 % attended formal education with less than primary level. Majority of the respondents (67.3 %) were currently married; nearly 10% were employed; 71% of study participants reported their annual income less than 12,000 Birr. The data collected on behavioural characteristics showed that about 4.2% of the survey participants were current smokers (men 7.3%, women 0.4%). Among all current smokers of both sexes, 82.8% of them smoked tobacco daily. Ten percent were exposed to second-hand smoke at home whereas 13% in the workplace. With regard to alcohol consumption, nearly 41% had consumed alcohol during the past 30 days prior to the survey. The proportion of men who consumed alcohol (46.6%) was higher than that of women (33.5%).The average number of days per week on which fruit and vegetable consumed was 0.9 and 1.5, respectively. More than ninety-eight percent of the population consumed fewer than five servings of fruit and vegetables daily. About six percent of the study population did not meet WHO recommendations on physical activity for health. Individuals in rural areas were found to be more exposed to physical activity than urban residents. About 16% of respondents were current khat chewers. Regarding injury, about 3% of respondents involved in a road traffic crash as a passenger, driver, or pedestrian during the past 12 months preceding the survey. Prevalence of raised blood pressure (SBP > 140 and/or DBP > 90 mmHg) among Ethiopian adult population was 15.6%, with no difference by sex. Six percent of study participants had raised blood glucose and diabetes. Mean body mass index (BMI) was 20.4 (20.1 for men and 20.7 for women). Few individuals (6.3%) were overweight or obese, with a higher prevalence of overweight in urban residents. The percentage of women respondents' age 30–49 years that had ever undergone screening for cervical cancer was 2.65%.

Conclusions and Recommendation: Most of the behavioural risk factors, such as tobacco use, alcohol consumption, khat consumption, were more prevalent among men compared to women. Conversely, the biological risk factors, such as obesity, impaired fasting glycaemia, and raised total cholesterol were more prevalent among women than men . The demographic and behavioural risk factors such as sex of respondent, age group, area of residence, not engaged in vigorous physical activity, alcohol consumption , not doing vigorous recreational activities, and adding salt to food had significant association with raised blood pressure. In addition, the demographic and behavioural factors (age group, area of residence, alcohol consumption , adding salt to food, not engaged in vigorous physical activity, chewing chat) and biological risk factors (raised BP or currently on medication) were significantly associated ($p<0.001$) with raised blood glucose. In this survey, 95% of the study population were found with 1-2 NCD risk factors and a forecast of the disease burden prevailing in urban population. Modifying the lifestyle like avoiding consumption of alcohol and khat limiting salt intake are highly recommended to decrease the risk of developing raised blood pressure and blood glucose level. In order to promote interventions for prevention and control of NCDs, reduce the risks associated with it, a comprehensive approach is needed which will involve all sectors including Ministries of Health, Education, Agriculture, Trade, Youth Women and Children Affair, Sport Commission, Mass Media, among others. The attention of other health development partners is also required in the fight against NCDs in Ethiopia. Strengthening the capacity of health facilities is also recommended to offer the service related to NCDs and ensures that the health system adequately monitors compliance with national standards. Furthermore, strategies of surveillance system for risk factors need to be established to monitor and measure changes in NCDs burden over time.

Abs 28

Non-communicable Disease Co-morbidities and Treatment Outcomes among People Living with Human Immunodeficiency Virus on Highly Active Anti-retroviral Therapy at Jimma University Specialized Hospital, South West Ethiopia: Nested Case-Control Study.

Tsegaye Melaku, Girma Mamo, Legese Chelkeba, Tesfahun Chanie

Background: The life expectancy of people living with human immunodeficiency virus (HIV) has dramatically improved with the much increased access to antiretroviral therapy. Consequently, a larger number of people living with HIV are living longer and facing the increased burden of non-communicable diseases.

Objective: To assess effect of chronic disease(s) co-morbidities and determinants of treatment outcomes among HIV infected patients on highly active anti-retroviral therapy at Jimma University Specialized Hospital.

Methods: A nested case–control study was conducted among people living with HIV at Jimma University Specialized Hospital from February 20 to August 20, 2016. Patient specific data was collected using structured data collection tool to identify relevant information and also patient reported outcome quality of life–HIV (PROQOL-HIV) scale was used to assess health related quality of life of patient. Data was analyzed using Statistical package for Social Science version 20.0. Logistic and linear regressions were done to identify factor associated to outcomes. Statistical significance was considered at p-value <0.05.

Results: A total of 160 participants, 80 cases and 80 controls, were included in the analysis. Among cases hypertension accounts 13.8%, followed by diabetes (11.9%) and about 12.5% had multimorbidity. At baseline, the mean (±SD) age of cases was 42.32±10.69 years, whereas it was 38.41±8.23 years among controls. The median baseline CD4+ cell count was 184.50 cells/μL (IQR: 98.50 - 284.00 cells/μL) for cases and 177.0 cells/μL (IQR: 103.75 - 257.25 cells/μL) for controls. Post 6-months of highly active anti-retroviral therapy initiation, immunologic failure was 28.80% among cases and it was 16.25% among controls. An average increase of CD4+ cell count was 6.4 cells/μL per month among cases and 7.6 cells/μL per month among controls. The mean± SD score of health related quality of life among cases was 57.39 ±6.89, 73.52 ±13.22, 64.15±9.03, 81.37 ±8.31 and it was 71.74±21.64, 76.48±11.88, 67.25± 9.67, 81.53±8.08 among controls in physical health and symptoms, health concerns and mental distress, social and intimate relationships, treatment-related impact dimension respectively. Male sex [AOR, 3.51; 95% CI, 1.496 to 8.24; p=0.004], smoking history [AOR, 2.81; 95% CI, 1.072, to 7.342; p=0.036] and co-morbidity with non-communicable chronic disease(s) [AOR 3.99; 95% CI, 1.604 to 9.916; p=0.003)] are independent predictors of immunologic failure.

Conclusions and Recommendations: Chronic non-communicable disease(s) have negative effects on the kinetics of CD4+ cell count and also have negative impact on quality of life among HIV-infected patients who initiated antiretroviral therapy. So integration of chronic non-communicable disease-HIV collaborative activities will strengthen battle to control double burden of chronic illnesses.

Key words: Non-communicable disease, Co-morbidity, Human immunodeficiency virus, Treatment outcome, Health related quality of life

Abs 29

Surveillance Data Analysis Report of Acute Flaccid Paralysis Cases Reported To Ethiopian Somali Region From January 2011-December 2015.

Mebrahtom Hafte Amaha

Background: Acute flaccid paralysis is commonly used as a marker in polio surveillance worldwide. Since there is no acute flaccid paralysis surveillance data analysis report done in the region and as polio is a crippling and potentially deadly infectious disease, this study is done to give baseline information for other scholars and to determine whether the cases are increasing or decreasing based on its trend and to show their distribution in the region.

Objective: This study aimed to analyze Acute Flaccid Paralysis surveillance data of Ethiopia Somali Region from January 2011 up to December 2015, Ethiopia, 2016.

Methodology: Descriptive cross-sectional review of secondary data was conducted. Data of all reported cases recorded in the Public Health Emergency Management center was systematically identified. Data cleaning was done using the same version another Microsoft Office Excel from the initial secondary data of the Microsoft Office Excel they were stored it. Descriptive analysis was computed using Microsoft office Excel 2007 and Epi-Info 3.5.3 and its result presented by tables and figures.

Result: A total of 395 cases were reported from December 2011- January 2015. The highest number 81 (20.51%) were from Warder Zone. The median age of the reported cases for acquiring the disease is 3±3.8 SD. Of the total reported AFP cases, 242 (61.27%) of them were male and sex of one case was not recorded. The age group of 1-4 and 5-14 year were the most affected groups on both sexes. From the total reported cases 122(30.89%) them were received polio vaccine three and above dose. The number of case starting from 2011- 2015 was in an increasing pattern but starts to decrease in 2015. 10 Wild Polio Virus, 2 Vaccine Derived Polio Virus and 6 compatible were also reported in the last five years.

Conclusion: The highest number of cases and all the confirmed cases were from warder zone bordered with Somalia. The higher number of cases was reported in 2014. Regional Health Bureau should focus on searching active case as the region is bordered with high risk countries.

Abs 30

Quality of Sexually transmitted Infections (STIs) Case Management was Found Poor in Health Care Facilities of Adama Town, Eastern Ethiopia 2015; the Missed Opportunities to Control HIV Spread. *Abay Burusie*

Background: Sexually transmitted infections (STIs) cause devastating sexual and reproductive health complications if poorly treated. Moreover, people with STIs are at higher risk of acquiring or transmitting HIV infection. World health organization (WHO) recommends 90% of primary point-of-care sites provide comprehensive care for people with STIs by 2015.

Objective: The objective of this was to assess quality of STIs case management and identify its determinant factors

Methods: Health facility based survey was conducted from May 16 to 26, 2015 in Adama town which is popularly hot spot for commercial sex. First, a total of 66 STIs management service providing units were randomly selected. Thereafter, health care providers working in the units were surveyed employing contextualized WHO tool. The level to which health care providers correctly manage STIs was computed and associated factors with incorrect management were assessed employing Chi-square (c^2) test.

Result: generally, 62 (94%) providers responded to the interview. About 45 (72.6%) providers treated a total of 211 STI cases in a month preceding the survey. Out of 53 (85.5%) providers that responded they were using syndromic approach for STI case management, only 29 (54.7%) correctly mentioned treatment for urethral discharge syndrome. Receiving no training on national guidelines was found significantly associated with stating incorrect regimen ($c^2_{corrected} = 6.40$; $p = 0.01$). For vaginal discharge syndrome, also, only 20 (37.7%) providers correctly mentioned the treatment. Receiving no training ($c^2_{corrected} = 14.00$; $p < 0.001$), less than 5 days training (Fisher's exact test $p = 0.038$) and being diploma level profession ($c^2_{corrected} = 7.85$; $p = 0.005$) were found significantly associated with stating incorrect regimen. Concerning genital ulcer syndrome, only 2 (3.8%) providers mentioned the correct regimen.

Conclusion: quality of STI case management was found poor. Thus, training of health care providers on national guidelines for at least five days is of paramount importance to improve quality of STI case management and thus avert complications following poor management of STIs

Abs 31

Neutrophil Effector Functions and Activation Profile in Treatment Naïve and Treated Visceral Leishmaniasis Patients at the University of Gondar Hospital, North West Ethiopia.

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Background: Visceral leishmaniasis (VL) is the most severe and fatal form of leishmaniasis. Neutrophils are primary effector cells during *Leishmania* infection. Little is known about neutrophil effector functions and their activation status in VL patients. Thus, it is important to evaluate neutrophil activation status and to determine their effector functions in VL patients.

Objective: The objective this study was to assess the effector functions and the activation profile of neutrophils purified from treatment naïve and treated visceral leishmaniasis patients and compare with controls.

Method: A cross-sectional study was conducted from December 2015 to April 2016. Neutrophils were isolated from blood sample by double layer density gradient technique. Neutrophil effector functions were assessed by measuring reactive oxygen species (ROS) production and phagocytic capacity by flow cytometry. Neutrophil activation status was assessed by measuring phenotypic markers on and in neutrophils by flow cytometry and by measuring degranulation products by ELISA in the plasma. The level of inflammation was assessed by measuring inflammatory markers by ELISA in the plasma. Data were analysed by graphpad prism version 6.

Results: High inflammation was observed in treatment naïve VL patients (shown by elevated CRP, IL-6 and IL-8 plasma levels) than in treated VL patients and controls. Neutrophils were highly activated and were degranulated in treatment naïve VL patients than in treated VL patients and controls. Neutrophils from treatment naïve VL patients had impaired ROS production and phagocytic capacity in *E.coli* and pyocyanin/ *Leishmania donovani* stimulation respectively. However, equal capacity to phagocytose *Leishmania donovani* as treated and control neutrophils.

Conclusion: Taken together these results show the impaired neutrophil effector functions, high degranulation status and elevated inflammation in treatment naïve VL patients are restored in treated VL patients even though not to the same level as in controls.

Key words: visceral leishmaniasis, neutrophil activation, neutrophil effector function

Abs 32

Malaria Outbreak Investigation of Gololcha District in Arsi Zone, Oromia Region, Ethiopia, June 2016.

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Background: About 75% of landmass is malarias & two thirds of population is at risk of malaria-illness in Ethiopia. Malaria transmission varies with country's topography & rainfall patterns but unstable & seasonal transmission is common. Arsi zone received unusually increased number of malaria cases reports from Gololcha district from epidemic -week 19 of May-2016. The aim of this study was to verify existences of malaria outbreak & identify its' determinant factors in the study-area.

Methods: A descriptive cross-sectional-study was followed by 1:1 unmatched Case-Control study with 62 randomly selected cases & 62 neighbor-controls was conducted to verify malaria outbreak & identify its determinants in Gololcha district of Arsi zone, Oromia region, Ethiopia, from June 10-27, 2016. District's previous year/s malaria-report was reviewed to set epidemic threshold.Cases were identified by national standard case definition& then recruited cases were traced by house-to-house visit/search with neighbor controls & their past exposure history was asked by structured-questionnaires using face-to-face-interview. Data was entered to *EpiData 3.1 software*& then exported to *SPSS-22 & ArcGis-10.3 software* for statistical data analysis. Magnitude of outbreak was described by person, place & time. Presence of association between predictors & malaria-illness was observed by 2x2 table's findings using *Pearson-χ^2& Fisher-exact tests*. After possible effect-modifiers *was identified by stratified-analysis using Breslow-Day-test*, *Multiple logistic regression*(enter method) *was computed for* all candidate predictors with P<0.20 as cutoff-point for inclusion into multivariate analysis & model adequacy was checked by using *Hosmer & Lemeshow goodness-of-fit* test & finally, its findings of adjusted OR, 95%CI & P<0.05was reported&*presented by tables, graph & text & maps.*

Results: From 293 fever cases, 242 (SPR=8/2.60%) malaria cases (194(80%)= P.F & 48(20%) = P.V) but no death was confirmed from epidemic-week 19-26 of May 2016. Epidemic threshold was crossed since epidemic-week 19 of May, 2016. Overall AR was 110/100,000 while females (AR=32/100,000) were more attacked. Among total participants of case-control study (n=124), 62 were cases & 62 were controls&their median age was 18 & 17 years, respectively. No any significant statistical-interaction was observed between predictors & after adjusted confounders, being male reduce odds of malaria by 80% (AOR=0.20 & 95%CI=0.06 - 0.62) while odds of living in compound at nearby stagnant waters within 500m radius(AOR=3.84 & 95%CI=1.25-11.84) while the odds of living in compound with higher numbers (≥ 4) of artificial mosquito breeding-sites (AOR=3.73 & 95%CI=1.18-11.79) were significantly higher among cases compared to controls & risk factors. Using insecticide treated bed net (ITN) every-night significantly reduced odds of malaria by 84% (AOR=0.16 & 95%CI=0.05-0.51). Odds of wearing long-sleeve/legs clothes against mosquito bites (AOR=0.21 & 95%CI=0.05-0.85) & ever-participating on health-meetings at

community level (AOR=0.12 & 95%CI=0.02-0.81) were significantly lower among cases compared to controls & protective factors.

Conclusions: There was confirmed malaria outbreak in study-area since epidemic week 19 of May-2016. Presence of stagnant waters, higher numbers of artificial breeding sites within compound, poor ITN utilization, poor personal protection against mosquito bites by wearing long sleeve/legs cloths & poor community participation on health meeting at village/kebele level were significant risk factors for malaria outbreak.

Key words: Malaria, Outbreak, Case-Control, Gololcha, Arsi, Ethiopia

Abs 33

Meningococcal Meningitis in Ethiopia: A Retrospective Record Review 2009-2013.

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Background: Meningitis is a disease that has had some form of impact on nearly every part of the world. In Ethiopia, meningitis outbreaks have been described in written reports since 1901. Therefore, since Ethiopia is located on the African meningitis belt, bordering with meningitis prone countries, it is reasonable to conduct such type of data analysis regularly, to asses overall trends of Meningococcal meningitis.

Methods: The study involved a retrospective collection of clinical and laboratory data from regional states. Secondary data was taken from Public Health Emergency Managment Meningococcal Meningitis data base. The study included all the suspected and confirmed meningococcal meningitis cases reported. We described the outbreak by time, place and person.

Result: A total of 7,799 cases reported as meningococcal meningitis (clinical& Lab confirmed) and 242 deaths were reported to PHEM. Of the total cases, 3564 (45.7%) were reported from SNNP. Thehighest incidence rate were recorded in Gambella with 67.8/100,000 population, while highest CFR (59.1%) was in Dire Dawa administrative city. The most affected age groups were infants less than 1 and children 1-4 years. Among those lab was done the Most cause of the meningitis was serotype type A and W135 contributing 48 % and 18.5 %, respectively.

Conclusions: The study showed that trends of meningitis case distribution were recorded the highest at the dry season of every year and progressively decreases at the wet or rainy season, showing meningitis onset and dry season have evidence of positive relationship .Infants and children experienced the highest risk, serotype A is still the most cause of meningitis. The analysis also shows us meningococcal meningitis occurring out of the meningitis belt. Therefore, this new phenomenon needs farther study collaborating with multi disciplines. Strengthen surveillance system and mass vaccination campaign also need special attention in order minimize morbidity and mortality.

Key Word: Meningococcal Meningitis; African Meningitis Belt expands; Ethiopia, 2010-2014.

Abs 34

Regional Approach for Medicine and Medical Products Regulation and Harmonization of Regulatory Standards: the Case of IGAD Member States.

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Protection of basic services and strengthening the health system in general, and that of Medicine regulation in particular, is the key priority area for health and social development program in the IGAD region.

The regulatory authorities, in most IGAD member states, lack both human and financial resources to perform all regulatory functions required to ensure the quality, safety and efficacy of the medicines and medical products.

The implementation of all these regulatory functions as a comprehensive regional and national regulatory system is the most critical factor to protect the public, in the member states and the region at large, from unsafe, substandard, counterfeit and falsified medicines and medical products.

Problem Statements: The availability and access to pharmaceuticals and medical supplies has been a major problem in the Horn and East Africa. As a result, the health care delivery system has been suffering and performed below the expected level for so long.

The quality assurance system for pharmaceuticals and medical supplies has remained weak and lagged behind in many of the Sub-Saharan countries, including in the IGAD member States, mainly because the lack of sufficient regulatory structure, capacity and lack of legal mandates by the relevant authorized agencies to take regulatory responsibilities.

Furthermore, due to high population growth in the region, the need for essential medicines and supplies is increasing while the regulatory system in IGAD member states is very weak, delaying access to quality medical products and resulting in proliferation of substandard/spurious/falsely-labeled/falsified/counterfeit (SSFFC) medicines and medical products.

Given the current situation, the region is prone to conflict and instability, the issue of SSFFC medicines and medical products in the region is a very serious problem that requires a regional approach to tackle the challenge and to combat the effect of these dangerous and compromised quality medicines and medical products.

Conclusion and Recommendations: In the framework of a serious public health measure and system strengthening on health care services, a common set of standards should be adopted and agreed to ensure the supply and regulatory standards among the regulatory authorities in the IGAD member states.

Regulatory system strengthening and capacity building as a regional health development agenda must be a priority, and in the long term vision harmonization and standardization of pharmaceutical quality assurance system in the IGAD region must be adopted by all member states, to better collaborate for implementation of these vital undertakings.

Key words: Regional approach, Counterfeit medicine, Medicine regulation, Harmonization

Abs 35

Regional Interventions for Cancer Control: New Initiative and the Case in IGAD Member States to Strengthen the National Cancer Control Programs and Collaboration to Establish the Regional Cancer Center of Excellence (RCCE).

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Background: Cancer is recognized as an enormous global health burden and one of the most common causes of morbidity and mortality today. It accounts for one in every eight deaths worldwide, more than HIV/AIDS, TB, and Malaria combined.

Decades ago, cancer was thought to be rare in Africa and was regarded more as a problem of the developed world. Now, more than 60% of all cancer deaths occur in low-and-middle income countries, many of which lack the medical resources and health systems to support the disease burden. Sub-Saharan Africa is faced with a continuing high burden of communicable diseases along with the growing burden of non-communicable diseases (NCDs) such as cancer, cardiovascular diseases, diabetes and chronic respiratory diseases. This results, in a double burden of diseases and needs to be dealt with effectively.

The problem of cancer in sub-Saharan Africa is expected to double in the next two decades if no intervention is implemented now. The health and economic consequences as a result of this would therefore be substantial.

Problem Statement: The burden and magnitude of the problem from cancer will increase as life expectancy increases; however, the reality is that cancer patients in the IGAD region do not have access to some or all of the essential services. Many breast cancer patients in IGAD region arrive at the Hospital with Advanced disease. Patients whose diseases are curable unnecessarily suffer and die due to lack of resources for early diagnosis and appropriate treatment. The economic shock often includes both the loss of income due to high cost for therapy and expenses associated with payment for costly health care payments within and outside the region.

Most unlikely that IGAD member states can immediately take on every aspect of cancer control from prevention to treatment and palliative care, because of acute shortages of trained personnel, treatment facilities (cancer centers, hospitals, health centers, etc.) and reliable communication network and referral systems.

Almost all IGAD member states have less than satisfactory infrastructure and facilities for cancer therapy using surgery, chemotherapy and radiotherapy. Furthermore, properly trained personnel able to work in sub-Saharan African environments, adequate drug supplies and replacement of ageing radiotherapy equipment as well as their proper maintenance are in most cases lacking.

Conclusions: It is true that early diagnosis and referral is a crucial strategy especially because over 80% of patients in the IGAD region at first presentation have advanced incurable cancer. The establishment of the regional Cancer Center of Excellence will be instrumental to identify and determine the means and mechanisms to mitigate the disease burden, to inform the general public about early symptoms and signs and educating health professionals on cancer prevention & control strategies for quick referral procedure to hospitals and the regional center for better treatment.

With prevention strategy, improved cancer services in IGAD region, require the integration of cancer care into the existing health service as well as effective referral system to the regional cancer center of excellence that will be established in collaboration with the member states and the development partners. IGAD and collaborators must closely work to reduce the cancer incidence, morbidity & mortality and to improve the quality of life of patients through the systematic implementation of evidence-based strategies for prevention, early detection, diagnosis, treatment, palliative care, and reliable data collection.

Recommendations: In line with the above required actions, IGAD must encourage and support its member states to formulate a National Cancer Control Program, to be integrated into existing health systems, and implement the design that will also help facilitate for appropriate referral linkages to the Regional Cancer Center of Excellence.

It is therefore recommended that IGAD works to empower each member states, with high political commitment to strengthen and expand cancer prevention and control, as one of the its member states flagship initiative, working on integration of prevention and early detection services at primary health care level, for specific actions that will lessen the impact of cancer among the people in the region.

The program can then be expanded with the establishment of the Regional Cancer Center of Excellence (RCCE) and presumably all cancer centers in each member states will be linked to the services, training and research undertakings at the regional level, with the support and ownership by IGAD and its member states.

Key words: Regional approach, Cancer Control, Integration, Cancer Center of Excellence

Abs 36

Predictors of Lost to Follow-up (LTFU) from ART Programs among Adult HIV Patients in Goba Hospital, Southeast Ethiopia.

Demewoz Haile Woldegebreal

Background: Failure to retain clients in long-term HIV care has been a major barrier to the success of antiretroviral therapy (ART) programs in Africa. Becoming lost to follow-up (LTFU) has serious consequences, including increased risk of mortality, morbidity, and treatment failure. This study aimed to investigate predictors of LTFU among ART clients at Goba hospital, Southeastern Ethiopia.

Methods: A retrospective cohort study design was employed with 1,727 patients on ART at the Goba hospital HIV clinic between 2007 and 2014. Socio-demographic, clinical, ART-related and follow-up data were extracted from the Federal Ministry of Health's HIV care/antiretroviral therapy (MOH HIV care/ART) intake and follow-up forms for HIV patents. An extended Cox regression model with time-varying covariates was used to identify factors associated with LTFU.

Results: The overall incidence rate of LTFU was 95.5 (95% CI: 87.6-104.1) per 1,000 person-years. The incidence of LTFU in the first 24 months was 142.5(95% CI: 129.1-157.3) per 1,000 person-years of follow-up. Being male [Adjusted Hazard Ratio (AHR) =1.52; (95% CI: 1.15-2.00)], being in bedridden functional status [AHR=1.75; (95% CI: 1.19-2.57)], and being in the 15–24 age group [AHR=1.73; (95%CI: 1.21- 2.46)] were associated with a higher risk of being LTFU from HIV care. ART clients with tuberculosis (TB) co-infections at the initiation of ART were at higher risk of becoming LTFU [AHR=1.69; (95% CI: 1.20-2.38)]. Patients who had opportunistic infections at initiation of ART [AHR=1.98; (95 % CI: 1.03-3.83)] and those who reported poor drug adherence at the first visit after initiation of ART [AHR=14.63; (95% CI: 10.83- 19.76)] were also at higher risk of becoming LTFU from HIV care compared with their counterparts. ART patients who had CD4 counts of <200m^3/dl at ART initiation were 33% less likely to become LTFU from ART care [AHR=0.67; (95% CI: 0.51-0.86)].

Conclusion: The incidence of LTFU was high in Goba hospital, Southeastern Ethiopia. Being younger, of bedridden functional status, or co-infected with TB or other opportunistic infections at the initiation of ART, and showing suboptimal (poor or fair) ART adherence were significantly associated with higher risk of becoming LTFU from HIV care. Healthcare providers should give more attention to patients exhibiting any of the above-identified characteristics. Designing and incorporating preventive tracking mechanisms into current ART programs should reduce the risk to patients of becoming LTFU

Abs 37

Is Deployment of Trained and Skilled Nurses to Rural Villages a Remedy for the Low Skilled Delivery in Ethiopia? A Cluster-Randomized Controlled Community Trial.

Taddese Alemu Zerfu, Henok Taddese Ayele, Girma Tenkolu Bunie, Tariku Nigatu Bogale, Amare Deribew

Background: Very low coverage of Skilled Birth Attendance (SBA) is one of the major drivers of maternal mortality in many of the developing countries including Ethiopia. We conducted a cluster randomized trial to assess the effect of repositioning trained and skilled nurses in hard-to-reach rural communities on SBA uptake.

Methods: We used a three-arm, parallel groups cluster randomized trial to assess the effect of deploying contextually trained community reproductive health nurses (CORN) to the rural communities in South Ethiopia on SBA. The intervention consists of provision SBA services through CORN positioned either at health centers (HC-based intervention) or health post (HP-based intervention) arms. A third arm was a control arm without the intervention. A baseline and end line survey was conducted to document and measure changes or effects of intervention.

Results: Data was collected from a total of 2147 and 2142 pregnant women from 282 villages at baseline and final evaluation surveys, respectively. SBA utilization rate increased by 83% (from 25.5% to 46.8%) and 117% (from 17.1% to 37%) in the HP and HC based intervention villages, respectively. On the other hand, home delivery unassisted by skilled provider declined by 15.6 and 17.8 parentage points (PP) in the HP and HC based intervention villages; while marginally declined by 5.2% in the control villages ($P< 0.001$). The condition of health care providers (approach, counseling skills and perceived better quality care) and accessibility (closeness of service delivery points) affected mothers' decision to use or decline skilled delivery services.

Conclusions: Deployment of trained nurses repositioned to hard-to-reach communities significantly improved SBA services utilization rate by more than 80% in the ten months' intervention period. Such type of innovate approaches can be adapted during the SDG era to achieve maternal and child health indicators effectively.

Funding : The study obtained financial support from the WHO Implementation Research Platform (IRP)

Keywords: Cluster randomized trial, Skilled Birth Attendance, CORN, Intervention

Abs 38

The Demands of Professional Associations for Active Engagement of their Members: the Case of the Ethiopian Public Health Association.

Semegnew Mengistu

Background: A professional association cannot function well in the absence of multiple but active forms of engagements of its members, and this, in turn, cannot be efficient enough in the absence of the factors which could motivate members to get well engaged. This study aimed to assess members' engagement status and its associated factors in the EPHA's activities.

Methods: The study employed exploratory and explanatory research designs with quantitative and qualitative approaches. Data were collected using self-administered questionnaire with 422 EPHA members, in-depth interview with 10 key informants, and three focus group discussions with 21 EPHA members.

Results: Of the 422 participants surveyed, 393 (93.1%) completed the questionnaire. Their membership was regular (73%), lifetime (26.2%), and associate (0.8%). Overall, 48.9% of participants were inactive or had poor engagement status. Fifty-four and 61.8 percent of participants had not paid membership fee for the year 2014 and 2015, respectively, for reasons such as lack of information, a designed system or access to payment and lack of attention or commitment. Of all the participants, 48.7% and 60% had not attended EPHA's annual conferences in the year 2014 and 2015, respectively, for reasons such as a busy schedule at work place, an overlap with other schedule, and dissatisfaction with EPHA's activities. Members who live out of Addis Ababa were more likely to be inactive (A*OR*, 1.86, 95% CI, 1.13-3.04), and academics or trainers had a reduced risk of being inactive (A*OR*, 0.31, 95% CI, 0.09-0.99). Qualitative findings disclosed that the EPHA has several gaps publicizing its activities and achievements, following a participatory approach, taking membership as a primary agenda and designing various strategies to boldly reach to its members and maximize their engagement.

Conclusion: The engagement status of members in EPHA activities was considerably low. By virtue of their position, EPHA general assembly, executive board, and secretariat management need to convey potential interventions to address the identified gaps and empower members to succeed in EPHA's role. Health professional association members in such settings are more likely to actively engage and contribute when the association demonstrates improved position, despite the fact that improving such associations is a shared responsibility of all its members.

Key words: Ethiopian Public Health

Abs 39

Survival Status and Predictors of Mortality among Patients Treated for Tuberculosis in Hosanna, Southern Ethiopia: Retrospective Cohort Study.

Likawunt Samuel Asfaw

Background: Tuberculosis (TB) is chronic infectious disease contributed to morbidity and mortality of 9.6 and 1.5 million people worldwide respectively. Despite increased burden of death, time to death and its predictors among patients with TB not researched in the study area.The aim of the study is to determine Survival status and identify predictors of mortality among patients with TB in Hosanna, Southern Ethiopia, 2010-2015.

Methods: Retrospective cohort design was employed among patients treated for TB in Nigist Eleni Mohammad Memorial Hospital and Hosanna Health center located in Hosanna, Southern Ethiopia. Statistically determined and randomly selected 423 subjects were included in this study. Person-days time scale was used to measure survival time from treatment initiation until death or censoring occurred. Kaplan–Meier curves and log-rank test were used to assess survival time. Cox regression model was used to identify predictors of death. The 95% CI (Confidence Interval) of Hazard ratio (HR) with corresponding P-value <0.05 were set to declare significance. Data was entered to Epi-Data 3.1 and exported to STATA 12.0 for analysis.

Result: Total of 423 TB patients were followed for 70608 Person-days. The mean survival time of the cohort was 269.8 Person-days. Out of the cohort 379(89.6%) patients survived to the entire months follow up period. There were 44(10.4%) known deaths recorded in the follow up period. Incidence of death was 6.23 per 10,000 Person-days, 95% CI: 4.6, 8.3. Majority, 27(61.4%) of deaths occurred within 30 days. Survival time significantly vary across status of TB/HIV co-infection (P<0.001), History of previous treatment (P=0.02) and Residence (P<0.001). TB/HIV co-infection, AHR =4.6, 95% CI: 2.41, 8.93,(P<0.001) Previous history of treatment ,AHR =4.8, 95% CI: 1.26, 18.59, (P<0.001), Residence , AHR =3.1, 95% CI: 1.61, 6.21, (P<0.001) and weight change ,AHR=0.814 95% CI: 0.77, 0.85, (P<0.001) were important predictors of death.

Conclusion: Low survival time and higher incidence of deaths noted in this study. The finding imply urgent need of intervention enhance survival and reduce death among patients with tuberculosis during treatment.

Abs 40

Option B+ Antiretroviral Adherence among HIV Positive Pregnant Women: A Multicenter Cross Sectional Study in South Ethiopia.

Dawit Jember Tesfaye, Kaleegziaber Lukas, Ermias Abera Turuse, Tariku Laelago

Background: There is a claim with Option B+ PMTCT, as there is prolonged exposure to ART, may lead to difficulties in adhering to treatment for HIV-positive pregnant women. Adherence to ART is vital to achieve the goal "HIV free generation". This study was aimed to assess option B+ PMTCT adherence and its associated factors among HIV positive pregnant women enrolled at PMTCT program in public hospitals of south Ethiopia.

Method and materials: A hospital based cross-sectional study was conducted from May to September/2016 in ART clinics of seven hospitals found in south Ethiopia. A total of 290 pregnant women enrolled in the Option B+ PMTCT programme were selected using systematic random sampling. Data were collected using structured questioner and entered in to Epi info version 3.5.1 software; and analyzed by using SPSS version 20 statistical software. Bivariate and multivariate logistic regression analysis methods were used to identify factors associated with option B+ PMTCT adherence. P-value less than 0.05 were used as cut of point to declare statistical significance.

Result: The overall option B+ PMTCT adherence level of the participants was 236 (81.4%). Among non-adhered participants, 14.8% were due to difficulty in remembering to take medication and 5.9% were taking a break from ART medication. HIV positive pregnant women who are not started ART at the time of diagnosis [AOR=2.04, 95 % CI: (1.12, 4.11)] and who had five and above ANC visit [AOR=5.83, 95% CI (1.29, 26.41)] were more likely to adhere to option B+ PMTCT. Participants who traveled 30-60 minute to reach health facility were less to adhere to option B+ PMTCT [AOR= 0.40, 95 % C I: (0.18, 0.91)].

Conclusion and Recommendation: Majority of the study participants had good adherence level. Under option B+ strategy, all pregnant women living with HIV are offered life-long ART, regardless of their CD4 count. In this study, however, participants who started ART at the time of diagnosis were found to have less adherence level. Strengthening the current antenatal care by making the health facilities more accessible to HIV positive pregnant needs an attention. Further study on starting time of ART and adherence is forwarded.

Abs 41

Do Previously Treated Tuberculosis Patients Need Special Treatment Follow-up Beyond the Regimen? A Finding of Five-Year Retrospective study.

Fentabil Getnet Yimer, Henok Sileshi Asfaw, Wubareg Seifu

Background: Treatment outcomes serve as proxy measures of the quality of tuberculosis treatment provided by the health care system. Hence, assessment of treatment outcomes is essential to evaluate the effectiveness of the Directly Observed Therapy-Short course program to control the disease and reduce treatment failure, death and default. However, TB treatment outcomes and the underlying factors related to poor treatment outcomes, to our knowledge, have not been studied in Ethiopian Somali regional state where 85% of its population is pastoralist.

Methods: A retrospective review of five years (from September 2009 to August 2014) data was conducted to evaluate the treatment outcome of 1378 randomly selected tuberculosis patients treated in Kharamara, Dege-habour and Gode Hospitals. We extracted data using prepared format on socio-demographics, HIV Sero-status, tuberculosis type, treatment outcome and year. Treatment outcomes were categorized into successful (cured/completed) and unsuccessful (died/failed/default) according to the national tuberculosis guideline. Data was entered using EpiData 3.1 and analyzed using SPSS 20. Ch-square test (χ^2) and logistic regression model were used to reveal the predictors of unsuccessful treatment outcome and a P-value of ≤0.05 was considered as a cutoff point for statistical significance.

Result: Out of the 1378 tuberculosis patients, majorities were male (59.1%), pulmonary smear negative (49.2%) and new cases (90.6%), and HIV co-infection rate was 4.6%. The median age (inter quartile range) was 26 (18 - 40) years. Overall, treatment success rate was 86.8% (84.9%, 88.5%) across the five years, however, 4.8%, 7.6% and 0.7% of patients died, default treatment and failed to cure respectively. Treatment success rate fluctuated across the years and ranged from 76.9% to 94% [p<0.001]. The odds of death/failure was considerably higher among re-treatment TB patients [AOR =2.4; 95%CI =1.4 – 3.9] compared to new counterparts, and pulmonary smear positivity was higher (53.8%) among retreatment patients compared to 22.8% among new Patients [p<0.05]. Treatment success rate had no difference between age groups, genders, tuberculosis types and HIV status (P>0.05).

Conclusion: This study revealed that the overall treatment success rate has realized the global target for 2011 - 2015. However, it does not guarantee its continuity as the trend showed that adverse treatment outcomes might sporadically occur. Therefore, continual effort to effectively execute DOTS should be strengthen and special follow-up mechanism should be in place to monitor the treatment response of retreatment TB cases and take early actions accordingly.

Abs 42

Incidence of Opportunistic Infections Reappearance among People Living with HIV/AIDS in North West Ethiopia between 2007 and 2013 (Retrospective Cohort study*).*

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Background*:* According to 2011 Ethiopian demographic health survey, the national adult HIV (Human Immunodeficiency Virus) prevalence was 1.5% and the figure was 2.2% in Amhara region. In northwest Ethiopia, opportunistic infections (OIs) were occurred in about 88.9% of people living with HIV/AIDS (PLWHA). HIV and OIs are prevalent in the study area regional administration though there is no local evidence on incidence of OIs reappearance and time gap of repetition. Thus the current study is aimed to assess incidence and time gap of OIs repetition among PLWHA.

Method: Institution based comparative retrospective cohort study were used and the required sample size was 536. All 18 years old and above HIV patients who were on chronic HIV care in Debre Makkos town health institutions was the source population for the study. Study participants were selected from their list of attended health facilities using simple random sampling procedure. Actuarial life table and Kaplan-meier survival was used to estimate time gap of repetition.

Result: During a median of 43 person weeks follow up opportunistic infections reappeared in three quarter study participants and the cumulative incidence was approximately similar in exposed and unexposed HIV patients. The Incidence rate of opportunistic infection reappearance was 13.1 per 1000 person weeks which differs by ART exposure status which was 15.7 and 11.3 per 1000 person weeks in pre-ART and ART HIV patients respectively. The median time of survival was 57 weeks. After adjusted for covariates the significant predictors for time of OI reappearance were marital status, occupational status, follow up CD4 count, base line Hgb value, ART exposure status, base line ART adherence status, base line and follow up prophylaxis exposure status and follow up prophylaxis adherence status.

Conclusion: opportunistic infections were reappeared in three quarter of study participants thus organizations working on HIV/AIDS should continuing HIV care.

Abs 43

Multidrug Resistant Tuberculosis: Prevalence and Risk Factors in Districts of Metema and West Armachiho, Northwest Ethiopia.

Feleke Mekonnen Demeke

Background: Multi drug resistant tuberculosis (MDR-TB) is an emerging challenge for TB control programs globally. According to World health organization, 2012 report Ethiopia stands 15th out of the 27 high priority countries in the world and 3rd in Africa. Updated knowledge of the magnitude of MDR-TB is so substantial to allocate resources, and to address prevention and control measures. Therefore, the aim of this study was to assess the prevalence of MDR-TB and associated risk factors in West Armachiho and Metema districts of North Gondar.

Methods: A cross-sectional study was conducted in West Armachiho and Metema districts between February 01 and June 25, 2014. A total of 124 consecutive smear positive pulmonary tuberculosis patients were included in the study. Socio-demographic and possible risk factor data were collected using a semi-structured questionnaire. Drug susceptibility testing was first performed for rifampicin using GeneXpert MTB/RIF. For those rifampicin resistant strains, drug susceptibility testing was performed for both isoniazid and rifampicin to identify MDR-TB using the proportional method on LJ media. Data were analyzed using statistical Package SPSS version 20; binary logistic regression was used to assess the association. P-values < 0.05 were considered as statistically significant.

Results: Of 124 smear-positive pulmonary TB patients, 117 (94.4 %) were susceptible to Rifampicin, while 7 (5.7 %) were confirmed to be resistant to Rifampicin and Isoniazid. The overall prevalence of MDR-TB was 5.7 % (2.3 % among new cases and 13.9 % among previously treated cases). History of previous treatment (OR = 7, P = 0.025) was significantly associated risk factor for MDR-TB.

Conclusion: The overall prevalence of MDR-TB was 5.7 % among cases at five health centers and a history of previous treatment was found to be a risk factor for being infected by an MDR-TB strain. Therefore, maximizing early case detection and treatment, strengthening TB infection control activities and proper implementation of DOTS are recommended to reduce the burden of MDR-TB.
Keywords: Tuberculosis, MDR-TB, Risk factors

Abs 44

Health Seeking Behavior and its Determinants for Cervical Cancer Among Women of Childbearing Age in Hossana Town, Hadiya Zone, Southern Ethiopia: Community Based Cross Sectional Study.

Samuel Yohannes Ayanto

Background*:* Cervical cancer is one of the most common and the most easily preventable forms of female cancers if early screening and diagnosis is made. Lack of knowledge about the disease and risk factors, wrong beliefs about the disease, lack of access to preventive services and unavailability of the services in the current health system can affect decision making to seek health care services in general and cervical cancer in particular. The aim of this study was to assess health seeking behavior and its determinants for cervical cancer among women of child bearing age in Hossana town, Southern, Ethiopia.

Methods*:* Community based cross sectional study was carried out in Hossana town among women of child bearing age in June 2015. A total of 595 women of child bearing age were selected using systematic random sampling technique. Pretested structured interviewer administered questionnaire was used to gather the information regarding health seeking behavior and its determinant factors. Data were entered in to Epi Info software version 3.5.4 and exported to SPSS version 16 for descriptive and logistic regression analysis.

Results: The prevalence of health seeking behavior for cervical cancer among the study participants was only 14.2%. Respondent's poor knowledge [AOR: 7.25, 95% CI: (1.87, 28.08)], not ever received information [AOR: 52.0395% CI: (13.77, 196.52)] and not actively searching information about cervical cancer [AOR: 14.23, (95%CI: (3.49, 57.95)] were significantly associated factors with not seeking health for prevention and control of cervical cancer.

Conclusion: This study highlighted the importance of awareness creation, increasing knowledge, suggestion of actively searching health information and experiences of receiving information from any information sources. It also strongly indicates that different health information dissemination strategies may be required for women to increase health seeking behavior about prevention and control of cervical cancer. Therefore, it will be essential to integrate cervical cancer prevention strategies with other reproductive health services like antenatal care services, health information education and communication at all level of health care delivery system.

Key words: Cervical cancer, health seeking behavior

Abs 45

Determinants of Adverse Pregnancy Outcomes among Mothers Who Gave BirthFrom Jan 1-Dec 31/2015 in Jimma University Specialized Hospital, Case Control Study, 2016.

Eyosiyas Yeshialem Asefa

Background: Adverse pregnancy outcomes lead to serious health consequences to the mother and/or the baby. These Adverse birth outcomes; prematurity, low birth weight and still birth represent significant problems in both developing and developed countries. Adverse pregnancy outcomes are still major public health problems in developing countries including Ethiopia where most pregnancies are unplanned, complications are many and outcomes are generally Unfavorable for both mother and infant.

Objective: To identify determinants of adverse pregnancy outcomes among deliveries takes place in Jimma University specialized hospitalfrom January1 – December 31 / 2015.

Methods: The study was a facility based unmatched case-control study design conducted by reviewing mothers and newborn cards and registration log book who delivered in Jimma university specialized hospital from January 1 /2015 to December 31/2015, southwest Ethiopia. The study was done on randomly selected 86 cases and 258 controls using structured data collection checklist. Data analysis was done by SPSS version 20 and multiple logistic regression statistical methods were used to identify the predictors.

Result: In this study 344 mothers and newborns cards were included yielding 100 % response rate. From this 86 mothers and newborn cards were selected for case group and 258 mothers and newborn cards were selected for control group. Most of the cases80.2 % and controls 82.9 % were between the age group of 20-34 years. Mothers who are referred for delivery service from other area are more than five times to have adverse pregnancy outcomes than mothers who are not referred, AOR=5.49 95% CI [2.80-10.76]. And mothers who had illness during current pregnancy are seven times to be case than controls, AOR=7.22, 95% CI = 1.65-31.58].Mothers who attend ANC were 83% less likely to have adverse pregnancy outcome, than mothers who didn't attended ANC follow up, AOR = 0.17 95% CI [0.06-0.49]. Pregnant mothers who are anemic or had hemoglobin level of less than 11 gram/dl are more than seven times to have adverse pregnancy outcomes than non-anemic pregnant mothers, AOR=7.29 95% CI=[2.85-18.67]. Additionally, women who had obstetric emergencies during current pregnancy, complications during current delivery, and multiple pregnancy are more than 18 times AOR =18.40[6.12-55.37], 2 times AOR=2.65[1.38-5.11] and 7 times AOR=7.59[1.49-38.65] to have adverse pregnancy outcomes than their counterparts respectively.

Conclusion: According to the findings of this study; referral, illness during current pregnancy, having ANC attendance, anemia during current pregnancy, complication during delivery, multiple pregnancy and having obstetric emergencies are statistically significant predictors of adverse pregnancy outcomes.

Recommendation: providing ANC for all pregnant mothers, quality care for laboring mother and facilitation of early referral in case of complications is recommended.

Keywords: pregnancy outcomes, determinant factors, Jimma, Ethiopia

Abs 46

Antenatal Care and Women's Decision Making Power as Determinants of Institutional Delivery in Rural Area of Western Ethiopia.

Birhanu Yadecha Dibaba

Background: Delivery by skilled birth attendance serves as an indicator of progress towards reducing maternal mortality. In Ethiopia, the proportions of births attended by skilled personnel were very low 15 % and Oromia region 14.7 %. The current study identiied factors associated with utilization of institutional delivery among married women in rural area of Western Ethiopia.

Methods: A community based cross-sectional study was employed from January 2 to January 31, 2015 among mothers who gave birth in the last 2 years in rural area of East Wollega Zone. A multi-stage sampling procedure was used to select 798 study participants. A pre-tested structured questionnaire was used to collect data and female high school graduates data collectors were involved in the data collection process. Bivariate and multivariable logistic regression model was it and statistical signiicance was determined through a 95 % conidence level.

Results: The study revealed that 39.7 % of the mothers delivered in health facilities. Age 15–24 years (AOR 4.20, 95 % CI 2.07–8.55), 25–34 years (AOR 2.21, 95 % CI 1.32–3.69), women's educational level (AOR 2.00, 95 % CI 1.19–3.34), women's decision making power (AOR 2.11, 95 % CI 1.54–2.89), utilization of antenatal care (ANC) during the index pregnancy (AOR 1.56, 95 % CI 1.08–2.23) and parity one (AOR 2.20, 95 % CI 1.10–4.38) showed signiicant positive association with utilization of institutional delivery.

Conclusion and Recommendation: In this study proportion of institutional delivery were low (39.7 %). Age, women's literacy status, women's decision making power, ANC practice and numbers of live birth were found important predic-tors of institutional delivery. The indings of current study highlight the importance of boosting women involvement in formal education and decision making power. Moreover since ANC is big pillar for the remaining maternal health services efort should be there to increase ANC service utilization.Keywords: Institutional delivery, Antenatal care, Decision making, Rural area

Abs 47

Obesity in Young Age is a Risk Factor for Preeclampsia: a Facility Based Case-control Study, Northwest Ethiopia.

Mulualem Endeshaw Bogale

Background: Preeclampsia is one of the most commonly encountered hypertensive disorders of pregnancy. For many years, obesity has been suggested to play a role in preeclampsia. However, the hypotheses have been diverse and often revealed inconsistent results. This study has aimed to estimate the effect of obesity and dietary habits on preeclampsia in Bahir Dar City, north-western Ethiopia.

Methods: A facility-based unmatched case-control study was conducted on 453 (151 cases and 302 controls) pregnant women, attending antenatal care or skilled delivery at Bahir Dar City. Data were collected through face to face interviews and measurements of mid-upper-arm circumference (MUAC) at the time of the interviews. Data were cleaned and entered into IBM SPSS version 20 and later analyzed using STATA version 12. Univariate and multivariate logistic regression analyses were employed to estimate the effect of independent variables on preeclampsia. Stratified analysis was conducted to check for presence of confounding and/or effect modification between covariates.

Result: The odds of preeclampsia were higher among obese (MUAC ≥25 cm) women than their leaner counterparts (AOR = 3.33, 95 % CI: 1.87, 5.79). Obesity was also found to have a similar magnitude of risk for late onset preeclampsia (AOR = 3.63, 95 % CI: 1.89, 6.97). When stratified by age, the effect of obesity on overall and late onset preeclampsia was significant among young (age < 35 years) women (COR = 1.81, 95 % CI: 1.11, 2.99) and (COR = 2.09, 95 % CI: 1.16, 3.86), respectively. As the age groups became more homogenous through adjusted stratification, obesity showed a particularly significant effect in women age ≤24 and 25–29 years; (AOR = 2.31, 95 % CI: 1.06, 5.12) and (AOR = 3.66, 95 % CI: 1.37, 10.87) respectively. Similarly, the effect of obesity on late onset preeclampsia was evident among younger women age ≤24 and 25–29 years; (AOR = 3.16, 95 % CI: 1.21, 8.24) and (AOR = 1.98, 95 % CI: 1.16, 3.40) respectively. However, obesity has no significant effect on early onset of preeclampsia (AOR = 1.98, 95 % CI: 0.79, 4.94). On the other hand, compliance to folate supplementation during pregnancy and fruit consumption were associated with reduced risk of preeclampsia.

Conclusion: Obesity in young age was found to be a risk factor for preeclampsia while compliance to folate supplement and adequate fruit consumption were found to be protective against preeclampsia. Promoting healthy life style, including body weight control, consumption of fruits and vegetables, and folate supplementation should be promoted to reduce the risk of preeclampsia.

Keywords: Preeclampsia, MUAC, Obesity, Compliance

Abs 48

Acute Watery Diarrhea Outbreak Investigation in Raya Kobo District, Northern Wollo Zone, Amahara Region, Ethiopia, 2016.

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Introduction: Acute Watery Diarrhea (AWD) is an acute bacterial infection of the intestine caused by ingestion of food or water containing *Vibrio cholerae*, serogroups O1 or O139. The AWD outbreak in Raya Kobo district started during epidemiological week 33 of 2016, when three suspected cases reported to the health office. Three of the samples investigated in the 33 epidemiological weeks by Rapid Diagnostic Test (RDT) kit confirmed that positive for *Vibrio cholera*. The index case was a 15-year-old male from town kebele 02. Stool specimen taken from him and positive for *Vibrio cholerae 01*.

Objective: We aimed to confirm the outbreak, identify risk factors, assess magnitude and implement control measures associated with AWD in Raya Kobo district, Northern Amahara region of Ethiopia.

Method: An age and sex matched case-control study design was conducted to investigate risk factors for AWD outbreak using structured questionnaire. A case was a person aged 5 years or more with history sudden onset of acute watery diarrhea (three or more episodes of loose watery stool per day) with or without vomiting residing in Raya Kobo district from 23to 27 August 2016. All the data collected from cases and controls were entered into a computer using MS Excel and Epi info. We established cases to control ratio of 1:3 with a total of 10 cases and 30 controls.

Result: Ten cases and zero deaths were registered during August 20 to September 1, 2016 in the two town kebeles (02, 04) and Arefa rural kebele with an Attack Rate of 86, 23 and 33 per 100,000 populations respectively. Among cases, 60% were males and 30% were in the age category of 21-25 years old. Multivariate analysis indicated that exposure to dirty latrine [AOR = 8.34, 95% CI = (1.36, 51.04), P = 0.021] and contact of patient with diarrhea and vomiting at home [AOR = 9.92, 95% CI = (1.32, 72.19), P = 0.023] were significantly associated with risk of AWD.

Conclusion: We confirmed the outbreak and the study identified a significant association between dirty latrine and contact history with AWD cases. There were no AWD related deaths. Most affected age group was adults 20-25 year-old. We recommended the district to provide health education and social mobilization on hygiene and sanitation, particularly maintaining latrine sanitation at home.

Key words: case-control, analytical, descriptive, Raya Kobo

Abs 49

Seroprevalence and Risk Factors of HBV and HCV among Health Adult Blood Donor at Hospitals in Wolaita Zone, Ethiopia.

Antehun Alemayehu Anjulo, Tigistu Demisse Andabo

Background: Viral hepatitis is a group of infectious diseases that affects hundreds of millions of people worldwide. Five distinct hepatitis viruses have been identified: A, B, C, D and E. Hepatitis B and C, which can lead to chronic hepatitis, are particularly prevalent; 240 million people are thought to be chronically infected with hepatitis B and 184 million people have antibodies to hepatitis C. More than three-quarters of HBV infections occur in Asia, the Middle East and Africa. HCV causes an acute and necro inflamatory disease of liver. Blood serves as a vehicle for transmission of blood-borne pathogens including hepatitis viruses. Determination of the prevalence of HBV and HCV in a population in general, and blood-donors in particular certainly help in reviewing the screening procedures and making health policy decisions.

Objective: The objective of this study was to assess the seroprevalence and risk factors of hepatitis B and C viruses in 2015 among health adult blood donors in Wolaita Zone, Ethiopia

Method: A cross-sectional study was conducted to determine the seroprevalence of HBV and HCV infections among blood donors at Wolaita Sodo Hospital, and Christian hospital, Wolaita Zone, Ethiopia from May/ 2015- July/ 2015. All serum samples were tested for HBsAg and anti-HCV using INSTANT rapid screening kit method according to the manufacturer's instruction. The socio-demographic characteristics and associated risk factors of blood donors were assessed using structured questionnaire. The blood samples were screened for HBV and HCV.

Results: A total of 148 blood donors were tested .The mean age of study participants was 28.8yr ± 5.8.The overall prevalence of HBV and HCV were 10.1% and 8.8% respectively. The risk factors associated with significant association was observed in sharp injury and teeth extraction for HBsAg (p=0.036 (OR=4.06) and p=0.035 (OR=3.36)).

Conclusion: Screening blood donors for both HBC and HCV is indispensable (absolutely necessary) for safe blood transfusion. It is of utmost importance to continue screening donated blood with highly sensitive and specific tests and to counsel donors who are positive to any of the above infections. It is absolutely necessary to avoid the further transmission of infection.

Key words: Hepatitis B virus, Hepatitis C virus, Prevalence, Blood donors.

Abs 50

Antibiotic Use Practice and Predictors of Hospital Outcome among Patients with Systemic Bacterial Infection at Tikur Anbessa Specialized Hospital: Identifying Targets for Antibiotic and Health Care Resource Stewardship.

Getachew Alemkere Kolech

Background: Despite massively used in different settings, about half of antimicrobial agents prescribed to hospital in-patients were considered inappropriate. Such malpractice and excess use has been associated with multiple cost like the development of resistant bacteria, which have become a threat for the generation. These calls for an integrated intervention that should better are preceded with identification of targets.

Objective: The objective of this study was to assess the antibiotic use practice and to identify predictors of hospital outcome among patients with systemic bacterial infection to uncover targets for antibiotic and health care resource stewardship

Methods: A prospective cross-sectional study was performed from 9 April to 7 July in the internal medicine wards of Tikur Anbessa specialized Hospital. Patients who had and/or developed systemic bacterial infections during this period were strictly followed. Data abstraction format was used to collect data on demographic, disease, drug and microbiologic related factors. Antibiotic use practice was assessed and predictors for mortality and length of stay (LoS) were identified. Descriptive statistics and binary logistic regression were used for statistical analysis.

Results: Females accounted for about 52% of the 323 study participants whose mean age was 41.8. About half of the attended patients had suspected systemic bacterial infections. Cephalosporins were the most widely prescribed class of drugs in all the wards. Based on changes to microbiologic culture reports the initial antibiotic uses were inappropriate in all of the ICU and 99.3% of the ward patients. About 28% of the wards and 59% of the ICU patients were died during the in-hospital stay. The mean (+ SD) LoS was 18.5+12.2 in the wards and 8.9+4.9 days in the ICU. Whilst presence of HIV, liver-cirrhosis, different signs and symptoms of disease, neoplasm, sepsis, meningitis, renal failure, vancomycin and increased antibiotic courses (> 2) were positive predictors, prolonged antibiotic days (>10) and simultaneous antibiotic uses (>3) were negative predictors of mortality. On the other hand, hospital acquired infection and prolonged agent days (>21) (positively) and on admission infection (negatively) were independently associated with prolonged LoS.

Conclusion: Generally, these observations call for the establishment and implementation of antimicrobial stewardship that facilitates appropriate use of antimicrobials in the context of resource-limited settings. Any stewardship activity should better start by addressing infections like pulmonary, sepsis and meningitis and drugs like vancomycin.

Key words: Antimicrobial Stewardship, Antibiotic use, Length of Stay, In-hospital Mortality, Tikur Anbesa Specialized Hospital, Ethiopia

Abs 51

Influnza Like Illness Outbreak Investigation at Tehulederie District, Amhara Region, Ethiopia, 2016

Sisay Awoke Fenta

Introduction: Influenza is a viral infection that affects mainly the nose, throat, bronchi and, occasionally, lungs. Infection usually lasts for about a week, and is characterized by sudden onset of high fever, aching muscles, headache and severe malaise, non-productive cough, sore throat and rhinitis. Most infected people recover within one to two weeks without requiring medical treatment. The objective was to investigate the outbreak and determine the associated factors for influenza.

Methodology: Investigation of an outbreak was conducted in Tehulederie district, Amhara Region from 19-24 march 2016. Matched case control study design was conducted for the investigation. The data was entered to Epi Info version 7 and analyzed by SPSS version 20 and STATA software.

Result: Attack rate of influenza outbreak was 0.28, 0.2 and 0.09 in the age category of 5-14, >15 age group and <5 age group respectively. Attack rate of female was 0.32 per 1000 females' population but in males it was 0.15. Sick person in the family was significantly associated with avian influenza with OR 0.25, P value (0.02), and CI (0.075, 0.8).Travel history to influenza affected area was highly significant association for influenza with P value 0.002, OR 0.111, and CI (0.028, 0.44). Among all influenza cases, 16 (64%) were females and 9 (34%) were males. The mean age of influenza cases was 24 years old and a range of 4.5-68 years. Among 25 influenza, cases 21 (96%) fever, 21 (96%) cough, 5 (20%) and 5 (20%) were shortness of breath.

Conclusion: The total attack rate of influenza outbreak in the district was 0.23 but no death was occurred. Sick person in the family and travel history to influenza affected area were significantly associated factors for influenza. Population movement to the influenza affected area should be limited and restricted until the outbreak stop. Sick persons in the family should cover their mouth when they sneezing to reduce transmission cured to the healthy family.

Key words: Inflenza Like Illness, Tehulederie

Abs 52

Epidemiological Distribution of Schistosomiasis Infection and Associated Factors among School Age Children and Adolescents in Ethiopia, Systematic Reviews and Mata Analysis, Evidence for the Control and prevention of Schistosomiasis, 2016.

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Background - Globally, schistosomiasis ranks second among parasitic diseases of socio economic and public health importance and found in 48 African countries. It was listed among the 13 diseases classified by World health organization as "Neglected Tropical diseases. But it is one of the most prevalent parasitic diseases and an important public health problem in many developing countries including Ethiopia. Spices like schistosoma mansoni and schistosoma haematobium are the two most important species in Sub-Saharan Africa and Ethiopia. Several studies and intervention efforts have been made on schistosomiasis and soil transmitted helminthiasis in Ethiopia, but the prevalence is un acceptably high and continued to be serious public health problems in our country specially among school aged children and adolescent. Therefore this review was conducted to have national estimate and to identify geographical area with high disease burden as well as key determinant factors to give policy emphasis for public health intervention.

Methods: Potentially relevant papers done on Schistosomiasis infection were reviewed among school age children and adolescents in Ethiopia from 2000 until December 2016 published in English from databases: PubMed, Google Scholar, Science Direct, Cochrane Library. The search criteria used as key word were Schistosomiasis, intestinal parasite infection, school age children and adolescent, associated factors, Ethiopia. Twenty one School and communities based published articles on Schistosomiasis and related title was eligible for review.

Result: The prevalence of Schistosoma Mansoni among school age children and adolescent ranges from 4.3% to 81.3% in Balalie, East Ethiopia and Damot Woide District of Wolaita Zone respectively. Whereas the prevalence of Schistosoma haematobium ranges from 7.7% to 35.9 in Afar Regional State Amibera District and Gambella Regional State, Abobo District respectively. The major modifiable identified significant factors were Education level, swimming habit, fishing activities, washing clothes and utensil using river water, working in an irrigated agricultural field, crossing water bodies on bare foot and herding cattle near the stream.

Conclusion and Recommendation: Schistosomiasis is still major public health problem in Ethiopia. Proper use of personal protection, considering fisher man and adolescent for mass drug deworming at national level, as well as health education at school and community level should be provided to bring behavioral change.

Key words: Schistosoma Mansoni, Schistosoma haematobium, Ethiopia, School age children.

Abs 53

Intensive Care Units and Operating Rooms Bacterial Load and Antibiotic Susceptibility Pattern

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Introduction: The indoor air environment can potentially place patients at a greater risk because enclosed spaces can confine aerosols and allow them to build up to infectious levels as a result. This study intended to determine the bacteria load and antibiotic susceptibility pattern in operating theater (OR) and intensive care unit (ICU) at Hawassa University Referral Hospital.

Methods: A cross sectional study was conducted to measure indoor air microbial quality from Nov 2014 to February 2015 on 120 air samples collected from selected sites in 15 rounds using purposive sampling technique by Settle Plate Method (Passive Air Sampling following 1/1/1 Schedule). Sample processing and antimicrobial susceptibility testing was done using standard microbiological methods. The data was analyzed using SPSS version 16.0 and was inferred based on baseline values recommended by Fisher.

Result: The mean bacterial load of ICU 454.2 CFU/dm2 was recorded. Likewise, at OR during active, 87.27 CFU/dm2 and 13.12/CFU/dm2 during passive were recorded. Compared to the standard set by Fisher, the ICU and OR while at passive were higher than the acceptable limit. Among the isolated six bacteria, *S. aurous* 36 (30%) was the predominant species in both OR and ICU were as *p. auriginosa* 16 (26.7%) was the second prevailing isolates at ICU. *S. aureus* was highly resistant to penicillin, tetracycline 86.1%, 72.2% respectively were as *P. auriginosa showed low level* resistance to Ciprofloxacin (22.2%), Cotrimoxazole (27.7%) and Ceftriaxon (16.7%).

Conclusion: This finding indicates that resistant isolates for the commonly used drugs and high bacterial load of indoor air judges the risk factor for SSI as well as more risking ICU patients. Hence, adequate attention should be given to maintenance of proper hygiene in the ICU and OR environments since it is well known those patients are highly susceptible to microbial infection.

Key words: Indoor Air, Intensive Care Unit, OR, Southern Ethiopia

Abs 54

Effect of Hydro-ethanol Leave Extract of Catha Edulis Forsk on Biochemical Parameters and Blood Coagulation of Swiss Albino Mice

Shimelis Mitiku Lema

The stimulating and euphoric effects of Catha edulis Forsk provide a strong inducement for the user to obtain daily supplies and to engage in regular Catha edulis chewing sessions. The aim of this study was to evaluate the effects of hydro-ethanol leave extract of Khat on biochemical parameters and blood coagulation tests of Swiss Albino Mice. About 192 gram of fresh khat were regularly collected from Jimma town local market, Ethiopia and twenty five Swiss Albino mice weighing between 27 and 40 gram were used in this study. The mice were housed in a group of five in five cages (control, 200 mg/kg, 250 mg/kg, 300 mg/kg and 400 mg/kg of khat extract) at a controlled ambient temperature and they were allowed access of water and pelleted food ad libitum. The data were presented as mean ± SEM, and the mean values were compared using independent samples student t-tests. Values of $p<0.05$ were considered statistically significant. The body weight measured at the end of the experimentation showed a non-significant reduction and there was a significant decrease in bleeding time; and 300 and 400 mg/kg of doses it showed reduction in clotting time at a significant level. The plasma glucose concentrations among Catha edulis treated groups were lower and the measured total cholesterol level was significantly increased. Whereas, LDL and HDL-cholesterol were slightly increased. Triglyceride levels were increased (232 mg/dl) non-significantly to a level higher than that of the corresponding control (169 mg/dl).

Key Words: Khat, *Catha edulis*, plasma glucose, cholesterol, body wieght, bleeding time, clotting time

Abs 55

The Role of Signal Transducer and Activator of Transcription 4 Expression in Viral and Non-Viral Causes of Liver Cancer and its Correlation with Cellular Immunity. *Gizachew Wubetu*

Background: Signal transducer and activator of transcription 4 (*STAT4*) mediates the intracellular effects of interleukin-12, leading to the production of interferon gamma (IFN-γ) and natural killer (NK) cells cytotoxicity. However, the clinical significance of *STAT4* expression in patients with hepatocellular carcinoma (HCC) remains virtually unknown.

Methods: A total of 66 HCC patients who underwent hepatectomy were enrolled in this study. Quantitative real-time polymerase chain reaction was performed to determine *STAT4* and *IFNG* mRNA expression levels. Tissue microarray-based immunohistochemistry was performed to examine $CD8^+$ T cells, STAT4 and INF- γ.

Results: *STAT4* was differentially expressed in tumor and non-tumor tissues ($P = 0.001$), and positively correlated with *IFNG* expression ($R^2 = 0.506$, $P < 0.05$) and $CD8^+$ T-cell infiltration ($R^2 = 0.530$, $P < 0.001$). Significant correlations were observed between *STAT4* expression and tumor TNM stage ($P = 0.043$), hepatic venous invasion ($P = 0.003$), des-gamma-carboxy prothrombin ($P = 0.011$), tumor size ($P = 0.036$), and tumor differentiation ($P = 0.034$). Patients with high *STAT4* expressionhad significantly better recurrence-free survival ($P = 0.009$). Low*STAT4* expression ($P = 0.030$) and presence of portal venous invasion or hepatic venous invasion ($P = 0.006$) were independent risk factors for HCC recurrence.

Conclusions: Downregulation of *STAT4* in HCC indicated aggressive tumor behavior and predicted a worse clinical outcome. *STAT4* might be a useful biomarker to identify patients at high risk of recurrence after hepatectomy.

Abs 56

Investigation of the Mosquito Larvicidal Activities of Some Medicinal Plants against Anopheles Gambiae

Asfaw Debella Hagos

Background: Vector borne diseases are among the major causes of illness and death in many developing countries affecting substantial portion of the productive force. Malaria is one of the major diseases of public health importance in Ethiopia that is transmitted by *Anopheles* mosquito. Repellants (natural and synthetic) and synthetic larvicides were also used as a control measures. However, environmental pollution, cumulative toxic hazards to humans and other non-target organisms, and resistance developed by the vectors to most of the insecticides currently in use has necessitated the search for alternative control measures. Medicinal plants with larvicidal properties have paramount importance for the local control of mosquito.

Objective: Evaluate the mosquito larvicidal effect of five medicinal plants against *An. Gambiae* and safety on mice and fish, and formulate the active extracts into appropriate dosage form and evaluate the efficacy and shelf life.

Methods: Laboratory reared and wild larvae at field set up by WHO protocol (WHO/VBC/75 583) for susceptibility of resistance mosquito larvae**.,**

Results: The result revealed that *Millettia ferruginea* (seeds) has an IC_{50} value of 6.25ppm for 70% ethanol extract and 3.25ppm for aqueous extract and *Albizia gummifera* (seeds)), IC_{50} value of 6.25ppm for 70% ethanol extract and 12.5ppm for aqueous extracts in the laboratory reared mosquito. The plants also found to have IC_{50} larvicidal value ranging 25 to 50 ppm on wild larvae at field set up. These plants showed higher activity compared to the other investigated plants. Acute toxicity studies of these plants on mice showed medium lethal dose (LD_{50}) values ranges from 150 mg per Kg to 450 mg per Kg when the aqueous extracts were administered intraperitonealy. Phytochemical investigation of the extracts used for the test revealed flavonoids for *M. ferrugina* and saponins for *A. gummifera* alkaloids as major constituents of the plants. The active extracts were formulated into effervescent tablet have good stability at room temperature and facilitates fast release of the constituents to maximize the larvicisal effects.

Conclusion: The crude extracts of these plants demonstrated stronger larvicidal effect and safety on non-target organism stresses the need for extended field evaluation, which could then be employed to play an important role in the control of the larvae of the vectors at their breeding site.

Key words: Malaria, Mosquito larvicidal, Medicinal plants, *An. Gambiae*

Abs 57

Assessment of the Effect of Antiretroviral Therapy on Renal and Liver Functions among HIV-Infected Patients: a Retrospective Study.

Habtamu Wondifraw Baynes

Background*: The* emergence of highly active antiretroviral therapy has dramatically improved quality of life in prolonging survival of HIV-infected patients on treatment in developed as well as developing countries. However, the main shortcoming of HAART in long-term use has the potential to cause cardiovascular disease, liver and kidney derangements that may be life-threatening. Therefore, the aim of this study was to assess the adverse effects of highly active antiretroviral therapy on kidney and liver functions among Human Immunodeficiency Virus patients attending at University of Gondar Hospital, Ethiopia.

Method & Materials: Institution based retrospective study was conducted from 2010-2015 on a subset of Human Immunodeficiency Virus infected patients. Data were collected from registration book of University of Gondar Hospital Anti-retroviral clinic laboratory after checking the completeness of age, sex, creatinine, blood urea nitrogen and alanine aminotransferase. Data were entered and analyzed using SPSS version 16. Descriptive statistics, Chi-square test, one way ANOVA, logistic regression were done to determine associations. A P value <0.05 was considered as statistically significant.

Result: A total of 275 study subjects were included in the study. Of those 62.2 % were females and the overall prevalence of Chronic Kidney Disease (CKD) before and after treatment was 3.6 % and 11.7 % respectively. Majority of the CKD patients were on stage 3 for patients after treatment. The overall prevalence of hepatotoxicity was 6.5% and 16.7% before and after treatment respectively. Majority of the patients develop Grade 2 hepatotoxicity 66.7% and 65.2% before and after treatment respectively. Being female is the risk factor on binary and multiple logistic regression analysis with Chronic Kidney Disease.

Conclusion: The prevalence of nephrotoxicity and hepatotoxicitywere high among HAART patients.. Stage 3 nephrotoxicity and Grade 2 hepatotoxicity were the highest from the total toxicities and being female was the risk factor for nephrotoxicity. Further prospective studies are recommended to determine the effect of the drug and contributing factors.

Abs 58

Assessment of Risky Sexual Behavior and Associated Factors among Youth in Haramaya Secondary and Preparatory School, East Hararghe, East Ethiopia, 2015.

Hirbo Shore Roba

Background: According to World Health Organization (WHO), "youths" are defined as belonging to the age group of 15 to 24 years, and are characterized by significant physiological, psychological and social changes that may place their life at high risk. This group makes up about 20% of the world's population, of whom 85% live in developing countries. Young adolescents who initiate sexual activity get a "head start" on exposure to risks such as sexually transmitted diseases and unwanted fertility, at a time when their developmental status places them at a disadvantage in the assessment and management of these risks.

Objective: The objective of this study was to assess the prevalence and factors associated with risk sexual behavior among youths in Haramaya Secondary and Preparatory School.

Methods: Institutional based cross-sectional study was conducted. Simple random sampling technique was used to select a sample of 394 participants. A structured, pretested and self-administered questionnaire was used to collect data. Collected data was entered and analyzed using SPSS version 20. Crude and adjusted odds ratio with its confidence interval was used as measure of association and Statistical significance was declared at $P<0.05$.

Result: Among 363 school youths who completed the questionnaire; 134(36.9%) were sexually active. More than quarter (25.3%) of the youth had engaged in risky sexual behavior; 36(20.1%) of 179 had sex at age before 18 years old. 46(34.6%) of 134 did not use condom during last sexual intercourse. Living arrangement, Substance use, watch pornographic movie, Age at sex doubt, peer influence and Perceived family control significantly associated with risky sexual behavior. This study revealed that risk sexual practice of the study area was relatively high among the respondents. The school and local health bodies should work together to address the identified risky behaviors with particular focus on Behaviour Change Communication

Abs 59

Assessment of Cold Chain Maintenance in Tigray Region, Ethiopia, 2015

Alefech Adissu Gezahagn,

Introduction: In order to eradicate, eliminate and mitigate the impact of vaccine preventable diseases (VPDs), high vaccination coverage with potent vaccines is needed. To maintain the potency of the vaccine, robust cold chain systems should be in place. We assessed the status of the cold chain and knowledge and practice of cold chain handlers.

Methods: Health facility based cross-sectional survey was conducted from 15 –31 July 2015 in four districts of Western Zone of Tigray Region. Data was collected from31 randomly selected Health Facilities (HFs) and the same numbers of cold chain handlers using pretested questionnaire that contains both quantitative and qualitative approach. Observation of cold chain equipment, fridge tag temperature and document review were conducted. Data was entered and analyzed using Epi-Info version 3.5.4.

Results: About 11 of the 31 HFs (64.5 %) had functional refrigerators. All had fridge tag which monitors the temperature of the refrigerator and it showed one or above "X"Sign. In all the visited sites, the temperature of the refrigerator was below or above the recommended range (2-8°c) for a consecutive 10 hours a day. And no one of them moved their vaccine to vaccine carrier. In 15% of the HFs, vaccines in refrigerator were reached the discard point. In all HFs, no budget was available for refrigerator maintenance. Vaccine storage in the refrigerator was not proper in 5 (25%) HFs. About 29 % of the respondents didn't know the recommended temperature ranges of vaccine storage of refrigerator. Only 18.5% of the respondents knew how to calculate the needed supply for the following month, only 54.8% knew the use of shake test and how to condition ice packs.

Conclusion: Relying only on vaccination coverage overestimates the protection ability of vaccines. Poor knowledge of cold chain handlers and fluctuating power of refrigerators may affect quality of the immunization services. Appropriate training and supervision should be conducted to cold chain handlers.

Keywords: Cold Chain, Knowledge, Ethiopia

Abs 60

Integrating Nutrition Education to School and Community Based Activities in Promoting Optimal Dietary Practices and Nutritional Status of School Adolescents in Jimma Zone, Ethiopia: Quase-experimental Study. *Dessalegn Tamiru Adugna*

Background: Nutrition problems are prevalent among school adolescents in low-income countries, partly due to their needs have been largely ignored by the national nutrition policies. Malnutrition and infection are major barriers to educational access and achievement in low-income countries and also complement each other in deteriorating wellness and productivity of schoolchildren.

Methods: A quasi-experimental design was used among four primary schools from October 2013 to July 2014. The intervention was done using peer-led approach, health promotion through school media and health clubs. Data were collected at baseline, midline and end line from randomly sampled students and their parents. To account for the effect of time trend, difference was measured using repeated measure analysis. All tests were two-sided. Variables that have p=0.28 in the bivariate analyses were entered in a multivariable to determine the independent effect of intervention after adjusting for various socioeconomic and demographic variables.

Results: The variety of dietary intake in both the intervention and control schools at baseline was almost similar. However, there was a significant improvement of dietary diversity from midline to end-line among intervention schools ($p<0.01$) and a significant difference between food secure and insecure adolescents ($p<0.01$). There was improvement of animal based food consumption among intervention schools ($P<0.001$) which significantly associated with an intervention (AOR=0.26, CI: 0.16, 0.42), males gender (AOR=0.48, CI: 0.31, 0.73) and poor households (AOR=1.69, CI: 1.01, 2.84). Although the intervention groups had high height for age z-scores on average at baseline, the difference was similar in all rounds of the survey and it significantly associated with food insecurity (AOR=0.44, CI: 0.19, 0.97) and being urban resident (AOR=0.09, CI: 0.04, 0.22). The control groups had high body mass index for age on average at baseline and a significant improvement among the intervention school was observed which significantly associated with gender (AOR=4.13, CI: 2.38, 7.15), middle income family (AOR=2.93, CI: 1.92, 6.15), lack of animal source food (AOR=0.44, CI: 0.22, 0.89) and having a farmer father (AOR=0.16, CI: 0.05, 0.50).

Conclusions: findings from this study showed that school based dietary intervention by integrating to school based activities had significant input to improve dietary intake of primary school adolescents. Therefore, school-based nutrition education programs can bring a significant difference in the dietary practices inferring that school based nutrition education should be a part of comprehensive school health programs to reach both the students and their families.

Key words: Adolescent, School, Education, Nutrition

Abs 61

Health Care Needs of Daily Laborers' on Sexually Transmitted Diseases in Debre Markos Town, Northwest Ethiopia, 2016: A Qualitative Study.

Tenaw Yimer

Introduction: Sexually transmitted Diseases continue to be major public health problems globally, the majority occurring in developing countries. In Ethiopian in general and in Debre Markos town in particular, urbanization and rural urban migration is a growing phenomenon for job opportunity that set youth daily laborers at high risk of sexually transmitted infections. However, there is lack of evidences regarding urban daily laborers health care needs for these diseases.

Objective: The objective of the study was to explore health care needs of Daily Laborers' towards sexually Transmitted Diseases in Debre Markos Town, Northwest Ethiopia during October, 2015.

Methods: Phenomenological qualitative study was carried out among 32 focus group discussion discussants and 20 in depth interviewee that are purposively selected street daily labourers in the town. A standard semi-structured questionnaire translated to local Amharic language was adapted. Data for in-depth interview was collected by two fourth year public health students and focus group discussion data was collected by three trained data collectors. Data was managed and analysed using open code version 4.0 thematically. The study was conducted after ethically approved by institutional research ethical review committee of health sciences college, Debre Markos University.

Results: Results indicates that though they perceive they have risky sexual behaviour and susceptible to the diseases, they are not intending to use health care in the future due to many barriers listed (either from themselves or families/peers, from health providers or quality of care in health facilities). Such reluctance and delay in seeking care may lead to complications both on themselves and future generations. This group are best supported with integrated multi-agency services that work flexibly across all areas of their lives.

Abs 62

Trends, Causes and Risk Factors of Mortality among Under-Five Children in Ethiopia During 1990 to 2013: Findings from the Global Burden of Diseases Study 2013.

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Background: Ethiopia has made remarkable progress to reduce child mortality over the last two decades. However, under-five mortality rate in Ethiopia is still higher than the under-five mortality rates of several Low and Middle-income Countries (LMIC). On the other hand, the patterns and causes of child mortality are not well investigated in Ethiopia. The objective of this study was to investigate the mortality trend, causes of death and risk factors among under-five children in Ethiopia during 1990-2013.

Methods: We used the Global Burden of Diseases and risk factors (GBD) 2013 data. Spatiotemporal Gaussian Process Regression (GPR) using STATA version 12 was applied to generate best estimates of child mortality with 95% uncertainty intervals (UI). Causes of death by age groups, sex and year were measured using Cause of Death Ensemble modeling (CODEm). For estimation of HIV/AIDS mortality rate, the modified UNAIDS EPP-SPECTRUM suite model was used.

Results: Between 1990 and 2013 under-five mortality rate declined from 203.9 deaths/1000 live births to 74.4 deaths/1000 live births with an annual rate of change of 4.6%, yielding a total reduction of 64%. Similarly, child (1-4 years), post neonatal and neonatal mortality rates declined by 75%, 64% and 52% respectively between 1990 to 2013. Lower respiratory tract infection (LRTI), diarrheal diseases, and neonatal syndromes (preterm birth complications, neonatal encephalopathy, neonatal sepsis and other neonatal disorders) accounted for 54% of the total under-five deaths in 2013. Under-five mortality rates due to measles, diarrhea, malaria, protein energy malnutrition, and iron deficiency anemia declined by more than two-third between 1990 and 2013. Among the causes of under-five deaths, neonatal syndromes such as sepsis, preterm complications and birth asphyxia ranked 3rd to 5th in 2013.

Of all risk-attributable deaths childhood wasting attributed to 25% of the total under-five deaths (112,288/435,962) and 48 %(112,288/232,199) of the deaths due to diarrhea, LRTI and other common infections in 1990. Similarly, 19 %(43759/229,333) of the total under-five deaths and 45% (43759/97963) of the deaths due to diarrhea and LRTI were attributable to wasting in 2013. Of the total diarrheal diseases and LRTI related deaths (n=97963) in 2013, 59% (57923/97963) of them were attributable to unsafe water supply, unsafe sanitation, household air pollutions and no handwashing with soap.

Conclusions: LRTI, diarrheal diseases and neonatal syndromes remain the major causes of under-five deaths in Ethiopia that call for a better integrated newborn and child survival interventions focusing on the main risk factors.

Abs 63

Prevalence, Infectivity and Associated Risk Factors of Hepatitis B Virus among Pregnant Women in Yirgalem Hospital, Southern Ethiopia: Implication of Screening to Control Mother-to-Child Transmission?

Anteneh Amsalu

Background: Without any prophylaxis or antiviral therapy, a hepatitis B surface antigen (HBsAg) and Hepatitis B e antigen (HBeAg) positive mother has up to a 90% likelihood of mother-to-child transmission (MTCT) of hepatitis B virus (HBV) to newborns. However, routine antenatal screening and intervention strategies are not yet practiced in Ethiopia. Therefore, this study was conducted to determine the prevalence, infectivity and associated risk factors of HBV among pregnant women.

Methods: A cross-sectional study was conducted from October 2015 to august 2016 in Yirgalem hospital. A total of 475 pregnant women were recruited consecutively. Data on socio-demography and potential risk factors were collected using a structured questionnaire. Blood samples were tested for HBsAg. Positive HBsAg samples were tested for HBeAg using a commercial strip test. The status of HIV was collected from the records. The data were entered and analyzed using SPSS version 20 statistical package

Results: Among the total study participants 35.4% were aware of MTCT, 15.6% were previously screened and only 0.6% had taken full dose vaccine for HBV. Thirty-four women (7.2%) were HBsAg-positive, of whom 27(76.5%) were positive to HBeAg. The prevalence of HIV infection was 10.1% (48/475). Overall, HBV/HIV co-infection rate was 2.1% (10/475). Women with a history of multiple sexual partners (aOR=2.92, 95%CI=1.19-7.16) and being HIV positive (aOR= 4.44, 95%CI=1.96-10.08) were the only independent predictors of HBsAg positivity.

Conclusions: High prevalence of HBsAg and coexisting with HBeAg, in addition to low awareness and practice suggests that MTCT might be the prevailing mode of HBV transmission in the study area. Thus screening of all pregnant women and provision of health education about the risk factors, the mode of transmission and prevention is recommended.

Key words: Hepatitis B virus, Hepatitis e antigen, pregnant women, Ethiopia

Abs 64

Institutional Delivery Service Utilization and Associated Factors among Reproductive Age Women of Mobile Pastoral Community: Case of Liban District of Guji Zone, Oromia, Southern Ethiopia: A Cross Sectional Study.

Wako Golicha Wako, Dejene Hailu Kassa

Background: Globally, an estimated 289,000 maternal deaths occurred in 2013. Majority of these deaths occurred in the sub-Saharan Africa and south Asia. Mobility of pastoralists is well recognized survival strategy in arid and semi-arid land of sub-Saharan Africa; but governments often encourage settlement as solution for difficulty of providing health services for mobile pastoralists. This study aimed to assess utilization of institutional delivery and associated factors among reproductive age women of mobile pastoral community of Liban District, Guji zone, Oromia.

Methods: Community based cross-sectional survey was conducted in mobile pastoralist community of Liban District. About 791 randomly selected women, who gave birth within the last 2 years of the survey, were interviewed using pretested structured questionnaire. Data were entered into Epi-info version 3.5.4 and analyzed by Statistical Package for Social Science (SPSS) version 16. Bivariate and multivariate analyses were done by using the SPSS.

Results: Out of 791 women who gave birth within the last 2 years of survey, only 110(13.9%) gave birth in health institutions. Majority (74.1%) of the women gave birth at their home. About 91(11.5%) of women gave birth at traditional birth attendant's home under attendance of traditional birth attendant. Multiple logistic regression shows that women who had readily available cash when labor onset (AOR=2.79, 95% CI: 1.29-6.25), those who delivered the birth preceding the most recent birth in health institution (AOR=6.8, 95%CI: 3.44-13.45) and those who faced birth related complication during the birth preceding the most recent birth (AOR=1.90, 95%CI: 1.08-3.36) were more likely to deliver at health institutions.

Conclusion: The institutional delivery is a little bit higher than national rural average of the country. It seems indirect health care cost remains to be the main barrier to institutional delivery. Alleviating burdens of indirect health care cost would positively impact institutional delivery.

Abs 65

An Innovative Community Based Approach Doubled Uptake of Long Acting Family Planning Methods in Rural Ethiopia; a Cluster Randomized Community Trial.

Taddese Alemu Zerfu, Taddese Taddese Zerfu, Henok Taddese Ayele, Tariku Nigatu Bogale

Background: Though more than half of all pregnancies that significantly contribute for maternal morbidity and mortality in the developing world are unintended, the contraceptive prevalence rate (CPR) in general and the use of most effective methods, long acting family planning methods (LAFP), in particular is the lowest ever. The objective of this study was to investigated the effect of an innovative community based approach, deploying specially trained and motivated community based reproductive health nurses (CORN), in improving uptake of LAFP methods in rural Gedeo, Southern Ethiopia.

Methods: The study employed a cluster randomized community trail design. The implementation was included 282 villages (94 in three different arms; two intervention and one control) in Gedeo zone, South Ethiopia. The intervention consisted of provider initiated LAFP family planning counseling and a method shift counseling for women by specially trained and skilled nurses deployed to rural villages [based at health center (HC- based) or health post (HP- based)]. Data were collected at baseline and end (9th month) of the intervention. We used difference-in-difference (DID) estimates to assess impacts on LAFP uptake.

Results: The contribution of LAFP increased from 31.1% to 54.1% in the HP based and from 18.7% to 46% in the HP based intervention arms; while slightly decreasing from 16.3% to 12.6% for the control arm. This resulted in a 26.7 and 31 percentage points (PP) increase in LAFP utilization. Utilization of specific methods including implanon, jadelle and IUCD increased by 11.5, 10.7 and 4.5 PP; respectively for the HP based arm. Service delivery points for LAFP have also shifted to health posts from 29.6% at baseline to 41% at end line.

Conclusions: Deploying of contextually trained nurses in the rural villages significantly improved uptake of LAFP. Therefore, policymakers should consider revising the staffing pattern and intervention package components of the rural health extension program for better health outcomes.

This trial was registered at clinicaltrials.gov as NCT02501252

Key Words: HIV, PMTCT, rural, uptake, Ethiopia

Abs 66

Factors Associated with Birth Preparedness and Complication Readiness in Southern Ethiopia: A Community Based Cross-Sectional Study.

Eshetu Andarge Zeleke, Aderajew Nigussie, Mekitie Wondafrash

Background Birth preparedness and complication readiness (BP/CR) is a strategy to promote the timely use of skilled maternal and neonatal care, especially during childbirth. There is minimal evidence on the factors associated with birth preparedness and complication readiness among pregnant women in Ethiopia in general and in the study area in particular. Hence, this study aims to assess the factors influencing BP/CR among pregnant women in Southern Ethiopia.

Methods: A community based cross-sectional study was conducted among 713 pregnant women in Southern Ethiopia in March 2015. Both quantitative and qualitative methods of data collection were used. For the quantitative study, the study subjects were included in the study by employing multi-stage sampling. Data was entered into Epidata version 3.1 and analyzed using IBM SPSS statistics 20. Level of statistical significance was declared at a of p- value < 0.05. The qualitative study was done by conducting six FGDs in three categories of health professionals, traditional birth attendants and husband`s of the study women.

Result: The prevalence of BP /CR in Arba Minch Zuria Woreda was found to be 30%. The odds of being prepared for birth and its complications was higher among women from high economic class (AOR= 2.29, 95% CI=1.16, 4.54), with frequency of antenatal care(ANC) >= 4 (AOR=4.52, 95% CI= 2.26, 9.02), who received advice on BP &CR (AOR=1.84, 95% CI=1.13, 3.01),and who were knowledgeable on labor and delivery(LAD) danger signs (AOR=1.85, 95% CI=1.01, 3.44). However, those women with parity of 2 to 4(AOR=.0.51, 95% CI=0.31, 0.84) and above four (AOR=0.51, 95% CI=0.31, 0.84) and food insecure (AOR=0.26, 95% CI=0.16, 0.42) were less likely to be prepared for birth and its complications than their counterparts.

Conclusions: The study showed that birth preparedness and complication readiness practice is inadequate in the study area. Enhancing BP/CR activities through provision of information on the importance of complete attendance of ANC and interventions targeting on women from lower economic class and food insecure households was recommended.

Key words: birth preparedness, complication readiness, South Ethiopia

Abs 67

Quality of Care in Delivery Service at Public Health Institutions in Bahir Dar Town, Ethiopia. *Michael Tamene Haile*

Introduction: Delivery and the time immediately after, is the most critical stage for every pregnancy, and this is the stage where quality of care available does matter. 99% of world's maternal deaths occur in developing countries. More than half of these deaths occur in sub- Saharan Africa including Ethiopia, and most were avoidable. Ethiopia's maternal mortality rate continues at an unacceptably high level. The percentage of deliveries attended by skilled health personnel at health institutions declined from 18.4% in 2009 to 16.8% in 2010, which is much below the target of 37.0% .This percentage, is very low, largely below the Sub Saharan African average of 47% in 2009 and very far from MDG/SDG target of 90% coverage. This is because of actual quality of care for deliveries have received relatively less research attention than other areas of health care.

Objective*:* The objective of this study is to assess the quality of delivery services at public health institutions in Bahir Dar town, Amhara regional state, Ethiopia.

Methods: Quantitative cross-sectional study was conducted on three health facilities from Feb1-30, 2014. Convenient non-probability sampling technique was used and samples were allocated proportionally to each facility according to their previous year delivery uptake. Data was collected using three data collection instruments; Exit Interview, Observation and facility assessment. Data entry, cleaning and analysis, using descriptive values and binary logistic regression for association test, were done.

Results*:* A total of 400 delivering mothers for exit interview and 40 deliveries for observation were participated from Felege Hiwot referral hospital, Bahir Dar and Han health centers.

Exit interview: the study revealed that 216 (54%) of mothers were satisfied while 184 (46%) dissatisfied with the delivery care given. A total of 167 (41.8%) of mothers satisfy with the distance over home to facility. Among other facility related satisfaction; cleanliness of toilets, overall cleanliness and comfort of the waiting area and examination room satisfaction were the first three least values; 184 (46.0%), 179 (47.1%) and 198 (49.5%) respectively. Regarding care provider related satisfaction completeness of information given by health professionals, measures taken to assure privacy and feeling of confidentiality were the first least values according to mothers view; 163 (40.8%), 169 (42.2%) and 196 (49.0%) respectively.

After adjusting for confounding socio demographic factors maternal age and monthly income were significantly associated with satisfaction of delivery services. When obstetric factors were adjusted; parity, maternal and fetal outcomes had significantly associated with mothers' satisfaction (p-values<0.05).

Observation: It was revealed that in 46% of cases health providers performed well while, 54% of them not performed well. Providers who introduce themselves were only 15% while only 40% of providers seen greeting the woman with kindness and respect. No provider encourages the woman to ask questions or explain procedures before performed except in one of cases for each. Three quarter of the providers did not maintained privacy.

Facility Assessment: Labor and delivery services were available in all the three health institutions 24 hours a day, every day. However, availability of personnel as the main task in delivery care during duty times was absent in both of health centers. Client privacy related issues were commonly lacking infrastructures in the delivery room of the three facilities. Drug shortage was prominent in Han health center. Basic equipment and supplies were fairly available and adequate than other components in all health facilities.

Conclusion and Recommendation: The overall quality of care in delivery services at public health institutions found to be suboptimal and the current performance of providers was found to be below the average. There were a lack of service availability, infrastructure, personnel, essential drugs, equipments and supplies essential to quality of delivery care. Therefore, strengthen health systems by providing indicators to measure and compare the quality of delivery care services provided at each level of health facility, make provider training and capacity building the pillar of delivery services and improvement of basic infrastructures for performance of delivery service to reduce maternal and newborn mortality in line with MDGs 4 and 5 are recommended.

Abs 68

Undernutrition and its Determinants among Daily Laborers of Cobblestone Project in Addis Ababa, Ethiopia

Geteneh Moges (BSc, MPH) [1], Solomon Shiferaw (MD, MPH), Robel Yirgu (BSc, MPH),*

Background*:* Undernutrition is among the most significant public health problems in the world. It is an important underlying cause of illness and death in Africa and imposes a huge cost both in human and economic terms. The aim of this study is to assess the level of under-nutrition and its determinants among daily laborers working in cobblestone projects, Yeka Sub City, Addis Ababa, Ethiopia.

Methods*:* A workplace-based cross-sectional study was conducted among 423 cobblestone daily laborers from February 20 to April 1, 2015. Systematic random sampling method was employed (with proportional allocation) in three cobblestone project sites. An interviewer-administered questionnaire and anthropometric measurements (weight and height) were used to collect the data. The data was entered by Epi Info version 3.5.3 then transferred to SPSS version 20 for data analysis.

Results*:* Overall, 423 respondents (of which 300, or 71%, were male) participated in this study, making the response rate 100%. Among the study participants, 141 (33.3%; 95% CI: 28.8 - 38.0) were underweight (BMI<18.50). Males were more likely to experience underweight than their female counterparts: 112 (37.3%) versus 29 (23.6%). Educational status, family size, income, and smoking had statistical significance with under-nutrition in multivariate analysis. The study participants who had no education were significantly more likely to be undernourished [AOR = 7.83; 95% CI (3.78, 16.22)] compared with those above secondary level education. Daily laborers with a larger family size (≥3) were three times [AOR=2.88; 95%CI; 1.54-5.40] more likely to be undernourished compared to low family size (≤2). Daily laborers who had low monthly income (<1500 ETB) were significantly more likely to be undernourished [AOR= 9.77; 95%CI (4.92, 19.39)] than those with high income (≥2500 ETB).

Conclusion*:* The study revealed that one-third of daily laborers in the cobblestone project were undernourished. Significant determinants of under-nutrition include: lower educational level, larger family size, lower monthly income, and smoking. Based on the findings of the study, it is important to prioritize such groups of daily laborers for targeted nutrition programs (screening, food fortification, dietary approach), to reduce the burden of under-nutrition and contribute to their productivity.

Keywords: Under-nutrition, Daily laborers, Cobblestone workers

Abs 69

Prevalence of Anemia and Associated Factors among Pregnant Mothers Attending Antenatal Care in Arsi Zone Lemu Bilbilo Wereda Health Facilities, May, 2016.

Gebi Tufa Kotora

Background: Anemia is a public health problem that takes the life of large number of mothers. There were many efforts done by different stakeholders including government. The aim of this study was to determine the prevalence of anemia and associated factors among pregnant women attending antenatal care May, 2016.

Method: Health facility based cross-sectional study design was employed in all health facilities of Lemu Bilbilo woreda, Arsi Zone. The sample size of the study was 367, which was calculated by single population proportion formula. Pregnant women attending ANC in the health facilities during the study period was selected and included in this study. Face to face interview was used for data collection and hemoglobin level was measured by using Hemocue 301 precalibreted instrument. The stool examination was done per standard protocol. The collected data was entered in epidata version 3.1 and exported to SPSS version 20 for analysis. Descriptive statistics (frequency tables, graphs, means, standard deviation etc) was computed. Multivariate and binary logistic regression was used to determine independent predictor of anemia. Statistical significance was declared at p-value 5%.

Result: According to this finding, the overall prevalence of anemia using a cut off level of hemoglobin < 11 was 22.3% (80/358). Out of 80 anemic pregnant mothers, 58(16.2%) were mildly anemic, 22(6.1%) were moderately anemic and. The variables that were significantly associated with anemia were), Intestinal parasitic infection (AOR 2.9, 95%CI 1.56-5.54 P V.value.001), knowledge (AOR 3.764, 95%CI 1.133-13.3.P value.001) and eating enjera with wot (AOR.373, 95%CI .181-.770,p value .008.

Conclusion: The result of this study shows that the prevalence of anemia was moderate (> 20-39%) public health problem. Majority of the anemic women are moderately anemic (Hgb 10-10.9. Intestinal parasitic infection, eating enjera with wet, occupation of husband knowledge on feeding habit were factors associated with anemia.

Keywords: Anemia, Associated factors pregnant women, Southeast Ethiopia

Abs 70

Assessment of Prevalence and Severity of Anemia and Associated Factors among School Adolescents in Gedeo Zone Wenago Woreda, SNNPR, South Ethiopia

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Background: Adolescence is a formative period of life between 10-19 years of age characterized by rapid growth and development next to the period of infancy. During adolescence iron requirement increases dramatically in both adolescent boys and girls, from preadolescent level of 0.7-0.9 mg Fe/day to as much as 2.2 mg Fe/day. With the poor quality of diet consumed from early childhood and the early onset of menarche seen as a secular trend in the population, depletion of iron stores would occur at faster rate, particularly, in adolescent females**.**

Objective: The objective of this study was assessing the prevalence and severity of anemia and associated factors among school adolescents in Gedeo Zone, Wenago Wereda.

Methods: School based cross-sectional study was conducted on randomly selected 424 school adolescents in Gedeo Zone, Wenago Woreda using structured questionnaire distributed across 15 randomly selected schools. Descriptive summary using frequencies, proportions, graphs and crosstabs was used to describe the data on prevalence of anemia, individual characteristics, anthropometric measurement, and stool examination result. Bivariate and multivariable logistic regression analyses were conducted to identify determinants of anemia among adolescents.

Results: About 424 school adolescents were responded to the enquiry. The prevalence of anemia among adolescents in this study was found to be 21.7% and all most all of the anemic adolescents were mildly anemic. Nutritionally, about 20.0% of the respondents were found to be with severe chronic energy deficiency. Adolescents in early adolescence period (AOR: 5.557 (CI: 1.435, 21.523)), those with severe chronic energy deficiency (AOR: 4.394 (CI: 1.483, 13.018)), those from lowest wealth quintiles (AOR: 7.809 (CI: 1.554, 39.249)), those who never or rarely wear shoe (AOR: 4.477 (CI: 1.379, 14.530)) and those whom their families get food by purchasing or aid (AOR: 4.434 (CI: 1.609, 12.218)) were found to be more anemic. Conversely those who eat meal three or more times daily (AOR: 0.213 (CI: 0.084, 0.536)) and female adolescents (AOR: 0.242 (CI: 0.080, 0.738)) were found to be less anemic in this study.

Conclusions: The finding shows that the prevalence of anemia in this area is considered as of mild public health significance according to World Health Organization. However it needs special emphasis as most of these adolescents are also with chronic energy deficiency as a burden. Special school based intervention needs to be considered.

Key words: Anemia, adolescent, hemoglobin, nutritional status.

Abs 71

Glycemic Index of Ethiopian Monofloral Honey. Abera *Belay*

Background: Honey is one of the richest carbohydrate foods and dietary significance of carbohydrates often described using glycemic index (GI). GI mostly related to diet related non-communicable disease, diabetes.

Objective: The objective is to investigate GI of Ethiopian monofloral honeys, using human subjects.

Method: Ethical Clearance was approved by Addis Ababa University, Institutional Review Board (IRB). The experiment was conducted in Arsi University, Asella Hospital. Eight monofloral honeys and reference glucose were used as treatment. Each treatment was provided to ten human subjects with four days of washout period. After fasting for 11hrs overnight, blood sample was collected from their finger; and 25g available carbohydrate of treatment was fed. Additional blood samples were taken at 15,30,45,60,90 and 120 minutes. Blood glucose concentration was used to plot a two-hour blood glucose response curve. Area under curve (AUC) for test food and reference glucose was used to calculate GI.

Result: *Acacia, Becium grandiflorum, Croton macrostachyus, Eucalyptus globulus, Hypoestes*, *Leucas abyssinica, Syzygium guineense* and *Schefflera abyssinica* had GI of 54.73,62.82, 60.31, 59.54, 63.22, 64.06, 71.90 and 63.07, respectively. There was a significant difference ($p<0.05$) between *Acacia* and all the treatments; except ($p>0.05$) *Eucalyptus globulus* and *Croton macrostachyus.* In this study, fructose concentration of honey had a strong ($r^2=0.705$) negative ($GI= -2.079x + 144.5$) relation with GI, whereas fructose to glucose ratio did not notably affect GI of honey.

Conclusion: GI of honey influenced by botanical origin. Accordingly; *Acacia, Becium grandiflorum, Croton macrostachyus, Eucalyptus globulus, Hypoestes*, *Leucas abyssinica* and *Syzygium guineense* were found as low and intermediate GI food.

Abs 72

Assessment of Level of Undernutrition and Associated Factors of Under-Five Children among Model and Non-Model Farmers of Gozamen District, Ethiopia, 2015

Abrehet Zeray, Getiye Dejenu (BSC, MPH), Cheru Tesema (BSC, MPH)

Background: Undernutrition is usually the result of a combination of inadequate dietary intake and infection and indirectly linked to other causes. According to the 2014 Ethiopia mini Demographic and Health Survey, Stunting is more common in rural areas (42%). Almost 27% of children under age five are underweight. Nine percent of Ethiopian children are wasted. The aim of this study was to assess the level of undernutrition and associated factors of under-five children among model and non model farmers of Gozamen district, Ethiopia, 2015.

Methods: A community based comparative cross -sectional study was conducted using multi stage sampling followed by simple random sampling technique. Totally 507 respondents 170(33.5%) from model and 337(66.47%) from non model households were included in the study. Data were collected from July 22-Auguset 30⁄2015. Semi-structured Pre-tested questionnaire and anthropometric measurements were used to collect data. One day training was given for data collectors. Data was cleaned, coded and entered into Epi Data then exported and analyze using SPSS version 22. The Emergency Nutrition Assessment for Standardized Monitoring and Assessment of Relief and Transition was used to convert raw anthropometric data into Z scores. The crude and adjusted odds ratio together with their corresponding 95% confidence intervals was computed, Descriptive, Bivariate and multivariate logistic regression analyses were done. P-value <0.05 was considered to declare a result as statistically significant.

Result: In model families, the prevalence of undernutrition were 91(53.5%), 44.7% stunting, 15.3% under weight, 10% wasting where as in non model families, 217 (64.4%) were malnourished, 52.5 % stunting, 24.3% under weight and 11.3% wasting. Multivariate logistic regression showed that commonly intake food, food distribution, ante natal care service, source of drinking water and daily intake of food were significantly associated with malnutrition in model families whereas antenatal care service, solid waste disposal, water source, daily intake food, food distribution, complementary food start and complementary food education were significantly associated with malnutrition in non model families under five children.

Conclusion: The study implies that the prevalence of under nutrition was very high in non model families compared to model families under five children. Factors associated with under nutrition in model families were commonly intake food, food distribution, ante natal care service, source of drinking water and daily intake of food. In non model families factors associated to under nutrition antenatal acre service, solid waste disposal, water source, daily intake food, food distribution, complementary food start and complementary food education. There should be trainings, education about complementary feeding, the type of meal children should take and solid waste disposal.

Key Words: Under nutrition, Under-five, Model and Non-model farmers, Ethiopia

Abs 73

Determinants of Neonatal Mortality in Rural Northern Ethiopia: a Population Based Nested Case Control Study. *Robel Yirgu Belachew*

Introduction: In the majority of low and middle income countries, neonatal mortality remains high despite the gradual reduction in under five mortality. Newborn deaths which take place in the first 28 days after birth only contribute for about 38% of all under five deaths. This study has identified the magnitude and independent predictors of neonatal mortality in rural Ethiopia.

Methods: This population based nested case control study was conducted in rural West Gojam zone, Northern Ethiopia among a cohort of pregnant women who gave birth between March 2011 and Feb 2012. The cohort was established by Maternal and Newborn Health in Ethiopia Partnership (MaNHEP) project in 2010 by recruiting mothers in their third trimester as identified by trained community volunteers. Once identified, women stayed in the cohort throughout the period of their pregnancy receiving Community Maternal and Newborn Health (CMNH) training by health extension workers and community volunteers till the end of the first 48 hours post partum. Cases were 75 mothers who lost their newborns to neonatal death at the end of the follow up period and controls were, 150 randomly selected mothers with live post neonatal newborns. Data was collected using standardized questionnaires. Data on neonatal morality was collected after 40 days of bereavement period as it is culturally appropriate. Binomial logistic regression model was used to identify independent determinants of neonatal mortality.

Result: The neonatal mortality rate was 18.6 (95%CI 14.8, 23.2) per 1000 live births. Small family size, number of births (parity) and previous history of neonatal death were found to determine neonatal mortality. Neonatal mortality declines with an increase in family size where newborns who were born among a family of more than two had lesser odds of death in the neonatal period than those who were born in a family of two (AOR= 0.13, 95%CI 0.02, 0.71). Mothers who gave birth to 2-4 and 5+ children had lesser odds of losing their newborns for neonatal death (AOR= 0.15, 95% CI 0.05, 0.48) and (AOR= 0.08, 95% CI 0.02, 0.26) respectively. Previous history of losing a newborn for neonatal death also increased the odds of neonatal mortality during the last birth (AOR= 0.25 95% CI 0.11, 0.53).

Abs 74

Under Age Marriage, Sexual Debut, and Factors Associated With Risky Sexual Behavior among High School Students, Sidama Zone, Southern Ethiopia.

Birhanu Jikamo bBego

Background: Most reproductive health problems of the youth happen as a result of underage marriage, reduced age at sexual debut, and engaging in other risky sexual practices. However, there is scarcity of information regarding the issue in the developing reign.

Objective: The aim of this study was to determine student's age at first sex, magnitude of underage marriage, prevalence of the risky sexual behavior and factors associated with risky sexual behavior among high school students of Sidama Zone, Southern Ethiopia.

Methodology: Institution-based cross-sectional study design was conducted from January to June 2016. We used a stratified sampling technique to represent a total of 1,577students. The data was collected using self-administered questionnaires and analyzed using SPSS version 20 and Stata 12. Descriptive statistics and binary logistic regression models were used to determine the magnitude, and predictors of risky sexual behavior. The predicting ability of the model was checked by using Area under the ROC curve.

Result: The mean age at first sexual intercourse was 15.2 years (SD =+ 3.0). The prevalence of underage marriage and risky sexual behavior were 5% and 13.8% respectively. Having female sex, living alone while attending high school, chewing khat, having family growing khat, having friend chewing khat, being married high school student, being in grade 11 or 12, being student aged > 18 years, and most importantly drinking alcohol (AOR=13.2, 95% CI [8.1-21.5]) were all determinants increased student's odds of practicing risky sex.

Conclusion and recommendation: Significant proportion of students practiced risky sex. The lower mean age at student's first sex and student's early and illegitimate marital engagement demand urgent collaborative and strategic effort. Focusing on determinants of student's risky sex identified in this study may help preventive works.

Key words: risky sexual behavior, age at first sexual debut, under age marriage, Associated Factor

Abs 75

Substantiated Childhood Maltreatment and Intimate Partner Violence Victimization in Young Adulthood: A Birth Cohort Study.

Amanuel Alemu Abajobir

Objective: Little is known about the associations between various types of childhood maltreatment and multiple forms of intimate partner violence victimization in early adulthood. This study examines the extent to which childhood experiences of maltreatment increase the risk for intimate partner violence victimization in early adulthood.

Methods: Data for the present study are from 3322 young adults (55 % female) of the Mater Hospital-University of Queensland Study of Pregnancy with the mean age of 20.6 years. The Mater Hospital-University of Queensland Study of Pregnancy is a prospective Australian pre-birth cohort study of mothers consecutively recruited during their first antenatal clinic visit at Brisbane's Mater Hospital from 1981 through to 1983. Participants completed the Composite Abuse Scale at 21-year follow-up and linked this dataset to agency recorded substantiated cases of child maltreatment.

Findings: In adjusted models, the odds of reporting emotional intimate partner violence victimization were 1.84, 2.64 and 3.19 times higher in physically abused, neglected and emotionally abused children, respectively. Similarly, the odds of physical intimate partner violence victimization were 1.76, 2.31, 2.74 and 2.76 times higher in those children who had experienced physical abuse, sexual abuse, neglect and emotional abuse, respectively. Harassment was 1.63 times higher in emotionally abused children. The odds of severe combined abuse were 3.97 and 4.62 times greater for emotionally abused and neglected children, respectively.

Conclusion: The strongest associations involved reports of child emotional abuse and neglect and multiple forms of intimate partner violence victimization in young adulthood. Childhood maltreatment is a chronic adversity that is associated with specific and multiple forms of intimate partner violence victimization in adulthood.

Abs 76

Predictors of Exclusive Breast Feeding Duration among Women Who Had 6-12 Months Old Child in Gurage Zone, South Ethiopia: A Survival Analysis.

Abebaw Wasie Kasahun, Wako Golicha Wako, Meron Worku Gebere

Introduction: Exclusive breastfeeding is giving only breast milk for an infant from birth up to 6 months of age without giving other liquid or solid foods except medications. For the first six months of life, breast milk alone is the ideal nourishment to meet nutritional demand of the growing child. Although breastfeeding is universal practices, in Ethiopia only 52% of children under six months were exclusively breast fed.

Objectives: The objective is to investigate predictors of exclusive breast feeding duration among women who had 6-12 months old children in Gurage zone, south Ethiopia.

Methodology: Mixed method cross-sectional study was conducted to assess predictors of exclusive breast feeding duration in south Ethiopia. 828 study participants were recruited using multistage sampling technique for quantitative survey. Interviewer administered close ended questionnaire is used to collect quantitative data. Data entered using Epi Data and analyzed using SPSS version 21, Kaplan Meier curve with log rank test was used to compare survival difference due to selected covariates. Binary and multivariable cox regression model was used to identify independent predictors of exclusive breast feeding duration. Three focus group discussions were conducted to generate qualitative data. Qualitative data is transcribed and analyzed by thematic approach using open-code software.

Results: Mean duration of exclusive breast feeding was 5.7 months. 21.9% of women initiated complementary food before six months of child age. Maternal education of diploma and above {AHR: 2.89, 95% CI:1.05-7.97}, perceived inadequate breast milk {AHR: 11, 95% CI: 6.7-18.0}, cesarean section delivery{AHR: 3.8, 95% CI: 2.0-7.2}were factors negatively associated with exclusive breast feeding duration to six months child age; while counseling on child feeding during PNC {AHR: 5.1, 95% CI:2.5-10.23} has positive association.

Conclusion: Mean duration of exclusive breast feeding is below the recommended duration. Maternal education of diploma and above, perceived inadequacy of breast milk, cesarean section delivery, post-natal counseling on child feeding are factors significantly associated with exclusive breast feeding duration. Improving working environment to be conducive for employed women nurturing their children; establish baby care Centre near the work place and strengthening behavioral change communication activities towards breast feeding are recommended.

Key words: *Exclusive breast feeding, predictors, survival analysis, south Ethiopia*

Abs 77

Magnitude and Determinants of Low Birth Weight in Kersa District, 2014: The Analysis of Kersa Demographic Surveillance and Health Research Center data.

Hirbo Shore Roba

Background: Low Birth Weight defined as birth weight less than 2500 grams by the World Health Organization and it's estimated that 26 million low birth weight infants are born each year. Low birth weight is the principal risk factor for neonatal and infant mortality in developing countries. Literature showed great variation of the determinant factors of low birth weight and there is no to date community based research on low birth weight.

Objective: The objective is to assess Magnitude and determinants of Low Birth weight in Kersa District.

Methods: An observational cohort study on pregnant women was conducted from December 20013 to November 2014. During the study period 2116 live birth were registered and the weights of 1088 children were subjectively measured birth weight. Socio-demographic, economic and maternal factors were considered as predicators of LBW. Logistic regression was used to analyze the data

Results: The incidence of low birth weight was 21.9% (95%CL, 17.1%-26.7%). It is significantly associated with place of residence 4.52(95% CI: 2.06-9.93), maternal education 1.72(95%CI; 1.06-2.74), maternal occupation 3.61(95%CI: 1.16-11.25), monthly income Quantiles; 0.26 (95% CI: 0.15-0.44), 0.18(95% CI: 0.10-0.32), 0.60(0.38-0.94), Maternal parity 2.06(95%CI: 1.22-3.49) and multiple pregnancy 6.01(95%CI: 3.15-11.49).

Conclusion and Recommendation: The magnitude LBW was high in this study. The significant predictors of LBW were being place of residence, maternal education, maternal occupation, monthly income, type of birth and parity. Multi-faceted approaches such as: health education, maternal nutrition, improvement in socio-economic indices, and more and better quality ANC services.

Abs 78

The Roles of Indigenous Medicine in the Primary Health Care Delivery System among the Konso. *Tebaber Chanie*

Indigenous medical knowledge is widely prevalent around the world. In Africa, up to 80 percent of the population use indigenous medicine for primary health care, while in Ethiopia about 90 percent of the population still prefer to solve their health problems consulting indigenous healers. Many governments in Africa have planned to incorporate indigenous medicine practices to help meet their primary health care needs. Although public patronage is sustaining and even fostering their growth both in developing and developed countries, still there exist gaps between public choice and national, institutional efforts for integration. The study, therefore, aims to investigate the roles of indigenous medicinal practices for primary health care delivery, health-care options and factors affecting the resort and challenges of the integration and cooperation to the biomedical health care system. In order to meet the objectives of this study, mixed research design was used. This design allows the researcher to use multiple perspectives and methods to provide better understanding of practices in utilizing indigenous medicine and in the study area. Pursuing primarily the qualitative research methods such as systematic observation, in-depth interview, Focus Group Discussions (FGDs), survey method was also employed as a supplementary. Thematic analysis was employed to analyze, and at times synthesize the qualitative data and data survey was entered into Statistical Package for Social Science (SPSS), Version 20 for analysis.

Findings indicated that indigenous healing tends to be their first preference. The survey data supported that the majority (59%) of the respondents used indigenous medicine. The main reason explaining this preference is that indigenous medicine is culturally acceptable and financially affordable. The study also indicate that medicine for malaria is prepared by grinding and mixing ginger, Moringa leaves, garlic, and black seed (tikur azmud), and then the patient is made to drink the infusion. Data obtained from interviews and field observations also pointed out that over-exploitation of plant resources, deforestation and environmental degradation caused by overgrazing and excessive fuel wood collection were the major factors for the challenges of indigenous medicine. Interpretative approach in relation to indigenous medicine and healing can be reflected and understood in connection to how one can produce meaning from symbols, which facilitate relationships between indigenous health practitioners and patients. Understanding the cultural context of health, illness and healing and the involvement of indigenous healers in the primary health-care systems is imperative in the study area for the identification, prevention and treatment of different diseases. This is because, indigenous approaches to healing are based on a worldview that seeks to take into account the mental, social, spiritual, physical and ecological dimensions of health and well-being. Thus, in order to maximize the benefits of indigenous medicine, the legal frameworks and service facilities for the use of indigenous medicine for primary health-care service should be re-examined in light of addressing the needs and interests of the local people.

Key Words: Indigenous knowledge, Medicine, Practice

Abs 79

From their Own Perspective: Community Perceptions of Tuberculosis (TB) in a Rural District of Eastern Tigray, Northern Ethiopia.

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Background: Despite the availability of effective treatment for many decades, TB remains to be one of the few major killer diseases in the world. Studies reveal that TB persists in developing countries and among the socially disadvantaged community members. Many social science studies identified that the confusion of TB symptoms with other illnesses may affect health care choice. Therefore, it is important to recognize how TB is conceptualized by layperson and factors influencing such a perception. There is little knowledge on how TB is viewed and conceptualized in relation to other illnesses.

Objective: The objective of this study is to explore the conceptions of TB from the perspectives of Tigray and Afar ethnic communities of Sa'sie Tsaeda Emba woreda of Tigray.

Method: The study was conducted in high TB prevalent region of Ethiopia. Qualitative methods of data collection (Key Informant Interviews and Focus Group Discussions (FGD) were used to collect data from six purposefully selected sub-districts. A total of 12 FGDs (male and female community group separately) and 10 key informant interviews (health workers traditional healers and community leaders) were conducted. Preliminary content analysis and semiotic approach are used to describe the following themes: 1) TB as a biomedical disease; 2) *Quri/gala'o* [lit. cold in Tigrigna and Afar Languages]/TB complex.

Finding: An illness category *quri/galao* cover variety of conditions including common cold, TB and folk illnesses which are not related to the respiratory system. Causation beliefs include, being exposed to draft/wind, fatigue due to excess labor work, and social causes like migration. Many identify TB with *quri/galao*, while most perceive *quri/galao* can transform in to TB. Most found *quri/galao* is non communicable, while TB is contagious. Health seeking behavior is influenced by household economy and perceptions of causation and severity of illness.

Conclusion: TB may be confused with folk illnesses known as *quri/galao*. Wide use of the term *quri/galao* may affect decision to seek home based remedy or self treatment. TB control program, including, educational activities must consider how the communities in Tigray interpret the disease and vague terminologies like *quri/galao*.

Acknowledgment: This study is supported by NIH/Fogarty International Center Global Infectious Diseases grant D43TW009127, Emory University, Addis Ababa University, University of Gondar, and Armuar Hansen Research Institute.

Key words: tuberculosis, meaning, Eastern Tigray, Northern Ethiopia

Abs 80

Predictors of Therapeutic Communication between Nurses and Admitted Patients at Jimma University Specialized Hospital, Jimma Zone, Ethiopia.

Robera Olana Fite

Introduction: Therapeutic communication is purposeful interpersonal interaction which is patient centered. As governmental priorities worldwide continue to emphasize the inclusion of patients in health care delivery, there is a pressing need for research that focuses on the factors influencing therapeutic communication. However, previous research addressing predictors of therapeutic communication in the study area has never been performed.

Objective: The aim of the study was to assess predictors of therapeutic communication between nurses and admitted patients at Jimma University Specialized Hospital, Jimma zone, Ethiopia, 2016.

Methods: Institution based cross-sectional study using quantitative supplemented by qualitative method was conducted in Jimma University Specialized Hospital from March 21 to April9, 2016. A total of 192 patients were involved using stratified sampling for quantitative and 7 nurses were included using purposive sampling for the qualitative part. Principal component analysis, Independent t-test, ANOVA, simple and multivariable linear regressions were conducted using Statistical Package for Social Sciences (SPSS) version20. P-value less than 0.05 were taken as significant association.

Result: A total of 192 admitted patients in different wards of Jimma University Specialized Hospital were participated in the study obtaining a response rate of 96%. The study revealed that 67(34.9%) of the patients rated high level of therapeutic communication. Significant predictors of therapeutic communication were educational status (β=5.870,P=0.0.011), language difference (β= -6.002, P=0.014), education difference(β=5.208,P=0.010) and perceived patient view score(β=3.573,P<0.001)

Conclusion: The study has shown implementation level of therapeutic communication was low. Education, language difference, education difference and perceived patient view score were significant predictors.

Key words: Therapeutic, communication, predictors, admitted patients, nurses

Abs 81

Perceived Nurse-Physician Communication in Patient Care and Associated Factors in Public Hospitals of Jimma Zone, South West Ethiopia: Cross-sectional Study.

Ch*anyalew Worku Kassahun, Mirkuzie Woldie Kerie, Fikadu Balcha Hailu*

Background: Nurse–physician communication has been shown to have a significant impact on the job satisfaction and retention of staff. In areas where it has been studied, communication failure between nurses and physicians was found to be one of the leading causes of preventable patient injuries, complications, death and medical malpractice claims.

Objective: The objective of this study is to determine perception of nurses and physicians towards nurse-physician communication in patient care and associated factors in Public Hospitals of Jimma Zone, South West Ethiopia.

Methods: Institution based cross-sectional survey was conducted from March10 to April1 6, 2014 among 341nurses and168 physicians working in Public Hospitals in Jimma Zone. Data was collected using a pre-tested self-administered questionnaire; entered into Epi Data version 3.1 and exported to Statistical Package for Social Sciences (SPSS) version16.0 for analysis. Factor analysis was carried out. Descriptive statistics, independent sample t-test, linear regression and one way analysis of variance were used. Variables with P-value <0.05 were considered as statistically significant.

Results: The response rate of the study was 91.55%. The mean perceived nurse-physician communication scores were 50.88±19.7% for perceived professional respect and satisfaction, and 48.52±19.7% for perceived openness and sharing of patient information on nurse-physician communication. Age, salary and organizational factors were statistically significant predictors for perceived respect and satisfaction. Whereas sex, working hospital, work attitude individual factors and organizational factors were significant predictors of perceived openness and sharing of patient information in nurse-physician communication during patient care.

Conclusion: Perceived level of nurse-physician communication mean score was low among nurses than physicians and it is a gap that seeks attention. Hence, the finding of our study suggests the need for developing and implementing nurse-physician communication improvement strategies to solve communication mishaps in patient care.

Abs 82

Incidence and Risk Factors of First Line Antiretroviral Treatment Failure among HIV Infected Children in Amhara Regional State, Ethiopia.

Malede Mequanent Sisay, Tadesse Awoke Sisay, Yalemzewod Assefa Gelaw

Background: Initiation of antiretroviral drug (ART) treatment is a proven medication of HIV positive individuals by reducing the rate of disease progression and death. However, treatment failure becomes one of a public health issue in the sub-Saharan Africa. The evidence on the incidence of first line treatment failure and risk factors among children in Ethiopia is limited. This study aimed to assess incidence, and risk factors of antiretroviral treatment failure among HIV/AIDS infected children who were on a first line ART regimen in Amhara regional state.

Methods: A retrospective follow up study was conducted in 6 hospitals in Amhara Regional State from January2010 to March 2016. A total of 1006 children under the age of 15 years and started ART were included in the study. Medical chart and ART registration log book review was done using a standard checklist to collect the data. R version 3.2.0 statistical software was used for data analysis. Weibull cox-regression model was used to identify risk factors of treatment failure. Adjusted Hazard Ratio with its 95% CI was used to declare the statistical significance of the factors.

Results: The median age of study, children were 30.45 (IQR: 37) months. Sixty three children [7.65%, 95%CI (5.8, 9.5)] were developed treatment failure. Of these, 17 (26.98%) were immunological and 46 (73.02%) were clinical failures. The incidence rate of treatment failure was 22.06/1000 person-month. The cumulative probability of failure was 0.4304 (28562.5 person-months) observations. Being not disclosed [AHR=4.4, 95%CI (1.75, 11.3)], having opportunistic infections at during initiations of ART [AHR= 2.3, 95% CI (1.3, 4.1)] and having long duration of follow up [AHR = 0.06, 95% CI (0.02, 0.18)] were risk factors for treatment failure.

Conclusion: The treatment failure remains significant public health concerns. Not Disclosed HIV status, presence of OIs during initiation of ART and having long duration of follow up were found to be predictors of treatment failure. Hence close follow up of patients and provision of more affordable regimen should be considered with an adequate viral monitor.

Key words: Incidence; Antiretroviral; Treatment failure; First-line Regimen; children

Abs 83

Mortality and Determinant Factors of Second Line Antiretroviral Treatment among Adult HIV Infected Patients in Amhara Region, Ethiopia.

Wagaye Alemu Zenebe

Background: Adult mortality on antiretroviral therapy (ART) is higher in low-income than in high-income countries. Antiretroviral treatment programs in sub-Saharan Africa have high rates of early mortality. Though some studies in Ethiopia investigate the outcomes of first-line HIV treatment; to date, little has been done regarding second line treatment out comes specially mortality.

Objective: The aim of this study was to assess mortality rate and determinant factors of second line antiretroviral treatment among adult HIV infected patients in Amhara region, Ethiopia.

Method: Multicenter institution based retrospective follow up study was conducted among 1233 patients with age 15 years and above who started second line ART between 2008 and 2016 in eight selected hospitals in Amhara region. Cox proportional hazard model was fitted to explain factors associated with mortality. Log rank test and Kaplan Meier curve was used to estimate mortality rate. Variables with p-value <0.05 in multivariate regression was considered as statistically significant determinant of mortality.

Result: The median age of patients was 32 years (IQR, 11years) and 612(51.9%) were males. Among 1233 adult HIV-infected patients on second line ART 136(11.09%) died. Over the study period, mortality rate was 4.33 per 100 years with 3157 person years of follow up. Being in Dessie referral hospital (AHR: 33.8; 95%CI:4.52, 253.48) and Felegehiwot referal hospital(AHR: 9.9 ; 95%CI:1.25, 79.29), taking isoniazid (AHR:0.21; 95%CI:0.092, 0.52), modify second line regimen (AHR:0.076; 95%CI:0.043, 0.134), good adherence (AHR:0.44; 95%CI:0.24, 0.82) and illiterate educational status (AHR:2.25; 95%CI:1.24, 4.08) were independent determinants of mortality.

Conclusion: The rate of mortality was lower and most of deaths occurred within 12 months after switch to second line ART. Higher mortality among adult HIV-infected patients was associated with poor adherence, illiterate educational status, not taking INH, second line regimen not modified.

Keywords: Mortality, second line ART, Adult HIV infected patients, Amhara region

Abs 84

Factors Affecting Malaria Diagnosis and Treatment Delay among Children in east Shewa Zone of Oromia Region, Ethiopia.

Yusuf Daud Haji, Wakgari Deressa

Background: Malaria treatment delay in children is one of the major problems in Ethiopia. Prompt access to early presentation and effective anti-malarial treatment at health facilities is one of the major strategies for reducing the burden of malaria in children. The objective was to assess factors associated with malaria diagnosis and treatment delay among children in east Shewa Zone of Oromia Region

Methods: A facility-based cross-sectional design comprising mixed quantitative and qualitative research methods were conducted from Oct - Nov 2012 in five purposively selected health centers of East Shewa Zone. A total sample size of 836 mothers/caretakers and their children and 5 in depth interview and 3 focus group discussions were included in the study. A pre-tested structured questionnaire was used. Data were entered using Epi-info-3.5.3 and analysis was carried out using SPSS-16. Logistic regression was used to assess an association. Qualitative data were summarized and the result was triangulated across the groups.

Results: Of the total 845 caretakers 830 (98.2%) were studied. Only 198 (24%) of children with malaria visited the health center within 24 hours of illness onset. Delay for more than two days were about 49% and cited reasons like first wait and see in 30% of cases, followed by less seriousness of illness in 28% and lack of money in 22% cases. Among factors associated with treatment delay for more than two days giving any drug prior to visiting the current health facility; adjusted odds ratio ((AOR)= (4.06; 95% CI= 2.97-5.55), being daily laborer; (AOR= 2.24 95% CI= 1.03-4.89), distance walked; (AOR= 1.71; 95% CI= 1.10-2.67) and educational level of respondents; (AOR=1.56; 95% CI= 1.01-2.44).

Conclusions: Low early treatment seeking for malaria sick children and about half of children visited health centers after 2 days of illness. Prior giving drugs to the sick child, being child of daily laborer, >1hour walking distance to health center and educational status of mothers were associated with treatment delay. Therefore, efforts should be made to increasing early treatment seeking through solving the identified problems at all levels. Appropriate and tailored information, education and communication should be given to the community to raise early treatment seeking behavior.

Abs 85

Prevalence and Associated Factors of Sexually Transmitted Infections based on the Syndromic Approach among HIV Patients in ART clinic; Ayder Referral Hospital, Northern Ethiopia.

Abraham Getachew Kelbore

Background: Sexually transmitted Infections represent a large burden of disease worldwide with an annual incidence of about 333 million cases. In Ethiopia, studies on Sexually Transmitted Infections (STIs) among HIV patients are very few; therefore, conducting research on STIs in general and among HIV patients in particular is an important input to design policy and strategy aimed at preventing and controlling the infections.

Objective: The aim of this study was to assess the prevalence and associated factors of sexually transmitted infections among HIV patients in Ayder referral hospital, Tigray, Ethiopia.

Methods: Institution based cross-sectional study design was conducted among 353 HIV patients in Ayder hospital, ART clinic from July to September 2014. A systematic random sampling technique was used to identify study subjects. Data were collected using structured questionnaire and entered into and analyzed using SPSS 20 for windows. Descriptive analyses were used to estimate the prevalence of STIs and selected characteristics of patients. The effects of predictors on having STIs were analyzed using logistic regression and their effects were depicted using OR adjusted for confounding. P-value less than *0.05* were considered as statistical significant for all tests.

Result: Among total respondents; 150 (42.5%) were male and 203 (57.5%) female HIV patients .The prevalence of sexually transmitted infections based on the syndromic approach was 8.5% with specific prevalence of (4.6%) urethral discharge syndrome,(2.8%) genital ulcer syndrome, none of them scrotal swelling syndrome,(2.5%) lower abdominal pain syndrome,(0.3%) inguinal bubo and (5.5%) had vaginal discharge syndrome. 8 patients (26.7%) had recurrent disease and 28 patients (93.3%) treated without their partners. After multivariable logistic regression analysis, age(AOR=11.3 (95%CI:1.1-116.5), marital status (AOR=0.031 (95%CI:0.001-0.93)and having new sexual partner within the last three months (AOR=152.7 (95%CI:3.7-6274)were significantly associated with STI syndromes p-value*<0.05.*

Conclusion: The prevalence of sexually transmitted infections based on the syndromic approach among HIV patients was 8.5% and the factors associated with STIs among HIV patients were: age, marital status and having new sexual partner within the last three months**.** Moreover, further studies to explore the predictor variables are highly recommended.

Keywords: Prevalence, Sexually Transmitted Infections, Syndrome

Abs 86

In vitro and in vivo Antimalarial Activity of Novel Harmine-Analog Heat Shock Protein 90 Inhibitors: A Possible Partner for Artemisinin. *Abebe Genetu Bayih*

Background: The emergence of artemisinin resistant *Plasmodium falciparum* strains poses a serious challenge to the control of malaria. This necessitates the development of new antimalarial drugs. Previous studies have shown that the natural beta-carboline alkaloid harmine is a promising antimalarial agent targeting the *Plasmodium falciparum* heat-shock protein 90 (PfHsp90). The aim of this study was to test the antimalarial activity of harmine analogs.

Methods: We synthesized 42 harmine analogs and investigated the binding of these analogs to *Plasmodium falciparum* heat shock protein 90. The *in vitro* antimalarial activity of two of the analogs, 17A and 21A, was evaluated using a 72h growth inhibition assay. The *in vivo* antimalarial activity was tested in *P. berghei* infection of BALB/c mice. The potential of 21A for a combination treatment with artemisinin was evaluated using *in vivo* combination study with dihydroartemisinin in BALB/c mice. Cytotoxicity of the harmine analogs was tested *in vitro* using HepG2 and HeLa cell lines.

Results: 17A and 21A bound to PfHsp90 with average IC_{50} values of 12.2 ± 2.3 μM and 23.1 ± 8.8 μM, respectively. They also inhibited the *P. falciparum W2* strain with average IC_{50} values of 4.2 ± 1.3 μM and 5.7 ± 1.7 μM, respectively. *In vivo*, three daily injections of *P. berghei* infected BALB/c mice with 100 mg/kg of either 17A or 21A showed significant reduction in parasitemia with a 51.5% and 56.1% reduction, respectively. Mice treated with 17A and 21A showed a median survival time of 11 and 14 days respectively while the vehicle control mice survived a median of only 8.5 days. A dose-ranging experiment with 21A showed that the compound has a dose-dependent antimalarial effect. Furthermore, treatment of infected mice with a combination of 21A and dihydroartemisinin (DHA) showed a dramatic reduction in parasitemia compared to treatment with DHA alone.

Conclusion: We have identified a novel, non-toxic harmine analog which binds to PfHsp90 protein, inhibits *P. falciparum in vitro* at micromolar concentration, reduces parasitemia and prolongs survival of *P. berghei* infected mouse with an additive antimalarial effect when combined with DHA.

Abs 87

Early Marriage in Sub-Saharan Africa: Systematic Review and Meta-Analysis.

Dureti Abdurahman (Mphill), Nega Assefa** (PhD), Bizatu Mengiste (PhD***), Beker Feto (MPhill)*****

Introduction: This article explores the prevalence and determinant factors of early marriage in Africa. It focuses on sub-Saharan region as it is an area with the highest rates of early marriage in the world. Approximately 40% of women aged 20-24 worldwide who were married before the age of 18 live in Sub-Saharan Africa. Since the time of early marriage is the period when the girls are not yet ready to sexual intercourses, pregnancy, and fertility, very often it is concluded by a greater number of maternal mortality and child morbidities. The causes of early marriage are diverse and complex; and it is related to *religious, cultural, economic and sociological factors*. To have better understanding of its causes and consequences at wider scale, systematic review and Meta analysis based on existing literatures would help a lot.

Objective: The aim of this study was to conduct a systematic review and meta- analysis of studies on early marriage and risk factors associated among married women in sub Saharan Africa countries.

Methods: A literature search was conducted with Pub Med and Google scholar using the key words of ('Prevalence and' "Determinant factor" AND (early marriage" OR Child marriage") AND Sub-Saharan Africa) for articles published from 2000 to date .Study quality was assessed based on JBI criteria of 2016,Adjested odds ratio, standard errors, study design and sample size were extracted from the included studies and meta analyzed using CMA version 2 .Heterogeneity among studies was assessed using Q test statistics and $I^2$was used to calculate the percentage of variation between studies that is attributable to heterogeneity. Effect size was measured using odds ratio. Pooled odds ratio for the prevalence the determinants of early marriage were calculated using random model.

Results: In this review and meta analysis studies, the overall prevalence of early marriage was 63.1 %(0.550 %-0.706 %, p=0.002) with minimum prevalence of 45% to 82%. Our results also indicates the increased odds of early marriage among rural residence (0.753, 0.670-0.845, CI 95%) as compared to women in urban residents. There was also increased risk of early marriage among illiterate /no formal education with odds ratio of 1.792(1.112-2.886, CI 95%), as compared to women with secondary and above classes. More over there is an increased odds of early marriage among low income households with odds ratio of 1.978(1.521-2.573,CI 95%)compared to middle income households, However there were heterogeneities in the included studies.

Conclusion and Recommendation: Communities' socio-cultural factors, being rural resident, illiteracy of women or lower educational level of women, lack of awareness of legal consequences of early marriage and lower households' income were statistically significantly associated with higher probability of being married at early age .So, engaging the whole communities in different ways of thinking about gender and empowering girls, girl's education, employment options for girls themselves as well as working with community and religious leaders offering economic support and incentives for girls and their families and fostering an enabling legal and policy frame work could help in preventing early marriage.

Key words: Early marriage, Determinants of early marriage, prevalence of early marriage.

Abs 88

Prevalence and Factors Associated with Disrespectful and Abusive Maternity Care Experience During Childbirth in Alamata District, Tigray, Ethiopia: Facility Based Cross Sectional Study.

Reda Shamie Welde

Background: Maternal mortality continues to be the biggest challenge facing Ethiopia and other developing countries. Although progress has been made in making maternity services available closer to the community, the rate of deliveries attended by skilled birth attendants has remained very low. Disrespectful and abusive maternity care is believed to have contributed to low utilization of facility delivery services.

Objective: The main purpose of this study was to assess prevalence and factors associated with disrespectful and abusive maternity care experience during childbirth in Alamata district, Tigray Ethiopia, 2016.

Method: Facility based cross-sectional study was used. The data were collected using standardized, pretested and structured questionnaire from Alamata District from February 01 to April 01, 2016. Three hundred and fifty study participants were selected using systematic random sampling technique. Data were entered in to Epi-data3.1 and analyzed using SPSS version 20. Bivariate and multivariable logistic regressions were used to see the association between outcome and explanatory variables. Statistically significance was declared by using p-value and 95% confidence interval for odds ratio.

Result. Three hundred and fifty participants provided data. The prevalence of disrespectful and abusive maternity care experience was 14% in this study. Age (15-24 years (AOR=20.12; 95%CI3.364-120.348), educational status (AOR=3.92, 95%CI 1.392-19.351) monthly income (AOR= 7.98; 95%CI 3.117-20.366) and place of birth (AOR=24.92, 95%CI 8.892-69.812) were independently and statistically associated factors with disrespectful and abusive maternity care experience.

Conclusion and Recommendation: Disrespectful and abusive maternity care experience was high in the District. The factors that were associated with disrespectful and abusive maternity care experience in this study (age, educational status, monthly income and place of birth) which are socio-economic and facility related and are almost all beyond the control of mothers. Therefore, government and other nongovernmental organizations should strength the enforcement of the reproductive rights of women for dignified and respectful maternity health care during child birth

Abs 89

Knowledge, Attitude and Intention to use Long Acting and Permanent Contraceptive Methods among Women in HIV Chronic Care, Addis Ababa, Ethiopia.

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Background: The use of Long-acting and permanent family planning methods (LAPMs) remains relatively small and sometimes a missing component of national family planning programs in sub-Saharan Africa**.** This study aims to assess the knowledge, attitude and intention to use long acting and permanent contraceptives methods and its determinants and barriers among women in HIV chronic care in Addis Ababa, Ethiopia.

Method: A mixed methods facility based cross-sectional study design was conducted in Addis Ababa private and public health institutions from February-March 2016. A total sample size of 400 women was used for the quantitative study. Moreover, 10 In-depth interviews were conducted among providers and member of mother support group. Data were entered in EPI INFO version 7 and exported to STATA version 12 for analysis. Descriptive summary measures and odds ratio along with 95% confidence interval in Binary Logistic regression was employed to ascertain association. Qualitative data were coded and categorized using Open Code software and thematic content analysis were used for analysis.

Result: Among 400 women in HIV chronic care, 178(44.5%) of women had low knowledge, more than half 212(53%) had negative attitude to use the methods and only 110(27.5%) had the intention to use LAPMs in the future. Moreover, the odds of women's intention to use LAPMs among women who didn't use LAPMs were AOR=2.85: 95% CI (1.22, 8.78) times more likely to use LAPMs compared with women who ever used LAPMs. Likewise, women who had two or more total children were AOR=3.28: 95% CI (1.22, 8.78) times more likely to desire LAPMs in the future compared to those who had less than two children. Similarly, women who had decided on the use of family planning together with their husband were highly likely AOR=20: 95%CI (5.09-80.45) to desire use of LAPMs. Women who had higher knowledge score were AOR=10: 95%CI (3.11, 33.4) times more likely to desire use of LAPMs compared with women who had low knowledge score. There were different myths and misconception attributed to LAPM including implant as a cause for weight gain, hypertension, anemia and other illness and IUCD as a cause of anemia, illness, infertility and cancer.

Conclusion: Most women in HIV chronic care had low intention to use LAPMs. About half of women in HIV chronic care had low knowledge and negative attitude towards LAPMs. History of use of LAPMs, children ever born, joint decision with a partner and knowledge were associated with intention to use LAPMs. Fears of weight gain, hypertension, anemia and other illnesses, infertility and cancer were some of the barriers to use LAPMs. Proper counseling of women on chronic HIV care to change the attitude, myths and misconceptions on LAPMs should be done.

Abs 90

Socio-Economic and Demographic Determinants of Adolescent Fertility in Eastern Ethiopia.

Nega Assefa, Melkamu Merid Mengesha, Yadeta Dessie Bacha

Background About 16 million adolescent women aged 15 to 19 and some 1 million under 15 give birth every year in most low-and middle-income countries. This segment of the population is disproportionately affected by several social and development problems owning to poor transition from childhood to adulthood. There is scarcity of information on adolescent fertility characteristics and determinants in many developing countries including Ethiopia. This analysis tried to compare urban and rural adolescent fertility characteristics in Eastern Ethiopia.

Objective: The objective of this study was to assess the socio-economic and demographic determinants of adolescent fertility in Harar and Kersa Health and Demographic Surveillance System (Harar and Kersa HDSS) sites, Eastern Ethiopia.

Method: The analysis was based on 5368 data extracted from the database of Kersa and Harar Health and Demographic Surveillance System (Harar and Kersa HDSS) database for observation of the year 2014. Descriptive statistics were calculated and tables were used to summarize and present the information. SPSS for windows version 23 was used to analyze the data. All variables with P-value <0.1 in the bivariate logistic regression were entered in to the multivariable logistic regression. All statistical tests were declared significant at P-value < 0.05.

Result: Adolescent fertility rate was 39 per1000 in Harar and it was 144 per 1000 in Kersa. Never married adolescents (AOR=0.08, 95% CI (0.01, 0.76)) and ethnic Harari (AOR=0.06, 95% CI (0.01, 0.64)) were less likely to be fertile during the adolescence period in Harar. In Kersa (dominantly rural), adolescent girls currently in marriage (AOR=9.07, 95% CI (1.13, 73.09)), in the lowest wealth quintile (AOR=1.68, 95% CI (1.12, 2.54)), and age between 17 and 19 years (AOR=2.13, 95% CI (1.65, 2.76)) had higher likelihood of fertility during the adolescence.

Conclusion: interventions designed to reduce early marriage, advocacy and initiating family planning methods especially in the rural HDSS, targeting age 17-19, and adolescents in the lowest wealth quintile are recommended to reduce the burden of adolescent fertility.

Abs 91

Intimate Partner Violence and Peri-natal Depression in sub-Saharan Africa: Systematic Review and Meta-Analysis.

Wondimye Ashenafi, Nega Assefa, Bezatu Mengistie

Background: Peri-natal mental disorders following women's exposure to violence in African settings is unacceptably high, especially in sub-Saharan African countries where pregnancy rates are very high and the means of detection and treatment for the mental health problem low. In the region very limited studies have been conducted on peri-natal depression and its association with experience of intimate partner violence (IPV), with statistics showing wide variations.

O**bjective:** The objective of this study was to summarize evidences in magnitude of association between women's experience of intimate partner violence and peri-natal depression in sub-Saharan African.

Methods: The review was done following standard procedures of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement. In the retrieval of relevant studies, AJOL, Pubmed Central, Google scholar and the like databases were searched with time reference of 1990-2016. The retrieved studies data were summarized using comprehensive meta-analysis software. In the random effects meta analysis, heterogeneity was evaluated using Q and I^2 test. A subgroup analysis was done on identified moderators to evaluate sources of heterogeneity. Through sensitivity analysis, the influence of individual studies on summary effect estimates was examined.

Results: Overall 20 studies involving 10,134 women qualified for systematic review and 16 of them for meta-analysis. The reported mean prevalence of peri-natal depression was 31.6% (SD=16.6; 95%CI:23.6-39.6)and mean prevalence of experiencing IPV among women depressed during peri-natal period were 44.1% (SD=24.5;95%CI:31.2-57.1). The review showed IPV is positively associated with peri-natal depression in cross sectional studies (OR 3.07, 95% CI 2.15-4.37, p=0.00;I^2=71.4%), and indicated IPV as being a prenatal risk factor for postnatal depression in prospective cohort studies(OR 1.52, 95%CI 1.03-2.25, p=0.03;I^2=60.4%).From sensitivity analysis, no significant heterogeneity was observed among the effect estimates on different depression screening tools[Q(df)=Q(6)=8.65;p=0.194].Removing unpublished studies brought no significant change in effect size estimates.

Conclusion: This systematic review and meta-analysis showed an increased odds of peri-natal depression among women who experienced IPV. Given high pregnancy rate and low mental health services in sub-Saharan African countries, the effect of IPV on maternal mental well being is compounding. Screening of IPV and depression at health care and community level is essential for early detection of these maternal co-morbidity.

Keywords: peri-natal depression, prenatal depression, postnatal depression, Intimate partner violence, Sub-Saharan Africa.

Abs 92

Dietary Diversity, Meal Frequency and Associated Factors among Infant and Young Children Aged 6-23 Months in Northwest Ethiopia, 2014.

Melkamu Beyene (MSc in Human Nutrition)

Background: Inappropriate feeding increases the risk of under nutrition, illness and mortality of children less than 2 years of age. Around 44% of under five children are stunted, 10 % wasted and 29 % underweight in Ethiopia, but the feeding practice shows only 4% of infant and young children have feed using minimum acceptable diet.

Objective: The objective is to assess minimum dietary diversity, meal frequency and associated factors among infant and young children aged 6-23 months in Dangila, Northwest Ethiopia.

Methods: Community based cross-sectional study was conducted from March to April in Dangila. A total of 925 children aged 6-23 months were included. Simple random sampling technique was used. Interviewer administered questionnaire were used. Bivariate and multivariable logistic regression analyses was employed to identify factors associated with minimum dietary diversity and meal frequency.

Results: A total of 920 children 06-23 months were included. Proportion of children who met the minimum dietary diversity and meal frequency was 12.6% and 50.4% respectively based on WHO indicator. Mothers education [AOR =2.516], Age of a child [AOR=2.047], Birth order of index child [AOR=2.077], Urban area [AOR=2.094], Home gardening [AOR=2.031] and Media exposure [AOR=2.738] has significant association with dietary diversity. Child age [AOR=3.025], Birth order of index child [AOR=1.580], Mother involve in decision making [AOR=1.512], Media exposure [AOR=2.620] and Postnatal care Postnatal visit [AOR=2.295] has significant association with meal frequency.

Conclusion and recommendation: children received minimum dietary diversity and meal frequency is low. Being Young age, first birth order and lack of media exposure affect both dietary diversity and meal frequency. Lack of education, live in rural area and lack of home gardening affect dietary diversity. Mother involvement in decision making and postnatal visit was protective for meal frequency. To increase dietary diversity and meal frequency increasing mother's education, home gardening, mass media promotion and mother involvement in decision making are essential.

Key words: Dietary Diversity, Meal Frequency, infant and young child, Dangila.

Abs 93

Fatty Acid Profile and Nutritional Content of Commonly Consumed Edible Oils Found in Addis Ababa and their Health Implications: A Physicochemical and Animal Model Study. *Kifle Habte*

Introduction: Keeping food safety and quality are the major components for food and nutrition security and for protecting human health. Directly or indirectly, edible oils are included in every day dish and due to this, long time preference to the type of edible oil quality and safety should bring either positive or negative efect on overall health and development of individual consumer. The objective of this research is to conduct fatty acid profile, nutritional content and animal trial study on the commonly consumed edible oils and based on the finding to write a way forward for policy makers, inspection and controlling bodies and possibly discuss with oil processers with the need to improvement.

Material and Methods: Sixteen different types of edible oils are collected from shops and supermarkets found in Addis Ababa in 2015. In this study, almost all types of edible oils found in Addis Ababa were included. Following the sample collection, the laboratory analysis was done according to AOAC, 2005, standard method of fat and oil analysis. The fatty acid profile and nutritional analysis were done in South Africa, Pretoria, ARC laboratory; however the animal trial and some of the physicochemical analysis were done at EPHI laboratory in the same year.

Results and Discussion: Among total of sixteen oil brands analyzed, seven were produced in Ethiopia. And all these were liquid, but actually they were poor in basic labeling. However the rest imported brands of oils had fulfilled the necessary labeling requirements in expire date, having nutrition facts, cholesterol level and fortification information as compared to local ones. Again From the seven analyzed local oils, six were contain acid value higher than the standard and five were not refined: either looks deep-yellow or brown-yellow, and three of them had settlable matter. Being solid or hydrogenated has brought significantly low value in iodine, cis, omega 3 and omega 6 level; however they were significantly high in saturated, monounsaturated and trans fatty acids content at $p<0.05$ compared to the liquid oils. In the animal trial study, the animals that were given solid oils as a treatment in the study duration has shown high level of body cholesterol level compared to those which were given liquid oils and the control rats.

Conclusion and Recommendation: Locally produced edible oils have good quality in Polly unsaturated fatty acids (PUFAs), cis fatty acids, vitamin A content and low saturated FAs; however they need to pass through all necessary oil refinery steps in order to neutralize the acidity and remove impurities, so that to make safe for consumption. The inspection and control mechanism should be strong to conform to the standard, in safety and labeling of the product. Compared to liquid vegetable oils, palm oils have high saturated, mono unsaturated and omega 9 fatty acids with low in cis and the two omega fatty acids; due to this, substituting liquid (high PUFAs) oils in the place of solid (high in saturated fatty acids) are recommended for their many health benefits. Actually further clinical trial on human subject or a follow up study is important to describe the cardiovascular and lipid profile effects of eating solid oils on human subjects.

Key words: fatty acid profiles, saturated and unsaturated fatty acids, cholesterol, animal trial and physicochemical.

Abs 94

Determinants of Early Initiation of Complementary Feeding in Sinan District, Northwest Ethiopia: a Case Control Study. *Kedir Yimam Ahmed*

Introduction: Complementary feeding begins either too early or too late are associated with under nutrition of the infants, and expose them to infectious diseases like diarrheal and respiratory diseases. Sustainable Development Goal-2 to end all forms of malnutrition cannot be achieved without substantial improvement of infant and young child feeding practices. The aim of this study was to identify the determinants of early initiation of complimentary feeding.

Methods: Unmatched case-control study was conducted among a total of 870 mothers (i.e. 218 cases and 652 controls) who gave birth in the last one year in Sinan District. A. Controls were those mothers who were exclusively breastfed their infant for completed six months, whereas those who initiate complementary feeding before completed six months were cases. Multivariable logistic regression analysis was applied to identify independent predictors.

Result: The odds of early initiation of complementary feeding were significantly higher among mothers who were 15-25 years (AOR = 3.09, 95% CI: 1.46, 6.53) and 26-35 years (AOR = 2.62, 95% CI: 1.37, 5.0) of age groups. Mothers who were daily laborer (AOR = 4.22 95% CI: 1.18, 15.06)), with lower monthly income (AOR = 5.33 95% CI: 2.44, 11.64), influenced by their relatives (AOR = 4.91 95% CI: 3.02, 7.97), not knowledgeable about infant feeding practices (AOR = 2.70, 95% CI: (1.68, 4.33), and assisted by TBAs or relatives (AOR = 2.87 95% CI: 1.72, 4.79) were significantly associated with early initiation of complimentary feeding. Regarding ANC visits, having one visit (AOR = 20.35 95% CI: 7.77, 53.26), and two visits (AOR = 3.71 95% CI: 2.06, 6.67) were found to be independent predictors.

Conclusion: It is concluded that mothers who are younger, daily laborer, with lower monthly income, assisted by relatives or TBAs, with less frequent ANC visits, influenced by their relatives about complimentary feeding and not knowledgeable about infant feeding practice were independently predicted early initiation of complimentary feeding.

Key words: Exclusive breast feeding, Early initiation of complimentary feeding, Ethiopia.

Abs 95

Decomposing the Burden of Global Malnutrition and its Associated Factor among under Five Year Children in Gurage Zone, Southern Ethiopia

Andamlak Dendir Egata

Globally, malnutrition is one of the most common causes of morbidity and mortality in children under the age of five year and the relative importance of each of the known risk factors of malnutrition and its burden are likely to vary between settings. However, little information is available on the burden of global malnutrition and its associated factor. Hence, this study aimed to assess the burden of global malnutrition and its associated factor in Gurage zone.

A community based cross-sectional study design was applied to determine the burden and the existing exposure difference between study children. Through simple random sampling technique, a total of 1062 eligible children were included in the study data were collected through interviewer administered questionnaire with anthropometric measurement tool and entered through Epi-data 3.1 computer program and analyzed through SPSS version 21. Univariate, Bivariate and Multivariate analysis were done to come up with the final results. Adjusted Odds Ratio was calculated through binomial multiple logistic regressions model and later 95% CI was used to test statistical significance.

The study revealed that the prevalence of global acute malnutrition, chronic malnutrition and underweight were 13.6%, 23.9, and 30.1 %, respectively. Unimproved sanitation [AOR 1.58 (95% CI 1.13-2.25)], short duration of exclusive breast feedings [AOR 1.44 (95% CI 1.05-1.97)], sever household food insecurity [AOR 2.06 (95% CI 3.49-3.33)] and maternal disempowerment [AOR 4.1(95% CI 2.69-6.24)] were significantly associated with the problem. The inherent limitation of the study was failing to establish temporal relationship between outcome and exposure variables.

Conclusions: The burden of global malnutrition in the study area was relatively high indicating that it is a major public health problem of the area and it is possible to prevent it through promotion of improved sanitation, household food security and maternal empowerment.

Key word: Undernutrition, Maternal Empowerment, Food insecurity, Ethiopia

Abs 96

Microbial Quality of Edible Oil Examined at Ethiopian Public Health Institute, Addis Ababa, Ethiopia: Retrospective Study.

Waktole Sima Gobena

Background: Nowadays food safety is considered to be one of the most global public health concerns. Edible oil is one of the most popular types of food to be consumed in every Ethiopian house but its safety is not emphasized. It is produced in Ethiopia from small scale production to large industry level and / or imported from other countries.

Objective*:* The objective is to study microbial and hygienic quality of edible oil.

Methods: A six year retrospective study design was conducted from January 2010 to January 2015 on129 edible oil samples which were examined at Ethiopian public health institute, public health microbiology and research laboratory, Addis Ababa, Ethiopia. The data were extracted using developed format from a laboratory registration book. Edible oil samples were examined for the presence of yeast and mould, aerobic plate count, total coliforms, fecal coliforms, and *E.coli*. Additionally examination for the presence of pathogenic organisms like *salmonella species*, *shigella* species, and *staphylococcus aureus* were also performed. Data was cleaned and entered to Microsoft XL and then exported to SPSS for statistical analysis and values of different parameters were expressed as the mean ± standard error (±S.E).

Results: The microbial examination of edible oil samples revealed that from the total of 129 edible oil samples 62(48%) was not incompliant with Ethiopian standards. The aerobic plate count 46(35.6), moulds 32(24.8), Yeasts 4(3.1), total coliforms 6(4.5%). Fecal coliforms, E.coli and S.aureus were found only in one sample. None of the examined edible oil samples contain salmonella and shigella organisms.

Conclusion: According to this finding, edible oils are not at a good hygienic condition and therefore strengthening the quality controlling body and increasing public health awareness are important.

Key words: edible oil, Ethiopian public health institute.

Abs 97

The Effectiveness of Post-Training Mentoring on Health Care Provider's Knowledge and Skills Retention in Basic Emergency Obstetric and Newborn Care.

Muluneh Yigzaw Mossie, Firew Ayalew Desta, Hannah Gibson, Gizachew Eyassu Aynalem

Background: A post-training follow-up visit is reported as one of the effective strategies to reinforce clinical skills and help health providers transfer these skills to clinical work in health facilities. The aim of this study was to determine the effectiveness of post-training face-to-face mentoring on knowledge and skills retention of health care providers working in health centers in Ethiopia.

Methods: A cross-sectional study was conducted to measure the knowledge and skills of 75 health care providers (Health Officers, Midwives and Nurses) in managing the seven Basic Emergency Obstetric and Newborn Care (BEmONC) signal functions three months post-training on the national standard for BEmONC training. The study was conducted at health centers in Amhara, Oromia and SNNP regions. Data was collected from providers trained on BEmONC from November 2015 to April 2016. Knowledge was measured by self-administered questionnaires and skills were measured by expert observations using clinical simulations three months post-training. Group comparison between those who received post-training mentoring and those who did not was conducted using independent samples t-test.

Results: Among health care providers who attended BEmONC training, about 68% received post-training face-to-face mentoring. The percentage mean skill score was 88.0 (95% CI = 85.9 - 90.1) among health care providers who attended BEmONC training and received face-to-face mentoring compared to 82.0 (95% CI = 78.9- 85.1) among those who did not receive post-training mentoring. The overall percentage mean competency score (knowledge plus skill) was 83.2 (95 % CI = 80.7-85.7) among health care providers who attended BEmONC training and received post-training face-to-face mentoring compared to 77.0 (95% CI = 73.4 - 80.6) among those who did not receive post-training mentoring.

Conclusion: Post-training face-to-face mentoring is an effective intervention to reinforce skill retention three months post-training. Concerted efforts should be made to provide face-to-face mentoring for providers undergoing skills-based in-service training in BEmONC and potentially other clinical skills.

Abs 98

Assessment of Factors Associated with Pregnant Mothers Intension toward Institutional Delivery Care Services Utilization in North Shoa Administrative Zone, Amhara National Regional State, Ethiopia.

Abdurahman Mohammed Ahmed

Introduction: Reducing maternal mortality is a global priority which is particularly relevant in developing countries including Ethiopia. The key strategies to reduce Maternal mortality ratio and improving maternal health is increasing institutional delivery service utilization of mothers under the care of skilled birth attendants; conversely, this service is significantly lower in Ethiopia, as well as in Amhara Regional State.

Objective: This study aims to identify factors associated with intention of institutional delivery service utilization among pregnant women in North Shoa Administrative Zone, Amhara National Regional State, Ethiopia.

Methods: Community based cross sectional study was conducted in North Shoa Administrative Zone, Amhara National Regional State, Ethiopia. Multistage sampling technique was used to get the total sample size of 408 pregnant women in their third trimester. A pre tested structured questionnaire was used to collect the data. Data entry and analysis were done by using EPINFO version 6 and SPSS version 20 software packages.

Results: Three hundred forty two (89.1%) of the pregnant women had an intension to give birth at the health institution. The logistic regression model revealed women educational, ANC visit, thinking institutional delivery necessary for all pregnant and Knowledge on risks which may happen during delivery were significantly associated with intension to give birth at health facilities.

Conclusion: The study indicated as there is high level of intensions in using institution delivery care service. But there is a significant difference between the intension and actual use of institutional delivery care services based on the national data on institutional delivery care services utilization. Therefore, Ministry of Health has to work to change the behavior of pregnant women to minimize the gap between intention and actual use of institutional delivery.

Abs 99

Magnitude and Factors Associated with Birth Preparedness and Complication Readiness Among Semi-Pastoral Pregnant Women In Bule Hora District Borena Zone, South Ethiopia.

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Background: Avoidable morbidity and mortality of pregnant woman have been a challenge in developing counties like Ethiopia. Birth preparedness and complication readiness by mothers are critical in reducing morbidities and mortalities due to these complications by promoting the timely utilization of skilled maternal health care.

Objective: This study was conducted to assess the magnitude and factors associated with birth preparedness and complication readiness among semi pastoral pregnantwomen in Bule Hora woreda, Borona Zone, Ethiopia.

Methods: A community based cross sectional study was conducted in 2015, and samples of 746 pregnant women were enrolled. Data were collected by interviewer-administered structured questionnaire and analyzed by SPSS V.20.0. Descriptive, binary and multiple logistic regression analyses were conducted. Statistically significant tests were declared at a level of significance of P value < 0.05.

Result: The overall status of Birth preparedness and complication readiness was 27.1%. Factors that have statistically significant association with birth preparedness and complication readiness were attending any formal education (AOR=4.65, 95% CI=2.45-8.63), husband's occupation or being merchant (AOR=3.83, 95%CI=1.52-9.64), spouse attending any formal education (AOR=3.35, 95% CI= (1.83-6.14), ANC visits greater than four times (AOR= 17.78, 95%CI=7.11-44.47)have significant associate with BPCR. and knowledge of woman at least two danger signs during Pregnancy, during delivery and after delivery (AOR= 3.32, 95% CI=1.64-6.69) , (AOR= 3.13, 95% CI=1.58-6.20) and (AOR= 3.75, 95% CI=1.93-7.28)respectivelywere also significantly associated with birth preparedness andcomplication readiness..

Conclusion: In this study only small respondents were found to be prepared for BPCR in study area. Education status of woman, education of status and occupation of spouse among socio-demographic factors associated with BPCR. In addition ANC frequency and knowledge of woman to danger signs during Pregnancy, labor and postpartum determinate factors. Improved ANC service and BPCR oriented health education are recommended

Abs 100

Quality of Antenatal Care Services Affects Completing Four or More Antenatal Care Visits in Ethiopia: A Study Based on Demographic and Health Survey.

Kindie Fentahun Muchie

Background: In Ethiopia an average annual decline of maternal mortality rate from 1990 to 2013 was 5%. This figure was below the expected 5.5% or more to achieve targeted 75% in between 1990 to 2015. Antenatal care is one of the most effective health interventions for preventing maternal mortality. In Ethiopian only 32% of women with a live birth in the five years received the recommended minimum of four antenatal care visits from skilled health personnel. This study examined individual, household and community level potential determinants of completing four or more Antenatal care visits in Ethiopia.

Methods: Data were obtained from the 2014 Ethiopian Mini Demographic and Health Survey. Information from 3694 women aged 15–49 years who had given birth within five years preceding the survey were included. Robust standard error method of generalized estimation equations for binary outcome variable from clustered data was used.

Results: Only 33.0% women completed four or more ANC visits. Out of the total women 56.5% had at least one ANC visits. Besides, out of that had at least one ANC 37.4% had their visit in their first trimester. Completing recommended four or more antenatal care visits were negatively associated with lower educational level, lower economic conditions, higher birth order and rural residence. But, it was positively associated with community level high quality of antenatal care services.

Conclusions: Despite women in Ethiopia have free access to antenatal care, this finding revealed inequalities in the completion of four or more antenatal care visits, highlighting the need to make a concerted effort to improve the quality of antenatal care delivery, the uptake of ANC services, early arrival in the first trimester for antenatal care services and monitoring of mothers who begin antenatal care in order to guarantee continuity.

Key words: ANC, 4+ visits, Determinants, Clustered data, Ethiopia

Abs 101

Prelacteal Feeding Practice and its Associated Factors among Mothers Having Children Less Than 24 Months of Age in Fitche Town, North Showa, Ethiopia, 2016.

Dejene Hailu Beyene

Background: A pre-lacteal feed is any food except mother's milk provided to a newborn before initiating breastfeeding. The early introduction of complementary feeds before the age of six months can lead to displacement of breast milk and increased risk of infections such as diarrhea, which further contributes to weight loss and malnutrition.

Objective: The aim of this study was to assess pre-lacteal feeding practice and its associated factors among mothers having children less than 24 months of age in Fitche town, North Shewa, Ethiopia, 2016.

Methods: A community based cross-sectional study was conducted at Fitche town from

February 1 to March 1, 2016. 327 mothers having children less than 24 months of age were selected by systematic sampling technique. Interviewer administered structured questionnaires was used to collect data. The data was entered using EPI data version 3.1and exported to SPSS version 22 statistical packages for analysis. Descriptive statistics, binary and multivariable logistic regression analysis was used to identify the factors associated with pre-lacteal feeding practices. The variables which had significant association were identified on the bases of P value <0.05 and 95%CI.

Results: The prevalence of pre-lacteal feeding practice was 24.4%. The common type of pre-lacteal feeding was plain water; 39(12.2) followed by butter; 25(7.8%). Mothers who didn't get breast feeding counseling were seven times more likely practice pre-lacteal feeding when compared to their counter parts (AOR: 7.07 (95% CI: 1.67, 29.88)). Mothers who didn't have knowledge on risk associated with pre-lacteal feeding were 8.56 times more likely practice pre-lacteal feeding as compared to their counterparts(AOR: 8.56 95% CI: 2.65, 27.64)).

Conclusion and Recommendation: Pre-lacteal feeding was commonly practiced in Fitche town. Lack of breast feeding counseling and knowledge of mothers about risk associated with pre-lacteal feeding were identified as potential predictors of pre-lacteal feeding practice. Promoting behavioral change communication activities on the risk associated with pre-lacteal feeding and to provide appropriate counseling on breast feeding practice to the mothers with practical demonstration of how to position the infant during breast feeding.

Key Words: Pre-lacteal feeding, Exclusive breast feeding, Mothers.

Abs 102

Technical Efficiency of Public Hospitals in the Provision of Maternal Health Services in Selected Zones of Oromia Regional State, Ethiopia.

Kiddus Yitbarek Kehali

Background: The health systems in Ethiopia faced critical resource constraints in extending maternal health services of acceptable quality. Consequently, wise use of the available health resources is a priority agenda to attain the goal of reducing maternal mortality in the Ethiopia.

Objective: This study was conducted to assess the technical efficiency of public hospitals in the provision of maternal health services in selected zones of Oromia regional state, Ethiopia, 2014/2015.

Methods: Health facility based cross-sectional study was conducted from March 25 to April 18, 2016. Data were collected from 11 primary and 3 secondary hospitals. A structured and pretested checklist based interview and document review were employed to collect data. Two stage Data Envelopment Analysis was performed with input orientation and variable returns to scale assumptions. Technical efficiency scores were computed at the first stage and predictors were determined using tobit regression.

Results: The assessment of maternal health service delivery efficiency revealed that twelve (85.7%) hospitals were found to be pure technical efficient and nine hospitals were scale efficient. The inefficient hospitals used excess resources. The hospitals could increase numbers of antenatal care users, deliveries, safe abortion service and post abortion service having the excess resources. The tobit regression analysis showed that average waiting time for maternal health service was negatively associated with efficiency. Level, service years and size of catchment population of the hospitals were positively associated with efficiency of the hospitals in maternal health service.

Conclusion: Most of the hospitals were technically efficient and around two third of the hospitals were operating as scale efficient in maternal health service. The inefficiency was a result of excess technical and administrative staff, beds, non-salary expenses and class rooms. Allocation of more resources to older secondary hospitals with larger catchment population could improve efficient use of resources for maternal health service delivery in the study area.

Keywords: Maternal health services, Data envelopment analysis, Technical efficiency, Scale efficiency, Oromia regional state**,** Ethiopia

Abs 103

Evaluation of Master of Science in Integrated Clinical and Community Mental Health Program in Ethiopia.

Matiwos Soboka Daba, Markos Tesfaye, Kristina Adorjan, Sandra Dehning, Tsedeke Asaminew, Mubarek Abera, Andrea Jobst, Matthias Siebeck

Introduction: The shortage of trained man power in the field of mental health remained an important barrier to the treatment of persons affected by mental illnesses in low and middle income countries. A new graduate program for non-physician clinicians was established at Jimma University to address the scarcity for mental health human resource in Ethiopia. Therefore, this study aimed to assess the competency, satisfaction and involvement level of graduates of the program.

Methods: A cross-sectional study was conducted among all the 28 of 32 graduates from the program. Data was collected using a semi-structured self-administered questionnaire that was developed for the study. Likert types of responses were used to assess competency and satisfaction level of graduates. Strengths and weaknesses of the program, courses to be added or removed from the program, and suggestions of graduate on the general program were assessed qualitatively using open ended questions. The quantitative data were summarized using descriptive statistics, including mean, standard deviation and frequencies. Qualitative data were transcribed and analyzed thematically.

Result: Until June 2015, 32 trainees have graduated from Jimma University, and 87.5 % (n=28) of them have participated the study. The majority of the graduates 82.1% (n=23) were male. Almost all of graduates (96.4%, n=27) were working in public institutions. The majority (75%, n=21) of the graduates were directly engaged in clinical care of patients. Also, two-third of the graduates (67.9%, n=19) were involved in mental health research. All of the graduates were confident to conduct psychiatric assessment of adults and to identify and manage common mental disorders (100%, n=28). Similarly, 100% (n=28) of graduates reported they were confident in identifying and managing severe mental illnesses. However, 17.9% of the graduates (n=5) reported they did not feel confident to conduct comprehensive psychiatric assessment of children and adolescents.

Conclusion: The majority of graduates were retained within the public mental health service. Brain drain does not appear to be a challenge among non-physician mental health specialists. The findings on the self-perceived competencies mirror the amount of clinical exposure during the training. There is a need for more clinical training in child and adolescent psychiatry. With minimal revision of the curriculum, the level of satisfaction and competencies can be enhanced.

Keywords: mental health, evaluation, competency, satisfaction, 'non-physician clinician', 'brain drain', 'human resource' Ethiopia.

Abs 104

Social and Behavior Change Communication (SBCC) for Addressing Sexual Reproductive Health (SRH) Issues: The Experience of the Integrated Family Health Program (IFHP) in Ethiopia.

Solomon Abebe Woldemariam, Mengistu Asnake Kibret

Significance/background: Ethiopia, being one of the developing countries, suffers from many health problems, the major ones being infectious diseases, which arise from poor sanitary conditions, nutritional deficiencies, harmful health practices and the like. Major causes to these problems can be narrowed down to peoples' lifestyle, harmful health practices and attitudes due to lack of knowledge, misinformation as well lack of system integration. Often, SBCC activities implemented separately without integrating advocacy. Behavior Change interventions to some extent requires advocacy interventions at all levels. It can be said that the health of people may be linked to their knowledge on health, beliefs, attitude and practice and the involvement of decision makers at the grass root level during behavior change intervention. Concentrating on these, IFHP in collaboration with Federal Ministry of Health (FMOH) decided to address sexual and reproductive health issues through Social Change Communication (SBCC) using an effective and sustainable technique that involves both federal and regional health authorities for behavior change, shift in people's practices and attitudes and bring about an overall increase in the health status of the communities and thereby the country. After the training, the communicators expected to cascade the integration knowledge gained from the training at the Primary Health Care Unit (PHCU) level.

Program intervention/activity tested: IFHP designed communication approaches for implementing SBCC for addressing Sexually Reproductive Health (SRH) issues in Ethiopia. The Purpose of this training is to expand SBCC strategies mainly Advocacy, Behavior Change, Social and Community mobilization in the IFHP's intervention areas. The approach is an integrated evidence-based process for social and individual behavior change involving the following five planning steps: understanding the Situation, focus and Designing, Creating, Implementing and monitoring, evaluating and replanning.

Methodology Program/Best Practice: Based on the communication approach, IFHP discussed the issue with the Federal Ministry of Health (FMOH) and reached a consensus to conduct a week long training focusing on integrating SBCC with advocacy for senior communication managers and experts working at the regional and zonal level of Amhara, Oromia, Tigray and SNNP regional states. IFHP targeted regional levels decision makers to get support for implementing SBCC for addressing Sexual Reproductive Health (SRH) issues in Ethiopia. After the consensus, training participants were identified and a training package was developed and tested to make the training specific and impactful. These activities were carried out in collaboration with the FMOH and RHBs. The training focused on understanding the SRH situation in Ethiopia, focusing and designing SRH issues, creating SRH communication strategies and audience friendly materials, implementing SRH activities and monitoring, evaluating impacts of SRH intervention and re-planning. The training

package contains the training program, copy of the presentations, discussion points, reference materials, and pre and post evaluation forms.

A total of 200 communication managers and experts were trained on using SBCC for addressing SRH issues. In addition they have acquired intensive skills and knowledge on benefit of socio ecological model. After the training IFHP conducted a series of follow-up supportive supervision visits. To understand the impact of the training IFHP collected RHB reports and conducted key informant interview with head of RHB and program implementers at the grass root level. Purposeful sampling was employed to select Interviewees. Before the interview, interview guidelines were prepared and reviewed by IFHP senior program advisors and government program coordinators. Accordingly, IFHP in collaboration with FMOH and RHB conducted a content analysis on reports and interview results.

Results/key findings: After the training, regions have started to give due attention on implementing SBCC activities for addressing SRH issues. According to the assessment, all trained health communicators at Amhara, Oromia, Tigray and SNNP Regional States started to utilize SBCC tool. Most of health communicators are using socioecological model as an important role in guiding the SRH intervention process.

In their interviews, all communicators affirmed that they are using SBCC in a way that help people to weigh up the benefits and barriers of change and expect positive outcomes from new behaviors, build skills and confidence, create a supportive environment for change, Increase access to services and modeling. Furthermore, regional communication heads cascaded SBCC training at zonal and woreda level.

Program implications/lessons: Using SBCC is crucial in bringing a relatively sustainable change. Bundling and integrating SBCC strategies may help to promote health equity and address the needs of individuals and communities in a more holistic, influential, and cost-effective way.

Abs 105

Data Management Practices and Associated Factors among the Health Extension Workers in East Gojjam Zone, Western Ethiopia.

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Background: Accurate, relevant and reliable health information is a crucial asset to enhance the efficiency and effectiveness of healthcare facilities. Poor data management is critical to compromise healthcare service quality at all levels. This study was aimed to assess data management practice and associated factors among health extension workers (HEWs) in Northwest Amhara, Ethiopia.

Methods: Institution based cross-sectional study was conducted between April-May 2015. All HEWs from the randomly selected 40% woredas of the East Gojjam zone were included in the study. Self-administered questionnaire and observation checklist were used to collect data. Data were edited and analyzed using SPSS version 20. Descriptive statistics to describe study objectives and bi/ multivariate analysis to identify associated factors were used. Association results were described using odds ratio at 95% confidence level (CI).

Results: A total of 302 HEWs participated in the study. Nearly half (47.4% and 53.3%) of HEWs had good data management knowledge and practice, respectively. The majority of HEWs reported shortage of transportation, communication service, reference materials, and data collecting/reporting formats. Residence, workload, data management knowledge, reference/ stationary materials shortage, clarity of formats, telecommunication, and supportive supervision were significant variables (p-value <0.05) to data management practice of HEWs.

Conclusions: Data management practice of HEWs is inadequate. Residence, Knowledge, materials access, workload, clarity of formats, training, telecommunication, and supportive supervision were factors to insufficient data management practice. Improving materials access, supervision, telecommunication, formats clarity, transportation, and training are important interventions.

Key words: HEWs, data management practice, determinant factors, Ethiopia

Abs. 106

Partograph Use among Obstetric caregivers in Public Health Institutions of West Showa Zone, Oromia Regional State, Ethiopia2015.

Wakeshe Willi Mengesha, Mitike Molla Sisay

Background: Professional assisted delivery using a partograph has paramount importance in identifying any deviation during labour. Despite its advantage, there is limited information about partograph use in Ethiopia.

Objective: The aim of this study was to assess the magnitude of partograph use and factors that affect its use among obstetric caregivers in public health institutions of West Showa Zone, Oromia Regional State, Ethiopia in 2015.

Methods: We conducted a mixed method combining both quantitative and qualitative research approaches from December 2014 to February 2015. The study was conducted in two randomly selected hospitals and five health centers from West Shewa zone. Quantitative data were collected using a structured self-administered questionnaire among 266 obstetric care givers. Actual use pantograph was observed among 44 women in labour while in-depth interview were conducted among 14 purposively selected health professionals in the selected health facilities. We used logistic regressions model to assess independent predictors of partograph use among health providers.

Result: Partograph was widely used in the selected health facilitates to assess the progress of labour, featal and maternal conditions. However, observation among 44 clients in the labour ward indicated that only five items out of fifteen parameters listed on the partograph were completed. A fourth of all professionals participated in the survey did not know when to start partograph mapping and 36% had unfavourable attitude toward partograph use. Midwives (AOR=13 CI=2.6-66.2), health workers who had knowledge about partograph use (AOR=7, CI= (2.8-21.8) and who work in facilities who had access to the tool (AOR=8.8 CI: 2.8-27.6),were more likely to use partograph. Health workers in higher institutions (hospitals) were less likely to use partograph (AOR=0.09, CI: 0.03-0.26)..

Conclusion: Despite high reported partograph use, most health workers do not complete the tool properly. Lack of knowledge about the right start time of partograph plotting and its benefits has affected proper identification of the action line which will farther affect maternal and fetal outcome. In-service and pre-service training on partograph use, continuous mentoring, supervision and staff motivation could improve the proper use of the tool.

Keywords: Partograph**,** Knowledge, Use, Obstetric care givers, Public health institutions, Oromia Regional state, Ethiopia.

Abs 107

Remembering the Under Served: Levels and Trends in Skilled Delivery Inequalities in Ethiopia. *Brook Tesfaye Tekle*

Background: There has been a remarkable improvement in health status in developing countries over the past two decades. Despite the progress achieved so far, maternal health goals of the Millennium Development Goals (MDG) remain underachieved. Ethiopia has shown a substantial progress in improving the health of Ethiopian mother's; nonetheless, disappointingly, these impressive gains are unevenly distributed. Thus, this study aimed to investigate levels and trends of wealth and education oriented skilled delivery inequalities in Ethiopia during 2000-2011.

Methods: Longitudinal data analysis was conducted on Ethiopian Demographic and Health Survey (EDHS) data of 2000, 2005 and 2011. The outcome variable was skilled delivery while, data on economic status and education levels of the mothers were used as dimensions of inequality. Rate ratio (RR) and rate difference (RD) inequality measures were used. STATA for window version 10.1 statistical package was utilized for data analysis and presentation. The strength of association of inequality dimensions with the outcome variable was assessed using a 95% confidence interval.

Results: Statistically significant levels of wealth and education related inequalities were observed in skilled delivery during the study period. For instance, in 2011, coverage of skilled delivery in women who had achieved secondary or higher education was at least 13.4 [RR=13.4, 95% CI (9.72, 17.09)] times higher than that of women with no formal education. In the same period, when disaggregated by wealth quitnile, the proportion of births attended by health personnel among the wealthiest quintile was about 17.6 [RR=17.6, 95% CI (9.45, 25.89)] times higher than that of women who belongs to the poorest quintile. Trends on gaps of wealth and education related inequalities on access to receipt skilled delivery services have been rising during the study period.

Conclusions: Skilled delivery in Ethiopia remained low. However, a small level of increment trend has been observed during 2000-2011. Moreover, disappointingly, linearly increasing levels of disparities are observed in wealth and education levels. The poorest and uneducated mothers remain the most disadvantaged subgroups in skilled delivery services in Ethiopia. Encouraging mothers in education and engaging mothers in income generating activities should be addressed as Ethiopia is looking forward to achieve universal health coverage

Keywords: Universal health coverage, Inequity, Maternal health, Skilled delivery, Developing country, Ethiopia

Abs 108

Exploring Foods Tabooed for Pregnant Women in Aballa District of Afar Region, 2016. *Znabu Hadush Kahsay*

Introduction: Food taboo is contributing substantial share to malnutrition for pregnant women by restricting and limiting the frequency and variety of foods most of which are nutritious and easily accessible. The practice is common in developing countries and most of the food taboos in East Africa fall on the women and most unfortunately on the pregnant. Foods of animal products, which are the main sources dietary energy of pastoralist community, are often prone to the practice of food taboos. Nonetheless, the existence of the practice in Ethiopian pastoralist community is not investigated yet. Therefore, the current study aimed to explore foods tabooed for pregnant women and the reasons behind the foods taboo if exists in Abala district of Afar region, Ethiopia.

Methods: Exploratory qualitative study was conducted inductively involving homogeneous participants in four focus group discussions and eight key informants individual in-depth interview in Aballa district from March 1 to 30, 2016. Participants were selected purposively according to their potential wealth of information. Semi-structured interview guide was used to collect the data. The investigators taped focus group discussions and interviews and then transcribed verbatim. Finally, the transcribed data were imported to Atlas.ti 7 software for coding. Analysis was done inductively. Triangulation and peer debriefing were applied to assure data quality.

Results: The study revealed that foods tabooed for pregnant women were 1) eating a lot amount of foods of any type, 2) fatty foods like meat, milk and Yoghurt, 3) solid foods including all forms of bread and 4) cool/cold foods such as cold milk, cold meat and cold water. The reasons mentioned to adhere with the foods taboo for pregnant women were to avoid difficulty to deliver the fetus, to prevent disease like, Gastritis, Diarrhea, Typhoid, and Abdominal cramp, and skin discoloration of the fetus.

Conclusions and Recommendations: Pregnant women in Aballa district avoid eating numerous accessible foods because the foods are believed as tabooed for them. Further studies that focus on the extent of food taboo and uncovering the understanding on how it is being practiced were recommended.

Abs 109

Factors Associated to the Utilization of the Prevention of Mother-to-Child HIV Transmission Service in Ethiopia Applying Count Regression Models: Urban-Rural Settings. *Elias Asfaw*

Background: PMTCT service has been implemented poorly and in a fragmented manner at the limited resource sub-Saharan Africa (SSA) countries settings.Similar to most SSA, Ethiopia has faced limited evidence on the PMTCT utilization service, particularly in the urban-rural settings.

Objective: The objective of this study is to assess factors associated with the PMTCT service utilization considering the number of counts of ANC visits in urban-rural settings.

Methods: A multivariate regression model was applied to identify the significant factors associated with PMTCT service utilization. Based on the descriptive statistics, a dependent variable (outcome of interest) was the number of ANC visits (frequencies/counts). A poisson and negative binomial regression models were applied. The explanatory variables consisted of age; educational status; type of occupation; decision-making balance; living in proximity to educated people; a neighborhood with good welfare; location (urban, rural); transportation accessibility; walking distance (minutes); and household income status. Alpha dispersion test (a), estatgof (statistical test) and chi-square test were performed to measure the goodness-of-fit of the model.

Results: Household income, socio-economic setting (urban, rural) and walking distance had a statistically significant relationship with the number of ANC visits by the pregnant women (Y) ($p< 0.05$). A pregnant woman from an urban setting would be expected to attend 34% more ANC visits (counts) than her rural counterparts ($p < 0.05$). Holding other variables constant, a unit increase in household income would increase the expected ANC visits by 0.004%. An increase in walking distance by a unit (a minute) would decrease the number of ANC visits by 0.001($p< 0.001$).

Conclusion: Long walking distance, low household income and living in the rural areas are the significant factors associated with a lower count of ANC visits, and hence low PMTCT service utilization. A holistic health policy aiming for improving geographical accessibility of the PMTCT service, better household welfare state and priority focus to the rural remote areas should be the priority strategy to improve PMTCT service utilization.

Abs 110

Town Level Size Estimation of Female Sex Workers, Hotspot and HIV Service Facility Mapping in Ethiopia. *Woldemariam Girma*

Background: HIV prevalence among female sex workers (FSWs) in Ethiopia is estimated 23%, and this is about 12 times more than the other women. This study aimed to map geographic locations ("hotspots") and estimate the population size of female sex workers in Ethiopia in order to better plan MULU/MARPs HIV prevention interventions among FSWs and their clients.

Methodology: Self-identifying and non-self-identifying venue and home based FSWs were enumerated through two key informants, key informants being; FSWs, venue managers/ owners, Cashiers or guards. The average of size estimate by the two key informants was taken as the size of FSWs in the given venue**.** Street based FSWs were estimated using capture recapture approach and analysis. Street vendors/guards of FSWs helped to identify FSWs on the street. Geographic Positioning System (GPS) coordinates of the venues and streets where the FSWs operate were also taken to identify the hotspots. Further, service facilities that provide SRH services (HIV counseling and testing (HCT), family planning (FP), sexually transmitted infection (STI) diagnosis and treatment) were also mapped. Data collection for size estimation was done from June to October, 2013 and February to March 2014 at two different periods.

Results: The total size of FSWs in the 79 towns out of 168 MULU/MARPs operational towns was estimated about 73,666, more than a third were non- self-identifying FSWs. These FSWs were found to operate in 28,873, venues, homes and streets. The majority venues were establishments (64%) followed by homes (24%). The majority of self-identifying and non-self-identifying FSWs were operating in the same type of establishment such as bars, hotels, café, grocery and coffee house. A total of 3,544 private, public, public/private, and NGO facilities were mapped and about 550 (11%) were found out to provide comprehensive HIV services including HIV counselling and testing, sexually transmitted infection screening & treatment and family planning. FSWs hot spot areas and location of service facilities were mapped to inform as a baseline, comprehensive services (prevention care and treatment) needs to achieve better linkage to treatment.

Conclusions: The results have been used for project target setting, allocation of resources, and developing coverage standard specific to each project town. The findings also helped to establish private network service facilities in hotspots to provide Clinical services for key and priority populations. Further, the results also provided evidence for planning National HIV Prevention Initiatives (NAPI) such as the investment case and national HCT catch up campaign to set priorities and understand the HIV epidemic. Results also served as an input for the preparation of 2016 to 2020 National HIV/AIDS Monitoring and Evaluation frame work, and planning the national catch up campaign on promoting HIV testing, care and treatment.

Abs 111

Differentials in Modern Contraceptive Method Use by Food Security Status among Married Women of Reproductive Age in Wolaita Zone, South Ethiopia

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Background: Many poor people in the third world remain reluctant to use modern contraception in spite of massive spending and extensive family-planning promotion. Mostly, when they use modern contraceptives, their continuation rates are often low. Addressing the connection between nutrition and reproductive health is critical to ensuring population growth that does not overwhelm world resources. In Ethiopia the connections between population and food security are extraordinarily complex and needs further investigation.

Objective: The purpose of this study was to assess determinants of modern family planning use with a main focus on the association between food insecurity and modern contraceptive use.

Methods: A community based cross-sectional study was conducted from March 15 to 30, 2014 in Soddo Zuria Woreda, South Ethiopia. A total of 651 currently married women of reproductive age group were selected using multistage sampling from 15 randomly selected kebeles. Data was analyzed using SPSS version 20 and descriptively proportion of modern family planning use and other characteristics of respondents' namely Antenatal care (ANC) follow up and place of delivery of the last child were compared among food secure and food insecure households. Multivariable logistic regression was used to assess the predictors of modern family planning use including food security status after adjusting for all variables that have p-value <0.20 on bivariate analysis.

Results: About 38.6 % of all women were currently using modern contraceptive and it is significantly low among food insecure women (29.7%) compared to those who were food secure (52.0%), P< 0.001. Women from food secure households were nearly twice likely to use modern contraceptive methods (AOR: 1.69 (CI: 1.03, 2.66)). Similarly, those who had antenatal care visit (AOR: 4.56 (CI: 2.45, 7.05)); exposure to media (AOR: 4.92 (CI: 1.84, 13.79)) and those who discussed about contraceptive methods with their partner (AOR: 3.07 (CI: 1.86, 5.22)) were more likely to use modern contraceptive methods. Conversely, women who delivered their last child at home were less likely to use modern contraceptive methods (AOR: 0.08 (CI: 0.03, 0.13)).

Conclusions: Food insecurity is one of the determinants of modern contraceptive method use implying that food insecurity should be considered as one of the barrier in designing family planning service and needs special arrangement. The main limitations of this study are possibility of some misclassification of subjects with food security status (since house hold food insecurity access scale measures acute food insecurity) and difficulty of capturing seasonal trends.

Abs 112

Sexual and Reproductive Health Services Utilization and Associated Factors among Preparatory School Students in Mecha District, Northwest Ethiopia Sexual and Reproductive Health Services Utilization and Associated Factors among Preparatory School Students.

Abebaw Addis Gelagay

Background: Young people are potential to sexual and reproductive health (SRH) problems. Most of these problems can be alleviated through SRH services utilization. However, information about the level of sexual and reproductive health services utilization and factors associated to service utilization are scarce in the study area and even in Ethiopia. Additionally, big variation was seen on the level of service utilization from place to place in the nation. Therefore, the propose of this study was to assess sexual and reproductive health services utilization and its associated factors among preparatory school students in Mecha district, northwest Ethiopia.

Methods: Institution based cross-sectional quantitative study was conducted on September, 2015 among 565 randomly selected preparatory school students. The data were collected using pretested structured self-administered questionnaire. The data were analyzed using SPSS version 20 and StataSE 14. Descriptive, bivariate and multivariate analyses were done. Two multivariate analysis models were used. The first multivariate analysis model was pooled analysis to identify factors associated with sexual and reproductive health service utilization in the overall study population while the second multivariate analysis model was to identify factors associated with the outcome variable stratified by sex/gender. P-value and Odds ratio with 95% confidence interval were used to assess the presence and the strength of association between explanatory variables and the outcome variable.

Results: Utilization of sexual and reproductive health services among preparatory school students in Mecha district was 18.4% (95%CI: 15.2%-21.9%). In the multivariate analysis, having employed mother [AOR=1.74 (95%CI: 1.07-2.85)], having discussion with their families on SRH matters [AOR=1.55 (95%CI: 1.07-2.60)], having sexual exposure [AOR=9.34 (95%CI: 5.46-15.98)] and involving in school sexual and reproductive health clubs or school mini-media [AOR=1.55(95%CI: 1.08-2.55)] were significantly associated with SRH services utilization. In the multivariate analysis.

Conclusions: In this study, utilization of sexual and reproductive services by preparatory school students was low. Improving the cogitative accessibility of SRH and breaking the social and psychological barriers is mandatory. Parents, school staffs, and health professionals are important stake holders to improve SRH services utilization.

Key words: Reproductive health, preparatory school students, service utilization, Ethiopia.

Abs 113

The Effect of HIV and Antiretroviral Therapy on Child Hood Hepatitis B Vaccine Response in HIV Positive Children in Addis Ababa Ethiopia.

Desalegn Yibeltal Reta

Hepatitis B virus (HBV) infection causes worldwide problem and the complication varies from acute liver failure to hepatocellular carcinoma. A vaccine is available to prevent HBV infection, however reduced vaccine response were reported among HIV infected individuals. The information on the effect of HIV and antiretroviral therapy (ART) on childhood response to HBV vaccine is fragmented and there is no different vaccination schedules for HIV positive children. The objective of the study was to assess the impact of HIV-1 infection and effect of ART on the immune response to Hepatitis B vaccine, and phenotypic property of B cells in HIV infected children. Longitudinal cohort study was conducted from January, 2015 to June, 2015. Children, 5-9 years of age, from the Pediatric department of ALERT and Zewditu Memorial Hospital were screened for HBV infection and standard hepatitis B vaccine was given to those children with no HBV infection at 0, 4 and 8 weeks. The vaccine response was evaluated by measuring Hepatitis B surface antibody (HBsAb) using ELISA and B cells phenotypic characterization was done by flowcytometry before and after vaccination. All healthy controls (90) and 94 % (64/68) of HIV positive children responded to hepatitis B vaccine. Plasma level of HBsAb was significantly reduced in HIV-1 positive children than healthy controls ($p= 0.0001$). Higher vaccine response was observed in early ART treated children ($r=-0.3497$, $p=0.0046$). The frequency of Resting Memory B cells showed no increment in HIV positive children ($p>0.05$) while significantly increased in healthy controls ($p<0.0001$), and the frequency of Activated Memory B cells decreased in HIV positive children ($p<0.001$) and increased in healthy controls ($p<0.05$) after vaccination. Our results showed reduced plasma antibody level and low frequency of Resting Memory B cells in HIV positive children. Therefore, regular monitoring of plasma antibody level to HBV vaccine should be integrated for HIV infected children and booster dose of HBV vaccine has to be considered, irrespective of ART status.

Key Words: HBV, antibody response, HBsAb, B cells, ART

Abs 114

Effectiveness of Supportive Supervision Visits on the Consistency of Skills of Community-Based Neonatal Sepsis Management Provided by the Ethiopian Health Extension Program.

Gizachew Tadele Tiruneh

Introduction: Ethiopia has been implementing Community-Based Newborn Care (CBNC) as one strategy to reduce neonatal mortality nationally through its flagship health extension program. To improve and maintain quality of community-based management of neonatal sepsis, competency-based training, prompt post-training follow-up, continued coaching through supportive supervision, and review meetings are the key strategies specified in the national CBNC implementation plan. This study examines the level of the consistency of skills of neonatal sepsis management, the trends of the consistency of sepsis management, and the effect of supervision on the consistency of sepsis management.

Methods: The study area covered 3,952 health posts in the 167 CBNC intervention districts of Ethiopia. A historic longitudinal program monitoring data captured during follow-up visits between January 2014 and June 2016 was used to examine the consistency of skills of neonatal sepsis management. Consistency of sepsis management was defined as consistency of the recorded classification, treatment, and follow-up for neonatal sepsis cases according to the national CBNC protocol. The researchers used random effects multiple logistic regression models for longitudinal data to predict the probability that a health post consistently conducted case management of neonatal sepsis using Stata version 14.

Findings: During January 2014 to June 2016, 72% (2,864) health posts received at least one supportive supervision visit, 21% (815) received two, and 6% (245) received more than two visits. The consistency of neonatal sepsis management by the health posts improved significantly ($p<0.05$) over the observation periods. Moreover, the consistency of sepsis management was 65%, 68%, and 79% during the first, the second, and the third supervision visits, respectively. The incremental effect of supportive supervision was observed between first and third rounds of visits and between second and third rounds of visits. However, the incremental effect of supervision was not observed between the second and third rounds of visits. After controlling for secular trend and other factors, significant dose-response relationships were observed between number of supervision visits and consistency of sepsis management.

Interpretation: The findings of this study suggest supportive supervision visits were effective intervention in improving the consistency of skills of sepsis management. As such, at least three rounds of supportive supervision is needed to maintain the consistent skills of management of neonatal sepsis at community level.

Abs 115

Timeliness of Vaccine Administration in Children Aged 12-23 Months in Welqait District, Tigray Region, Ethiopia, 2014.

Alefech Adissu Gezahagn

Introduction: Achieving high vaccination coverage for individual vaccines does not necessarily imply timely vaccination. We study to assess the timeliness of vaccination and its determinant factors in children aged12-23 months in Welqait district of Tigray region.

Methods: A community based cross-sectional survey was conducted from July 08-28/2014. Timeliness of vaccinations were assessed for each vaccine based on the following time ranges (lowest–highest target age): BCG (birth–8 weeks), polio 0 (birth–4 weeks), three polio and three pentavalent vaccines (4 weeks–2months; 8 weeks–4 months; 12 weeks–6 months) and measles vaccine (38 weeks–12 months). Data was entered in to EPI-Info version 3.5.4 and analyzed using STATA version 11. Multivariate logistic regression was applied to determine independent factors associated with timeliness of vaccination.

Results: From the total 843 children about 61.3 %(517) have Immunization cards, which we have included in the analysis and 31(3.7%) have no any vaccination history. From those 517 the coverage rate for individual vaccines that were part of the Expanded Program on Immunization (EPI) was above 90% except for Oral Polio Vaccine 0(OPV0) (23%) and measles (85.3%). About 81.6% (422) were fully vaccinated but only 31.1% received all vaccineswithin the recommended time interval. Timely vaccination ranges from 42.2% for pentavalent 1 to 63.6% for pentavalent 3. Mothers of children with secondary and above educational status (AOR=4.1, 95%CI: 2.2-7.7), child born in health facility (AOR=1.8, 95%CI: 1.2-2.8) factors that independently associated with timely vaccination and more than an hour travel time to closest vaccination site (AOR= 0.3, 95%CI: 0.17-0.55) was independently associated with more likely immunization of children out of the recommended time interval.

Conclusion: Even though there is relatively high vaccination coverage the timeliness of vaccination was remained very low at only 31%. Relying only on vaccination coverage overestimates the herd immunity.Timelinessof vaccinations should be considered along with the coverage rate to determine children's susceptibility to vaccine-preventable diseases and to evaluate the quality of vaccination programs.

Key words: Timeliness, vaccination, children, Ethiopia

Abs 116

Prevalence and Associated Factors of Upper Respiratory Tract Infections among under Five Children in Debre Berhan Town, Ethiopia. *Asmamaw Abera*

Background: Upper respiratory tract infection is a major public health problem worldwide. It is a significant cause of morbidity and mortality and the main reason for utilization of health service among under five children. Upper respiratory infections are illnesses caused by an acute infection which involves the upper respiratory tract including the nose, sinuses, pharynx or larynx. The aim of this study conducted to determine factors that affect the prevalence of upper respiratory tract infection (URTI) among under five children.

Objective: The aim of this study is to assess prevalence and associated factors of upper respiratory tract infections among under five children in Debre Berhan town.

Methods: A community based cross-sectional study with multi-stage sampling technique was used to assess the prevalence of upper respiratory tract infections and associated factors April, 2016. Data entry and cleaning were done using Epi Info version 3.5.4, and analyzed by SPSS version 20. Odds ratio with 95% confidence interval was estimated using bivariate and multivariable analysis with binary logistic regression model to identify independent predictors of upper respiratory tract infection. Frequency, table and graphs were used for data presentation.

Result: A total of 400 children were involved in this study with a response rate of 99.5% among 52.2% are male. From the 400 households (98%) of them have window and 57% of them good ventilation, 41.2% fair ventilation and remaining have bad ventilation. About 92.3% and 16% have separate kitchen from the main house and have domestic animal share the same room with human respectively. The prevalence of upper respiratory tract infection was 22.2%. Kitchen outside the main house AOR: 0.1, 95% CI (0.05,0.65), gas used as a source of fuel AOR: 2.5,95% CI (1.2,4.3), fully immunized children AOR:0.2, 95% CI (0.07,0.96), delivered at home AOR:4.9, 95% CI (2.2,10), children exclusively breast feed AOR:0.2, 95% CI (0.076,0.5) and bottle feeding AOR:3.9, 95% CI (2.2,7) was found associative factors for upper respiratory tract infection.

Conclusion and Recommendation: the results of this study found high URTI among under-fives in the study area. The associated factors are place of kitchen, kind fuel used, immunization status, exclusive breast feeding, bottle feeding and place of delivery. Introducing improved stove to house hold may reduce upper respiratory tract infection. Health education should be given for children's of mother about bottle feeding and exclusive breast feeding are also should be implanted.

Abs 117

Survival Status and Predictors of Mortality among Children (0-59 Months) Admitted With Severe Acute Malnutrition in Dilchora Referral Hospital, Ethiopia.

Abdu Oumer Abdu

Background and Objectives: Globally, mortality among complicated severe acute malnutrition children is unacceptably high; ranging from 3.5 % as high as 35 %. In Ethiopia, mortality is still high from 6 % to 29 % but predictors of mortality were not well established. This study assessed survival status and predictors of mortality among children aged 0-59 month with severe Acute Malnutrition admitted in Dilchora referral Hospital.

Methods: A retrospective Cohort study was conducted on random sample of 631 eligible medical records of SAM children treated in Dilchora referral hospital. Data collected using a pretested data extraction format was entered to Epidata software checked, validated and exported to SPSS version 20 for analysis using life table, Kaplan Meir test and Cox proportional hazard regression.

Results: Data from 617 medical records were collected with 97.8 % card retrieval rate. From this 345 (55.9 %) were male with mean age of 23.6 months ± 14.7 months. About 256 (41.5 %) and 134 (21.8 %) had diarrhea and pneumonia. Overall 47 (7.6 %) were died while 431 (69.9 %) were cured. Most cases of death occur during the first weeks of admission to hospital. Children with HIV/AIDS, pneumonia, diarrhea, dehydration and who took IV antibiotics and fluid had significantly lower mean survival time than counter parts. Failed appetite (AHR = 2.75), diarrhea (AHR = 2.52), malaria (AHR = 12.69), lower WFH % (AHR = 0.95) and HIV sero positivity (AHR = 12.5) are independent predictors of mortality of SAM children. Additionally not taking F 100 (AHR = 3.26) and F 75 (AHR = 2.56) were significantly increase hazards of death from SAM.

Conclusion: Generally higher level of mortality was seen. Presence of medical co morbidities, IV fluid and antibiotics intake and not being supplemented by nutritional therapy were significant predictors of death.

Key words: Survival status, Predictors, Mortality, Malnutrition

Abs 118

Availability of Adequately Iodized Salt at Household Level and Associated Factors in Dabat District, Northwest Ethiopia: a Cross-Sectional Study.

Zegeye abebe Abitew, Amare Tariku, Ejigu Gebeye

Background: Utilization of universal iodized salt is the most cost-effective, safe and sustainable strategy to eliminate iodine deficiency disorders. However, little is known about the availability of adequately iodized salt in the northwestern part of Ethiopia. Thus, the aim of this study was to assess the availability of adequately iodized salt and associated factors at the household level in Dabat District, northwest Ethiopia.

Methods: A community-base cross-sectional study was conducted from February 21 to March 31, 2016. A total of 705 households were included in the study. A stratified multistage followed by simple random sampling technique was employed to select households. The level of salt iodine content was determined using the rapid field test kit. Accordingly, the value of 0 parts per million (PPM), <15 PPM and ≥15 PPM with the corresponding color chart on the rapid test kit were used to classify the level of iodine content in the sampled salt. A multivariable logistic regression was fitted to identify factors associated with the availability of adequately iodized salt. Both Crude Odds Ratio (COR) and Adjusted Odds Ratio (AOR) with the corresponding 95% Confidence Interval (CI) were calculated to show the strength of association. In the final model, variables with a P-value of <0.05 were considered statistically significant.

Results: This study indicated that about 33.2% [95% CI: 29.6, 36.7%] of households had adequately iodized (≥15 parts per million) salt. Moreover, a substantial proportion, (95.7%), of households used the unpacked type of salt for food preparation. According to the multivariate analysis, urban residence (AOR=2.15, 95%CI: 1.23, 3.76), use of packed salt (AOR=2.23, 95%CI: 1.01, 4.89), and good respondents' knowledge about iodized salt use (AOR=1.49, 95%CI: 1.08, 2.08) were positively associated with the availability of adequately iodized salt. However, lower odds of availability of iodized salt were found among respondents traveled a long distance to buy salt (AOR=0.68, 95%CI: 0.48, 0.99).

Conclusions: In this community**,** the availability of iodized salt was low. Place of residence, type of salt used, respondent's knowledge towards iodized salt use, and distance to buy iodized salt were significantly associated with the availability of iodized salt. Therefore, improving access to iodized salt, awareness regarding iodized salt use and handling mechanisms is essential to step-up the availability of iodized salt.

Keywords: Iodized salt, Knowledge on iodized salt use, Ethiopia

Abs 119

Determinants of Acute Malnutrition among South Sudanese Under Five Childeren in Terkidi Refugee Camp, Gambella Region, South West Ethiopa: a Case Control Study.

Yenealem Gezahegn Erdate

Background: Malnutrition among refugee children aged 6–59 months is a critical public health concern due to the heightened vulnerability of this age group. The prevalence levels of wasting are high among refugee children in Ethiopia (11.9 %) however little information is known about the determinant factors of acute malnutrition, which is obtained from hospital based studies and other community based studies which may not represent refugees in the camp. Hence this study identified the determinants of acute malnutrition in Terkidi refugee camp, south west Ethiopia.

Methods: Community based case control study was conducted from February 28 to march 30, 2015 in Terkidi refugee camp, Itang woreda, Southwest Ethiopia. Cases were 94 wasted children under the age of five which were selected systematically and the controls (n=187) were children without malnutrition which were recruited from neighbor of the cases. Data was collected by face to face interview using structured questionnaire and the anthropometric measurements of the children was taken using standard procedures. Descriptive and summary statistics was done. Bivariate and multivariate analysis was also performed using logistic regression on SPSS version 20.0 software in order to determine factors associated with acute malnutrition.

Result: Acute under nutrition was associated with lack of maternal autonomy in decision making (AOR=6.36, 95% CI 2.53, 16.00), children in age group of 6-11 months (AOR= 9.81; 95% CI: 2.69, 35.75). Diarrheal disease occurrence 2 weeks preceding the survey (AOR= 3.77;95% CI: 1.55, 9.17), non-exclusive breast feeding (AOR=3.70, 95% CI 1.64, 8.33),short birth interval (AOR=6.70,;95% CI: 2.89, 15.54), and visit to health institution after 24 hours of the onset of symptoms for sick child (AOR =5.89; 95% CI: 2.49, 13.94) after the effects of other significant variables were controlled.

Conclusion: The findings of this study have shown the association of acute malnutrition with lack of maternal autonomy in decision making, short birth interval, child age, and inappropriate infant and young child caring practices. To reduce childhood malnutrition due emphasis should be given in empowering women, improving the practice of parents on appropriate infant and young child caring practices and child birth spacing.

Keywords: Acute malnutrition; under five children; case control study, refugee camp

Abs 120

Prevalence and Associated Factors of Zinc Deficiency among Pregnant Women Attending Antenatal Care At Gambella Hospital, South West of Ethiopia: Institution Based Cross-sectional Study, 2016.

Ataguadil Mekonnen

Background: Pregnant women in developing countries are vulnerable to multiple micronutrient deficiencies including zinc deficiency. Zinc deficiency during and later pregnancy has devastating and irreversible consequences on mothers and fetus, subsequent birth outcomes and child survival. However, data on the prevalence and determinants of zinc deficiency among pregnant women are scanty and inconclusive in Ethiopia.

Objective: The objective is to assess the prevalence and associated factors of zinc deficiency among pregnant women attending antenatal care at Gambella Hospital, Southwest of Ethiopia.

Methods: Institution based cross-sectional study design was employed at Gambella Hospital and data were collected using a structured questionnaire from January to March 2016. A total of 246 pregnant women were selected by systematic random sampling technique. Blood sample were collected to analyze biochemical indicators. Descriptive statistics and logistic regression analysis were employed to describe the background characteristics and assess the relative effect of various explanatory variables on the outcome variables, respectively. Variables with P-value less than 0.05 were considered as statistically significant.

Results: The mean serum zinc concentration was 58.75(±21.11) μg/dl [95%CI (56.10, 61.41)]. The overall prevalence of zinc deficiency among pregnant women was 55.3% [95% CI (50.0, 61.3)]. In multivariable analysis, too close birth [AOR=2.6; 95%CI(1.08,6.27)], third trimester [AOR=3.76; 95% CI(1.49,9.49)], lack of nutrition education [AOR= 2.4; 95% CI(1.01, 5.74)], inadequate dietary diversity [AOR=3.59; 95% CI (1.45, 8.96)], low intakes of diet of animal origin [AOR=3.05; 95%CI(1.31,7.08)], and anemia [AOR =3.09;95%CI(1.19,7.95)] were significantly associated with zinc deficiency.

Conclusion and Recommendation: Zinc deficiency is of public health concern in the study area, so providing nutrition education to increase knowledge as well as practices concerning the consumption of zinc rich foods and improving dietary diversity, giving special attention for pregnant women with anemia and strengthening family planning implementation will be effective to prevent zinc deficiencies.

Keywords: Zinc deficiency, pregnant women, Gambella.

Abs 121

Household Food Insecurity and Fertility Desire of Married Women: A Community Based Cross-sectional Study in Sodo Zuria District, Wolaita Zone, South Ethiopia.

Abraham Abate Altaye, Tefera Belachew, Desalegn Tamiru, Dawit Jember Tesfaye

Background: The question of whether food insecurity leads to low fertility desire or whether high fertility desire is the result of poverty driving food insecurity is unanswered from the existing body of literature. The objective of this study was to assess the household food security status and fertility desire of women's in Sodo Zuria district, South Ethiopia .

Methods: Community based cross-sectional study was conducted at Sodo Zuria district, which is located at the center of Wolaita zone in south Ethiopia. Systematic sampling technique was employed to collect data from 651 married women in reproductive age group using interviewer-administered structured questionnaire. The data were entered into Epi Data version 3.1 and then exported to SPSS version 20 for further analysis. Multivariable logistic regression method was used to identify predictors of fertility desire. Adjusted odds ratios with the 95% confidence intervals were computed and variables with P-value ≤ 0.05 considered statistically significant.

Results: The study showed that from 651 currently married women in the reproductive age group, the majority 381(58.5%) had desire for additional children and 270 (41.5%) had no desire or had desire to limit child bearing. The odds of women in food insecure households had 2 times higher desire for additional children [AOR= 2.0, 95% CI (1.314, 2.49)] compared to those women in food secure households. Factors contributing to higher desire for additional children were husband occupation, age of women, household food security, media exposure, number of children living, sex composition of living children, sex preference and husband desire for additional children.

Conclusions and recommendations: The desire for additional children was high for women in Sodo Zuria district, particularly among women in food insecure households, women whose husband desire for additional children and those who have small family size. The strong change of couples' fertility behavior via encouragement of partner involvement on family planning service, inter-spousal communication and developing decision-making ability of women for fertility behavior is fundamental if the desire for additional children of women in Sodo Zuria district has to decrease.

Key words: fertility desire, food insecurity, currently married women

Poster Presentations

Abs 1

Using Creative Brief to Bring Impactful Social and Behavior Change Communication (SBCC) Campaign of Family Health Program: The Experience of the Integrated Family Health Program (IFHP) in Ethiopia.

Solomon Abebe Woldemariam, Mengistu Asnake Kibret

Significance/background: In Ethiopia, most health communication campaigns have succeeded in increasing public awareness, but have been ineffective in bringing impacts, to kindle sustainable changes in Knowledge, Attitudes, and Practices toward creating lasting social behavioral change. Based on the Ethiopian national health communication strategy, a number of health campaigns were conducted by the Ethiopian government. However, the change is not as expected.

Majority of the Ethiopian health communication interventionists are not using creative brief for analyzing their communication intervention to bring sustainable impacts. In order to bring behavior change in Amhara, Tigray, Oromia, and SNNP Regions, IFHP needs its target audience to be segmented and analyzed appropriately using comprehensive creative brief system.

The utilization of this creative brief for family health communication campaign will help towards achieving common understanding of issues in family health program development and providing opportunity for coordinated health communication interventions across IFHP intervention areas.

In order to expand the use of creative briefs in health communication campaigns, the Integrated Family Health Program (IFHP) in collaboration with the Federal Ministry of Health (FMOH), organized four different training sessions in four major regions of the country mainly in Amhara, Oromia, Tigray, and Southern Nations, Nationalities, and Peoples' (SNNP) Regional States. The training was provided to health communication mangers and experts with a due focus on utilizing creative briefs for Social and Behavior Change Communication (SBCC) campaigns specifically for addressing family health programs in Ethiopia.

Program intervention/activity tested: Creative brief serves as a key tool in enhancing impacts of SBCC campaigns on any public health concerns of family health program in Ethiopia. Initially, the Integrated Family Health Program (IFHP) designed a strategy for providing creative brief training for high level health communicators working in four major regions of the country mainly Amhara, Oromia, Tigray and SNNP.

Prior to the creative brief training, presentation, and discussion was held on situation and audience analysis. Following, practical training was conducted using the following sequentially detailed components of creative brief: setting overall aim of the communication, segmenting intended

audiences, identifying desired behavior, analyzing obstacles and key constraints to adopting required behavior, setting communication objectives by audience, positioning and long term identity, designing a strategic approach, identifying the single most important (key) benefit for the audience , considering support statements for the key promise, determining call to action, putting detailed key contents reveled in the communication materials, reaching consensus in understanding the tone of communication materials, writing detailed activities, mapping appropriate events, and other relevant creative considerations. For all creative brief components, relevant local examples prepared and presented. Participants selected their own thematic intervention and drafted creative brief. Finally, each participant presented the draft creative brief to the general participants and received comments. Majority of the participants implemented the draft creative brief after returned back to their office.

Method: Key informant interview were conducted with high level Regional Health Communication Managers and Experts working in Amhara, Oromia, Tigray, and SNNP regional states. Then, FMOH, IFHP, and Regional Health Bureau (RHB) reports were analyzed. Furthermore, Sample works of regional health bureau's creative brief also reviewed.

Results/key findings: Health communication managers and experts described that previously their communication intervention was not strategically designed to bring impacts of family health program. After taking creative brief training from IFHP, the style of SBCC materials changed. The communicators further emphasized that the creative brief is a useful communication tool that simplifies health communication interventions.

The health communicators also stated that they have cascaded the training to woreda level communicators to expand the implementation of creative brief system bring meaningful change in their SBCC intervention.

The woreda health communicators on their part mentioned that they are using creative brief system to conduct health communication campaigns and other similar communication activities in their respective areas.

Program Implications/lessons: The creative brief serves as a communication tool that supports health communicators to set direction, appropriately segment the audience(s), focuses on the key messages and shows the desired results for SBCC campaign or materials.

Abs 2

Social Connectedness and Risky Sexual Behavior among Youth in North Shewa Zone, Oromia Region, Central Ethiopia.

Simegnew Handebo Berassa

Background: Although myriad of diverse factors associated with youth risk sexual behaviors have been identified, there is emerging interest in understanding the impact underlying patterns of social systems. It is recognized that risky sexual behaviors are driven by social and structural factors, which are beyond an individual control.

Objective: To assess social connectedness and risky sexual behavior among youth in North Shewa zone, Oromia region, Ethiopia, February 2016.Methods: An institutional based cross-sectional study triangulated with qualitative was conducted in North Shewa Zone Oromia Region, from February to March 2016. Six hundred thirty five students were selected using multi-stage sampling method. Self-administered questionnaire and focus group discussions (FGDs) guide were used to collect the data. Quantitative data were analyzed using SPSS version 16. Logistic regression was done to identify factor associated with risky sexual behavior. Four FGDs were conducted and data were analyzed using thematic approach. Finally, it was triangulated with quantitative finding.

Result: of all students, 115(18.3%) of the respondents were sexually active and had developed risky sexual behavior. Of social connectedness domains, youths had higher connectedness with their family (84.5, SD +17.1). Social connectedness was inversely correlated with having multiple sexual partners, inconsistent condom use and overall risky sexual behavior. Substance user students had four times risky sexual behavior than non users (AOR= 4, 95%CI(1.54 -10.3)). Risky sexual behavior was associated with family connectedness (AOR=0.39, 95%CI (0.303-0.51)), religion connectedness (AOR= 0.23, 95%CI(0.169-0.31)) and school connectedness (AOR= 0.39, 95%CI (00.297-0.52)).

Conclusion: Youths who had high connectedness were less likely engaged in risky sexual activity. Grade level, substance use, religious connectedness, family connectedness and school connectedness were major predictors of risky sexual behavior.

Keywords: Social connectedness, Risky sexual behavior, Youth, Ethiopia

Abs 3

Physical Activity Behavior among Type 2 Diabetes Mellitus Patients Using Trans-Theoretical Model in Wolaita Sodo University Teaching Hospital, Southern Ethiopia.

Getu Debalkie Demissie

Background: Physical inactivity has-been established as an important risk factor for the development of cardiovascular disease and increased risk of premature death. Physical activity is with an up to 50% reduction in cardiovascular and all cause mortality inpatients with type 2 diabetes mellitus. No previous studies addressed in determining physical activity behavior among type 2 diabetes mellitus patients using Trans-theoretical model in the study area.Objective:To determine physical activity behavior among type 2 diabetes mellitus patients using Trans-theoretical (TTM) model inWolaita soda University Teaching Hospital, Southern Ethiopia.

Method: Institutional based cross-sectional study was conducted with a total of 400 selected type 2 diabetic patients using systematic random sampling. Structured and pretested questionnaire was used. One way ANOVAwas used to show the significant differences in mean scores of processes of change, decisional balance and self-efficacy among each stage. Descriptive and Binary logistic regression analysis were used to see the distribution of socio-demographic and TTM variables and to identify the predictors of physical activity behavior respectively.

Result: Atotal of 137(34.3%) of the respondents were physically active. 189(47.3%) of respondents had no intention to start physical activity within the next 6 months (Pre-contemplation stage). The study showed that processes of change, pros, cons and self-efficacy were significantly different among stages of physical activity behavior ($p<0.05$). The processes of change, pros and self-efficacy significantly increased from Precontemplation to maintenance. However, the cons decreased across the stages. Self-liberation, (AOR= 1.5, 95% CI (1.05,2.01), Counter conditioning (AOR=1.9, 95% CI (1.11, 3.11), Pros (AOR=1.7, 95% CI(1.03, 2.70), Cons (AOR= 0.56, 95% CI (0.40,0.71) and Self-efficacy (AOR= 1.3, 95% CI (1.01,1.69) were predictors of physical activity behavior in type 2 diabetes mellitus patients.

Conclusion: Physical activity status of type 2 diabetes mellitus patients was very low and significantly associated with self-libration, counter conditioning, Pros, Cons and Self-efficacy. Thus, stage matched intervention should be designed by considering the above significant variables to reduce the burden of type 2 diabetes mellitus. Key words: Physical activity, Type 2 Diabetes Mellitus, Transtheoretical model

Abs 4

Prevalence and Associated Factors of Attention Deficit Hyperactivity Disorder (Adhd) Among Children Age 6 to 17 Years Old Living in Rural Area of Girja District, Guji Zone, Southern Oromia Regional State, Ethiopia.

Hirbaye Mokona Lola

Introduction: Attention deficit hyperactivity disorder (ADHD) is the most common neurodevelopmental disorder in childhood with long-term consequences. Although ADHD is the most extensively studied mental disorders of childhood in developed countries very few studies have been conducted in African countries, particularly in Ethiopia on this important disabling mental disorder of childhood.

Objective: The objective of this study was to assess the prevalence and associated factors of ADHD among children age 6 to 17 years old living in rural area of Girja district, Guji zone, Southern Oromia regional state, Ethiopia, 2015.

Method: A community based cross-sectional study was conducted from May 09 to June 02, 2015 among children age 6 to 17 years living in rural area of Girja district. Multi-stage cluster sampling technique was used to select 1302 study subjects. 18 items Disruptive Behavior Disorder (DBD) rating scale based on DSM-IV and semi-structured questionnaire was used to collect data. Data was coded and entered into EpiData version 3.1; cleaned and analyzed by SPSS version 20. Binary logistic regression was used to identify the association of dependent and independent variables. Variables which show significant association on multivariate logistic regression analysis were reported using adjusted odds ratio (AOR) with their 95% CI.

Results: The overall prevalence of ADHD among children age 6 to 17 years in this study was 7.3% (95%CI: 5.8%-8.8%), from which 63.3% (n=57), 24.4% (n=22) and 12.3% (n=11) were predominantly inattentive, hyperactive/impulsive and combined subtypes respectively. Being male [AOR=1.81, 95%CI: (1.13, 2.91)], child living circumstance (living with single parent) [AOR=5.0, 95%CI: (2.35, 10.65)], child birth order/rank [AOR=2.35, 95%CI: (1.30, 4.25)], low family socio-economic status (low SES) [AOR= 2.43, 95%CI: (1.29, 4.59)], maternal alcohol/khat use during pregnancy [AOR=3.14, 95%CI: (1.37, 7.37)] and complication at delivery [AOR=3.56, 95%CI: (1.19, 10.64)] were more likely to develop ADHD when compared with their counterparts.

Conclusion: The prevalence of ADHD in children in the present study was similar with that of other African countries and worldwide prevalence of ADHD in children. So, prevention, early detection and management of its modifiable risk factors should be undertaken alongside increasing community awareness.

Keywords: ADHD, prevalence, children, associated factors

Abs 5

Genotyping and Molecular Detection of Multi Drug Resistance Mycobacterium Tuberculosis among Tuberculosis Lymphadenitis cases in Addis Ababa, Ethiopia. *Olifan Zewdie Abil*

Background: MDR-TB has emerged as a major public health problem. Worldwide, the proportion of new cases with multidrug-resistant TB (MDR-TB) was 3.5% and the proportion is higher among people previously treated for TB, at 20.5% in 2013. Thus a better understanding of drug resistance mechanisms and knowing specific lineages in *M. tuberculosis* is crucial for the development of rapid methods for drug resistance detection and new anti-TB drugs to treat MDR-TB patients.

Objective: The objective of this study was to analyze the lineages in relation with resistance gene in MDR-TB isolated from Tuberculous Lymphadenitis (TBLN) in Addis Ababa, Ethiopia.

Methods: A cross-sectional study was conducted from July- October, 2014 in Addis Ababa, Ethiopia. Sixty culture positive isolates were taken from FNA specimen on L-J culture media for analyzing of gene responsible for MDR-TB in relation to its molecular genotyping. Mycobacterial culture, GenoTypeMTBDR plus and Spoligotyping were used for undertaking this study.

Results: Of 60 TBLN isolates, 8.3% resistance to both RMP and INH,10% resistance to INH and 8.3% resistance to RMP only. From 13 T3-ETH sub lineage, 11(84.6%) of them were sensitive to both RMP and INH, 2(15.4%) were resistance to both RMP and INH. CAS and CAS sub lineage were significantly associated with RMP, INH and MDR-TB ($P<0.05$).

Conclusion: Genotyping and molecular detection together have a great contribution in specific MDR drug design and vaccine trial. The turnaround time of culture opens the door for increased TB mortality and drug resistance and extensive drug resistance, thus molecular method like LPA(Hains) should be recommend to screen all suspected MDR patients.

Keywords: TBLN; MDR-TB; genotyping; INH; RMP; Addis Ababa

Abs 6

Transfusion-transmissible Viral Infections among Blood Donors at North Gondar District Blood Bank, Northwest Ethiopia: A Three Years Retrospective study. *Belete Biadgo*

Background: Transfusion-transmissible infections remain a major public health problem in developing countries. Epidemiological reports have documented that the risk of transmission of viral infections has been decreased in countries where continuous and rigorous screening of all donated blood is carried out. Therefore, the aim of this study was to assess the sero-prevalence of transfusion-transmissible viral infections among blood donors.

Methods: A retrospective study was conducted among blood donors over three year's period. Data was collected from records of North Gondar District Blood Bank. Data were cross-checked for completeness, entered and analyzed using SPSS version 20 software. Descriptive statistics were done and presented in percentages. Both bivariate and multivariate logistic regression analyses were done to determine statistical associations. P value < 0.05 was considered statistically significant.

Result: A total of 6471 blood donors were enrolled; of whom 5311(82.1%) were males. Overall, 424 (6.55%) donors have shown serological evidence for at least one transfusion-transmissible viral infections. About 233(3.6%), 145(2.2%) and 51(0.8%) of those donors were sero-positive for HBsAg, HIV and HCV test respectively. Four (0.06%) of the study participants had shown co-infections: 3(75%) with HBV-HCV and 1(25%) with HIV-HBV-HCV. The highest sero-prevalence of HBV (5.0%), HIV (3.9%) and HCV (1.9%) were found among donors aged older than 45 years old. In multivariate logistic regression analysis occupation was significantly associated with HBV infection. Moreover, occupation and age have shown statistically significant association with HIV and HCV infection.

Conclusion and recommendation: The overall sero-prevalence of transfusion-transmissible viral infections were still high in the study area with predominant in males and replacement donors. Hence, it demands more vigilance in routine screening of donated blood prior to transfusion, and design tailored control and prevention strategies to reduce the burden of transfusion-transmissible viral infections.

Key words: Blood donors, Ethiopia, HBV, HCV, HIV, Transfusion-transmissible viral infections

Abs 7

Seoprevalence and Risk Factors of Hepatitis C Virus Infections and Human Immune Deficiency Virus (HIV) among Pregnant Women Attending Antenatal Care Clinic in Western Ethiopia.

Eyasu Ejeta Duken

Introduction: Human Immune Deficiency Virus and Hepatitis C virus (HCV) are a global public health challenge. Both HIV and HCV have serious effects on both pregnant women and infants, and share common modes of transmission. There is limited information on sero-prevalence of HIV and HCV infection among pregnant women in West part of Ethiopia. Hence, this study was conducted to assess sero-prevalence and predictor factors of HIV and HCV infection among pregnant women attending antenatal care in West Ethiopia.

Methods: Institutional based cross-sectional study was conducted from July to September, 2014 among 421 pregnant women's attending antenatal care services in purposively selected health facilities, East Wollega Zone, Ethiopia. The HCV and HIV sero-markers were tested from aseptically collected serum samples. Hepatitis C virus was detected using an enzyme linked immunosorbent assay (ELISA). HIV infection was also detected using the national HIV test algorithms. The A pretested-structured questionnaire were used to collect socio-demographic data, and predictor factors of HIV and HCV infection. The collected data were analysis using SPSS version 20.

Results: The overall seroprevalence for HCV and HIV among the study population was about 8.1% (34/412; 95%CI: 5.7-10.7) and 1.0% (4/421; 95%CI: 0.2-2.0), respectively. The HCV-HIV co-infected prevalence was 0.23% (1/421). Among HIV infected women, the prevalence of HCV infection was 25%. The an overall of higher seropositivity for HCV infection among rural residents (10.2%), Tigray and Gurage ethnic group (10.5%), and participants having lower average monthly income (10.1%). All HIV positive participants were among Oromo ethnic group, married, house wife or unemployed and less than 24 year old. The risk of HCV infection was significant low for urban residents (AOR=0.38, 95% CI: 0.16-0.90) compared to their rural counterparts. Significantly low risk of HCV infection was also observed among illiterate (AOR= 0.24, 95%CI: 0.06-0.85) population comparing to those attending higher level of education. For HIV infection, the history of blood transfusion was significant increase the risk (AOR = 19.52, 95%CI: 1.80-150.6).

Conclusion: The study showed that HCV and HIV infections are important public health problem in the study area. All pregnant women need to be screened for both HCV and HIV infection during antenatal care. Thus, HCV testing and diagnosis need to be included in the antennal care services, and public health programmes need to make progress in increasing communities awareness on the prevention and mode of transmissions HCV and HIV in general.

Key words: Seroprevalence, HIV, HCV, Pregnant Women, ANC, Ethiopia

Abs 8

Hematological Profiles of Normal Pregnant Women Attending at University of Gondar Hospital, Northwest Ethiopia. A comparative Cross Sectional Study.

Belete Biadgo, Aynadis Alemu, Molla Abebe, Betelihem Terefe, Muhammed Yesuf

Background: Pregnancy is a natural physiological variation as a result of hormonic and metabolic changes, which helps the growth and survival of the fetus. Worldwide more than 500,000 women are expected to have died each year as a result of pregnancy complication related to hematological profile alterations. Therefore the aim of the study was to assess hematological profiles of pregnant women attending at University of Gondar Hospital, Northwest Ethiopia.

Methods: A comparative cross sectional study was conducted among pregnant and non-pregnant women at University of Gondar Hospital, Antenatal care clinic from February to April, 2015. Blood sample was collected from 139 pregnant and 139 age matched non-pregnant women using systematic random sampling technique. Data analysis was made using SPSS version 20. Level of significance between groups was analyzed using independent t test and Mann-Whitney test. P-value <0.05 was considered statistically significant.

Result: Overall, the values obtained were (mean ± standard deviation), Pregnant women had significantly higher white blood cell count [(7.08+2.07vs 5.77+1.85) $x10^9$/L], Mean corpuscular volume [(93.16+3.44 vs 90.74+4.12) fl], Mean corpuscular hemoglobin concentration [(30.40+1.19 vs 29.47+1.46) pg], Neutrophil [(4.73+1.86 vs 3.06+1.47)$x10^9$/L], Red blood cell distribution width [(49.35+2.9 vs 46.37+2.73) fl], Platelet distribution width [(14.02+0.6 vs 13.12+0.19)fl] and mean platelet volume [(10.49+0.95 vs 10.06+1.18) fl] level compared with control. The level of red blood cell [(4.55+0.38 vs 5.14+0.53) $x10^{12}$/L], Hemoglobin [(13.73+0.96 vs 15.30+1.074) gm. /dl], Hematocrit [(42.14+2.55 vs 47.16+3.36) x%], Platelet [(196.07+48.88 vs 249.36+62.73) $x10^9$/L] and Lymphocyte [(1.65+0.41 vs 2+0.54) $x10^9$/L] was significantly lower in pregnant women than control respectively.

Conclusion and recommendation: This study found that hematological profiles were altered during pregnancy, it provides a baseline data for basic hematological parameters especially in the antenatal care assessment of pregnant women to avoid pregnancy related adverse outcomes.

Key Words: Pregnancy, hematological profiles, Gondar, Ethiopia

Abs 9

Larvicidal Effect of Endod (Phytolacca Dodecandra) Seed Products against Anopheles Arabiensis (Diptera: Culicidae) in Ethiopia.

Ayalew Jejaw Zeleke

Background: Over time, mosquito control success has been hampered due to the development of insecticides resistance by mosquitoes. The search for natural insecticides with less ill effects on the non-target populations remains the top priority. Thus, the present study aimed at investigating the larvicidal effect of 'Endod' (*Phytolacca dodecandra*) powder and crude extraction on *Anopheles arabiensis* in Ethiopia.

Methodology: Experimental study design was used following the WHO susceptibility test procedure. Seed products of *Phytolacca dodecandra* were evaluated against third instars larvae on laboratory strains and field populations of *Anopheles arabiensis* under laboratory condition. Mortality was then recorded within 24 hours exposure. Triplicates were done for treatment and control groups. During the experiment, colonies with 25 larvae were used from each wild and laboratory strains of the vector. LC_{50}, LC_{90} and LC_{99} were calculated from a log dosage–probit mortality regression line using SPSS version 20.0.

Result: This experiment was conducted with a total of 2400 third instars larvae of *Anophiles arabiansis.* The seed products *Phytolacca dodecandra* showed larvicidal activity against larvae stages of both the laboratory and field population of *Anophiles arabiansis*. The LC_{99} values for *Phytolacca dodecandra's* seed powder and its extract were 121.07 mg/l, and 616.46 mg/l respectively. In addition, the LC_{50} and LC_{95} values were also determined.

Conclusion: The findings of this study indicates that *Phytolacca dodecandra's* seed powder and its extract form could be used as an alternative mosquitocidal for targeted larval control in selected temporary breeding habitats with minimal effect on non-target organisms.

Key words: Endod, *Phytolacca dodecandra*, larvicidal, lethal concentration

Abs 10

Malaria Surveillance Data Analysis from 2011-2015 in Dembia District, North Gondar Zone, Northwest Ethiopia.

Melaku Kindie Yenit, Mesafint Fekadu

Introduction: Malaria is a life-threatening disease caused by parasites that are transmitted to people through the bites of infected female Anopheles mosquitoes. Globally, 3.2 billion people which are nearly half of the world's populations were at risk of malaria. There were an estimated 198 million cases of malaria and 584,000 deaths occurred in worldwide. Of which, 82% of these cases and 90 % of deaths were in the WHO African Region. In Ethiopia also an estimated 68% of the populations are at risk of contracting malaria.

Objective: The objective of this study was to analyse malaria surveillance data from 2011-2015 in Dembia district, North Gondar Zone, North West of Ethiopia.

Methods and materials: From 2011-2015 malaria surveillance data and demographic data for subsequent calculation of rates were received in Dembia district health office and a descriptive statistical method was used. Dembia district is found in North Gondar zone, Amhara Region, North West of Ethiopia. The method of data collection was document review and interview with responsible malaria officers. Data was compiled and analyzed by SPSS version 20 and Arc GIS 10.1. Any person with fever or fever with headache, rigor, back pain, chills, sweats, myalgia, nausea, and vomiting diagnosed clinically as malaria and a suspected case confirmed by microscopy or RDT for plasmodium parasites were used as suspected and confirmed malaria case definition respectively.

Results: In the past five years (2011-2015) a total of 415395, outpatient cases were seen in Dembia district. Of which malaria case accounts 96,460 (23%). The prevalence of malaria was 32%. Plasmodium falciparum was the dominant malaria species which accounts 66% 0f the total malaria cases. Adults (>=15 years of age) was highly affected with the overall prevalence of 41%.The highest malaria cases were reported from September to December followed by April to June. The proportionate mortality rate of malaria cases was 13%.

Conclusion and recommendation: In the past five years there was a fluctuating malaria trend in Dembia district. The prevalence and slide positive rate of malaria was higher. This indicates still malaria is the problem in the district. There for the district health office strictly focus and implement all nationally recommended malaria prevention and control strategies following spring season.

Abs 11

Comparative Study on Efficiency of Scoria and Pumice Filter Media for Industrial Wastewater Treatment: The Case of Tannery Waste Water.

Mekonnen Birhanie Aregu

Background: Tannery effluent is one of the most hazardous pollutants containing heavy metals, nutrients, toxic chemicals and others. Therefore identifying potentially efficient low-cost and locally available filter media as an adsorbent for the treatment of tannery wastewater is critical.

Objective: The general objective of this study is to investigate and compare the efficiency of pumice and scoria as a filter media for tannery wastewater treatment with selected physicochemical parameters.

Methods: This study has been conducted in Addis Ababa University from May to August 2016. Batch mode comparative experimental study design has been carried out. The filter media were crushed and graded and effective size was determined by using standard sieve. The composite sample wastewater was collected from Dire tannery, Addis Ababa Ethiopia. The physicochemical analysis of wastewater samples has been done before and after 12, 24, and 72 hours treatment using standard methods. Mean and standard deviations were calculated for each parameter. R statistical software was run for data analysis.

Result: Based on this investigation, characterization of the untreated tannery wastewater revealed that the mean concentration of BOD_5,COD, TSS, orthophosphate, ammonium, nitrite, nitrate, sulfide, sulfate and chromium were 1081±159.55, 12913±6874.7, 2426±515.2, 168±74, 314±59.9, 1.7±0.29, 124±12.8, 417±130.7, 1307±224 and 35.7±8.6 mg/l respectively. Nitrate removal efficiency of scoria and pumice were 99% and 95% respectively at RT= 72 hours. However phosphate removal was better by scoria on the first 24 and 48 hours but then again at RT=72hours pumice remove 66% and scoria removes 63% only. The efficiency of pumice to remove sulfate was from 83-84% whereas scoria shows from 75-77%. In the first 24 hours and 48 hours retention time pumice and scoria achieved 76% and 71% chromium reduction respectively. Considering all the selected tannery wastewater parameters for this study, the average treatment efficiency of pumice and scoria were 58.8% and 63.4% at RT=24 hours, 61.5% and 67.5% at RT= 48 hours respectively and equivalent efficiency (68.3%) was obtained after 72 hours.

Conclusion and Recommendation: Both scoria and pumice substrates has a potential to treat tannery wastewater. Conversely when we compare the average efficiency to reduce those selected wastewater parameters scoria showed better result than pumice. Further investigation on the combined effect of mixed substrates is recommended.

Key Words: Tannery Wastewater, Pumice, Scoria, Filter media

Abs 12

Prevalence of Respiratory Morbidities and Factors associated, among workers in Mugher cement factory.

Fantahun Ashagerie, (MD, MPH); Muger Cement Clinic, Zewdu Dagnew (BSc, MPH, Ass. Professor); Debre Markos University Public Health Departemt, Fentaw Tadese (BSc, MPH); Debre Markos University Public Health Departemt.

Introduction: Occupational related respiratory diseases which most often go unnoticed by the health professionals in our nation is one of the dangerous diseases affecting workers in Ethiopia and are expected to become the prominent public health problem as the country moves forward to industrialization, with a resultant expansion of cement industries which require deployment of huge work force. Though cement industries are important for Ethiopian economy, not much is studied on respiratory morbidity which could have implications to the health of factory workers and the research under consideration is important in this regard.

Objective: The study assessed the prevalence of respiratory morbidities and factors associated, among factory workers in Mugher cement, 2015.

Methodology: A cross-sectional study was done in Mugher cement enterprise workers using a validated questionnaire, peak flow meter measurements and data from clinical examination (chest expansion). A total of 317 workers were selected using simple random sampling and data collected using modified British Medical Research Council and American Thoracic Society questionnaire, peak flow meter and chest expansion measurements.

The data was analyzed for the prevalence of respiratory morbidities among the study participants. Logistic regression was performed using SPSS version 19 software. Significant association was stated at p value of less than 0.05 and with 95% CI of odds ratio.

Results: The prevalence of chronic bronchitis, chronic asthma, and chronic rhino sinusitis and peak air flow limitation were 20%, 17.9% a 24.8% and 45.8%respectively and the prevalence of chronic cough, phlegm, breathlessness was 25.2,20 and 42.9 percent respectively. logistic regression analysis showed that the main risk determinants among the predicator variables were working more than 36 hours OR=1.86 95%CI [1.10-3.16], mining/packing section, OR=3.70, 95%CI [1.82-7.51] and unskilled/semiskilled occupational categories OR=4.45, 95%CI [2.31-7.39] which were significantly associated with chronic morbidity of any form. Among the socio demographic factors those who live in rural areas were at higher risk of developing chronic morbidity of any form. Apart from the primary exposure variables, personal habits such as the use of alcohol were significantly associated OR=2.14, 95%CI [1.35-3.39] with chronic morbidity of any form.

Conclusion: The prevalence of chronic respiratory morbidity among workers in Mugher cement factory was higher. Changing the personal habits of employees also needs serious consideration.

Abs 13

Non Tuberculosis Mycobacterium(NTM), Entrococcus Faecalis and E.coli from Biofilm Samples from the Water Distribution Pipeline in Addis Ababa.

Samson Girma Gabre

Introduction: Drinking water distribution systems provide an oligotrophic environment, and post-treatment recovery and regrowth of bacteria is therefore a concern because of the effect it has on public health.

Objective: The main objective of this study is to look for Non Tuberclosis Mycobacterium, *E.coli* and *E.faecalis* from biofilm samples in the water distribution pipeline from selected sites of Addis Ababa.

Methodology: A total of 40 biofilm samples were collected from two sub cities of Addis Ababa (Gulele and Kolfe sub cities). Biofilm sample were taken from the inner surfaces of the getvalve or faucette using sterile cotton tipped swab moistened in 1ml sterile normal saline solutions. Biofilm samples were dispersed by vigorous vortexing in sterile saline water. Biofilm samples were analyzed to determine the presence of E. *coli*, *E. faecalis* and NTM (Non Tuberclosis Mycobacterium). The diluted biofilm samples were used to inoculate three replicate tubes of the relevant enrichment broths. After incubation a loopful from each tube was streaked onto the corresponding selective sub-culture medium.

While for NTM culture based method was used to grow on LJ media the NTM upto 3 months. This was followed by Mycobacterial DNA is extraction from cultivated material, specifically amplified via PCR and detected on a membrane strip using reverse hybridization and an enzymatic colour reaction (Gentoype Mycobacterium CM/AS Kit).

Result: Out of the total biofilm samples collected 14/40(35%) were taken from Kolfe subcity while the rest 27/40(67.5%) were taken from gulele subcity. From the total swabs taken from the pipelines, 10 out of 40 (25%) were taken from getvalve, where as 60% were taken from faucette. Most of the biofilm samples were collected from household 28/40(70%), 4/40(10%) hotel, 3/40(7.5%) reservoir, 3/40(7.5%) bono water and 3/40(7.5%) health facility respectively. In general out of the total 40 biofilm samples collected, positive isolates of NTM were found in 16 of the samples, which would be in 40% of the samples. The majority of Mycobacterium spp was isolated from a household at the rate of 10/28 (35%).

From the total biofilm samples *E. coli* was only isolated in only 3 swab samples, which is a 3/40(8%) of the biofilm samples. In terms of the samples taken, 2/28(7.1%) is isolated from household, while 1/3(33%) was isolated from tanker/reservoir. *Ou*t of the total biofilm samples collected 6 of the samples were positive for 6/40(15%).

Conclusion: The study has highlighted the importance of biofilm samples in addition to the routine drinking water quality testing techniques, usually for the indicator organisms such as fecal coliform and *E.coli*. Further work on the impact and significance of the environmental non Mycobacteria (NTM) should be studied widely on their diversity as well as impact on the water quality, as well as the impact on health.

Key words: NTM, Biofilm, Genotype

Abs 14

Prevalence and Factors Associated with Pelvic Organ Prolapse among Pedestrian Back-Loading Women in Bench Maji Zone. *Andualem Henok*

Background: It is common to see women carrying heavy loads on their back in developing countries including Ethiopia. Bench-Maji zone is a zone found in SouthWest Ethiopia which is known in its dense forest. Many women lead their lives by selling heavy fire woods to residents in urban areas by back loading. This may have effect on pelvic organ prolapse. The objective of the study was to determine prevalence and factors associated with pelvic organ prolapse among pedestrian back-loading women in Bench-Maji zone, 2016.

Methods: The study was conducted in Bench-Maji zone, SouthWest Ethiopia from January to March 2016. Cross-sectional study design was employed. The sample size was calculated to be 422. Women were selected by using convenience sampling technique. Interviewer administered questionnaire was used to collect data. Binary logistic regression was used to determine factors associated with pelvic organ prolapse.

Result: Fifty six (13.3%) had pelvic organ prolapse. The likelihood of pelvic organ prolapse was higher among those women whose age greater than forty (AOR= 5.99: 95% CI 2.98, 12.01), weight less than forty (AOR= 2.26: 95% CI 1.17, 4.38), BMI less than 18.5 (AOR= 2.37: 95% CI 1.25, 4.51), duration of work greater than 10 years (AOR= 4.01: 95% CI 1.81, 8.89), and experiencing of abortion (AOR= 2.39: 95% CI 1.10, 5.19).

Conclusion: The prevalence of pelvic organ prolapse was high. Age, weight of women, BMI, duration of work and abortion were significantly associated with pelvic organ prolapse. Urgent attention is needed from concerned bodies.

Key Words: Pelvic organ prolapse; back loading; Factors, Utero Vaginal Prolapse, Ethiopia

Abs 15

Occupational Injuries among Building Construction Workers in Addis Ababa, Ethiopia.

Dagnachew Israel Tariku

Background: Occupational injuries can pose direct costs, like suffering, loss of employment, disability and loss of productivity, and indirect costs on families and society. However, there is a dearth of studies clarifying the situation in most of Sub-Saharan African countries, like Ethiopia. The present study determined the prevalence of injury and associated factors among building construction employees in Addis Ababa, Ethiopia.

Methods: An institutional-based cross-sectional study was conducted among building construction employees in Addis Ababa, Ethiopia from February to April 2015. Multi-stages sampling followed by simple random sampling techniques was used to select the study participants. The sample size of the study was 544. A pre-tested and structured questionnaire was used to collect data. Multivariable analyses were employed to see the effect of explanatory variables on injury.

Results: The prevalence of injury among building construction employees was reported to be 38.3 % [95 % CI: (33.9, 42.7)] in the past 1 year. Use of personal protective equipments, work experience, khat chewing were factors significantly associated with injury.

Conclusion: This is among the few studies describing construction health and safety in Ethiopia. In this study a relatively higher prevalence of injury was reported among building construction employees compared to other studies. If urgent interventions are not in place, the absence from work, loss of productivity and work-related illnesses, disabilities and fatalities will continue to be a major challenge of the construction industry in the future. Therefore, programs to mitigate the burden borne by construction-related injuries should focus on areas, such as provision of safety trainings, promoting use of PPE and monitoring substance abuse in workplace.

Keywords: Construction industry Occupational injuries Workers Workplace safety

Abs 16

Equity in Reproductive and Maternal Health Service Utilization in Ethiopia. *Firew Tekle Bobo*

Background: Disparities in health services utilization within and between regional states of countries with diverse socio-cultural and economic conditions such as Ethiopia is a frequent encounter. Understanding and taking measures to address unnecessary and avoidable differences in the use of reproductive and maternal health services is a key concern in Ethiopia. The objective of this study was to examine degree of equity in reproductive and maternal health services utilization in Ethiopia.

Method: Data from Ethiopia mini demographic health survey 2014 was analyzed. We assessed inequalities in utilization of modern contraceptive methods, antenatal care, facility based delivery and postnatal checkup. Four standard equity measurement methods were used; equity gaps, rate-ratios, concertation curve and concentration index.

Results: Significant inequalities were observed in the utilization of antenatal care, facility based delivery and postnatal care provided by skilled providers. Coverage of services had more concentration among women in developed regions, urban residents, more educated and among economically better-off. Use of modern contraceptive method was found to be more equitable while, birth at health facility was found to be less equitable across all economic levels, favoring the economically better-off.

Conclusion: Equity of coverage in reproductive and maternal health service in Ethiopia is low. Inequities were observed in terms of all four socio-economic factors; urban/rural, administrative regions, educational status and wealth quintile. A long and difficult road awaits Ethiopia to ensure equitable reproductive and maternal health services for all women in the country.

Key words: Equity, Modern contraceptive, Antenatal care, Postnatal care, Birth in the facility, Ethiopia

Abs 17

Status of Attitudes of Primary School Teachers towards Leprosy in Kolfe Keranio and Gullele Sub Cities, Addis Ababa, Ethiopia, 2016.

Wubitu Abere Woldesemayat

Background: Untreated Leprosy is one of a leading cause of disability in Ethiopia. Little or no information on causes, mode of transmission and treatment affected people's attitude. In this thesis, status of attitude of primary school teachers towards leprosy and its associated factors such as knowledge, belief, area of residence and age were studied in Kolfe keranio and Gullele sub cities in Addis Ababa, Ethiopia. Leprosy affected people evicted and or migrated from different corners of leprosy endemic areas in search of leprosy services. Not returning to residence area becomes a means to escape from stigma and discrimination. As a result, settlement entailed colony followed by slum formation. Gullele and Kolfe Keranio Sub cities are adjacent to one another.

Methods: Cross-sectional quantitative study was conducted using multistage sampling technique. Questionnaires were self administered to a total of (n=634) primary school teachers. Primary data was collected and entered into EPI-INFO version 3.5.3 and exported to SPSS version 16. Descriptive, Binary Logistic regression and Multiple Logistic regressions were executed for analysis.

Results: In the descriptive analysis**,** the status of attitude of primary school teachers towards leprosy was favorable, showing 71.9%. The multiple logistic regression result showed that Kolfe keranio was 79% more likely to develop favorable attitude towards leprosy compared to those **residing** in Gullele sub city ([AOR 95% CI] = 1.79 (1.11, 2.89). Primary school teachers between 18 to 39 years of age were 47% more likely to develop favorable attitude towards leprosy compared to those 40+ years of **age** ([AOR 95% CI] = 0.47 (0.27, 0.80). Primary school teachers having fair belief were 57% more likely to develop favorable attitude towards leprosy compared to those having poor **belief** ([AOR 95% CI] = 1.57 (1.06**,** 2.34). Primary school teachers having **fair knowledge** on leprosy were 56% more likely to develop favorable attitude towards leprosy compared to those having **poor knowledge** ([AOR 95% CI] = 1.56 (1.04**,** 2.35).

Discussion: The study asserted there was favorable attitude among primary school teachers towards leprosy. There was also association between attitude and its predictors.

Conclusion and recommendation: Status of attitude of primary school teachers towards leprosy was favorable. Public health planning in school community was important to sustain favorable attitude and introduce early detection of child leprosy. The finding of this study needs to be complemented by qualitative and reliability research.

Key words: Primary school teachers, Attitude, Belief, Knowledge, Residential area, Age.

Abs 18

Tuberculosis Patients' Satisfaction with a Directly Observed Treatment Strategy in Addis Ababa, Ethiopia: A Mixed Method Study.

Belete Getahun, Zethu Zerish Nkosi

Background: Directly observed treatment, short course (DOTS) strategy has been a cornerstone for Tuberculosis (TB) control programs in developing countries, however, satisfaction of TB patients with this strategy was not well understood. Therefore, the study aimed to assess the TB patients' level of satisfaction with the DOTS.

Method: the study used explanatory sequential mixed method design, employing interviewer-administered questionnaire with 601 TB patients, focus group discussions with 23 TB experts, and telephonic interview with 25 defaulted TB patients.

Result: the mean satisfaction score of the TB patients was 3.8 (SD=0.5) and 8.4 (SD=1.57) with 23 Donabedian health care quality model measuring items and single overall measuring item, respectively. Sixty seven percent of the TB patients were satisfied with the DOTS, while all of the defaulted TB patients were dissatisfied. TB experts lack evidence to affirm the satisfaction level of TB patients. Availability of health care providers (HCPs) on time, active DOTS delivery process, premises of health care facilities, and presence of aligned services such as nutritional support and transportation are areas that require immediate attention to improve TB patients' satisfactions with the DOTS.

Conclusion: The study findings show that the unignorably numbers of TB patients were dissatisfied; even the dissatisfaction was one of the causes to default from the treatment. Moreover, the DOTS has no regular system which measures the level of satisfaction of TB patients. Therefore, the DOTS delivery system should include regular TB patients' satisfaction measuring mechanism which informs health care workers.

Keywords: defaulted TB patients, DOTS, HCP, TB experts, TB patients' satisfaction

Abs 19

The Role of Health Extension Workers in Medicine Management in Ethiopia.

Hiwot Moges Bekele, Netsanet Fekadu Belaye

Introduction: Health Extension Workers (HEWs) are frontline public health care providers who are often trusted members of and/or have a close understanding of the community being served. In Ethiopia HEWs promote four areas of the health sector: Disease Prevention and Control, Family Health, Hygiene and Environmental Sanitation, Health Education and Communication. On the other hand to address strong community demands for basic curative care, HEWs are trained to provide first aid, treat malaria, intestinal parasites, immunizations and injectable contraceptives. This review is prepared to describe the types of community health care services as well as distribution of vaccines and pharmaceuticals health extension workers are engaged in.

Method: various literatures were reviewed of using Google as a search engine. On-line databases such as Google, Google Scholar, Pub Med reports and training modules and reports from Federal Ministry of Health were accessed. Community health workers, the role of CHWs in medicines management, health extension workers, Ethiopia were the search terms and phrases used.

Results: Weighing scale, growth monitoring chart, ORS, Anti-helminthic, oral contraceptives, Iron/ foliate, antibiotics for case management, insecticides treated bed nets, malaria drugs, and rapid diagnostic test materials, vaccines such as **:** BCG, DPT1, DPT2, DPT3, OPV1, OPV2, OPV3 and measles are medicines and pharmaceuticals managed by HEWs to the community through home based service. Moreover they promote adherence to TB drugs and ARTs.

Conclusion: In Ethiopia HEWs are providing both preventive and curative medicines and pharmaceuticals such as insecticide treated bed nets, malaria drugs, and rapid diagnostic test materials, vaccines, antibiotics to households and maintain their supply chain management. It is recommended to perform further study on knowledge attitude and practice of HEWs towards medicines managed for the betterment of the health care system.

Abs 20

Patient's Perception and Experience on Determinants of TB Treatment Adherence in Addis Ababa, Ethiopia: A Qualitative Research.

Zekariyas Sahile (MPH) Ambo University, College of Medicine and Health Sciences. Zekariyas Sahile Nezenega, Zekariyas Sahile Nezenega

Introduction: Ethiopia classified as one of the worst affected and of highest burden for tuberculosis (TB) in the world. The DOTS strategy ensures that infectious TB patients are identified and cured using standardized drug combination. Patient compliance is a key factor in treatment success. In many countries, a significant proportion of patients stop treatment before completion, for various reasons. This study aimed to assess perception and experience of TB patient on determinant of treatment adherence in Addis Ababa, Ethiopia.

Methods: A qualitative study was conducted from August 19-25/2016. A total of 10 TB patients were involved in-depth interviewee until idea saturated method from to public health facilities in Addis Ababa, Ethiopia. Purposive sampling technique was employed to select the study participants. In-depth interview guideline was prepared in English and then translated to Amharic. Open code software version 3.5 was employed for thematic analysis using both inductive and deductive approach. All responses were coded and categorized based on the concepts that have similar and related ideas clustered together A total of four themes were identified.

Result: The majority of the respondents had aware the transmission and prevention method of TB. However, most the respondents had wrongly belief that TB is caused by exposed to cold air. Majority of the respondents perceived that the risk of discontinuing TB treatments by saying the disease will relapse and take injection for long period. The majority of respondents were report never missed any dose of medication. However, among those who missed forgetfulness was mentioned as a reason. Most of the respondents getting the service in near distance from their home and was getting the service with a few waiting time. However, a few respondents experience high waiting time in some occasions. Most of the respondents had good relationship with patients. But, Patients had preferred to get the treatment services by one health care professional. Poor relationship of patient with health care provider who works out of TB clinic was reported.

Conclusion: Respondents prefer to get the services by one health professional. Poor relationship of patient with health care provider who works out of TB clinic was reported. Emphasis should be given on patient preference and patient provider relationship to improve the services.

Abs 21

Level of Health Professionals Commitment towards Increasing Uptake of Institutional Delivery Services and Associated Factors at Government Health Facilities in Jimma Zone, Southwest Ethiopia, 2016.

Yibeltal Siraneh

Background: Professional commitment is beyond a commitment for a particular organization and implies the individuals' perspective towards their profession and the motivation that they have to stay in their job which refers to one's loyalty to the profession and the willingness to strive and uphold the values and goals of the profession to maintain membership in that profession. There is a general conviction that professional commitment of health workforce has a positive and significant impact upon business performance and reform process of health system. The quality and effectiveness of health systems critically depends on the size, skills and commitment of the health workforce. In Ethiopia, the National, regional (Oromia) and Zonal (Jimma) level of family planning and ANC coverage were in good status but uptake of institutional delivery service (IDS) coverage was still low. In Oromia region, IDS utilization is about 13%, which is lower than the national level (16%). The health sector is struggling to bring change by exerting its effort on these constraints/determinants of IDS utilization from the client and service coverage perspective but the level of professional commitment and associated factors of health professionals' was not studied yet.

Objective*:* The objective of this study was to assess the level of professional commitment of health professionals' and associated factors in government health facilities of Jimma zone, Oromia, Southwest Ethiopia, 2016.

Methods*:* A facility based cross-sectional study design employing both quantitative and qualitative methods was conducted from March 01-20, 2016. A sample of 442 health professionals were included from the randomly selected 7 Woredas and Jimma town within respective 47 health facilities that fulfill inclusion criteria, and 20 health managers were selected purposively from selected health facilities,woreda health offices and zonal health department for in-depth interview. All eligible health professionals from the health facilities were requested to fill self-administered questioner. Finally, after checking its completeness, the data was entered in to EPI data version 3.1 and exported to SPSS version 20 for statistical analysis. Factor analysis was conducted to identify the measurement scales and factor scores that were used in both simple ($P<0.25$) and multiple linear regressions ($P<0.05$). Finally, the finding was presented using graphs, tables, narratives and descriptive numerical summary. Qualitative data was collected using key-informant interviews to support the findings from the quantitative survey by thematic analysis technique.

Results*:* The response rate of this study was 93.21%. The percentage mean score of professional commitment for health professionals working in government health facilities of Jimma zone was 72.71 % (SD21.88). The raw mean score of this scale was 39.08± 8.8 with a total rotated variance

explained 61.22%. The percentages mean score for perceived maternal health goal scale was 68.37% with the total variance explained 69.68%. This study found that perceived staff interaction, perceived work-life balance, affective organizational commitment, normative organizational commitment, personal characteristics and perceived maternal health goal as independent predictors of professional commitment.

Conclusion*:* In this investigation, the percentage mean score of professional commitment of health professionals working in government health facilities of Jimma zone was medium. Hence, we recommend health managers to communicate and update the new maternal health goal (SDG) as well as Professionals' should be committed to their organization and consider their personal characteristics having balanced work life time to foster a more high level of professional commitment among health professionals in government health facilities of Jimma zone to increase uptake of institutional delivery services.

Key words*:* Professional commitment, health professionals, government health facilities, IDS uptake.

Abs 22

Willingness to Pay for the Newly Proposed Social Health Insurance Scheme and associated factors among Civil Servants in Debre Markos Town, North West Ethiopia, 2015. *Endawoke Almayhue*

Introduction: Utilization of modern health care services is limited in low income countries compared to developed countries. In Ethiopia, in spite of high burden of preventable disease, user-fee charges one of the reasons for low utilization of healthcare services. The government of Ethiopian has developed health insurances strategy to increase the prepaid plan coverage and access to modern healthcare services. Objectives: To assess willingness to pay for the newly proposed social health insurance among civil servants in Debre Markos town, East Gojjam, Amhara, Ethiopia, 2015.

Methods: Institution-based cross sectional study was conducted on 421 selected civil servants using simple random sampling technique. Data were collected using semi-structured questionnaire. The collected data were entered EPI data version 3.1 and exported to SPSS version 20 for analysis. The results were presented thorough tables, figures and odd ratio with their respective 95% confidence interval.

Result: Two hundred fourteen study participants replied that social health insurance as acceptable strategy for paying health care. In addition, majority 266(63.2%) responded that SHI protects financially from unexpected costs of illness. Majority of respondents', Two hundred ninety four (69.8%) of participants were willing to pay the proposed of social health insurance (3% of Gross salary) and the rest participants (127) were not willing to contribute 3% of Gross salary. Participants with Single Marital status, < 3HH size of with under age of 18 years, who accept the SHI scheme, and who perceive improvement on quality of services if SHI is implemented were significantly associated with the WTP 3% of Gross salary with AOR; 5.1,CI(1.6,16), AOR; 15,CI(0.012,0.347),and AOR ;5.8 CI(0.06,0.506) respectively.

Conclusion: Majority of participants were WTP the proposed social health insurance (3% of gross salary). Marital status being single, HH size with age of <18 years, acceptability of SHI and perceived quality of services having if SHI is implemented were significantly associated with WTP. Health institution should deliver high quality services, ready to in equipment's, resources and skilled manpower to attain high achievement of the proposed health insurance.

Abs 23

Adult Patient Satisfaction with In-Patient Nursing Care in Ethiopia; Cross-Sectional Study in Referral and Teaching Hospital Southern Nations Nationalities and Peoples' Region.

Mehret Tesfu Legesse

Background: Knowing patients' satisfaction with nursing care is important for any health care agency as nurses and nursing care comprise majority of the healthcare provision in hospitals throughout 24 hours a day.

Objectives: This study aimed to assess adult inpatient satisfaction with nursing care and its determinant factors in the study area.

Methods: A cross-Sectional Survey was conducted at Hawassa specialized and teaching hospitals in Ethiopia from April 1-30, 2014. The study population were Patients who were admitted to the study wards at the time of data collection. Patients aged >18, admitted at least for two days and able to communicate. Data was collected using a modified 'Newcastle Satisfaction with Nursing Scale'. Bivariate and multivariate linear regression analyses were conducted for identifying the predictors of satisfaction. Summary tables were used for presenting the result. Ethical approval was obtained from Jimma University

Results: a total of 406 patients participated in the study. The study showed that the mean satisfaction score of the patients was 47%. Multivariate linear regression indicated that perceived need and expectation of care were independent predictors of the patients' satisfaction.

Conclusions: This study revealed that the satisfaction level of patients with the inpatient nursing care they received was low. It was influenced by their perceived need and expectation of care from their providers. Thus, we recommend that the hospital's managers should frequently assess its patients' satisfaction status and provide tailored on-job training to its nurses in order to improve their skill for enhancing patients' satisfaction.

Keywords: Nursing care, patient satisfaction, in-patient care, Hawassa, Ethiopia

Abs 24

Improving the Health Workforce Distribution in Remote and Rural Areas of Ethiopia: An Evidence-Based Policy Brief *Serebe Abay Gebrie*

Background: Human Resources for Health (HRH) constitute the most vital component of health systems. Effective and equitable health service provision depends to a large degree on the availability, competence, motivation and distribution of HRH. However, worldwide the geographical distribution of health workers is skewed towards urban and wealthier areas. The HRH picture of Ethiopia has remained critically low and has been characterized by geographic mal-distribution, skills imbalance, staff shortages, low retention and low productivity. The numbers of health professionals in different parts of the country remains lower than the standard. Particularly, in the rural parts that constitute 85% of the population has been chronically under-served. Therefore, this brief was aimed to show the major causes for poor health workforce distribution and to suggest possible policy options to improve the HRH distribution throughout the country.

Methods: We reviewed relevant evidence describing the problem, the impacts of options on addressing the problem, and barriers to implement those options. We searched electronic databases of systematic reviews, including: the Cochrane Library, SUPPORT SUMMARIES, PDQ Evidence, and Health Systems Evidence. We also used a focused searching method for specific topics by using PubMed, Google Scholar, and personal contacts to identify systematic reviews. The final selection of reviews for inclusion was based on a consensus of the authors.

Result: We found that poor motivation and retention schemes, organizational and local environmental factor, individual and work-related factor were the major causes for poor health workforce distribution in remote and rural parts of Ethiopia. Systematic reviews on impact of task shifting, clinical rotations in rural areas during studies and financial incentives have shown favorable results that may lead to increase the number of health workforce working in rural and underserved areas.

Conclusion and Recommendation: In our review, we found different options that help to improve health workforce distribution in the remote and rural areas of the country, but none of the studies assessed the costs and cost effectiveness of all options. Therefore, given the limitations of the currently available evidence, there is a need for rigorous evaluative research on the cost effectiveness of each option prior to widespread implementation.

Abs 25

Perceptions of Health Managers on Factors that Affect the Satisfaction and Intention to Leave of Public Sector Health Workers in Ethiopia: A Cross Sectional Study.

Shelemo Shawula Kachara, Tegbar Yigzaw Sendekie, Damtew woldemariam Dagoye, Mesfin Kifle Edo, Zeine Abosse anore

Introduction: Availability and performance of the health workforce is the single most important determinant for the achievement of Ethiopia's health sector transformation plan. Health managers with a clear understanding of factors that affect satisfy or dissatisfy health workers can play a key role to improve health workers' performance and retention. We examined perceptions of the public sector health managers about factors that affect satisfaction and turnover intention of health workers in their organizations.

Method: A cross-sectional study was conducted from May 28 to June 14, 2014. A total of 245 health managers from randomly selected 108 hospitals, 127 health centers and 12 management structures were included in the study. Data was collected by using structured questionnaire with Likert scale responses.The data entered into Epi Info Version 3.5.1 and exported to SPSS 20 (IBM Corporation) for descriptive analysis.

Results*:* More than 81% of all managers agreed that 17 out of 18 factors related to human resources management practices affected the health workers' job satisfaction. Three top rated factors were placing people in jobs for which they are suited, valuing and respecting each worker, and creating a climate in which people get along and have friendships at work. Between 92% and 95% of the health managers reported that their organizations were performing well in the three top rated management practices. Even though more than 95% of all health managers considered salary and various financial allowances were significantly important for health workers to decide to stay or leave their jobs, only 21% said their organizations were able to offer fair salary package. Moreover, only 25% of managers reported availability of sufficient opportunities for health worker promotion. Finally, 93%, 81% and 80% of the health managers, respectively, reported that low pay, high cost of living and poor access to higher education were the three most important factors affecting decision to leave the current job among their employees.

Conclusion: More than 90% of the managers agreed that their organizations were performing well in human resource management practices but had limitations in making the work environment conducive and paying fair salaries and benefits to their workers. The health sector should focus on improving remuneration and creating conducive work climate for the health workforce in the country.

Abs 26

Burden of Tuberculosis among Students in Two Ethiopian Universities.

Abiyu Mekonnen Gebrehiwot [1], Beyene Petros[2] [1]PhD Fellow at Addis Ababa University, Department of Microbial, Cellular and Molecular Biology [2] Professor of Biomedical Sciences, Addis Ababa University, Department of Microbial, Cellular and Molecular Biology.

Background: Today, tuberculosis (TB) incidence is 100 times higher than the elimination target for 2050. The long term goal has been established to eliminate TB as a public health problem by 2050 by reducing the incidence to less than one case per one million population. *Tuberculosis outbreaks emerge occasionally in long-term care facilities and various educational establishments.*

Objectives: This study was designed to determine the five year overall prevalence and trend of tuberculosis and associated factors among students at Adama Science and Technology University and Addis Ababa University Sidist Kilo campus.

Methods: A five-year retrospective study was conducted on students' medical records of tuberculosis Directly Observed Treatment Short Course clinics from September 2009– July 2014. The overall prevalence and the trend of smear positive, smear negative and extra pulmonary tuberculosis cases was determined. Odds ratio with 95 percent confidence interval was calculated for categorical variables using a multivariate logistic regression model to assess the strength of association.

Findings: A total of 112 and 263 tuberculosis cases were recorded in Addis Ababa University Sidist Kilo campus and Adama Science and Technology University, respectively. The mean proportion of tuberculosis cases of all types among the total number of students enrolled at Adama Science and Technology University and Addis Ababa University Sidist Kilo campus was 1098.1 and 511.7 cases per 100,000 population, respectively**.** There was a statistically significant difference in prevalence of tuberculosis among students in Adama Science and Technology University compared to that in Addis Ababa University Sidist Kilo campus [adjusted odds ratio: 2.881, 95% CI (1.76-4.71)]. The trend of tuberculosis prevalence showed a steady decline from the first to the last year of the study period.

Conclusion: The number of tuberculosis cases observed among university students in this study was high. Governmental and nongovernmental agencies involved in tuberculosis control must consider higher education institutions as focal points for prevention and elimination of tuberculosis in Ethiopia.

Keywords: Prevalence, Trend, University-students, daily observed therapy Short course-Clinic, Universities

Abs 27

Determinants of Delayed Care Seeking for TB Suggestive Symptoms in Rural Ethiopia: a Community Based Unmatched Case-Control Study.

Robel Yirgu Belachew

Introduction: Early tuberculosis case finding and adequate chemotherapy is a top priority to interrupt transmission of the infection and prevent death and complications caused by delayed care seeking. This study has identified the magnitude and determinants of patient delay to seek care.

Setting: Rural Seru district, Oromiya regional state, Ethiopia

Objective: To measure the prevalence of patient delay and identify factors associated with care seeking delay among presumptive tuberculosis cases.

Methods: Population based unmatched case control study was employed. The WHO standard TB screening tool was used to screen and identify presumptive TB cases (> 15 years of age). Presumptive TB cases who sought care after the first 14 days since the symptoms first started were taken as cases while those who sought care in the first 14 days were the controls. A pretested interview questionnaire was used to collect data pertaining to socio demographic characteristics and health care service related variables from the study participants. Multiple binary logistic regression model was used to identify determinant factors for patient delay.

Result: A total of 9,782 individuals were screened, 980(10%, 95%CI; 9.4%-10.5) were found to be presumptive TB cases. Among the presumptive TB cases 358(76%, 95% CI; 75.6%-76.4%) sought care in the first 14 days with the median patient delay of 15 days IQR (5-30 days). The most common suggestive symptom mentioned by the participants was night sweat 754(76.4%) but history of contact with a TB case was mentioned only by 207(21.1%) participants. Individuals in the age range of 45 to 50 years had lower odds of delaying for care (AOR 0.31, 95%CI 0.15, 0.61) than those in the range of 15 to 24. Previous history of TB treatment (AOR16.16, 95%CI 9.94, 26.26) and limited access to either traditional or modern mode of transportation (AOR 2.62, 95% CI 1.25, 5.49) were independently associated with patient delay.

Conclusion: Older age, previous history of TB treatment and lack of access to traditional or modern means of transportation increased the odds of patient delay. The findings suggested the need for enhancing access to the health care service through strengthening community based TB program and enhancing geographic accessibility of health care facilities.

Abs 28

Gestational Age at Antiretroviral Therapy Initiation Affects Retention in Option B+ Prevention of Mother-to-Child Transmission Services in Northeast Ethiopia. *Israel Mitiku Hatau*

Background: Rapid antiretroviral therapy (ART) initiation in pregnant women and retention in care are important for effective prevention of mother to child transmission (PMTCT) of HIV and for the long-term health of mothers. However, many women across Africa visit an antenatal (ANC) clinic often at a late stage of gestation (delaying HIV diagnosis and ART initiation) and have poor retention in HIV care. We examined whether gestational age at ART initiation was associated with loss to follow-up (LFU) among pregnant women initiated on a lifelong ART for PMTCT (Option B+ strategy) in Ethiopia.

Methods: We conducted a retrospective cohort study of pregnant women who started ART at 14 public health facilities in northeast Ethiopia. We defined LFU as 90 days since the last clinic visit among those not known to have died/transferred out. We used multivariable logistic regression models to identify the predictors of LFU.

Results: A total of 306 women started ART during pregnancy between March 2013 and April 2015. The median gestational age at ART initiation was 20 weeks (Interquartile range (IQR): 15-26). Multivariable analysis showed that gestational age at ART was independently associated with LFU (adjusted odds ratio (AOR) <20/>20 weeks: 3.24; 95% confidence interval (CI): 1.53-6.84). Moreover, younger women 18 to 24 years/30 to 40 years (AOR: 3.44; 95% CI: 1.19-9.90) and women starting ART on the same day as HIV diagnosis (AOR:2.11; 95% CI: 1.04-4.32) were more likely to be LFU.

Conclusions: A considerable proportion of pregnant women start ART at a relatively late stage of gestation, and such delays are associated with increased risk of LFU. Efforts must be made to promote ART initiation at early gestational age so as to maximize the duration of ART before delivery and enhance retention in care under option B+.

Abs 29

Intestinal Helminth Co-Infection and Associated Factors among Tuberculosis Patients in Arba Minch. *Getaneh Alemu*

Objective: Helminths affect the outcome of tuberculosis by shifting cell mediated immune response to humoral and by total suppression of the host immune system. On the reverse, *Mycobacterium* infection favors immune escape of helminths. Therefore assessing helminth co-infection rate and predisposing factors in tuberculosis patients is mandatory to set strategies for better case management.

Methods: Facility based cross-sectional study was conducted in Arba Minch to assess the prevalence and associated factors of intestinal helminths among pulmonary tuberculosis patients from January to August, 2016. A structured questionnaire was used to capture data about socio-demographic characteristics, clinical history and possible risk factors for intestinal helminth infections. Height and weight were measured to calculate body-mass index. Appropriate amount of stool was collected and processed by direct saline and formol-ether concentration techniques following standard protocols. All the data were analyzed using SPSS version 20.0.

Results: A total of 213 (57.3% male and 42.7% female) pulmonary tuberculosis patients were participated in the study. The overall co-infection rate of intestinal parasites was 26.3%. The infection rate of intestinal helminths account 24.4% and that of intestinal protozoa was 6.1%. *Ascaris lumbricoides* accounted the highest frequency of 11.3%. Living in rural residence (AOR=3.175, 95% CI: 1.102-9.153, p = 0.032), Eating vegetables/ fruits without washing or peeling off (AOR=2.208, 95% CI: 1.030-4.733, p = 0.042) and having body-mass index <18.5 (AOR=3.511, 95% CI: 1.646-7.489, p = 0.001) were associated with intestinal helminth infection.

Conclusion: The infection rate by intestinal helminths was 24.4%. *Ascaris lumbricoides* was the most prevalent helminth. Residence, habit of washing vegetables/fruits before use and body-mass index were associated factors with intestinal helminthiasis. Therefore health care providers should screen and treat TB patients for intestinal helminthiasis in order to ensure good prognosis.

Key words: helminth, tuberculosis, co-infection

Abs 30

HIV Stigma and Associated Factors among Art Clients in Jimma Town, Oromia Region, South West Ethiopia.

Mamusha Aman Hussen

Background: HIV Stigma has an important role in the spread of the AIDS epidemic. It profoundly affects the lives of individuals living with HIV/AIDS. Due to fear of being identified as having HIV may discourage a person from getting tested, from accessing medical services and medications. Thus, this study was aimed at assessing HIV-Related stigma and associated factors among Anti-Retroviral Treatment (ART) clients in Jimma Town, Oromia Region, Southwestern Ethiopia.

Methods: Facility based cross-sectional study was conducted from March 11th to April 26th, 2015 in ART clinics in Jimma town; consecutively identified sample of ART clients voluntarily participated in the survey after signing written consent. A Structured interviewer administered questionnaire was used to collect the data. Multiple linear regression were conducted to factors associated with stigma domains

Result: Out of 349 clients requested 318 (91.1%) respondents were voluntarily participated in the study, 204 (64.2%) respondents were females, and the mean age of the respondents was 32.9. The mean score and possible range of experienced HIV stigma was 41.5±12.6 (20.0 to 86.7), internalized stigma score 50.5±16.4 (20 to 96.5) and perceived stigma 56.2±19.2 (20 to 100).

Conclusion: The study revealed that duration of ART use, provider initiated, and forced HIV testing were significantly associated with the three HIV stigma domains. Despite the lower experienced HIV stigma, there were higher internalized and perceived stigmas. Therefore, HIV counseling services should be strengthened for new ART beginners including pre-test counseling.

Key Words: HIV/AIDS, JIMMA, STIGMA, ART clients, PLWHA.

Abs 31

Magnitude and Associated Factors of Tuberculosis among Diabetic Patients at Tikur Anbessa Specialized Teaching hospital in Addis Ababa, Ethiopia, 2015.

Sisay Tiroro Salato

Background*:* Tuberculosis is a chronic infectious disease, and it is a major cause of morbidity and mortality throughout the world. The link between tuberculosis and chronic diseases, particularly diabetes mellitus have long recognized, but an underappreciated connection between the two revealing that diabetes makes a substantial contribution to the burden of both incidence and prevalence of tuberculosis at the worldwide level. There is a paucity study on the burden of tuberculosis among diabetic patients in Addis Ababa, Ethiopia. Therefore, this study aimed to assess the magnitude and associated factors of tuberculosis among diabetes patients at Tikur Anbessa teaching hospital in Addis Ababa, Ethiopia.

Methods*:* Retrospective study (record review) was conducted at Tikur Anbessa Specialized Teaching Hospital in Addis Ababa, Ethiopia from January 2010-January 2014. Six hundred eighty one known diabetic patients aged ≥ 18 years were included in the study. Data was collected using a checklist. Data were analyzed using SPSS for Windows version 20. Descriptive statistics such as frequency, proportion, mean, median and standard deviation was calculated. Both binary and multiple logistic regression analysis were used to identify associated factors of tuberculosis among diabetic patients. The results were expressed in odds ratio with 95% confidence interval a significant threshold was considered at $p < 0.05$.

Results*:* The magnitude of tuberculosis among diabetic populations was 3.8%, 95%CI (2.5%-5.3%). Age from 51-65 years (AOR=21.4; 95%CI; 1.2-385) and age over 66 years (AOR=51, 95%CI; 3-877), low body mass index (AOR=27.6, 95%CI; 1.7-442), and prolonged duration of DM (AOR=5.1, 95%CI; 1-24) were significantly associated factors of tuberculosis among diabetic patients.

Conclusion*:* In this study higher magnitude of tuberculosis was reported compared to other studies in developing countries. Age, low body mass index, type of diabetes and duration of diabetes were the significantly associated factors leading to occurrence of tuberculosis among diabetic patients. All diabetic patients should be screened for tuberculosis at the diagnostic time and needs regular follow up.

Abs 32

Delays to Seek Care and Treatment among Tuberculosis Patients on Directly Observed Treatment Short Course (DOTS) in Districts of Southwestern Ethiopia.

Abyot Asres, Abyot Asres, Degu Jerene, Wakgari Deressa

Background: Delayed tuberculosis (TB) diagnosis and treatment increase morbidity, mortality, expenditure and transmission in the community. Thus prompt diagnosis and treatment of cases represent a key element in reducing TB burden in the community.

Objective: The aim of this study was to quantify time delays to seek care, diagnosis and treatment and factors associated with delays among TB patients.

Methods: A cross-sectional study was conducted among 735 consecutive new adult TB cases registered between January to December 2015 in selected districts of southwestern Ethiopia. Data were collected via face to face interview of patients with in the first 2 months of treatment initiation using structured questionnaire. The data were entered in to Epidata and transported to SPSS version 21 for description and analysis. Three forms of delay were assessed as number of days elapsed between 1) onset of TB symptoms to first health care facility visit (patient delay), 2) first consultation to treatment initiation (provider delay) and 3) onset of illness to treatment initiation (total delay). Then median days were used to dichotomize the delays so as to fit binary and multiple logistic regression models to identify predictors of the delays. All the analysis were judged statistically significant at $p<0.05$.

Result: The median (inter-quartile range) of patient, provider and total delays were respectively 25(15-36), 22(9-48) and 55(32-100) days. Prior self treatment adjusted Odds ratio (AOR) 95% confidence interval (CI) 1.72(1.07,2.75), HIV co infection AOR (95% CI) 1.8(1.05,3.1) and Extra pulmonary TB AOR (95% CI) 1.54(1.03,2.29) independently predicted higher odds of patient delay. On the other hand, visiting first to health posts or private clinics AOR (95% CI) 1.42(1.01,2.0) and delayed to seek care AOR(95% CI) 1.81(1.33,2.5) predicted longer provider delay. Finally, having extra pulmonary TB AOR (95% CI) 1.6(1.07,2.38), prior consultation of traditional healer AOR(95% CI) 3.72(1.01,13.77) and prior use of holy water independently predicted longer total delay.

Conclusion: Majority of the patients waited beyond the expected time to initiate care seeking, diagnosis and commence treatment that reflects existence of missed opportunities and longer periods of disease transmission to the community. The delays are attributed to the patient, disease and health system related factors. Hence involving informal providers, improving diagnostic efficiencies of health care facilities and creating community awareness about TB control strategies can reduce the delays.

Key words: Tuberculosis, healthcare seeking, patient delay, provider delay, total delay, Ethiopia

Abs 33

Magnitude and Factors Associated with Long Acting Family Planning Use among Family Planning Clients in Public Health Institutions of Gulele Sub city, Addis Ababa, Ethiopia, 2016.

Alemtsehay Paulos Atimo

Introduction: Long acting contraceptive is essential to women's empowerment as well as it is central to efforts to reduce poverty, promote economic growth and improve child survival and maternal health. In Addis Ababa, the use of long acting family planning was only 5.1 % in EDHS 2011 and only 16% in 2014 as result of Mini DHS finding. There is limited evidence on factors associated with low use of long acting family planning method in the city specifically in Gulele sub city.

Objective: To identify magnitude and factors associated with long acting family planning use among family planning clients in public health institutions of Gulele Sub city, Addis Ababa.

Methods and materials: Health institution based cross-sectional study was carried out at Addis Ababa, Gulele sub city in ten public health centres. Data was collected from April 10-May 10 /2016 G.C by diploma nurses. Descriptive and inferential statistic was carried out. Epi-data 3.1 for data double entry and SPSS 20.0 version for analysis were used. Bivariate and multiple logistic regressions were used to detect associated factors. Odds ratio (OR) and 95% Confidence Interval (CI) used to measure the strength of association and P-value < 0.05 were considered statistically significant.

Result: Long acting family planning method use was identified to be 106(25.8%). Multivariate analysis result showed that respondents whose husbands were educated above secondary school (AOR=3.265:95%CI:1.643,8.585)), those who had negative attitude (AOR=0.132:95%CI:0.048,0.394), those who believe information they shared to service providers will not be kept confidential (AOR=0.060:95%CI: 0.010, 0.130) and women who said the privacy was enough (AOR=1.085:95%CI:1.020,3.366) were associated with long acting family planning method use.

Conclusion and recommendation: The uptake of long acting family planning is almost half lower than the target. Attitude towards the use LAFPM, education of husband, privacy and confidentiality of service at health facilities were important predicators for low use of LAFPMs. There is need to give due attention at community and health facility level to improve uptake by program managers and service providers.

Abs 34

Skilled Delivery Service Utilization and its Association with the Establishment of Women's Health Development Army in Yeky District, South West Ethiopia: A Multilevel Analysis.

Melese girmaye negero, yifru berhan mitike, abebaw gebeyehu worku, tafesse lamaro abota

Background: In response to the high maternal and perinatal morbidity and mortality, the government of Ethiopia has established health extension program with a community based network involving health extension workers (HEWs) and a community level women organization which is known as "women's health development army" (WHDA). Currently the HEWs and WHDA network is the approach preferred by the government to register pregnant women and encourage them to link in the health care system. However, its association with skilled delivery service utilization is not well known.

Methods: A community based cross-sectional study was conducted from January to February 2015. Within 380 clusters of WHDA, a total of 748 reproductive age women who gave birth in one year preceding the study, were included using multi stage sampling technique. The data were entered into EPI info version 7 statistical software and exported to STATA version 11 for analysis. Multilevel analysis technique was applied to check for association of selected variables with utilization of skilled delivery service.

Results: About 45% of women have received skilled delivery care. A significant heterogeneity was observed between "women's health development teams (clusters)" for skilled delivery care service utilization which explains about 62% of the total variation. Individual-level predictors including urban residence [AOR (95%CI) = 35.10 (4.62, 266.52)], previous exposure of complications [AOR (95%CI) = 3.81 (1.60, 9.08)], at least four ANC visits [AOR (95%CI) = 7.44 (1.48, 37.42)] and preference of skilled personnel [AOR (95%CI) = 8.11 (2.61, 25.15)] were significantly associated with skilled delivery service use. Among cluster level variables, distance of clusters within 2KMs radius from the nearest health facility was significantly associated [AOR (95%CI) = 6.03 (1.92, 18.93)] with skilled delivery service utilization.

Conclusions: In this study, significant variation among clusters of WHDA was observed. Both individual and cluster level variables were identified to predict skilled delivery service utilization. Encouraging women to have frequent ANC visits (-four and above), enhancing awareness creation towards skilled delivery care attendance and making accessible facilities and transport services are recommended.

Keywords: community based, Ethiopia, multilevel analysis, skilled delivery care, women's health development Army.

Abs 35

Maternal Delays and Associated Factors in Seeking Fistula Care among Obstetric Fistula Women Admitted at Addis Ababa Hamlin Fistula Hospital and its Five Fistula Centers March 2015. *Wude Fentahun Adigo*

Background: Obstetric Fistula is highly prevalent in Ethiopia. A recent study estimates there are between 36,000 to 39,000 women currently living with obstetric fistula and 3,300 and 3,750 new cases occur every year. A number of women delay seeking fistula care and there is limited information on the factors that contribute to the delay in seeking obstetric fistula care.

Objective: The objective of this study is to assess extent of maternal delays and associated factors in seeking fistula care among women with obstetric fistula who are admitted to Addis Ababa Hamlin Fistula Hospital and its five fistula centers in the country.

Method: A cross sectional facility based quantitative and complemented by qualitative study was conducted. Data were collected from women with fistula and are eligible based on the inclusion criteria. Analysis was done using SPSS version 20. Main predictors for seeking fistula care were analyzed using bivariate binary logistic regression and multivariate binary logistic regression analysis. Results were put in tables and graphs.

Results: Three hundred ninety seven women with fistula participated in the study. Three hundred thirty four (84.1%) respondents sought fistula care late after 45 days while only 63 (16%) requested fistula care before 45 days after delivery.

The main predictors to delay in seeking fistula care were age at marriage (AOR =10.094 with, 95% CI (1.066, 95.545), p-value 0.044 and fear for surgical intervention (AOR= 4.094 with 95% CI (1.425, 11.76), p-value 0.09).

Conclusion: This study showed that delay in fistula care is existed in the community. The prevalence of delay to seek fistula care is 84.1%. Age at marriage and fear for surgical intervention were factors that significantly contribute for the delayed to fistula care.

Recommendations: Increase awareness and information on obstetric fistula care including surgical intervention and its outcome and early marriage which are associated with adolescent pregnancy; providing information on referral may help to address the problem.

Abs 36

Intimate Partner Violence among Podoconiosis Patients: Exploratory Qualitative Study in Northern Ethiopia. *Girmay Tsegay*

Background: Intimate partner violence (IPV) is a serious, preventable public health problem that affects millions of people. A 2008 World Health Organization multi-country study on IPV and women's physical and mental health found a significant association between lifetime experience of IPV and self reported poor health and specific health problems. Podoconiosis patients frequently experience stigma in their day to day interactions with family members. Prejudice and discrimination by family members and deprivation of emotional and material support are common violence among podoconiosis patients.

Objective: The aim of this study was to explore IPV among podoconiosis patients in Northern Ethiopia.

Methods: The study was conducted in East and West Gojjam zones, Amhara Region. First podoconiosis patient was screened using HITS (Hurt-Insult-Threaten-Scream) is a domestic Violence screening tool for IPV Screening method and then 15 in-depth interviews were conducted among podoconiosis patients. Data collection was conducted over thirty days from January to February 2016 by native speakers of the local language, Amharic. Unstructured and pilot tested interview guides was used to conduct the in-depth interviews. Data were analyzed using open code qualitative software program to assist with the content analysis.

Results: A total of 15 podoconiosis patient women were interviewed with the age range of 21 to 75 years old. Almost half of the respondents were divorced at the time of interview and were living with their extended families. Based on the occupational categories of the respondents and their husbands most of the respondents were working as a farmer and housewives. Intimate partner violence among podoconiosis was psychological violence, physical violence and different controlling behaviors.

Conclusion: Podoconiosis itself is a manifestation of violence against women. So, this study adds to the literature that women podoconiosis patients are vulnerable to intimate partner violence. Low socio-economic due to the disease push podoconiosis patient women not only bear intimate partner violence but also force them to stay in abusive marital relations. There is a need to raise women empowerment and increase productivity of podoconiosis patients to prevent Intimate partner violence among podoconiosis patients.

Keywords: Intimate partner violence**,** podoconiosis**,** women,

Abs 37

Drug Use and Associated Factors among Pregnant Women in Health Institutions, Bahir Dar City Adminstration, North West Ethiopia.

Edndalkachew Worku[1], Measho G[2], Alemayehu S[3]

Introduction: The use of drugs during pregnancy calls for special attention because the health and life of unborn child has great value in addition to the mother. The drugs given to pregnant mothers for therapeutic purposes may cause serious structural and functional adverse effects in the developing child.

Objective: The aim of this study was to assess drug use and associated factors among pregnant women attending antenatal care (ANC) service in Bahir Dar city administration, 2015.

Methods: Institutional based cross-sectional study design was carried out. Semi - structured questionnaire was used to interview pregnant women and check list was used to review the antenatal care follow up cards. Collected data were entered into Epi info version 7 and analyzed using SPSS version 20. Crude and adjusted odds ratio was estimated to identify the associated factors using logistic regression analysis.

Result: The prevalence of drug use at least one drug during their pregnancy was 70.4 % (excluding iron and multi vitamin). Gravida (AOR=2.7, 95 % CI (1.80-4.66)), chronic disease (AOR=2.97, 95 % CI (1.27-7.27)), self medication (AOR=3.24, 95 % CI (1.85-5.68)), passive smoking exposure (AOR=2.20, 95 % CI (1.64-4.43)) and caffeine beverage (AOR=0.43, 95 % CI (0.27-0.70)) were significantly associated with drug use during pregnancy in multivariable analysis.

Conclusion and Recommendation: The prevalence of drugs prescribed including those with potential harm to the fetus during pregnancy is very high in Bahir dar city administration. Considerable proportion of pregnant women took self-medication by themselves with modern medications or traditional herbs. Therefore, efforts should be made to decrease exposure to harmful substances during pregnancy. Further studies should be conducted to identify factors and effect of drug use among pregnant women.

Key words: Drug use; Pregnancy; Substance exposure; FDA risk classification

Abs 38

Postnatal Care Utilization and Associated Factors among Women in Cheha District, Guraghe Zone, SNNPR, Ethiopia: A community Based Cross-section Study.

Kifle Lentiro Lamade

Background: Ethiopia is one of the countries with the highest burden of maternal death with a mortality ratio of 676 per 100,000 live births and annual death toll of 19,000. Despite the enormous efforts in the past few years, universal access to postnatal Care (PNC) service remains far to be attained with a country wide coverage of only 12% during the 2014 MEDHS.

Purpose: This study was aimed at assessing the PNC service utilization and associated factors among mothers in Cheha Woreda of Guraghe Zone, SNNPR.

Methods: A community based cross-sectional study that involved 646 women who gave birth in the last one year found in selected kebeles of Cheha Woreda was conducted from October 10 to 30, 2015. A two-stage sampling technique using random sampling for selection of kebeles with proportionate allocation of the subjects and simple random sampling to get 658 women was used after getting updated list of targeted women from health extension workers. A pre-tested structured questionnaire was employed to collect data from women at household level. The important factors of PNC service utilization in the study population was identified by fitting a multivariable logistic regression model. All analyses was conducted using SPSS for windows version 20.0 and statistical significance was considered at $\alpha<0.05$.

Result: With a 98% response rate the assessment showed that the magnitude of PNC was 51.9% and the probability of PNC utilization among mothers who gave birth at institutions was 7 [AOR=7, 95%CI (3.5, 14)] times that of home delivered ones, the odds of utilizing PNC was 4 [AOR=4, 95%CI (1.10, 4.7)] times among women who accepted four or more ANC than that of <4 ANC, compared to mothers aged >=35 years, the odds of PNC was 4 [AOR=3.9, 95%CI (1.8, 8.4)] times and 2 ([AOR=1.7, 95%CI (1.07, 2.70)] times among whose age was 20-24 and age 25-29 respectively, and the odds of PNC was 2 [AOR=2.2, 95%CI (1.3, 3.5)] times for those women who are better knowledgeable about danger signs as that of their counterparts.

Conclusion: For about 50% prevalence of PNC in the district, enhancement of the factors institutional delivery, women knowledge about danger signs and frequency of ANC utilization are the most important areas of intervention for stakeholders to upgrade it.

Key words: PNC utilization, Cheha wereda, associated factor, Kebeles

Abs 39

Estimates of Uterine Rupture Bad Outcomes Using Propensity Score and its Determinants in Mizan-Tepi University Teaching Hospital: Case Control Study.

Tegene Legese Dadi

Background: Uterine rupture is among one of the most preventable obstetric complications that carries grave risks to the mother as well as for her baby. Even if women survive, the future reproductive potential is reduced or lost forever. Majority of ruptured uterus are traumatic. Maternal death, fetal death, still birth or intrauterine fetal death might be more serious outcomes.

Objectives: To estimate uterine rupture bad outcomes using propensity score and its determinants in Mizan-Tepi University teaching hospital from September 2011- August 2016: case control study

Methods: A case control study on 363 participants, 121 cases and 242 controls was conducted in MTU teaching. Data was analyzed by STATA 14. Propensity score matching analysis was used to see causes. Confidence interval of 95% was used to see the precision and the level of significance of p value =<0.05.

Result: Females who reside in rural areas are 3.996 times at higher risk of acquiring uterine rupture (AOR= 3.996, 95% CI (2.011, 7.940)). Females who had ANC follow up are at lower risk of developing uterine rupture which is reduced by 68.5% (AOR= 0.315, 95% CI (0.164, 0.606)). Females with preterm gestational age pregnancy are at lower risk of developing uterine rupture which is reduced by 86.5% (AOR= 0.135, 95% CI (0.025, 0.725). In our study participants from 100 females who had uterine rupture 88.4 females lost their fetus (β=0.884, 95% CI (0.827, 0.942)). From 100 females who develop uterine rupture 9.1 of them are died (β=0.091, 95% CI (0.040, 0.142)). From 100 females who develop uterine rupture 97.5 of them developed additional obstetric complication (β=0.975, 95% CI (0.947, 1.000)). If 1000 females in the community developed uterine rupture 812 of them will lose their fetus (β=0.812, 95% CI (0.721, 0.904)). If 1000 females in the community developed uterine rupture 35 of them will die (β=0.035, 95% CI (0.009, 0.610)). From 1000 females who developed uterine rupture in the community 992 of them will develop additional obstetric complication (β=0.992, 95% CI (0.982, 1.000)).

Conclusion: Residence, ANC follow up and gestational age are significant determinants factors of uterine rupture. Fetal loss, maternal death and obstetric complications are significant determinant bad out comes of uterine rupture.

Abs 40

Teenage Pregnancy and its Associated Factors among School Adolescents of Arba Minch town, Southern Ethiopia.

Aleme Mekuria Belachew, Samuel Mathewos Garbo

Introduction: Teenage pregnancy has long been a worldwide social, economic and educational concern for the developed, developing and underdeveloped countries. Many countries continue to experience high incidence of teenage pregnancy despite the intervention strategies that have been put in place. Studies on adolescent sexuality and pregnancy are very limited in our country. Therefore, this study aims at assessing the prevalence of teenage pregnancy and its associated factors among school adolescents of Arba Minch town**.**

Objectives: The objective of this study was to assess the prevalence of teenage pregnancy and its associated factors among school adolescents of Arba Minch town.

Methodology: Institution based cross-sectional study was conducted from 20-30 March 2014. Systematic sampling technique was used to select a total of 578 students from four schools of the town. Data was collected by trained data collectors using a pre tested, self-administered structured questionnaire. Analysis was made using the software SPSS version 20.0 statistical packages. Multivariate logistic regression was used to identify the predictors of teenage pregnancy.

Results: The prevalence of teenage pregnancy among school adolescents of Arba Minch town was 7.7%. Being grade11(AOR=4.6;95%CI:1.4,9.3),grade12 student (AOR=5.8;95% CI:1.3,14.4), not knowing the correct time to take emergency contraceptives(AOR=3.3;95%CI:1.4,7.4), substance use(AOR=3.1;95%CI:1.1,8.8), living with either of biological parents (AOR=3.3;95%CI:1.1,8.7) and neither of biological parents (AOR=3.7;95%CI:1.3,10.2) and poor parent-daughter interaction (AOR=3.1;95%CI:1.1,8.7) were found to be significant predictors of teenage pregnancy in this study.

Conclusion and recommendation: This study revealed high level of teenage pregnancy among school adolescents of Arba Minch town. Significant numbers of adolescent female school students were at risk of facing the challenges of teenage pregnancy in the study area. School based reproductive health education, and strong parent daughter relationship is recommended.

Key Words: Adolescent, Teenage pregnancy, Risk factors

Abs 41

Effect of Intimate Partner Violence on Birth Outcomes.

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Background: Violence by intimate partner during pregnancy has adverse pregnancy outcomes. Babies born to women who are subjected to intimate partner violence while pregnant have a significantly increased risk of being born preterm or low birth weight, which can result in immediate and long term health and developmental problems.

Objective: Thus, that's why we sought to determine association between intimate partner violence during pregnancy and adverse birth outcomes.

Methods: The study was conducted among 195 recently delivered women from March 31- April 30, 2014 in public health facilities of Hossana Town. The data were collected through structured questionnaire and record review. Logistic regression analysis was employed to determine the association between intimate partner violence and adverse birth outcomes with adjustments for potential confounders.

Results: About 23 % of women experienced intimate partner violence during pregnancy. The result of this study indicated an association of intimate partner violence during pregnancy and low birth weight of the new born (AOR: 14.3,95% CI: (5.03, 40.7). The difference remain unchanged after adjustment with age of women, number of pregnancy, planned pregnancy, educational status of women and monthly income. Intimate partner violence during pregnancy was not associated with still birth, preterm birth and Apgar score less than 7 at 5 minutes.

Conclusions: The findings of this study showed that intimate partner violence during pregnancy is associated with a low birth weight of new born. Health sectors should train health care providers on how to screen, counsel, treat and follow up of abused women. Polices, lawyers and advocates should also ensure that women seeking justice and protection are treated appropriately.

Key words: Intimate partner violence, Pregnancy, Birth outcomes, Ethiopia

Abs 42

A Framework for Utilisation of Health Services for Skilled Birth Attendant and Postnatal Care in Ethiopia. *Yoseph Woldegebriel Gessesse*

Introduction: The Ministry of Health (MOH) and its partners are determined to prevent and manage preventable causes of morbidity and mortality in mothers, neonates and children. In the last decade, special emphasis has been given to increasing the number of health facilities that provide maternal and child health services (MNCH), huge production of skilled birth attendants (SBAs), and equipping the health facilities to improve the utilization of quality services. This study investigated the community perspectives of health service utilization and proposes a framework for improving the utilization of the available SBA and postnatal care (PNC).

Objective: The purpose of this study was to develop a framework for the utilization of skilled care for delivery and postnatal care by women of childbearing age (15-45). METHODOLOGY Andersen's Health Behavioral Model was the basis for the assumption of this study that assumes that predisposing, enabling and need factors, including social support are important factors determining women's utilization of health facilities for delivery by SBA and PNC attendance. The study used a Sequential explanatory Mixed Methods Approach to investigate the utilization of SBA and PNC in a district in Ethiopia. Pragmatism is the most commonly applied approach in Mixed Method Research. It is oriented towards realistic and real world problems to be researched or solved (Feilzer 2010:8). The Delphi Technique helped to solicit inputs from maternal health care experts in the country on the development of a Framework for utilization of SBA and PNC.

Results: In the study, 79.8% of the women who delivered within 12 months prior to this study received ANC from SBA. Baby care and PNC for the mother and baby received from SBA were at 248 (71.5%), 55 (15.8%), and 131 (38%) respectively. The study found that women who can read and write and were educated are more likely to utilize SBA and receive quality health care services. The study showed that certain factors such as disrespecting service users, abusing service users' lack of trust on the SBA by service users, religion and superstition contribute negatively to the use of SBAs. It was revealed that there was a widespread knowledge and perception gaps in the community related to the importance of postnatal period and PNC. Religious sanctification also have imperative role in hampering PNC service use by the mothers. The Health care workers (HCWs) also lacked the keenness and orientation to provide the service. Babies born from families with monthly income equal to 500 or above USD were more likely to use PNC within 45 days. There was a widespread misconception in the community that Babies do not need PNC before 45 days of birth except for vaccination purpose.

Conclusion: To examine their role in health service utilization for SBA and PNC, researches can integrate social support and social network to the Andersen's health- service utilization model. A framework for utilization of SBA and PNC is proposed. The researcher recommends developing an utilization tool kit that specifies the detail operationalization of the framework.

Key Words: Childbirth; framework; health services utilization; postnatal care; skilled birth attendant; skilled care for childbirth

Abs 43

Psychological Morbidity and Substance Use among Patients with Hypertension: a Hospital-based Cross-sectional Survey from South West Ethiopia.

Matiwos Soboka Daba, Esayas Kebede Gudina, Markos Tesfaye

Background: Psychological morbidity and substance use disorders have been linked to cardiovascular diseases; affecting patients' medical outcome and quality of life. However, little is known about psychological morbidity and substance use among patients with hypertension in Ethiopia. Therefore, we aimed to assess psychological comorbidity and substance use among hypertensive patients in Southwest Ethiopia.

Methods: A cross-sectional study was conducted among 396 hypertensive patients on follow-up at Jimma University Teaching Hospital in Ethiopia during the study period. Structured questionnaires were used to assess alcohol use, khat chewing and cigarette smoking. Psychological morbidity was assessed using the Kessler-6 scale. Multiple logistic regression analysis was carried out to identify the independent association between outcome and explanatory variables.

Result: The prevalence of psychological morbidity among hypertensive patients was 31.6%. Of the total participants, 31 (7.8%) of them had alcohol use disorders and 79 (19.9%) of them were using khat regularly at the time of the study. Singles were more likely to have psychological morbidity than married participants (AOR=5.18; 95% CI: 2.02, 13.28), whereas those who were able to 'read and write' were less likely to have psychological morbidity than non-literate ones (AOR=0.46; 95% CI: 0.24, 0.88). However, no association was seen between psychological morbidity and substance use (khat chewing, alcohol use and cigarette smoking).

Conclusion: Psychological morbidity and substance use are prevalent among hypertensive patients on follow-up at the hospital. The findings suggest that there is a need to integrate mental health services into the existing hypertension clinics to address the mental health needs of persons with hypertension.

Keywords: 'Psychological morbidity', 'Substance use', Hypertension, Ethiopia, 'mental health service'.

Abs 44

Evaluation of Surgical Antimicrobial Prophylaxis Use in Ethiopia: Prospective study.

Sadikalmahdi Hussen Abdella

Background: Appropriate use of surgical antimicrobial prophylaxis can prevent approximately 40 to 60% of surgical site infections. On the other hand, inappropriate use is associated with emergency of antimicrobial resistance, occurrence of side effects and increased health care cost. This study aimed to evaluate surgical antimicrobial prophylaxis use at surgical ward of Hawassa University Referral Hospital, against American Society of Health-System Pharmacists guideline for surgical antimicrobial prophylaxis use.

Methods: We conducted prospective observational study on 105 patients who undergone major surgical procedure at Hawassa University Referral Hospital from March 2 to May 2, 2015. Data was collected from patient medication charts, operational and anesthesia notes, by direct observation and patients' interview using pre-tested data collection tool. All patients were followed daily before, during and after operation till discharge. We coded and cleaned the data using Epi-Data version 3.1 and exported to Statistical Package for Social Science (SPSS) for window version 20.0 software for analysis.

Result: Overall adherence to American society of health-system pharmacists (ASHP) for surgical antimicrobial prophylaxis use guideline was not observed for all parameters evaluated. Out of 105 patients, surgical antimicrobial prophylaxis was indicated only in 85(80.9%) patients but administered in 103 (98.1%). Choice of antimicrobial was discordant for all patients for whom antimicrobial prophylaxis was indicated and administered. Ceftriaxone was the most frequently administered 73(70.9%) antibiotics followed by combination of Ceftriaxone and Metronidazole 25(24.3%). Out of 103 patients for whom Antimicrobial prophylaxis was administered, time of first dose administration and duration of administration were concordant in 38(36.9%) and 19(19.1%) respectively.

Conclusion: Overall adherence to ASHP guideline was far from optimal for all parameters evaluated.

Keywords: Antimicrobial Prophylaxis, American Health system Pharmacists, Ethiopia

Abs 45

Modeling of Progression and Recovery Time of Hypertension Patients: A Case Study at Bahir-Dar Felege-Hiwot Referal Hospital, Ethiopia.

Melaku Tadege Gesesse, Mettu University, Natural and Computetional Science, Department of Statistics

Blood pressure is one of the leading risk factor for mortality. The aim of this study is to model the recovery time and progression of hypertension patients. One hundred and ninety five hypertensive patients has been taken from a hospital record at Felege Hiwot Referral Hospital, Bahir Dar, Ethiopia, during 2012 to 2016. Kaplan Meier, Cox proportional hazard and multivariate longitudinal models were applied. From long rank test result, Patients who were lower baseline systolic, lower baseline diastolic, smaller age, positive diabetes and small number of medication significantly contributed to smaller time to immunological recovery at 5% of significant level. From the Cox regression result, patients who take one type of medication (adjusted HR=3.23, CI= 1.79-21.69), patients who take two type of medication (adjusted HR=2.90, CI= 1.79-21.69),Patients who are diabetes positive (adjusted HR=1.62, CI= 1.05-2.50), patients whose baseline diastolic blood pressure ≤100 (HR=1.63, CI=1.04-2.54) patients whose baseline systolic ≤150 (adjusted HR=1.74, CI=1.12-2.74) and patients whose age>40(HR=0.40, CI= 0.46-1.12) significantly contributed to a larger hypertensive immunological recovery time at 5% of significant level.

From the bivariate linear mixed model result, the progression change of systolic blood pressure is decreased by 0.88 MmHg for patients who were used one types of medication type keeping other variable constant. The progression change of systolic blood pressure is decreased by 0.878 MmHg for patients who were used two types of medication type keeping other variable constant.

The progression change of diastolic blood pressure is decreased by 0.998 MmHg when age of patient changed by one unit keeping other variable constant. In conclusion, the major factors that affect the recovery time of hypertension patients were number of type of medication, diabetes status, baseline diastolic blood pressure, baseline systolic blood pressure and age. The major factors that affect progression of systolic blood pressure are baseline systolic blood pressure, number of type of medication and time. The major factors that affect progression of diastolic blood pressure are baseline diastolic Blood pressure, number of type of medication and age. We recommend that further modeling researches might be necessary in order to model recovery time and progression of hypertensive patients with larger data from a number of hospitals.

Key words: Hypertension, Recovery time, Progression, Survival Analysis, Multivariate Longitudinal, Hypertensive

Abs 46

Chemotherapy Induced Hematologic Toxicities, Reduced Relative Dose Intensity and Associated Risk Factors in Ethiopian Female Breast Cancer Patients.

Jemal Hussien Ahmed

Background: Chemotherapy induced hematologic toxicities are the primary reasons of dose delays and/or reductions that result in low relative dose intensity (RDI). We have investigated the incidence of chemotherapy induced hematologic toxicities, reduced RDI, and associated factors in breast cancer patients.

Methods: Prospective cohort study was conducted at the radiotherapy center of Tikur Anbessa specialized Hospital, the only public oncologic care institution in Ethiopia. A total 249 breast cancer patients were enrolled and the majority (65.9%) of them received 5-Flourouracil, Doxorubicin, and Cyclophosphamide. None of the patients received primary prophylactic G-CSF. The primary outcome was the incidence of grade 3 or 4 hematologic toxicity. The secondary outcomes were actual average RDI, chemotherapy dose delays, anddose reduction. The RDI level amongst different covariate groups was analyzed using ANOVA. Predictors of hematologic toxicity were formed on the basis of multivariate logistic regression model.

Results: The overall incidence of chemotherapy induced grade 3 or 4 hematological toxicity was 49.0% (95% confidence interval = 42.7 - 55.3%), mainly of grade 3 or 4 neutropenia (48.6%; 95% CI = 42.26 - 54.93%). Patients who initiate chemotherapy with leukocyte toxicity grade 1 (adjusted odds ratio (AOR) = 13.416, 95% CI = 3.022 – 59.558, $p < 0.001$) were at higher risk of experiencing grade 3 or 4 hematologic toxicity at any cycle in the course of chemotherapy. Dose delay was observed in 61.4% patients. The overall actual RDI was 81.9%. The proportion of patients who received RDI of less than the baseline 85% was 56.6% (95% CI = 50.3 - 62.9%). Analysis of variance showed statistically significant differences in average RDI between chemotherapy regimen, ($p = 0.005$), baseline WBC toxicity grade ($p = 0.002$), baseline neutropenic toxicity grade ($p < 0.001$).

Conclusion: We report high rates of chemotherapy-induced hematological toxicities causing inadequate RDI in large proportion of Ethiopian breast cancer patients. Baseline white blood cells and neutrophil counts are markers to identify high-risk patients for neutropenic toxicities and introduce subsequent supportive measures to deliver full dose-intensity chemotherapy.

Recommendation: Patients on low baseline level WBC or ANC need prior support including implementation of the timely use of prophylactic G-CSF before initiation of chemotherapy and optimize treatment accordingly. Development of breast cancer treatment guideline is also recommended for better management of breast cancer care in Ethiopia.

Abs 47

Factors Related to Deep Vein Thrombosis in Patients Admitted to Sain Paul's Hospital; A Retrospective Study Involving Patients Admitted to the Hospital from July/2007 to June/2008 E.C, Addis Ababa, Ethiopia, 2016.

Wudma Alemu

Background: Deep Venous thrombosis (DVT) is a health concern a life threatening sequel. There has been a significantly high rate of morbidity and mortality thereof around the globe. Thus, timely, accurate and definitive diagnosis and initiating the right treatment isthe core in halting the fatal consequences of DVT. The identification of the major contributing factors to DVT is highly likely to play the central role in preventing/minimizing the incidence of DVT.

Purpose: This study aims to identifythe common risk factors contributing to DVT.

Methods: A retrospective cross-sectional study was used to assess the factors that were suspected to contribute significantly to the occurrence of DVT. The study included all the patients who had a proven DVT. The data were collected from the patients' chart dating back from July 2007 to June 2008EC. The data were collected using a structured checklist. The tool was adapted from previous studies. It was designed to focus on three important areas. The focus of the first part was enabling the collection of data on the general attributes of the study population. The second part was concerned with the collection of data on the pattern of coagulation profile of the study population. Part three was composed of questions targeting the risk factors for DVT.

The data collection procedure was initiated after getting approval from the administrative bodies of the hospital. The data was analyzed descriptively and analytically.A statistical test was computed to measure the degree of association between DVT and the risk factors. A test result with a corresponding P. value of less than or equal to 0.05 was taken as statistically significant at 95% of CI.

Results: A total of 81 ultrasound proven cases of DVT were identified in the specified period. Most (65.4%) of the victims were female. DVT was found to be common (58%) among individuals under the age of 40 years. Over half (59.3%) of the cases happened to the left lower limb only. Malignancy was the most frequently (30.9%, P: <001) identified risk factor to DVT followed by prolonged immobilization (19.8%, P: <0005). Pregnancy related problems and severe trauma were also implicated torelatively high proportion of DVT each contributing to just over 6% of the misfortune.

Conclusion: From the study we concluded that Malignancy, prolonged immobilization, pregnancy related problems and major trauma were the most common risk factors contributing to DVT. Majority of the patients had multiple site deep vein involvement extending from the common iliac to the popliteal veins.

Key words: Risk factors, deep vein thrombosis

Abs 48

Depression and Associated Factors among Adult Population in Harar Town, Eastern Ethiopia: A Community Based Cross Sectional Study.

Betelhem Sime Guta

Background: Currently depression is estimated to affect 350 million people globally. It is a significant contributor to the global burden of disease and affects people in all communities across the world. At its worst, depression can lead to suicide and almost 1 million lives are lost yearly due to suicide, which translates to 3000 suicide deaths every day. In Ethiopia, mental illness is the leading non-communicable disorder in terms of burden. However, share of depression and associated factors were not well studied among adult at community level in Eastern Ethiopia.

Objectives: The objective of this study was to assess prevalence of depression and associated factors among adult population in Harar Town, Ethiopia.

Methods: A community based cross-sectional study was conducted among a sample of 834 adults aged 15 years and above from February 19 to March 5, 2015. Standardized clinical rating scale PHQ-9 was used to collect data. EPI-Data version 3.0 and SPSS 16 software were used for data entry and analysis respectively. Both descriptive and inferential statistics were used for data analysis. Odds ratio with 95% CI & p<=0.05 were used for decision of significant association.

Results: The prevalence of depression was 26.6%of which females made the majority(72%). After adjusting for confounding variables, depression was highly prevalent among socio economic status of households with middle wealth index [AOR=1.62, 95% CI (1.077-2.441)] , among illiterate and those in elementary education [AOR=2.27, 95% CI (1.289-3.986)] and [AOR=2.21, 95% CI (1.301-3.739)] respectively, those in stressful life events [AOR=2.87, 95% CI (2.043-4.030)], and among individual with chronic non-communicable diseases [AOR=1.59, 95% CI (1.094-2.316)].

Conclusions and recommendations: Educational status, socioeconomic status, stressful life events, presence of chronic non communicable disease were the most important risk factors for depression. Because of the high magnitude related to consequences of depression attention should be given at all levels and by all sectors/institutions.

Abs 49

Postsurgical Assessment of Serum Interleukin-6 and C-reactive protein in Breast Cancer Patients before Receiving Adjuvant Chemotherapy.

Ketsela Yirdaw Woldehawariat, Daniel Seifu

Background: Breast cancer is one of the most common cancers in females. Several studies have shown proinflammatory biomarkers can facilitate tumor growth and metastasis by altering tumor cell biology and activating stromal cells in the tumor microenvironment. They have been also associated with poor survival of breast cancer patients. The aim of this study was to evaluate postsurgical serum interleukin 6 and C reactive protein in breast cancer patients.

Methodology: Forty-four breast cancer patients visiting oncology chemotherapy unit were subjected to assessment Serum IL-6 and CRP. Serum IL-6 were assessed via ElecsysIL6 assay and CRP was measured by immunoturbidimetry before initiation of adjuvant chemotherapy.

Result: The median age was 42 years, the majority of patients had invasive ductal carcinoma, and did present with positive nodes involvement. Postsurgical elevated levels of serum CRP and IL-6 were observed in most of the patients. Progress in breast cancer staging were associated with increases in serum IL-6. IL-6 level correlated with stage ($P < 0.026$), CRP has borderline correlation with stage ($p = 0.05$). However, IL-6 and CRP have shown insignificance correlation with tumor size and lymph node involvement. Serum IL-6 levels were correlated positively with CRP levels (rho = 0.530, $p < 0.01$).

Conclusion: These results suggest that proinflammatory status of the breast cancer patients have high values of interleukin-6 and C– reactive protein. Progressive elevation of serum interleukin 6 observed as stage of cancer advanced.

Key words: interleukin-6, C - reactive protein, breast cancer, proinflammatory

Abs 50

Prevalence and Associated Factors of Depression and Anxiety amongst Diabetes Mellitus Patients on Follow up at Ambo Zonal Hospital, Oromia Regional State, Ethiopia: Cross sectional study. *Fetuma Feyera Hiksa*

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Introduction: Depression and anxiety are the most frequent emotional disorders occurring among patients with diabetes mellitus. Patients with diabetes mellitus are almost twice as likely to suffer from depression and anxiety as the general population. More ever, there is a limited study regarding these conditions among people with diabetes mellitus in developing countries, particularly in Ethiopia.

Objective: The aim of this study was to assess the prevalence of Depression and Anxiety and associated factors among patients with diabetes mellitus on follow up at Ambo general hospital, Oromia Regional State, Ethiopia

Methods: Institutional based cross-sectional study was conducted from April to May 2014. A total of 423 study respondents were enrolled in the study and systematic random sampling technique was used to select the study participants. Structured and pre-tested questionnaire was used to collect socio-demographic, substance and clinical related data. Depression and Anxiety scale using (HADS=14) was used to assess depression and anxiety. The collected data was cleared and entered into Epi-info version 7 and analysis was done by Statistical Package for Social Sciences version- 20 software (SPSS version 20).Both Bivariate and multivariate logistic regression analyses were used to assess the effect of the various factors on Depression and Anxiety.RESULT: A total of 423 participants were studied.The overall prevalence of depression and anxiety was found to be 47% and 44.2% respectively. Being female, current use of alcohol, Type 1 diabetes, greater than five years duration of diabetes mellitus illness, chronic complication of diabetes mellitus and other additional chronic illness were significantly associated with depression and anxiety among patients With Diabetes Mellitus.

Conclusion: Depression and anxiety have high prevalence among patients with diabetes mellitus. Being female, having Type 1diabetes, having chronic complication diabetes mellitus and other additional chronic diseases were main predictors associated depression and anxiety.Key words: Anxiety. Depression. Prevalence and Diabetes

Abs 51

Uncontrolled Asthma and Associated Factors among Adult Asthmatic Patients on Follow-Up at Chest Clinic of Jimma University Specialized Hospital, South-West Ethiopia.

Fekede Bekele Daba, Korinan Fanta

Background: Poor asthma control is common and remains a frequent cause of hospital admission. The aim of this study was to identify risk factors associated with uncontrolled asthma among adult patients on follow up at Jimma University Specialized Hospital (JUSH).

Methods: A facility based cross-sectional study involving patient interview and chart review was conducted among asthmatic patients aged 18 years and older who were attending chest clinic of JUSH for at least 3 months. Multivariate logistic regression was employed to examine the association between variables.

Result: One hundred ninety seven asthmatic patients were included in the study. More than 57% were females. The mean age of the patients was 41.75 (±15.54). Twenty four percent of the patients had one or more comorbid conditions. According to the classification by Global Initiative for Asthma Management and Prevention (GINA), 33.6% and 18.7% of study participants had moderate persistent and severe persistent asthma, respectively. Among the patients who received asthma medications, only 21% was according to GINA guideline recommendation. Accordingly, 127 respondents (64.5 %) were found to have uncontrolled asthma. Low monthly income (p=0.023), presence of comorbidity (p=0.007), moderate persistent asthma (p=0.027), severe persistent asthma (p=0.03) and use of SABA (short acting $beta_2$ agonist) alone as anti-asthmatic medication (p=0.000) were significantly associated with uncontrolled asthma.

Conclusion: Majority of the patients had uncontrolled asthma. Factors significantly associated with uncontrolled asthma were low income, presence of comorbid condition, asthma severity and use of SABA alone as anti-asthmatic medication, highlighting the importance of clinicians' adherence to the available asthma management guidelines.

Key words: Asthma, uncontrolled, risk factors

Abs 52

Post Traumatic Stress Disorder and Associated Factors among Survivors of Road Traffic Accident Attending Orthopedic Units at Public Hospitals in Addis Ababa, Ethiopia, Cross Sectional Study. *Bereket Duko Adema*

Background: Post-traumatic stress disorder occurs after a single traumatic event or from prolonged exposure to trauma. Globally it is one of the most common psychological consequences for adult survivors which can have serious and long-lasting consequences for recovery if left untreated. Despite this fact, the psychiatric sequel is overlooked and there is limited literature concerning the magnitude and contributing factors for post-traumatic stress disorder among survivors of road traffic accident. Cross sectional study was conducted to assess the magnitude of post-traumatic stress disorder and associated factors among survivors of road traffic accident attending orthopedic unit of public hospitals, Addis Ababa, Ethiopia.

Methods: Institution based cross-sectional study was conducted, May 2016 – June 2016. A total of 492 study participants were recruited using systematic random sampling technique. Post-traumatic stress disorder was assessed through face to face interviews by trained psychiatry nurses using the Post-traumatic stress disorder Checklist-Specific version (PCL-S). Logistic regression was used to assess the relation between post-traumatic stress disorder and associated factors. An Odds ratio with 95% confidence interval was employed to show strength of association.

Results: A total of 492 respondents were enrolled with a response rate of 92.56%. The magnitude of post-traumatic stress disorder among the respondents was 112 (22.8%). Among the respondents, 313(63.6%) were male. Among survivors, Being female [AOR=2.23, 95% CI: 1.40, 3.56], had poor social support [AOR=2.1, 95% CI: 1.34, 3.46], duration since accident (1-3 months) [AOR=1.72, 95% CI: 1.07, 2.76] and depression [AOR=3.46, 95% CI: 1.99, 5.99] were more likely to have post-traumatic stress disorder as compared to their counter parts.

Conclusion: In the current study the magnitude of post-traumatic stress disorder was high. Being female, poor social support, duration since accident (1-3 months) and depression were found to be significant factor for post-traumatic stress disorder. Hence, the finding points the need of screening of road traffic accident victims for PTSD at orthopedic hospitals.

Key words: Post Traumatic Stress Disorder, Road Traffic Accident, Magnitude

Abs 53

Asymptomatic Bcteriuria among Pregnant Women Attending Antenatal Clinic in Bahir Dar: A Prospective Bacteriological Study.

Awoke Derbie, Daniel Mekonnen, Enyew Abate

Introduction: Urinary tract infections (UTI) are common during pregnancy due to hormonal and anatomo-physiological changes that facilitate the growth and dissemination of bacteria in the maternal urinary tract. These infections have potentially serious consequences for maternal and fetal health if they are not properly treated. The aim of this study was to identify bacterial uropathogens from asymptomatic pregnant women attending antenatal clinic and to determine their up-to-date antimicrobial susceptibility pattern.

Materials and Methods: A health facility based cross-sectional study was conducted on urine samples collected from asymptomatic pregnant women attending Felege Hiwot Referral Hospital (FHRH) in the period of Feb to May 2016. Freshly voided clean catch midstream urine samples were collected and processed at FHRH microbiology laboratory with conventional culture and biochemical tests. A urine sample was considered culture positive for UTI if a single organism was cultured at a concentration of $>10^5$ cfu/ml. Isolates were tested against commonly used antibiotics by Kirby-Bauer disc diffusion methods and degree of susceptibility was determined based on Clinical Laboratory Standards Institute. Data were entered and analysed by using SPSS version 22 for Windows. Descriptive summaries were used to present data and Chi-square test (X^2) was used to assess difference between proportions. P-value less than 0.05 was considered to indicate statistically significant difference.

Results: In this study a total of 234 pregnant women were included with the mean age of 26.8 years (SD 4.7, and ranges 18–41). The majority, 139(59.4%) were primigravida. Most of the participants, 134 (57.3%) were in the 3rd trimester of pregnancy. Of the participants, 20(8.5%) were HIV infected. The overall prevalence of asymptomatic bacteriuria (ASB) was at 11.5 % (27/234). Of all considered variables only history of diabetes was significantly associated with ASB (*p=0.019)*. A total of 27 bacterial uropathogens were identified of which 20 (74.1%) were Gram positives. The predominant isolate was *S. saprophyticus* at 48.2% (13/27) followed by *S. aureus* at 22.2% (6/27) and *E. coli* at 11.1% (3/27). With regard to antimicrobial susceptibility pattern of the isolates 11 (84.6%), 10 (76.9%) and 9 (69.2%) of 13 isolates of *S. saprophyticus* were found resistant for co-trimoxazole, oxacilin and tetracycline respectively.

Conclusions: The status of ASB and their antibiotic susceptibility pattern should be taken into consideration during management of pregnant women while visiting antenatal care.

Abs 54

Factors Associated with Tuberculosis among Adult Clients in Bale Zone, Ethiopia: A Case Control Study. *Daniel Bogale Odo*

Background: Tuberculosis (TB) remains a major global health problem, responsible for ill health among millions of people each year. It ranks as the second leading cause of death from an infectious disease worldwide, after the human immunodeficiency virus (HIV). In Ethiopia, TB has long been recognized as a major public health problem since the 1950s.

Objective: This study aimed to assess factors associated with tuberculosis in Bale Zone, Southeast Ethiopia

Methodology: This case control study was conducted in health facilities of Bale zone from November 1, 2015 to January 30, 2016. All TB patients attending health facilities for DOTS were the study population for cases. For each case two consecutive controls were sampled from Outpatient Department (OPD) of the same health facilities from which cases were drown. To minimize the recall bias on the risk factors causing TB, patients on intensive phase were considered as case. A pre tested, structured, interviewer administered questionnaire was used for data collection. The data was analyzed using statistical package for social science (SPSS) version 21 and descriptive statistics as well as binary and multivariable logistic regression analysis was computed to identify factors associated with TB.

Results: A total of 173 cases and 346 controls were involved in this study with 100% response rate. In multivariable logistic regression, the following factors were significant: respondents who had no education (AOR=4.23, 95% CI (1.67, 10.73), being HIV positive (AOR=4.80, 95% CI, (1.46, 15.83), previous TB contact (AOR=3.56, 95% CI, (1.14, 5.91) having BCG scar (AOR=0.55, 95% CI, (0.33, 0.93), consumption of raw milk (AOR=2.00, 95% CI, (1.17, 3.44) and previous Khat chewer AOR=4.43, 95% CI (2.09, 9.37).

Conclusion: As it is indicated by the finding, socioeconomic, lifestyle and medical conditions are the risk factors for tuberculosis. Interventions focused on tuberculosis control through prevention and control of risky lifestyles and awareness creation both in the health facilities and at community level on the transmission of this disease is mandatory.

Key words: Tuberculosis, factors associated with TB, Bale zone, Ethiopia

Abs 55

Assessment of Prevalence of Trachoma Eye Infection and Factors Associated with its Occurrence among Grade 1-8 School Children in Harari.

Aklilu Abrham Roba, Aklilu Abrham Roba.

Background: Trachoma is the leading infectious cause of blindness worldwide. Globally, 1.2 billion people live in trachoma-endemic areas, primarily in the poorest communities in the developing world. There are 571 woredas in Ethiopia that are endemic above the treatment threshold for trachoma by 2016.

Objectives: The objective of this study was to assess prevalence of trachoma eye infection and factors associated with its occurrence in grade 1-8 school children in Harari region, eastern Ethiopia.

Methodology: School based cross-sectional study was conducted in 1745 grade 1-8 students in Harari Region from November 30, 2015 to April 29, 2016. From government, private, urban and rural, one school was selected randomly and all students in the school were subjected to the study. Thorough health history and eye examination according to WHO simplified trachoma grading scheme was performed in the class rooms of the students in all 4 schools. Environment related variables were filled by check list. Then, the data was entered in to Epi Info version 3.5.1 and exported to SPSS version 16 for analysis. Logistic regression (Bivariate and multi-variate analyses), and odds ratio were done to see the association between dependent and independent variables.

Major findings: The overall prevalence of trachoma eye infection among grade 1-8 school children was 1.3% (22 cases with 95 % CI). From these 22 cases, 13 had TF only, 8 had both TF and TI while 1 had TC. Being from rural school (AOR 7.26, CI 1.59-33.11), Cleanliness of face (AOR 3.4, CI 1.01-11.42) and Family size of >5 (AOR 4.88, CI 1.62-14.73) has association with trachoma eye infection. Conclusion: The prevalence of trachoma eye infection among grade 1-8 school children in Harari region was 1.3%. This may not indicate true prevalence in the area because most of the schools were from urban areas while trachoma risk factors were less likely to occur. F and E components of SAFE strategy were lacking in 3 of 4 schools. Access to water especially for face washing and after toilet should be built for students in order to prevent communicable diseases like Trachoma eye infection. Key words: trachoma, School children, risk factors, Ethiopia.

Abs 56

Surveillance System Evaluation in West Hararghe Zone, Oromiya Region, Ethiopia, 2016.

Belay Mamuye Cherinet

Background: The purpose of evaluating public health surveillance systems is to ensure that problems of public health importance are being monitored efficiently and effectively. The study was conducted to evaluated functionality of public health surveillance systems in West Hararghe Zone, focusing on Malaria and Measles prevention and control activities.

Method: Cross-sectional descriptive study was conducted in West Hararghe zone, Oromia region from May 17-27/2016. 22 health facilities were included in evaluation. Surveillance data flow from peripheral to regional level was evaluated and data was compiled and analyzed using Microsoft Excel 2007 software.

Result: All visited 8 health posts and four private clinics did not have National Public Health Emergency Management guideline, Malaria and measles national surveillance manual. Standard case definitions for malaria and measles are not available in 9(43%) of visited health facilities. Shortage of Weekly reporting format was observed in 10(47.6%) of visited health facilities from July to May, 2016. There is no specific budget line in visited district health office for epidemic preparedness and response. Written feedback to lower health facilities was not regular. Due to scarcity of transportation, shortage of budget and logistics, supportive supervision on surveillance activities was not conducted as needed from July to May, 2016. The average timeliness and completeness of surveillance system of West Haraghe Zone was 98, 5% and 84.3% respectively from July to May, 2016. The average surveillance report completeness of private and nongovernmental clinics was 22% and 71% respectively.

Conclusion: The current evaluation showed that the system was overall satisfactory in estimating morbidity and mortality and monitoring the trend of disease. However, Periodic supervision, data analysis as needed, providing feedback to lower health facility, training, increase resource availability and monitoring and evaluation is needed at each level to strength the current surveillance system in the zone and visited health facilities.

Key Words: Surveillance System Evaluation, Attributes

Abs 57

Occurrence of Suspected Rabies Cases in Humans Jimma Zone and Surrounding Areas, South West Ethiopia. *Tadele Kebeta*

Background and Justification: Rabies, an acute viral disease of the central nervous system, is widespread in many regions of the world and affects all warm-blooded animals. However, study on occurrence of the rabies and associated risk factor in Jimma zone is not conducted, despite rabies was reported to be endemic in most parts of the Ethiopia.

Objective: The objective of this study was to assess the occurrence of suspected rabies cases in humans and associated risk factors in Jimma zone and surrounding areas from 2009-12012 recorded.

Materials and Method: A retrospective study was conducted in year of 2013 at Jimma Town Health Center recorded rabies suspected humans cases from 2009-2012.

Results: From 2009- 2012years 2302 suspected human's rabies cases were used post-exposure prophylaxis (PEP) at the Health Center. The trends of rabies fluctuating among these four years, from the total recorded cases, the highest (862) of rabies suspected cases occurred in the year of 2012, while smallest (365) of cases were recorded in the year 2010 as shown in figure below.

With regard to month of case recorded, more number (35.4%, N=816) of suspected cases were recorded in winter and then followed by Summer 588(25.5%), Spring 486(21.1%) and Autumn 412(17.9%) according to Ethiopia season.

Most of these cases (90.4%) were due to bite of dogs; and the majorities (52.6%) of the victims were children with less than 15 years and 71.8% of cases were from rural areas. There were statistically significant (P=0.001) variation in the occurrence of the cases with respect to age category, season, residence and sources of exposure. Rabies virus is widely distributed in all districts of Jimma zone. However, the highest (20.4%) of rabies suspected cases were recorded from Jimma town and followed by Limmu Kossa (11.1%), where as the smallest cases in Nonno Benja (0.7%) district of Jimma zone

Conclusion: Rabies appears to be endemic in Jimma zone south western Ethiopia. The sources of exposure to humans were dogs, as most PEP is given to humans were primarily due to dog bites. The risk of dogs' bite appears to be continuously throughout the year; and children were more exposed. The fact that herbal remedy practiced in the community's may lead to the underestimation of the burden of the disease, as most of these cases remain unreported to the health centers.

Abs 58

Hematological Profiles of Asthmatic Patients in Jimma, South West Ethiopia: A Comparative Cross-Section Study

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Background: Asthma is a disease affecting the airways that carry air to and from the lungs. Eosinophils and neutrophils play major roles in pathogenesis of inflammatory disease. However the relation between peripheral blood cell counts of other major leukocyte, hemoglobin, and erythrocyte sedimentation rate in asthmatic patients is less clear.

Objective: The aim of this study was to determine hematological parameters among asthmatic patients attending Jimma University Specialized hospital chest clinic, southwest Ethiopia from March 1 to April 30, 2016

Methodology: Facility based comparative cross-sectional study was conducted. A total of 120 asthmatic patients and 120 apparently healthy individual were recruited in this study. Socio-demographic and clinical data were collected using questionnaire based interview. Four ml of blood sample was collected from each study participants for hematological analysis. Complete blood count was done using *Sysmex hematology analyzer, KX-21 (*Sysmex Corporation, Japan). Differential leukocyte count was done by examination of thin blood films stained with Wright stain under oil immersion objective. Erythrocyte sedimentation rate was determined using Westergreen's method. Data was analyzed using SPSS Version 20 software for Windows. P-value < 0.05 was considered as statistically associated.

Result: The mean comparison of hematological parameters indicated absolute and relative counts of neutrophil, eosinophil and basophil white blood cell and erythrocyte sedimentation rate were significantly high in asthmatic patients compared to control group. On the other hand, relative and absolute counts of monocyte and lymphocyte were significantly low in asmathic patients.

Conclusion and recommendation: In this study, there was a statistical significant variation in many hematological parameters among asthmatic patients compared with control group. Therefore, hematological parameters showed significant mean difference should be considered for proper management of asthma.

Key words: Asthmatic patients, Hematological profile, Jimma University Specialized Hospital

Abs 59

Alcohol Use Disorder among University Students: The growing Concern.

Tesfa Mekonen

Introduction: Problematic alcohol use (alcohol use disorder) includes hazardous drinking, harmful drinking and alcohol dependence and those all patterns of problematic alcohol use implicated in a wide variety of diseases, disorders, and injuries, as well as many psycho-social and legal problems. Problematic alcohol use by school adolescents and young people in Universities has become a global major public health problem.

Objective: The objective of this study was to assess the magnitude and associated factors of alcohol use disorder among Wolaita Sodo University students, 2015.

Methods: Institution based cross sectional study was conducted among 740 Wolaita Sodo University students selected by cluster sampling technique. Data were collected by pretested and self-administered questionnaire. Alcohol use disorder was assessed by Alcohol Use Disorder Identification Test, which was developed by WHO to be used in various countries with variety of cultures. Data were presented with descriptive statistics and logistic regression was used to analyze the data with 95% confidence interval. Odds ratio was used to indicate the strength of the associations and variables with P-value less than 0.05 was considered as significant.

Result: A total of 725 participants were involved in the study. The prevalence of alcohol use disorder (AUD) was 11.4%. Medium level alcohol problem was 6.8% whereas high level alcohol problems was 4.6%. Significantly associated variables with alcohol use disorder among students were; presence of social phobia [AOR = 1.03, 95% CI: 1.01, 1.05], lifetime use of any substance [AOR = 6.81, 95%CI: 3.74, 12.42], higher score in students cumulative grade point average (CGPA) [AOR = 0.59, 95% CI: 0.36, 0.96], and having intimate friend who use any substance [AOR = 2.23, 95% CI: 1.31, 3.81].

Conclusion and recommendation: Alcohol use disorder among university students was high and associated with social phobia, poor academic achievement of the students, life time use of any substances like khat and tobacco, and peer pressure. Strong legislative control of alcohol in universities is important to reduce the burden of alcohol on young and future generation.

Key words: alcohol dependence, adolescents, academic achievement

Abs 60

Assessment of the Prevalence, Associated Factors and Community Perception Towards Common Mental Disorder among Haramaya Town Residents, East Hararge Zone, Oromia Region, Ethiopia

. Fethia Mohammed[1] (MSc in ICCM), Dr. Abebew Gebeyehu[2] (PhD)

Background: Common mental disorders (CMD) are a group of distress states manifesting with anxiety, depressive and unexplained somatic symptoms typically encountered in community. *T*he mental health problems are the leading non-communicable disorder in terms of burden in Ethiopia and the risk factors for the development of mental illness are complex. There is scarcity of information regarding the perception and determinant factors of CMDS. So t*he main aims of this study are to assess the prevalence, associated factors and community perception towards* CMDS *in* Haramaya town*.*

Method: A community based cross-sectional study combined both quantitative and qualitative method was done. For quantitative study 744 participants aged 15 years and above were interviewed. Multistage sampling technique was utilized to select the study subjects and structured questionnaires were used to collect the data. For the qualitative study three FGDs were conducted and the study participants were purposely selected from different Got in the study area. Structured case veginnte technique was used to collect data. Trained supervisors, data collectors and note takers were used in data collection. Quantitative data was entered to Epi Info and was analyzed using SPSS. Descriptive statistics was done using frequency distribution and logistic regression analysis was done to establish the associations. Qualitative data was transcribed, translated, coded, categorized and themes were developed to answer the research questions.

Result: From the 744 participants sampled for the study, 740 were interviewed giving the response of 99.5%. This study revealed that the prevalence of common mental disorders was quite high (26.8%) in the study area. The younger age group 15-24 (AOR=3.60 CI: 1.012, 12.775) was more likely to develop CMDS compared to the older age group (55 and above). Unemployment (AOR 3.99, CI: 1.789, 8.933), living with chronic illness (AOR= 3.33 CI: 1.643, 6.762), having Family history of mental illness (AOR=7.02 CI: 4.038, 12.19) and experiencing one or more stressful life event (AOR=2.01 CI: 1.338, 3.03) were found to be positively associated with common mental disorders as compared to their counterparts. Regarding the current substance users; active smoking (AOR=2.10 CI: 1.312, 3.349), drinking alcohol (AOR=2.99 CI; 1.549, 5.788) and chewing khat (AOR=1.81 CI: 1.114, 2.965) were also significantly associated with common mental disorders. Regarding community perception, they perceived CMDS as narrowness or disturbance of the mind, which is caused by curses, evil eye, evil spirit, substance use and conflicts. They thought this problems can be alleviated by religious treatments (using Qur'an), sprit of God, good nutrition, modern treatment and by good family and social support.

Conclusion: Our study showed that the prevalence of CMD in Haramaya town was high. Age (younger and middle ages), unemployed, presence of Stress full life events, family history of mental illness and presence of chronic illness was found to be significantly associated with common mental disorder. Also this study revealed that the community has some misperception about the causes and treatments of CMDS. The provision of mental health service at primary health care units should be strengthened and health extension workers and community health development armies should also be used in creating awareness among the community members.

Key word: prevalence, common mental disorder, perception.

Abs 61

Mental Health Disorder: Magnitude, perception about the Disease and Health Care Seeking and Associated Factors among Adult People Living in Dire Dawa Administration.

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Introduction: Mental illness comprised 15% of the total global burden of disease and it costs the global economy approximately US$ 44 billion per year. These common mental disorders account for one third of days lost from work due to ill health. In Ethiopia, mental illness is the leading non-communicable disorder in terms of burden; this shows that mental illnesses have been overlooked as a major health priority in Ethiopia and underscore the need for public health programs targeting mental illnesses. The magnitude of common metal disorder in community like Dire Dawa where *khat* chewing is high is unknown. This study aimed to identify prevalence of common metal disorder, its predictors and community perception and health care seeking behaviors.

Objectives: To assess common mental health problem, associated factors, community perception and health care seeking behavior among adult person living in Dire Dawa Administration.

Methodology: A community based cross-sectional quantitative and qualitative study design was employed among randomly selected 2839 adult from Dire Dawa administration in 2013. Interview administered questionnaire, FGD, key informant interview, in-depth interview and desk top review were used to obtain data. The descriptive statistic presented in percentage and proportion. Crude and adjusted prevalence ratio and odds ratio were calculated using Poisson regressing and logistic regression respectively. The qualitative data were analyzed using phenomenological analysis methods and presented thematically.

Result: Two thousand five hundred fifty-two participants were included in this analysis. Majority (63.9%) were female and 1033(41.2%) chewed *khat*. Over all prevalence of mental disorder among adult participants were 852(33.4%). Out of 2552 house hold interviewed 188(7.5%) of them were reported at least one mentally ill person found in their family member. Employment, marital status, losing job, income and chronic disease, family break down, separated from loved one and lack of support during adversely were found to be predictors for mental disorder. According to discussant, people with mental problems seek treatments largely from traditional healers and religious centers. This is because the community believes that mental illnesses are caused by evil spirits and modern medicines cannot cure the victims. The perception of the community towards mentally ill people, according to our FGD participants' reflection is mostly negative. Families feel that having a mentally ill member would work against their social stand in their community and due to this they always consider their ill member as a liability.

Conclusion: common mental disorder in Dire Dawa administration is very high and also large number of house hold had psychiatric case among the family member. The community has wrong perception towards mental illness and its treatment.

Recommendation: Dire Dawa administration health bureau has to address community's wrong perception and misconception regarding health care through IEC/ BCC.

Abs 62

Insomnia and Associated Factors among Dessie Town Adult Residents, Amhara Region, North East Ethiopia, 2016.

Tilahun Ali Endris

Background: Insomnia is one of the most common sleep complaints and it is a major public health concern among adults in the general population. If left untreated, it will leads to physical and mental health disturbances. Despite this fact emphasis is not given for this specific problem in the community level and there is a lack of study concerning the prevalence and different factors affecting insomnia in this study area.

Objective: The objective of this study was to assess the prevalence of insomnia and associated factors among Dessie town adult residents, North East Ethiopia, 2016.

Method: Community based cross-sectional study was conducted from May 03 to June 02, 2016 in Dessie town. Multistage sampling technique was employed. Data was collected by using semi-structured questionnaires for individuals' demographics and Athens insomnia scale and self-reporting questionnaire 20 for insomnia and common mental disorders respectively. The collected data was coded & entered into Epi Info version 7 and analyzed by using SPSS version 20. Descriptive analytical statistical procedures; bivariate and multivariable logistic regressions with odds ratio and 95% confidence interval was employed. The statistical significance was declared at p-value <0.05.

Result: A total of 840 respondents were included in the study with a response rate of 99.3% and prevalence of insomnia was found to be 42.9% with 95% confidence interval (CI) (39.4%, 46.2%) by using Athens insomnia scale. Factors associated with insomnia were female sex [AOR (adjusted odds ratio)=2.74, 95% CI; (1.77, 4.24)], age above 48 years [AOR=4.67, 95%CI; (2.32, 9.40)], being single [AOR=2.81, 95% CI; (1.59, 4.95)] and widowed [AOR= 4.20, 95% CI; 1.60, 11.01], current khat use [AOR=1.76, 95% CI; (1.19,2.60)], current tobacco smoking [AOR=3.13, 95% CI; (1.64,5.95)], caffeinated beverage use [AOR=1.67, 95% CI; (1.12, 2.49)], current medical-surgical disorder [AOR=2.03, 95% CI; (1.18, 3.48)], common mental disorders [AOR=8.92, 95% CI; (5.93, 13.44)] and excessive noise at bed time [AOR=2.13, 95% CI; (1.20, 3.78)].

Conclusion Aand Recommendation: The prevalence of insomnia has to be found high. Females, advanced age, current substance use, widows and single; excessive noise; current medical/surgical disorders and psychological distress were significantly associated with insomnia. Large scale studies and strengthening mental health care are recommended.

Key words: insomnia, prevalence, Ethiopia

Abs 63

Glycemic Conterol and Associated Factors among Diabatics Patients in Gamo Gofa Zone Hospitals, 2016.

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Introduction: Poor glycemic control is the most common cause of hospital admissions and complications in diabetes. Evidences show that maintaining good glycemic control is main therapeutic goal for all patients with diabetes to prevent organ damage and other microvascular and macrovascular complications. Good glycemic control reduces the risk of diabetic complications. Achieving good glycemic control remains a great challenge in diabetic patients. The aim of this study is to identify factors affecting glycemic control among diabetic patients in Gamo Gofa Zone Public Health Hospital, Southwest Ethiopia.

Methods: To assess glycemic control and associated factors among diabetic's patients in Gamo Gofa Zone Public Health Hospital. A Hospital based cross sectional study was conducted in three public Health from February to June to 15/ 2016.

Data Collection and Analysis: Data was collected through structured questionnaire, physical measurement and by using data abstraction sheet for clinical related diabetic's complication or co morbidities. Data was entered in to Epi info version 7 and exported to SPSS Version 21 for analysis. Binary logistic regression analysis will be undertaken to assess the presence and degree of association between dependent and independent variables. After conducting binary logistic regression significant factors will be identified based on AOR include with 5% Confidence level and P-value less than 0.05 by conducting Multivariable logistic regression.

Result: From all respondents only 128(20.2%) diabetics patients have fasting glucose level in normal range of 76-126 mm/dc and 464(73.1%) had above 126 mm/dl and 21(3.3%) below 76 mm/dl during diabetics follow in each public health hospital. among diabetics self care practice lack of regular physical exercise, following recommended dietary feeding practice and food care were the major problem identified in this study.

Being Higher wealth index 1.82(1.02, 3.25), Being Government worker AOR 1.86(1.04, 3.32), awareness on regular glucose measurement AOR **1.306(1.67, 2.55)** and training on diabetics self care practice 2.19(1.24, 3.86) were identified significant associated factors with good glycemic control.

Conclusion and Recommendation: Only one fifth of diabetic's patient had good glycemic control. Therefore poor glycemic control remains a great challenge for diabetic's patients in this context. Creating awareness on regular glucose measurement and providing training on diabetics self care practice like regular physical exercise and recommended dietary feeding practice were mandatory to improve glycemic control.

Key word: Glycemic control, diabetics, Gamo Gofa Zone, Southern Ethiopia

Abs 64

Complications of Diabetes Mellitus and Factors Associated among Adult Patients attending Diabetes Mellitus Clinic in Dessie Referral and Teaching Hospital, Northeast Ethiopia, 2015

Alemayehu Bekele Mengesha, Wolansa Zewdu

Background: Diabetes mellitus (DM) is recognized as one of the major non-communicable diseases worldwide. According to International Diabetes Federation, the prevalence of diabetes in Ethiopia stands at 3.32 %. The complication of diabetes is also high particularly in resource meager countries. There is limited information as for the complications of diabetes in the health care settings of Ethiopia.

Objective: The objective of this study was to assess the magnitude and factors associated with complications of diabetes mellitus among diabetic patients attending diabetic clinic in Dessie Referral and teaching Hospital, Northeast, Ethiopia in 2015

Methods: Institutional based descriptive cross-sectional study with document review was employed. Checklist including variables on socio-demographics, clinical characteristics, co morbidities and types of complication was prepared. Data of diabetic patients enrolled in 2015 was taken and entered to excel spreadsheet and later on exported to SPSS version 20 for analysis. Descriptive analysis was used to indicate the magnitude of factors. Tables and figures were used to display the findings. Bivariate and multivariate analyses were used to assess the predictors of acute, chronic and overall complications. Odds ratio with 95% CI was used to declare the presence and strength of statistical significance between outcome and independent variables.

Results: Overall complication of diabetes was19.3%, from these acute and chronic complication46.9% and 53.01%. On the other hand, retinopathy prevalence looks stable at around 7.5% . On the other hand, the prevalence of infectious diseases such as: UTI, HTN RVI, and that is associated with diabetes mellitus reaches up to 2.2%, 18.3%, and 2.7% respectively. Type two diabetes mellitus was the commonest one among the patients. Patients with co-morbidities were 3.06 times more likely to have chronic complication compared to patients who did not have co-morbidities, with AOR and 95% CI, 3.06(1.19,6.25). Diabetic patients with fasting blood sugar level of third quartile (246-317 mg/dl) were 4.41 times more likely to have chronic complications compared to patients whose fasting blood sugar level was in the first quartile(<=197.4), AOR and 95% CI, 4.41(1.4,13.99). Type II diabetic patients were, were 10.77 times at more risk of developing acute complications when compared to patients who had type I diabetes, with AOR and 95% CI, 10.77(2.87,40.50). Diabetic patients with fasting blood sugar level of second quartile (179.5-245 mg/dl) were 81% reduced risk of acute complications compared to patients whose fasting blood sugar level was in the first quartile with AOR and 95% CI 0.19(0.047,0.75). Type II

diabetic patients had 68% reduced risk of having overall complications of diabetes mellitus compared to type I, with AOR 95% CI, 0.32(0.12, 0.89). Diabetic patients whose age was 15-29 years had 64% reduced risk of having overall complications compared patients in the age group >=45 years of age, with AOR and 95% CI, 0.36(0.14,0.96). Diabetic patients having co-morbidities were 1.99 times more likely to have overall complications compared to patients who did not have co-morbidities, AOR and 95 % CI, 1.99(1.11, 3.55).

Conclusion: The magnitude of acute, chronic and overall complication was found to occur in sizeable proportion of patients. Factors associated with complications of diabetes mellitus were: the presence of comorbidities, type of diabetes mellitus, old age diabetic patients and high blood sugar level. Thus, all stakeholders need to join their hands to prevent in controlling the complication of diabetes mellitus through ensuring quality and comprehensive health care provision to diabetic patients.

Keywords: Diabetes mellitus, overall, acute and chronic complications, co-morbidity.

Abs 65

Intention to Seek Help for Depression and Associated Factors among Residents of Aykel Town, Northwest Ethiopia, 2015.

Shegaye Shumet, Telake Azale, Getnet Ayano

Background: Depression is a major contributor of global disease burden and the leading cause of disability among mental illnesses. Despite high prevalence and serious consequences, people with depression are reluctant to seek help and a large proportion remains untreated.

Objective: The objective of this study was to assess intention of help-seeking for depression and associated factors

Methods: A cross-sectional population study was conducted between April and May 2015 among 832 participants. A major depressive disorder case vignette, the general help-seeking questionnaire (GHSQ), and attitude as well as perception questions were used. Study participants were selected by multistage cluster sampling technique. Data were collected by face-to-face interview. Data were entered into Epi Info version 3.5.3 software and exported to SPSS version 20 for analysis. Simple and multiple linear regression analyses were carried out to identify predictors of intention to seek help

Result: The proportion of those who have intention to seek help from health professionals for depression was 71.2%. Attitude towards seeking professional help for depression were positively associated with intention to seek help for depression with (β=0.03, CI: (0.01, 0.05), p-value <0.001). Other factors positively associated with intention to seek help for depression were age (β=0.02,CI:(0.01,0.03)p<0.001), and perceived need of treatment for depression (β=0.19,CI:(0.01,0.376),p<0.05). Poor social support was negatively associated with intention to seek help for depression (β=-0.39 CI:-0.68,-0.10, p<0.05).

Conclusion: The results suggest that more than two-third of the respondents reported that they were likely or very likely to seek help from health professional if they were having depression. Increasing age, favorable attitude to depression, and perceived need for treatment were predictors of intension to seek help. Interventions focusing on awareness creation and attitude change towards depression are necessary.

Abs 66

Factors to Sputum Smear Positivity Rate among Tuberculosis Suspected Patients Attending Public and Private Health Facilities in Bahir Dar Town, North West Ethiopia.

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Background: Tuberculosis is one of the top major deadly infectious diseases globally. Ethiopia ranks 7th among 22 high tuberculosis burden countries globally. This study was aimed to assess sputum smear positivity rate and associated factors among patients attending public and private health facilities in Bahir Dar Town, Ethiopia.

Methods: Facility based cross-sectional study was conducted among 283 tuberculosis suspected patients in June 2016. Structured interviewer administered questionnaire, slide rechecking and processing leftover sputum samples were used to collect data. Descriptive statistics, bi-variate and multivariate logistic regression analyses were computed to describe study variables and identify factors associated with smear positivity. Results: A total of 283 TB suspects were included and gave 34 (15.2%) prevalence. Age <35 years (AOR=2.24, 95% CI=[1.18-4.15]), cough ≥2 weeks (AOR=3.34, 95% CI = [1.51-10..21]), no education (AOR= 2.13, 95% CI= [1.18-7.21]), purulent sputum (AOR= 1.81, 95% CI= [1.09-4.15)]), HIV/AIDS (AOR=2.41, 95% CI=[1.06-6.15)], sputum collection orientation (AOR= 3.12, 95% CI= [1.48-7.51]), sputum deeply from lung (AOR=2.14, 95% CI= [1.38-8.22]) and staining quality (AOR= 1.8, 95% CI= [1.06-5.32]) were significant variables to sputum smear positivity.

Conclusions: Sputum smear positivity rate was found higher compared with previous studies. Age, education level, duration of cough, sample collection orientation, sputum appearance, smear quality, HIV/AIDS status and sputum source were factors to sputum smear positivity. Improving TB suspects screening, staining quality, sample collection orientation and adherence to TB laboratory standards are important to improve smear positivity.

Key words: Tuberculosis, smear positivity, private/public facilities, Bahir Dar, Ethiopia

Abs 67

Effect of Malaria Infection on Hematological Profiles of People Living with Human Immunodeficiency Virus in Gambella, Southwest Ethiopia.

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Background: Malaria and human immunodeficiency virus are the two most devastating global health problems of our time, causing more than two million deaths each year. Hematological abnormalities such as anemia, thrombocytopenia and leucopenia are the common complications in malaria and HIV co-infected individuals.

Objective: To determine the effect of malaria infection on hematological profiles of people living with HIV attended Gambella Hospital ART clinic, Southwestern Ethiopia.

Methods: A facility based comparative cross-sectional study was conducted from May 25 to November11, 2014 in Gambella Hospital. A total of 172 adult people living with HIV, 86 malaria infected and 86 malaria non-infected participants were included in the study. Demographic and data were collected by using questionnaire, anthropometric data were collected by measuring height and weight and clinical data were collected carefully from the existing ART logbook. Venous blood sample was collected for blood film preparation, complete blood count (CBC) and CD_4^+ lymphocyte count. Stool specimen was collected for intestinal parasite examination. The blood films were examined using light microscope for malaria detection. The whole blood sample was analyzed using CELL DYN 1800 for CBC and BD FACS counter for CD_4^+ lymphocyte count. The data were analyzed using SPSS, Version-20. All variables with p-value <0.05 were considered as statistically significant.

Results: The prevalence of anemia, thrombocytopenia and leucopenia in malaria and HIV co-infected participants were 60.5%, 59.3%, and 43.0%, respectively. Resident (AOR: 4.67; 95%CI: 1.44, 15.14), malaria infection (AOR: 2.42; 95%CI: 1.16, 5.04) and CD_4^+ count were predictors for anemia. Predictor for thrombocytopenia was malaria infection (AOR: 9.79; 95%CI: 4.33, 22.17). Malaria parasitic density (AOR: 0.13; 95%CI: 0.03, 0.57) and CD_4^+ count (AOR: 4.77; 95%CI: 1.23, 18.45) were predictors of leucopenia.

Conclusion: Prevalence of anemia and thrombocytopenia were higher in malaria and HIV co-infected study participants than HIV mono-infected study participants. Mean value of hemoglobin, hematocrit, lymphocyte, neutrophils and platelet counts were significantly different in two groups. Malaria infection increases the rate of being anemic and thrombocytopenic.

Keywords: Malaria, Anemia, HIV, Gambella

Abs 68

Incidence of Severe Adverse Effects Associated with the Treatment of Multidrug Resistant Tuberculosis among Patients Treated for MDR Tuberculosis at ALERT Hospital Addis Ababa.2015.

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Background: Drugs that are used to treat multidrug-resistant tuberculosis have serious adverse effects. Little is known about adverse effects in the multi drug resistant tuberculosis population in Ethiopia.

Objective: The aim of this study was to determine incidence of severe adverse effects for MDR-TB therapy and associated factors among TB patients at ALERT Hospital. Addis Ababa.

Methods: A cross sectional study design using retrospective medical record review of 238 patients with multidrug-resistant tuberculosis , treated at least for one month were conducted to assess severe adverse effects of MDR-TB therapy and associated factors. Multivariate logistic regression model and their 95% confidence intervals were used to identify risk factors associated with adverse effects.

Result: One or more adverse effects developed in 219 cases (92 %). These effects led the clinicians to withdraw or discontinue one or more drugs from the treatment regimen in 46 cases (19.3%). Adverse effects observed most frequently included: Gastritis (68%), Hypokalimia (49.3%), Vomiting (37.4%), Arthragia (32%), sleep disturbance (13.7%), psychosis (7.3%), Hypothyroidism (6.4%), renal toxicity (5.5%), Neuropathy (3.7%), hepatotoxicity(0.9%) and depression(0.5%). Diabetes co morbidity remains the most important determinant factor for the development of adverse effect (AOR =9.75, 95%CI=2, 47, p-value=0.005)

Conclusion and Recommendations: Our study suggests that efforts should be made to continue treatment in the face of adverse effects. All diagnostic procedures and ancillary medications need to be always available for early detection and treatment of adverse events. Patients need to be aware of the seriousness of their disease and the absence of options for cure if they chose to discontinue therapy and special attention should be given for diabetic MDR-TB Patients.

Key word: MDR-TB, Sever Adverse Effect,

Abs 69

Xpert MTB/RIF for Rapid Detection of Rifampicin Resistance Mycobacterium Tuberculosis from Pulmonary Tuberculosis Patients in Southwest Ethiopia.

Mulualem Tadesse Jano

Background: Accurate and rapid detection of drug resistant strain is critical for early initiation of treatment and for limiting the transmission of drug resistant TB. We investigated the accuracy of Xpert MTB/RIF for detection of rifampicin resistance and whether detection of rifampicin resistance by Xpert MTB/RIF predicts multidrug resistance (MDR) in Southwest Ethiopia.

Methods: Smear- or culture-positive sputa obtained from TB patients with increased suspicion of drug resistance were included in this study. GenoType MTBDRplus line probe assay (LPA) and Xpert MTB/RIF tests were done directly on smear-positive sputum specimens and on the cultured isolates for smear-negative specimens. We used the routine drug susceptibility test using LPA as the reference standard for confirmation of rifampicin (RIF) and isoniazid (INH) resistance.

Results: In this preliminary result, first line drug susceptibility results were available for 67 *M. tuberculosis* complex-positive sputum specimens using LPA test: 30% (20/67) were MDR-TB, 3% (2/67) were RIF monoresistant, 6% (4/67) were INH monoresistant, and 61% (41/67) were susceptible to both RIF and INH. Relative to routine RIF susceptibility testing (LPA), Xpert MTB/RIF detected all RIF resistance correctly with 100% sensitivity and 97.8% specificity. The positive predictive value of Xpert MTB/RIF for RIF resistance was 95.7%. Of 23 RIF resistant strains on Xpert MTB/RIF, 87% (20/23) were resistant to both RIF and INH (MDR), 8.7% (2/23) were RIF monoresistant, and 4.3% (1/23) were sensitive to RIF by LPA test. High proportion of RIF resistance was documented among patients previously categorized as failure cases (50%, 10/20) followed by relapse cases (31.6%, 6/19), and defaulters (28.6%, 2/7).

Conclusions: Xpert MTB/RIF was highly effective for identification of rifampin-resistant strains in smear or culture-positive samples. RIF resistance based on Xpert MTB/RIF result could be used to estimate multidrug resistance and can allow rapid initiation of MDR-TB treatment in regions with high drug resistant TB.

Abs 70

Prevalence of Malaria and Associated Factor in Basoliben Woreda, East Gojjam Zone, Amhara Regional State, Northwest Ethiopia, 2016.

Nurilign Abebe Moges, Yeshanew Asnake, Moges Wubie

Introduction: Malaria remains one of the greatest health and development challenges worldwide. Approximately 52 million people (68%) live in malaria risk areas in Ethiopia, primarily at altitudes below 2,000 meters. Unstable malaria transmission patterns make Ethiopia prone to focal and multifocal epidemics that have on occasion caused catastrophic public health emergencies. Malaria is seasonal in most parts of Ethiopia, with variable transmission and prevalence patterns affected by the large diversity in altitude, rainfall, and population movement. The approaches in planning and implementing prevention and control activities vary based on local conditions. To design and implement appropriate interventions, understanding the local area malaria prevalence and factors associated with malaria occurrence has vital.

Objectives: the objective of this study was to assess the prevalence of malaria and associated factor in Basoliben Woreda, East Gojjam zone, Amhara regional state, Northwest Ethiopia, 2016.

Methods: A community based cross sectional study was conducted in Basoliben woreda, on a sample size of 759 Household. Multi stage sampling method was used to select the sample. Data was collected using pre-tested structured questionnaire by interviewer administered questionnaire & blood sample was collected for rapid malaria diagnostic test. The head of household were asked and randomly selected family member tested for malaria prevalence. The collected data was entered in to EPI data 3.1version software and analyzed by SPSS version 20 software. Descriptive statics result was presented by narratives, tables and graphs. Bivariate analysis was done to identify factors associated with malaria prevalence and those found significant (P value≤ 0.2) was entered in the multiple logistic regression analysis. The result was presented as odds ratio and 95% confidence interval. Ethical approval and clearance was obtained from Debre Markos University health science college ethical review committee.

Result: Data were obtained from 725 respondents yielding a response rate 96 %. The parasite positivity rate among the study subjects was 52 (7.2 %); of these, 36 (69.2%) were *P.falciparum*, 15 (28.8%) were *P.vivax* and the rest were mixed 1(1.9%). In multivariate analysis, Bed net utilizer AOR=0.398, 95%CI=0.22, 0.719, house spray AOR=0.344, 95% CI =0.194, 0.608, Presence of breeding site AOR= 3.0, 95% CI= 1.69, 5.32 were significantly associated with the malaria prevalence.

Conclusion and Recommendations: Malaria positivity rate was high in the study area. Most of respondents were not practice malaria prevention and control method as compared to their awareness. Most people living closer to breeding sites and not bed net utilizer were affected. Therefore, community mobilization and empowerment should be kept on and more attention and priority should be given to minimize the gap and to those living closer to potential breeding sites and bed net not utilizer to safe life and prevent the spread of malaria disease in the community.

Abs 71

Multidrug Resistant Tuberculosis in Ethiopian Settings and its Association with Previous Anti-Tuberculosis Treatment: A systematic Review and Meta-analysis. *Setegn Eshetie*

Background: Efforts to control the global burden of tuberculosis (TB) epidemic have now been jeopardized by the rapid evolution of drug resistant MTB, which are resistant to one or more anti-TB drugs. Multidrug resistant tuberculosis in Ethiopia may be more prevalent than previously appreciated, thus up to date national drug resistance studies are critically needed. Therefore, this meta-analysis aimed, firstly, to determine pooled prevalence of MDR-TB among newly diagnosed and previously treated TB cases, secondly, to measure the association between previous anti-TB exposure and acquisition of MDR-MTB infection.

Methods: PubMed, Embase and Google Scholar databases were consulted. Studies that reported prevalence of MDR-TB among new and previously treated TB patients were selected. Studies or surveys conducted at national or sub-national level, with reported MDR-TB prevalence or sufficient data to calculate prevalence were considered for the analysis. Two authors searched and reviewed the studies for eligibility and extracted the data in pre-defined forms. Forest plots of all prevalence estimates were performed and summary estimates were also calculated using random effects models. Associations between previous TB treatment and MDR-MTB infection were examined through subgroup analyses stratified by new and previously treated patients.

Results: We identified 16 suitable studies and found an overall prevalence of MDR-TB among newly diagnosed and previously treated TB patients was, respectively, 1.7% (95% CI 1.2% - 2.3%) and 14.1% (95% CI 10.9% - 17.2%), and the observed difference was statistically significant ($P<0.01$). For the past 10 years (2006 to 2014) the overall MDR-TB prevalence showed a stable time trend. There was an odds ratio of 8.1 (95% CI 7.5 – 8.7) for previously treated TB patients to develop a MDR-MTB infection compared to newly diagnosed cases.

Conclusions: The burden of MDR-TB remains high in Ethiopian settings, especially in previously treated TB cases. Previous TB treatment was the most powerful predictor for MDR-MTB infection. Therefore, strict compliance with anti-TB regimens and improving case detection rate are the necessary steps to tackle the problem.

Key words: Multidrug resistant tuberculosis, Meta-analysis, Systematic review, Ethiopia.

Abs 72

The Third Ethiopian Malaria Indicator Survey 2015 (EMIS-2015). *Ashenafi Assefa (MSC)[1*], Adunga Woyessa (PhD)[1], Amha Kebede (PhD)[1],Daddi Jimma (MD, MPH)[1] , Yibeltal Assefa(PHD)[1], Messeret Assefa(MSC)[1,12], Moges Kassa (MSC)[1], Sindew Mekasha (MSC)[1], ,Hiwot Solomon (MSC)[3], Asefaw Getachew (MSC)[4] Asnakew Kebede (MSC)[4], Gunawardena Dissanayake (PHD)[5], Sheleme Chibsa (MSC)[5], Hiwot Teka (MSC)[5] , Jimee Hwang (MD, MPH)[6] ,Matthew W. Murphy (MD,MS)[6], Dereje Muluneh (MD MPH)[7], Worku Bekele (MD)[8], Henock Kebede(MSC)[8] , Demisse Bimrew (MSC)[9], Desalegn Nigatu (BSC)[9], Mekonnen Tadesse (MSC)[11] ,Ayele Zewde (MD,MPH)[11], Alemayehu Worku (PhD)[10] 1. Ethiopia Public Health Institute, Addis Ababa, Ethiopia, 2. Malaria Indicator Survey coordinator, 3. Federal Ministry of Health, Addis Ababa, Ethiopia, 4. Malaria Control and Elimination Partnership in Africa, PATH, Addis Ababa, Ethiopia, 5. U.S. President's Malaria Initiative, USAID, Addis Ababa, Ethiopia, 6. U.S. President's Malaria Initiative, Malaria Branch, Division of Parasitic Diseases and Malaria, US Centers for Disease Control and Prevention, Addis Ababa, Ethiopia, 7. United Nations International Children's Emergency Fund, Addis Ababa, Ethiopia, 8. World Health Organization, Addis Ababa, Ethiopia, 9. Central Statistics Agency, Addis Ababa, Ethiopia, 10. ICAP, Addis Ababa, Ethiopia, 11. Addis continental Institute of Public Health, Addis Ababa, Ethiopia, 12. Malaria consortium, Addis Ababa, Ethiopia*

Malaria is among the major health problems in Ethiopia. Two Malaria Indicators surveys (MISs) were conducted in 2007 and 2011 to measure the coverage and utilization of key malaria interventions, parasitemia and anemia. These surveys assessed the progress on scale up of malaria prevention and control interventions. A follow up survey, MIS 2015, has been conducted between September and December, 2015 to measure attainment of goals set in the 2011-2015 national malaria strategic plan. MIS 2015 was a population based cross-sectional household (HH) survey. Two stage cluster probability sampling technique was used to select 555 enumeration areas from all malarious areas of Ethiopia. The survey followed standardized RBM MIS guidelines which included the household and women's questionnaires that were uploaded on to smart phones using the Open Data Kit platform with GPS capability. 100,159 HHs were mapped 13,875 HHs were randomly selected. 64% of HHs had at least one long-lasting insecticidal net (LLIN) with an average of 1.8 LLIN per household. Thirty two percent reached universal coverage (1 LLIN per 2 persons). IRS had been conducted in 29% of HHs in the past 12 months preceding the survey. 71% of HHs in malarious areas were protected by either a LLIN or IRS. Of children less than five years of age (U5) , 45% slept under a LLIN the night before the survey, and 70% slept under a LLIN if the HH owned at least one LLIN. These figures were 43% and 71%, respectively, for pregnant women. 16% of children U5 had history of fever in the two weeks preceding the survey. Of these children, 38% sought medical attention within 24 hours of onset of fever and 89% took an antimalarial drug. Malaria parasite prevalence in areas <2,000m was 0.6% by microscopy blood-slide examination and 1.4 % by rapid diagnostic test with regional-level differences.

The results of the current survey document the sustained gains in malaria control in Ethiopia while highlighting gaps in current utilization of interventions.

Abs 73

Exploring Sexual Behavior in Relation with Sexually Transmitted Diseases among Daily Laborers' in Debre Markos Town, Northwest Ethiopia, 2016.

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Introduction: Sexually transmitted Diseases are continue to be major public health problems globally, more than 340 million new cases occur annually.The majority occurring in developing countries. In Ethiopia, Urbanization and rural urban migration is a growing phenomenon for job opportunity that set youth daily laborers at high risk of sexually transmitted infections. Debre Markos town is not also out of this phenomenon where many daily laborers found. However, there is lack of evidences regarding urban daily laborers sexual behaviour and health care needs.

Objective: The objective of this study was to explore risky sexual behavior and health care needs of Daily Laborers' towards sexually Transmitted Diseases in Debre Markos Town, Northwest Ethiopia from October 1-30, 2015.

Methodology: phenomenological qualitative study was carried out among 32 focus group discussion discussants and 20 in-depth interviewees that are purposively selected street daily labourers in Debre Markos town administration. A standard semi-structured questionnaire translated to local Amharic language was adapted. Data for in-depth interview was collected by two fourth year public health students and focus group discussion data was collected by three trained data collectors. Data was managed and analysed using open code version 4.0 thematically. The study was conducted after ethically approved by institutional research ethical review committee of health sciences college, Debre Markos University.

Results: Results regarding daily Labourers' risky sexual behaviour for sexually Transmitted Diseases indicates that they have poor knowledge about Sexually transmitted Diseases (types, symptoms and signs) and misconceptions about transmissions. Their perception towards their susceptibility to the disease was also low due to a complex of social and economic reasons. Their perception of threats/ the barriers for preventing disease ranges from problem of buying and appropriately using condom to risky sexual relationship and to sexual pressure they (especially females) face from contractors/employers. Despite these risky behaviours, they are not intended to use health care in the future due to many barriers listed (either from themselves or families/peers, from health providers or quality of care in health facilities). Such reluctance and delay in seeking care may lead to complications both on themselves and future generations.

Conclusion and recommendation: This study shows multiplicity and interdependency of poor knowledge about the problem, risky sexual behaviours and low need for utilizing health facilities suggest this group are best supported with integrated multi-agency services that work flexibly across all areas of their lives.

Abs 74

Towards Malaria Elimination: Evaluation of Malaria Surveillance System in Raya Azebo and Hintalo Wajirat Districts of Southern and Southeastern Tigray, Ethiopia, 2016.

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Introduction: Malaria is one of the leading causes of illness and death in the world. World Health Organization (WHO) estimated 214 million cases of malaria and 438,000 deaths in 2015. Sixty percent of Ethiopian population is at high risk of malaria. It is common public health problem and frequently reportable diseases among the 21 priority notifiable diseases under the integrated disease surveillance and response in Ethiopia. As the country is moving towards malaria elimination in 2020, its surveillance system needs to be evaluated and strengthened at each level periodically to prevent future outbreaks and decrease its transmission to zero.

Objective: We aimed to evaluate the performance of the system and assess the system key attributes in Raya Azebo and Hintalo Wajirat districts of Southern and Southeastern Tigray regional state.

Method: We conducted a cross-sectional descriptive retrospective review to evaluate surveillance system on malaria from 2014-2016. We selected two districts purposively which previously not evaluated in southern and southeastern Tigray region. Then, two health centers and two health posts from each district selected. We used the updated Centers for Disease Control and Prevention (CDC) guidelines for evaluation of surveillance system. We reviewed the documents and developed semi-structured questionnaires that we used to interview the key stakeholders to collect information about the system and its attributes. Finally, all quantitative data collected were cleaned and entered into a computer using Microsoft excel 2007.

Result: The system provides information on disease trends and morbidity. Case definitions were well understood by 80% of the participants. In evaluated districts, in 2015/16, there were 17,186 and 3,995 suspected and confirmed malaria cases respectively in Raya Azebo district and 5,071 and 568 suspected and confirmed malaria cases respectively in Hintalo Wajirat district, estimating high sensitivity. The positive predictive values (PPV) of the case definition of malaria for 2014/15-2015/16 were 51% and 21% respectively, and the overall PPV was 29.5% (9256/31,398). Seventy percent (70%) of interviewers responded that the surveillance system is simple and flexible. The average completeness and timeliness of report forms were 82.4% and 90.5% respectively.

Conclusion: Malaria surveillance system met most of its stated objectives. The surveillance system was simple, sensitive, flexible, stable, moderately accepted, low PPV. Timeliness inadequate and data quality was poor. We recommended training of surveillance officers at each level of health facility in both districts on data quality.

Key Words: Surveillance System, Evaluation, Malaria

Abs 75

Postpartum Intra Uterine Contraceptive Device Use and its Associated Factors: A Facility Based Cross Sectional Study in Sidama Zone, South Ethiopia.

Lidetu Bezabih Tefera, Mulumebet Abera, Chaltu Fikru, Dawit Jember Tesfaye

Background: Insertion of an intrauterine device (IUD) immediately after delivery have a proven record of very high effectiveness, protection against unintended pregnancy, cost effectiveness, suitability and high user satisfaction. Despite these benefits and relative increase in institutional delivery, information on PPIUD acceptance is rare in Ethiopia. Therefore, this study was aimed to assess postpartum intra uterine contraceptive device use and its associated factors among mothers delivered in selected facilities found in South Ethiopia.

Methods: A facility based cross-sectional study was conducted among mothers delivered in Yirgalem hospital and Bursa health center. Data were collected using structured questionnaire among 310 selected women. Data were entered into Epi-Info version 3.5.3 software and exported to SPSS version 20 for further analysis. Frequency tables and graphs were used to describe the study variables. Bivariate and multivariate logistic regression analysis methods were used to identify factors associated with postpartum intrauterine device use. Variables with P-value of <0.05 with 95% CI were used to declare statistical significance.

Result: Postpartum intra uterine contraceptive device use within 48 hours of delivery was 21.6 % while 38 % of the respondents were interested to use PPIUD. Only 22.8 % of participant mothers were counseled during ANC, labor and postpartum period. Those mother who don't have a plan to have another child were 2.36 time more likely to use PPIUD than mothers plan to have another child [AOR=2.36, 95% CI, (1.25, 4.47)]. Mother with undecided plan to have another child [AOR= 0.17, 95% CI, (0.05, 0.58)], mothers who did not heard [AOR=0.41, 95 %CI: 0.41 (0.20, 0.83)] and not counseled [AOR=0.17, 95 % CI: 0.17 (0.06, 0.52)] about PPIUD were less likely to use PPIUD.

Conclusion: Despite more than one third of participants were interested in PPIUD use**,** acceptance of PPIUCD use was low. Most mothers were not counseled during the important contact points through the whole cascade of pregnancy. Program managers need to develop strategies to raise public awareness of the PPIUCD through different media sources. This study also highlights, the need to improve and integrate standard PPIUD counseling scheme during FANC, labor and postpartum period.

Abs 76

Institutional Delivery Service Utilization among Women from Rural Districts of Wolaita and Dawro Zones, Southern Ethiopia: a Community Based Cross-Sectional Study.

Mihiretu Alemayehu Arba

Background: The highest number of maternal death occur during labour, delivery and the first day after delivery highlighting the critical need for good quality care during this period. Therefore, for the strategies of institutional delivery to be effective, it is essential to understand the factors that influence individual and household factors to utilize skilled birth attendance and institutions for delivery. This study was aimed to assess factors affecting the utilization of institutional delivery service of women in rural districts of Wolaita and Dawro Zones.

Methods: A community based cross-sectional study was done among mothers who gave birth within the past one year preceding the survey in Wolaita and Dawro Zones, from February 01 – April 30, 2015 by using multistage sampling technique to select a total of 12 clusters. All eligible mothers from the selected clusters were included in the study. Accordingly, 957 mothers were included in the survey. Data was entered using Epi-data version 1.4.4.0 and exported to SPSS version 20 for analysis. Bivariate and multiple logistic regressions were applied to identify predictor variables.

Result: Only 38% of study participants delivered the index child at health facility. Husband's educational status, wealth index, average distance from nearest health facility, wanted pregnancy, agreement to follow post-natal care, problem faced during delivery, birth order, preference of health professional for ante-natal care and maternity care were predictors of institutional delivery.

Conclusion: The use of institutional delivery service is low in the study community. Eventhough antenatal care service is high; nearly two in every three mothers delivered their index child out of health facility. Improving socio-economic status of mothers as well as availing modern health facilities to the nearest locality will have a good impact to improve institutional delivery service utilization. Similarly, education is also a tool to improve awareness of mothers and their husbands for the improvement of health care service utilization.

Abs 77

Prevalence and Predictors of Exclusive Breastfeeding Practices among Infants in Hossana Town, Southern Ethiopia: A community Based Cross-Sectional Study.

Alemu Earsido

Introduction: Different researches provide convincing evidence for the effect of human milk in decreasing the risk of infant mortality and morbidity from acute and chronic diseases. The World Health Organization (WHO) advocates for breastfeeding as the best source of food for optimal infant growth and development. They recommend that infants should be exclusively breastfed, receiving no other foods or liquids besides breast milk, until 6 months of age.Objective: To assess prevalence of exclusive breastfeeding practices and predictors among infants in Hossana Town, Southern Ethiopia, 2015Method and materials: A community based cross sectional study was conducted from January to February 2015, in Hossana town, Hadiya Zone, Southern Ethiopia. Multi stage sampling technique was used to select 720 respondents. All the questionnaires were entered, edited, coded and cleaned into Epi-info version 3.5.3 and exported to SPSS version 20 soft ware packages for analysis. The degree of association between independent and dependent variables were assessed using odds ratio, 95% confidence interval and p-value <0.05 to be considered as significant.

Result: A total sample of 707 mothers having infants aged 0–12 months was interviewed which had the response rate of 98%. The prevalence of exclusive breastfeeding in the study area was 74%. Age group of the respondents 15-24 [AOR=3.2, 95% CI: 1.6, 6], illiterate educational level of the respondents' husband [AOR=0.34, 95% CI: 0.12, 0.95], age of the infants <6 months [AOR= 2.7, 95% CI: 1.3, 3.9], prelactal feeding [AOR= 4, 95% CI: 2.6, 6.5], early initiated breast feeding (AOR = 1.91, 95% CI = 1.16, 3), plan to exclusive breastfeeding (AOR = 2, 95% CI = 1.4, 3), advice/ counseling on infant feeding (AOR = 1.85, 95% CI = 1.2, 2.8).Conclusion: Promotion of exclusive breastfeeding for age group 34-49, encouragement of education for husbands, provision of EBF for all <6months, supporting early initiated breast feeding, and enabling every mother a prenatal exclusive breastfeeding plan during antenatal care were recommended in order to increase the proportion of women practicing EBF.

Keywords: Prevalence, Exclusive breastfeeding, predictors, Southern Ethiopia

Abs 78

Basic Emergency Maternal and Neonatal Care Status of South Gondar Zone, North Central Ethiopia: Institutional Descriptive Survey, June 2016.

Bedilu Abebe Abate, Bedilu Abebe Abate, Mekonnen Assefa Ahunie

Background: Globally; an estimated 303,000 maternal deaths, 2 million intrapartum-related stillbirths and neonatal deaths occur annually. The majority of the deaths occur around the time of childbirth and three fourth are preventable with BEmONC services. Thus, this study aimed to assess status of emergency maternal and neonatal care in south Gondar zone, North central Ethiopia.

Methods: Institutional descriptive survey was conducted from January to May 2016 on 89 public health facilities including one general hospital using WHO and AMDD questionnaires. The signal functions of BEmONC were determined whether each signal function was performed in the past 3 months, and the reasons why if it is not in the past 3 months.

Result: About 94.4% 96.6% of health facilities administered parental antibiotics and oxytocics 3 months before the study period respectively. The reported reasons for not administering were management issues and lack of supplies. More than nine in ten (91%) of facilities had performed removal of retained products in the last 3 months respectively. Almost one in ten of the health facilities were not performed removal of retained products due to policy issues (75%). More than nine in ten 93.3%of health facilities were used partograph to manage. Lack of indication (50%), lack of supplies 33.3% were reasons reported for not using partograph. Nineteen percent of the health facilities provided special or intensive care to a preterm or low birth weight. Majority of health facilities (80.9%) were not provided the service due to 50.7% no pediatric or intensive care unit for infants,(25.4%) lack of supplies, lack of training16.9%, no indication (4.2%).

Conclusion: Some of the signal functions were not functioned in the past 3 months mostly due to lack of supplies and management issues. Zonal health department with regional health bureau should avail supplies and solve management issues.

Key words: Signal functions, BeMONC, Ethiopia.

Abs 79

Assessment of Obstetric Complications in Mothers Attending Obstetric Care in Debre Birhan Referral Hospital, North Central Ethiopia.

Kefyalew Dagne Gizachew

Introduction: Little is known about the health of women with obstetric complications in poor countries like Ethiopia. Ethiopia has one of the highest maternal mortality rates in the world.

Methods: cross-sectional study design with review of records was employed in Debre Birhan Referral Hospital, between 1January 2009 to 31 December 2010. The materials used were the labor and delivery registration books, discharge registration books and patient charts. The data was entered on Ms-excel spreadsheet. Data was cleaned, managed and analyzed using SPSS. Association between variables was computed by SPSS logistic regression using OR with 95% CI.

Result: Most of the participants were in the age group of 18-34 (88.6%) and the mean age was 26± **5.52** years. Most of the study subjects were nulliparious, 1730 (52.1%) and grandmultiparas account 245(7.4%). Of 3322 study subjects, 941 (28.3%) developed at least 1 obstetric complication. Common complications were obstructed labor, 245 (7.4%), preeclampsia and eclampsia, 80 (2.4%), uterine rupture, 40 (1.2%), anemia, 37 (1.1%), puerperal sepsis, 29 (0.9%), APH and PPH each, 26 (0.8%) and PROM, 23 (0.7%). Of 3322 births, still births were (10%), malpresentations (3%), Preterm delivery (2.3%), fetal anomaly (0.8%), neonatal death and fetal distress each (0.7%). Maternal death was 873/100,000 births. The most common causes of maternal death were obstructed labor (51.7%), uterine rupture (24.1%), eclampsia (17.2%) and anemia (10.3%) respectively. Mothers who gave birth at home were most likely to develop obstetric complications compared to mothers who were attended institutionally, (AOR 24.12; 95% CI 8.30 to 70.10).

Conclusion: The proportion of obstetric complications was high**.** The most common obstetric complications in Debre Birhan Hospital were obstructed labor, hypertensive disorders of pregnancy (preeclampsia and eclampsia), hemorrhage and sepsis. Factors associated with obstetric complications were maternal age, gravidity and parity, Place of delivery, fetal outcome, HIV status and birth weight.

Abs 80

Modern Contraceptive Utilization and Associated Factors among Married Pastoralist Women in Bale Eco Region, Bale Zone, South East Ethiopia.

Semere Sileshi Belda

The high fertility rate is one of the main population threats to the unique biodiversity of the Bale ecoregion. The perspectives of modern contraceptive utilization by married pastoralist women in the Bale ecoregion could be specific and not well known. Therefore the current study assessed modern contraceptive utilization and its predictors among married pastoralist women in Bale eco-region.

A cross-sectional community-based quantitative study supplemented with a qualitative study was conducted from November/ 2015 to February/2016. A structured questionnaire was used to interview 549 married women selected by a multistage sampling technique. SPSS 21 software was used to analyze the quantitative data. Odds ratios with 95% confidence interval were used to determine predictors of modern contraceptive use at ($P<0.05$). Thematic analysis was used to analyze the qualitative data using an open-code software.

The current modern contraceptive utilization rate by married pastoralist women was (20.8%). Couple discussion, husband's approval of FP use, discussion with health extension workers, desired time for additional child and perceived cultural acceptability were the independent predictors of modern contraceptive utilization. Opposition due to misinformation, personal ideologies and traditional beliefs in favor of a large number of children were the perceived sociocultural main themes hindering modern contraceptive use. There was less modern contraceptive utilization in the study area. There were an extensive opposition rooted in traditional beliefs and weeded around religion. In order to alleviate the underlying socio-cultural barriers national strategies and programs should target outright opposition and misinformation through actively involving religious leaders and husbands.

Abs 81

Knowledge of Obstetric Danger Signs and Associated Factors among Pregnant Women Attending Antenatal Careat Health Facilities of Yirgacheffe town, Gedeo Zone Southern Nation, Nationalities and People Region, Ethiopia, 2016.

Desalegn Tsegaw Hibstu

Introduction: Obstetric danger signs are not the literal obstetric complications, merely symptoms that are well named by non-clinical personnel. Realizing these danger signs for pregnancy linked complications and what to do if they happen would importantly increase the capacities of women, their partners and their families to stay healthy, to call for appropriate steps to insure a safe birth and to seek timely skilled care. The aim of this study was to assess the knowledge of obstetric danger signs and associated factors among pregnant women attending antenatal care in Yirgacheffe town, Gedeo Zone, Southern Ethiopia.

Method: Institutional based cross-sectional study design was conducted from March 15- April 15, 2016 in randomly selected samples of 342 mothers using simple random sampling technique in health facilities of Yirgacheffe Town administration. Pretested and structured questionnaire was used to collect the data. Bivariate and multivariate logistic regression was carried out to identify factors associated with knowledge of obstetric danger signs.

Result: A total of 342(90%) were included in the study. The level of obstetric knowledge of danger signs was 21.9% (95% CI: 20.2-55.65%).Maternal education (AOR=0.26, CI: 0. 08, 0.88), paternal education (AOR=0.13, CI; 0.04, 04), maternal age (AOR=3.68, CI: 1.30, 10.46), paternal occupation (AOR=4.65, CI: 1.82, 11.87), place of residence (AOR=2.61, CI: 1.35, 5.04) and time taken to reach health facilities (AOR=0. 06, CI: 0.02, 0.17) were significant factors for knowledge obstetric danger sign.

Conclusion: Maternal and paternal education, maternal age, paternal occupation, place of residence and time taken to reach health facility were the main factors for knowledge of obstetric danger signs. Increasing knowledge of key danger signs needs to be given focus as it makes ready women and their families for prompt and appropriate decisions and measures in case of obstetric danger signs.

Key words: obstetric danger signs, knowledge, Yirgacheffe, Ethiopia

Abs 82

Unmet Need for Modern Contraceptives and Associated Factors among Women in the Extended Postpartum Period in Dessie Town, Ethiopia.

Tenaw Yimer

Background: The contraceptive use of women in the extended postpartum period is usually different from other times in a woman's life cycle due to the additional roles and presence of emotional changes. However, there is lack of evidence regarding women contraceptive need during this period and the extent they met their need. Therefore, the objective of this study was to assess unmet need for modern contraceptives and associated factors among women during the extended postpartum period in Dessie Town, North east Ethiopia in December 2014.

Methods: A community-based cross-sectional study was conducted among women who gave birth one year before the study period. Systematic random sampling technique was employed to recruit a total of 383 study participants. For data collection, a structured and pretested standard questionnaire was used. Descriptive statistics were done to characterize the study population using different variables. Bivariate and multiple logistic regression models were fitted to control confounding factors. Odds ratios with 95% confidence intervals were computed to identify factors associated with unmet need.

Results: This study revealed that 44% of the extended post-partum women had unmet need of modern contraceptives of which 57 % unmet need for spacing and 43% for limiting. Education of women (being illiterate) (AOR (adjusted odds ratio) =3.37, 95% CI (confidence interval) 1.22-7.57), antenatal care service (no) (AOR= 2.41, 95% CI 1.11-5.79), Post-natal care service (no) (AOR= 3.63, CI 2.13-6.19) and knowledge of lactational amenorrhea method (AOR= 7.84 95% CI 4.10-15.02) were the factors positively associated with unmet need modern contraceptives in the extended postpartum period.

Conclusion and recommendation: the unmet need for modern contraception is high in the study area. There is need to improve the quality of maternal health service, girls education, information on postpartum risk of pregnancy on the recommended postpartum contraceptives to enable mothers make informed choices of contraceptives.

Key words: unmet need, modern contraceptives, associated factors, extended postpartum period, Dessie town, north east Ethiopia

Abs 83

Contraceptive Utilization and its' Associated factors among Women of Reproductive Age group in Southern Nations and Nationality People Region (SNNPR), Ethiopia.

Akine Eshete, Misganu Endriyas, Embet Mekonnen, Tebeje Misgnaw, Mekonen Shiferaw

Background: Despite a great progress of success in family planning programs in Ethiopia in the last fifteen years, fertility rate has been declining slowly and contraceptive prevalence rate (CPR) was slightly increased from 29% in 2011 to 42% in 2014 at nationally and it increased from 34% in 2011 and 39.8% in 2014 in SNNPR among married women. Even though contraceptive methods are made accessible near to household level through health extension program in the country as well as in study area, it was one of underutilized public intervention. Thus, assessing status and factors affecting contraceptive utilization is a key step for program improvement.

Methods: Community based cross-sectional study supplemented by a qualitative study was employed from March to April, 2015 in SNNPR. Multistage stratified cluster sampling technique was used and total of 3205 study subjects were interviewed. The data were collected by using interview administered questionnaire, while qualitative data were collected by IDI and FGDs. Data entry was done by Epi Info vision 7, while analysis was done by using SPSS V-20. Descriptive statistics was used to describe the socio-demographic and other study variables. Bivariate and multivariate logistic regression analysis was used to identify factors associated with contraceptive utilization. The association between variables was determined using odds ratio at 95% confidence interval.

Results/Findings: Contraceptive utilization was 53.3% among women of reproductive age groups. Nearly three fourth, (73.6%), of current users were using short-term contraceptive methods. Even though the benefits of contraceptive were acknowledged, various reasons were impeded their utilization. The desire to have many children, fear of perceived side effects, absence of sufficient discussion with the client and unable to administer particularly LAPMs were mentioned as a major reason.

In multivariate analysis, women having 1-2 children [AOR-3.07, 95% CI 2.06-4.58], having 3-4 children [AOR-3.7, 95% CI 2.41-5.82], having more than five children [AOR–4.7, 95%CI 2.91-7.49] and women who had decided the total number of children in the whole life (AOR- 1.6, 95% CI [1.29-1.93] were more likely to utilize contraceptives. However, women who had experienced of child death were less likely to utilize contraceptive (AOR-0.62, 95%CI [0.48-0.81]. Having overall good knowledge and attitude towards contraceptives were positively associated with contraceptive use (AOR 15.51 [95%CI 9.75-24.68] and (AOR-1.97, 95%CI [1.57-2.47] respectively.

Women in the age range of 35 to 39 years [AOR-0.52, 95% CI 0.31-0.89], 40 to 44 years [AOR-0.29, 95% CI 0.15-0.54] and 45 to 49 years [AOR-0.29, 95% CI 0.09-0.86] were less likely to utilize contraceptive as compared those in age range of 15 to 19 years. Those who ever married women and not live together were less likely to use contraceptive than married and live together (AOR-0.24, 95% CI [0.16-0.37]. Likewise, women from pastoralist area were less likely to utilize contraceptives than agrarian area (AOR-0.33, 95%CI [0.14-0.84].

Lessons and Recommendations: The present research identifies that contraceptive utilization was below national HSDP IV target and it was associated with various misconceptions by users. Hence program planner and implementers need to address socio-cultural barriers.

Abs 84

Factors Affecting Contraceptive Use among Women of Reproductive Age Group in Surma Woreda, Southwestern Ethiopia: Cross Sectional Community Based Study. *Nardos Delelegn Bogale*

Background: Modern contraceptive plays a vital role in the reduction of maternal and child morbidities and mortalities. Prevention of pregnancy is an effective form of primary prevention. The link between fertility and the consequences of population growth can be stabilized by giving more emphasis on contraceptive methods at community level. In remote southern communities of Ethiopia, the contraceptive utilization is still low when compared to other districts in the region.

Objective: The aim of this study was to assess factors affecting contraceptive use among reproductive aged women in Surma *woreda*.

Methods: A cross-sectional community based study triangulated with qualitative study was conducted from April to May 2015. Multi-stage sampling technique was used to select a total of 584 women participants for the quantitative study, whereas purposive sampling was employed for the qualitative study. Key-informant interview guide and pre-tested questionnaire were used for data collection. Data were entered into Epi-Info version 3.5.3 and analyzed using SPSS version 20. Logistic regression analysis was carried out to see the effect of predictors on the dependent variable.

Results: The current modern contraceptive prevalence rate is found to be 3.3%. Among the variables partner approval was significantly associated with modern contraceptive use (AOR=6.006; 95%CI= (1.804, 19.994). The Suri have long-standing tradition of fertility regulation i.e. the rhythm method and a culture that support child spacing.

Conclusion: There is low prevalence of modern contraceptive use while traditional contraceptive methods are widely practiced. Partner approval as well as the culture and lifestyle of the community are believed to have influenced modern contraceptive use. Hence, continuous health education on modern contraceptives, male involvement and adequate number of community based agents should be trained to reach the community.

Key words: Contraceptive, Prevalence, Associated factors, Ethiopia

Abs 85

Prevalence and Etiologic Agents of Dermatophytosis among Primary School Children in Harari Regional State, Ethiopia. *Alem Alemayehu*

Dermatophytes are worldwide in distribution and dermatophytosis is a common problem in developing countries. It can occur on both sexes, and all ages but the diseases are more common in schoolchildren. This study attempted to determine the prevalence and etiological agents of dermatophyte infections of hair, skin and nail among primary school children in Harari Regional State from April to June 2015. A cross-sectional study was conducted on 428 primary school children. Skin scrapings, hair sample and nail clippings were collected from children who showed dermatophytosis. All specimens were subjected to microscopic examination and culture. Following a meticulous collection, data was analysed using SPSS version 21. Of the 428 school children, 211 (49%) male and 217(51%) female, 100 (23.4%) had culture confirmed dermatophytosis and tinea capitis took the overall prevalence of 18 % (77 /428). *Trichophyton violaceum* was isolated from 43 samples, followed by *Trichophyton rubrum,* 24. The highest prevalence of dermatophtosis was seen in the age group 5-9years and grade level of 1-2 ($P < 0.05$). As a result, this study found a high prevalence of dermatophytosis in the Harari's Regional State schoolchildren and tinea capitis was the predominant clinical finding which needs an intervention.

Key words: dermatophytes, hair, prevalence, skin, schoolchildren

Abs 86

Readiness to Provide Child Health Services in Ethiopia: Health Facility Assessment.

Ibrahim Kedir Menuta, Theodros Getachew, Abebe Bekele, Atkure Defar, Mekonnen Tadesse, Habtamu Teklie, Kassahun Amenu, Terefe Gelibo, Yibeltal Assefa, Amha Kebede

Background: World Health Organization (WHO) and also United Nations Children's Fund (UNICEF) have estimated that about 10 million children under five years of age die each year, largely from preventable causes. Ethiopia has made tremendous effort by cutting under five mortality by two third from the 167 in 1999 to 68 in 2012. Nevertheless, nearly 277,186 under five children die each year mostly from preventable or treatable diseases (WHO/CHERG 2010).

Objective: The objectives of this study are to examine the readiness of facilities to provide quality child health services, including the availability of basic amenities and equipment, infection prevention and control processes, laboratory diagnostic capacity, and essential medicines.

Method: The assessment is part of the 2014 Ethiopia Service Provision Assessment Plus (ESPA+) Survey. A total of 1,327 health facilities were assessed. All Hospitals, selected health center, private clinics, and Health posts were assessed.

Results: Sixty-nine percent of facilities offering outpatient curative care for sick children has IMCI guideline and 48 percent have at least one staff member who received training in IMCI 24 months before the survey. Among all facilities, excluding Health posts offering outpatient curative care services for sick children, only 43 percent have soap and running water at the service site on the day of the survey and only 44 percent of them have alcohol-based hand antiseptic, but 56 percent of them have either soap and running water, or alcohol-based hand antiseptic. Fifty-eight percent of these facilities have laboratory diagnostic capacity for malaria. Majority of government health facilities (greater than 80 percent) have all essential medicines with the exception of zinc tablets and vitamin A capsule. Fifty-three percent of facilities that offer child immunization services have guidelines and 47 percent of them have at least one staff member trained on child immunization service. Fifty-six percent of these facilities had all the five basic child vaccines available in the facility on the day of the survey. A great majority of these facilities have equipment for vaccination services with the exception of vaccine refrigerator (18 percent) with a great disparity between government facilities (18 percent) and private facilities (72).

Conclusion: Governmental managing facilities are more likely to demonstrate service readiness in terms of Guideline, trained staff and equipment. Majority of facilities offering child vaccination services have all the five basic child vaccines available in the facility.

Keywords: Child health service, Readiness

Abs 87

Health Care Seeking Behaviour for Newborn Who Developed Danger Sign and Associated Factor among Women Who Had an Infant Age of 28 - 364 Day in Tenta Woreda, South Wollo Zone, North East Ethiopia.

Gebeyaw Molla Wondim

Background: Health care seeking behaviour is a complex outcome of many factors operating at individual, family and community level. This includes consulting a physician during the prenatal, natal and postnatal period. Neonatal and infant mortality pose a major public health challenges in the world. However, in Ethiopia, there is no a study that documented women's health seeking behaviour and its association with neonatal danger sign. So, the purpose of this study was to assess the health seeking behaviour for newborn who developed danger sign and associated factor among women who had an infant age between 28 -364 day in Tenta Woreda, North East Ethiopia, 2015.

Methodology: A community based cross-sectional study was conducted from October 23 to November 17, 2015. Stratified simple random sampling was used and 564 mothers were enrolled in the study. Epi data version 3.1 and SPSS version 20.0 were used for data entry and analysis respectively. Multivariable logistic regression analysis was used to identify independent predictors of women's health seeking behaviour of neonatal danger signs.

Result: The mean age of the respondent was 30.85 (± 6.16 SD) and mothers who sought medical care for neonatal danger sign were 175(43.2%). Mothers who attended secondary education (AOR=4.64 [95%CI: 1.1-19.81]), delivered last child in health center (AOR=3.35 [95%CI: 1.31-8.56]), perceived severity of neonatal illness (AOR= 4.44 [95%CI: 1.6-12.32]), practiced optimal thermal care (AOR=2,52 [95% CI: 1.08 - 5.85]), and higher decision-making ability of women to seek neonatal health care (AOR=11.28 [95% CI: 4.36-29.22]) were significant predictor of women's health seeking behaviour on newborn danger sign.

Conclusion: In this finding, nearly half of women's were seeking medical care for newborn danger sign/illness. Long distance to go health facility, perceptions of illness was not serious, belief that some illness are caused by evil spirits, belief that herbs are more effective and being busy are the common reason of mothers not to seek medical care.

Health facilities should integrate essential newborn care service in antenatal and postnatal care services. In addition, at the community level, health extension workers should educate mothers about newborn care practice and neonatal danger sign through women development army. Similarly, the established health extension program should focused on women's opinion to avoid these wrong opinions through strengthen women's development army in the community.

Key Words: Health seeking behaviour, neonatal danger sign, women who had an infant.

Abs 88

Timely Initiation of Complementary Feeding and Associated Factors among 6 to 23 Months Children in Halaba Kulito Town, Halaba Special Woreda, Southern Ethiopia, Ethiopia, 2016. *Desalegn Tsegaw Hibstu*

Introduction: Infants and young children are at an increased risk of malnutrition from six months of age onwards and hence timely initiation of nutritionally enough, reliable, age appropriate complementary feeding at sixth month of age is urged for improved health and development of infants. The aim of this study was to assess the magnitude and associated factors of timely initiation of complementary feeding.

Method: A community based cross-sectional study design was conducted among 320 mothers with their 6-23months children in Halaba Kulito town from May 30to June 4, 2016 using systematic random sampling technique was used to identify the study subjects. Data was collected using pretested and interviewer administered structured questionnaire. Logistic regression was performed to identify factors associated with timely initiation of complementary. Model fitness was checked using Hosmer and Lemeshow show.

Result: The magnitude of timely initiation of complementary feeding in the study area was found to be 57.8% [95 % confidence interval (CI): 52.8-63.4%]. Maternal education, maternal and paternal occupational status and age at first pregnancy were identified as a significant with timely initiation of complementary feeding.

Conclusion: Nearly, three among five mothers (57.8%) initiated complementary feeding at six months which is lower than the World Health Organization recommendation. Women education needs emphasis since it has a substantial contribution on timely initiation of complementary feeding. Health education dissemination strategies using mass media as a vehicle and through Health Extension workers need to be considered on benefits of avoiding early pregnancy.

Keywords: timely initiation, complementary, Halaba Kulito, Ethiopia

Abs 89

Determinants of Low Birth Weight: The Case of Institutional Deliveries at Gammo-Goffa Zone Hospitals, Southern Ethiopia: institution Based Cross-sectional Study.

Samuel Mathewos, Aleme Mekuria

Background: Low birth weight (LBW) remains a significant Public Health problem in many parts of the world and is associated with a range of both short and long-term adverse consequences. Besides the limited number of studies undertaken in Ethiopia with regard to low birth weight so far, little is known about Low Birth Weight and its determinants within our study area of interest. Therefore, this study is aimed at assessing the prevalence and determinants of Low Birth Weight among New born infants in institutional deliveries of Gammo Goffa Zone Hospitals of Southern Ethiopia.

Methods: Institution-based cross-sectional study was conducted among 423 neonate/mother pairs from 1-30th March 2016 in three Hospitals of Gammo Goffa Zone, Southern Ethiopia. Data were collected by trained Midwives in each hospital. Consecutive sampling technique was used to collect the data until the allocated sample size is achieved. A pretested, structured interviewer administered questionnaire and a standard calibrated weight scale were used for data collection. Data were analyzed using SPSS v20 software. Multivariate logistic regression analysis was done to identify predictors of Low Birth Weight.

Results: The prevalence of Low Birth Weight in Hospital deliveries of Gamo Goffa Zone was found to be 9.5%. Being HIV sero positive(AOR=6.0;95%CI:2.04,9.45), additional meal intake during the most recent pregnancy(AOR=3.16;95%CI:1.44,6.95), pregnancy status (AOR=5.5; 95%CI:2.02,15.20) and more than 5 pregnancies(AOR=3.43;95%CI:1.69,11.55) were independent predictors of Low Birth Weight.

Conclusion: Low Birth Weight is still a Public Health problem in this study; significant numbers of newborns were at risk of LBW in the study area. Concerned public and private bodies should give emphasis with regard to improving a mother's awareness and practice for a healthy pregnancy to reverse LBW related problems.

Key words: Low Birth Weight, Arba Minch, Ethiopia

Abs 90

Determinants of Full Immunization of Children 12-23 Months in the Siti and Fafen Zones of Ethiopia's Somali Region. *Yohannes Tetemke Haile*

Background: Routine childhood vaccinations have been shown to be cost effective in protecting childrens against different diseases. Yet, 34 Million children are not vaccinated annually. While Ethiopia has witnessed declines in child mortality and improved immuization coverage (86% fully immunized), progress has not been uniform. Only 34% of children 12-23 months in Ethiopia's Somali Region are fully immunized.

The Somali Region comprises pastoralist communities with limited access to health care services and various socio-cultural factors affect health care seeking behavior. This study was conducted to understand the determinants of full immunization of children 12-23 months in this Region.

Methods: A cross-sectional household suvery was conducted in Siti and Fafen Zones (n=1,490). Three stage stratified cluster sampling was employed. District, Kebele and household, hence, mothers of children 12-23 months were interviewed. The dependent variable was full immunization and association was assessed by Pearson chi-square tests. Multi-variate logistic regression was used to test factors associated with full immunization. factors included were; area of residence, duration of residence, mother's education, mother's occupation, wealth quintile, mothers household decission making, use of formal maternal and child care services.

Results: 8% of mothers had any formal education, 65% of mothers lived in a rural area, 90% of mothers were permanent settlers, and 46% of mothers were involved in making decissions about the household and 37% of mothers had comprehensive immunization knowledge. only 19% of children were fully immuunized, 26% never immunized and the rest (55%) were partially immunized.

Full immunization was associated with permanent and urban residence (AOR 4.9 95% C.I: 1.8-13.6) and (AOR 1.6 95% C.I: 1.1-2.2) respectively. Women with greater household decission-making and women currently married were likely to have a fully vaccinated child (AOR 3.9 95% C.I: 2.6-5.8) and (AOR 2.4 95% C.I: 1.4-4.1) respectively. Women who had ANC (AOR 3.4 95% C.I: 2.2-5.2), PNC (AOR 3.2 95% C.I: 2.2-4.8), facility delivery (AOR 1.9 95% C.I: 1.3-2.6), and better physical access to health facility (AOR 5.2 95% C.I: 3.0-8.9) were more likely to have a fully vaccinated child.

Conclusions: Full immunization in Siti and Fafen Zones of Ethiopia's Somali Region was extremely low. Greater women empowerment and access to health services were strongly associated with full immunization. Multi-pronged interventions that include increase physical access to health facilities, increasing uptake of MNCH services and tailored and regular out reach immunization services to hard to reach areas is required to improve full vaccination of children in the Somali Region of Ethiopia.

Abs 91

Determinants of Adverse Birth Outcome among Mothers Who Gave Birth at Hospitals in Gamo-Gofa Zone, Southern Ethiopia: Unmatched Case - Control Study.

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Background: The magnitude of perinatal mortality in Ethiopia was among the highest in Sub Saharan Africa. The Millennium Development Goals 4 targets a two-thirds reduction of under-five deaths between 1990 and 2015. Hence, achievement of goal is strongly influenced by progress in reducing neonatal deaths; and since preterm birth is the leading cause of these deaths, progress is dependent on achieving high coverage of evidence-based interventions to prevent preterm delivery and to improve survival for preterm newborns including Ethiopia. Therefore identifying those problems is a priority area to give policy insight and recommendations.

Objective: To determine the factors associated with abnormal birth outcome among delivered mothers in selected public health facility of Gamo-Gofa zone, SNNPR, 2016 G.C.

Methods: -An unmatched case-control study design was conducted among mothers gave birth from February, 01/2016 to April 01/2016 in three hospitals. Data was collected from 420 delivered women (158 cases and 262 controls) who were delivered in the hospital and selected by systematic random sampling. Data was collected through face to face interview and delivery registration book. The data were collected by trained diploma Midwife/Nurse using semi-structured and pretested questionnaire. Binary and Multivariable logistic regression analysis were performed at level of significance of p value ≤0.25 and ≤0.05 respectively.

Results: In this study there were 262(62.4%) controls and 158(37.6%) cases with a response rate of 98.5%. Majority of the study participants were in the age group of 15-24 years old. Most of the participants (98%) among cases and 90.1% of controls were planned pregnancy. Mothers from both controls and cases (94.6% and 98.7% respectively) had a history of antenatal care follow up. More than half of mothers 139(49.1%) of controls and 144(58.8%) of cases were not utilized contraceptives. This study indicated that mothers with Rural residence [AOR = 3.338, 95% CI (1.055, 10.566), p-value = 0.04], Multigravida [AOR = 6.65, 95% CI (1.876, 23.579), p-value = 0.003], Being male baby [AOR = 26.41, 95% CI (3.149, 221.414), p-value = 0.003], Do not know on danger signs during pregnancy[AOR = 102.41, 95% CI (17.477,600,11), p-value = 0.000], and Do not know on danger signs during Labour [AOR = 14.3, 95% CI (1.951,600,12), p-value = 0.009] were significantly associated with Adverse Birth Outcome.

Conclusion and Recommendations: Adverse birth outcomes (low birth weight, still birth, and preterm birth) were still a major public health problems in the study area. Mothers with rural residence, history of multigravida, delivering male baby, lack of knowledge on danger signs during pregnancy and labour were associated factors with adverse birth outcomes. Therefore, providing appropriate information on danger signs encountered during pregnancy and labour and number of pregnancy is very important.

Key words: Birth outcome, southern Ethiopia.

Abs 92

Perinatal Death and Associated Factors in Wolaita Sodo University Teaching and Referral Hospital, Southern Ethiopia.

Mihiretu Alemayehu Arba

Background: Birth is a critical time for the mother and fetus. However, an estimated 1.02 million intra partum stillbirth and 0.9 million intra partum related neonatal deaths occur annually, out of which more than 90% of the burden occurs in lowest and middle income countries including Sub-Saharan Countries. In Ethiopia rates of new born morbidity and mortality are among the highest in the world. The aim of safe delivery service is to have healthy mother and baby with a little intervention as possible. However, the etiological factors for perinatal outcomes are different in developed and developing world. The primary causes in developing countries are preventable causes of obstetric factors such as ante-partum hemorrhage, hypertensive disorders, preterm labor, infections, obstructed labor, cord accidents and others. Nevertheless, many African mothers including Ethiopian are ending up in perinatal mortality.

Objective: This study aimed to assess predictors of perinatal death among mothers who gave birth at Wolaita Sodo University teaching and referral hospital, Southern Ethiopia, from July 1-30, 2015.

Methodology: A facility based retrospective cross-sectional study was conducted in Wolaita Sodo University teaching and referral Hospital by collecting data through record review of all women who gave birth at Wolaita Sodo university teaching and referral hospital within the time period between July1/ 2014 to June30/ 2015. Systematic sampling technique was used to select 300 representative study subjects from the overall deliveries took place at the specific time period. Epi-data version 1.4.4.0 and SPSS version 20 were used to enter and analyze data respectively. Proportions and means were used to describe the study population by explanatory variables whereas; Bivariate and stepwise backward multivariable logistic regression were used to identify the candidate and predictor variables respectively. All statistical tests were considered significant at alpha <0.05.

Result: Among the 300 mothers who delivered their index child at Wolaita Sodo University teaching and referral hospital, 52(17.3%) of them had a dead perinatal outcome. Antenatal care visit, obstructed labor, referral from other health facility, cord prolapse, preeclampsia and birth weight were identified as predictors of perinatal outcome.

Conclusion: Perinatal death among the study participants was very high, which needs a remarkable improvement. Appropriate antenatal care supported with ultrasound examination, improving obstetrics care, early diagnosis and appropriate management of severely asphyxiated fetus at the time of delivery could reduce the prevalence. Hence, making health facilities (those which can provide comprehensive services) accessible to clients could reduce perinatal death attributable to referral related causes. Health facilities including Wolaita Sodo University teaching and referral hospital as well as health centers in the catchment area have to give due attention on strengthening improvement of ante-natal care service and the use of partograph since it reduces the bad outcome of child birth.

Abs 93

Determinants of Female Genital Mutilation Practices in East Gojjam Zone, Western Amhara, Ethiopia.

Mulusew Andualem Asemahagn

Background: Female genital mutilation (FGM) is one of the harmful traditional practices among women and girls. More than 130 million girls and women live today who have undergone female genital mutilation. In Ethiopia, a high prevalence (74.3% national and 68.5% in Amhara region) has been reported. This study was aimed to identify determinant factors of FGM practices in East Gojjam Zone, Western Amhara, Ethiopia.

Methods: A community based cross-sectional study was conducted among 730 women aged 15-49 years and having children < 5 years old in September 2014. Data were collected using a pretested interviewer administered questionnaire. Data were analyzed using SPSS version 20. Determinant factors of female genital mutilation were identified by multivariate analysis.

Results: About 718 women and 805 daughters participated in the study. FGM prevalence was 689 (96%) and 403 (49%) among women and daughters< 5 years of age, respectively. Type1 and type 2 FGMs were common and daughters <1 years of age exhibited 91% female genital mutilation. Daughters' age, parent education level, residence, women circumcision history, culture, health education, frequent health extension workers follow up and participation in anti FGM interventions were factors to female genital mutilation practice.

Conclusions: Female genital mutilation practices continued to be a major problem to women and daughter <5 years of age in the study area. A number of factors were associated with FGM practices including daughters' age, parent education level, residence, health education, culture, mothers circumcision history, frequent health extensions workers follow up and participation in anti FGM interventions were determinants to higher FGM practices.

Key words: Female genital mutilation, determinant factors, Goncha District, Ethiopia

Abs 94

Methicillin Resistant Staphylococcus Aureus among HIV Positive Pediatric Patients in Northwest Ethiopia. GenoType MRSA Molecular Line Probe Assay.

Yohannes Yohannes Zenebe, Yohannes Yohannes Zenebe, Martha Tibebu Lemma, Begna Tulu Etcha, Daniel Mekonnen Nigus, Zewudie Mekonnen

Background: Increasing evidence suggests that Methicillin resistant *Staphylococcus aureus* (MRSA) infections are becoming more prevalent throughout the HIV infected community.

Objectives: This study aimed to determine the prevalence of colonization by MRSA species among HIV positive pediatric patients in the Amhara National Regional State, Northwest Ethiopia.

Methods: Participants who attended the clinic from December 2013 through April 2014 were invited to participate in the study. Eligible participants were HIV-infected<18 years of age, receiving medical care at the Paediatric HIV clinics of Felege Hiwot, Dessie, and Debretabor Referral Hospitals. From each participant specimens for *S. aurous* culture were collected from the anterior nares, the skin of the back of the wrist and the perineum using sterile broth moistened swabs. Swabs were cultured and read according to standard microbiologic procedures. The GenoType MRSA VER 3.0 was used for characterization of *S. aurous* and *S. epidermidis* strains among culture positive patients by detecting methicillin resistance-mediating mecA & mecC genes. The bicomponent cytotoxin virulence factor Panton-Valentine leukocidin (PVL) were detected. Data was analyzed by descriptive and logistic regression model using SPSS version 20. The P value of <0.05 was considered as statistically significant.

Results: Among 202 culture positive patients, 126 (62.4%) were also confirmed by GenoType MRSA as S*. aurous* and of these, 47(37.3%) and 15(11.9%) were mecA and Panton-Valentine leukocidin genes positive respectively. There was an association between age and *S. aurous* colonization, (AOR=5.07, 95%CI, 1.10-23.41, P-value=0.03). The study sites, (AOR=4.90, 95%CI, 1.31-18.56, P value=0.01) and PVL gene, (AOR=7.51, 95%CI, 8.82-63.92, P value=0.001) have also significant association with MRSA colonization.

Conclusion and recommendation: High prevalence of pathogenic MRSA strains among HIV positive pediatric patients in the study area. From the PVL gene detection, most of MRSA type was HA MRSA. Hence, strict hygienic approaches by all healthcare workers in hospitals should be implemented to reduce the chance of hospital acquired MRSA infections.

Key words: MRSA, Pediatrics, HIV, Ethiopia

Abs 95

Factors Associated with Anemia among Lactating Mothers in Subsistence Farming Households from Selected Districts of Jimma Zone, South Western Ethiopia, A Community Based Cross-Sectional Study.

Mihiretu Alemayehu Arba

Background: Anemia is the most common nutritional deficiency disorder in the world affecting about one third of the global population. Three-quarters of death attributable to anemia occur in Africa and South-East Asia. Lactating mothers are more susceptible to anemia than other population subgroup because of maternal iron depletion during lactation, blood loss during childbirth and inadequate nutrient intake. In addition, morbidity associated with chronic anemia extends to loss of productivity from impaired work capacity, cognitive impairment, and increased susceptibility to infection. Nevertheless, many Ethiopian mothers remained anemic and there is scarcity of studies regarding anemia among lactating mothers.

Objectives: The objective of this study was to assess factors associated with anemia among lactating women in subsistence farming households from selected districts of Jimma zone, South Western Ethiopia from Feb. to March, 2014.

Methods: A community-based cross-sectional study was conducted on 327 lactating mothers residing in the selected two districts of Jimma zone. Interviewer administered structured questionnaire was used to collect demographic characteristics and anemia risk factors, whereas hemoglobin concentration was analyzed by Hemocue Hb 301 to identify anemia. Epi-data version 1.4.4.0 and SPSS version 20 were used for data entry and analysis, respectively. Proportions and means along with standard deviations were used to describe the study population, while bivariate and multivariable regressions were used to identify candidate and predictor variables of anemia, respectively. All associations were considered statistically significant at alpha < 0.05.

Result: The prevalence of anemia was 28.7%, 95% CI (24.1%, 33.6%) with mild and moderate anemia accounting for 25.7% and 2.9%, respectively; while none of them found to be severely anemic. The mean hemoglobin concentration was 12.8g/dl with standard deviation of 1.4 g/dl. Multivariable regression showed that being multi-gravida (AOR = 2.32 (95% CI: 1.12, 4.84), not fully attending the four ANC visits (AOR = 2.37 (95% C.I: 1.20, 4.71)), eating less than three meals per day (AOR = 2.28 (95% C.I: 1.12, 4.63)), living in food insecure household (AOR = 4.19(2.83, 21.13)), being severely underweight (AOR = 0.35 (95% C.I: 0.10, 0.80)) and dietary diversity score below 6, (AOR = 2.32 (95% C.I: 1.65, 5.72)) were identified as independent predictors of anemia.

Conclusion: Anemia is a public health problem in the study community, where nearly one in every four lactating mothers was anemic. Multi-sectoral approach (agriculture, education, and health sector) is needed to improve the feeding practice, dietary diversity, food insecurity and chronic energy deficiency of study community in order to prevent and control anemia. ANC follow up should be encouraged in order to reserve and prevent depletion of iron store for lactation period. In addition, multi-gravidity and frequent births have to be alleviated through family planning utilization.

Abs 96

Knowledge and Practices of Iodized Salt Utilization and Associated Factors at Household Level in West Ethiopia.

[1*]*Meselech Regassa, Tsedeke Wolde Hailemariam*[1], *Befridu Mulatu*[1] [1]*Wollega University, Department of Public Health*

Background: Iodine deficiency is a serious public health problem in Ethiopia. Fortification of salt with iodine has been the long term and effective preventive measure against iodine deficiency disorders. According to Salt Iodization Council of Ministers Regulation No. 204/2011 of Ethiopia, every salt for human consumption should be iodized. Despite this, studies conducted in different parts of our country indicate that availability of adequately iodized salt at household level is still low. This may be related with poor practices of storing and using iodized salt.

Objective: The objective of this study was to assess knowledge and practice of iodized salt and associated factors at household level in Lalo Assabi district.

Methods: A community based cross-sectional study was employed among 768 households in the district from December 10, 2014 to January, 2015. A two stage stratified sampling technique followed by systematic random sampling was used to identify study unit. Women of child bearing age, who live in the kebeles selected for the quantitative data, were selected by convenience sampling method for the focus group discussion. Data was collected using a pretested and structured questionnaire by a face-to-face interview technique, the households' salt was tested for its iodine content and four focus group discussions were carried out. Logistic regression analyses method was used to check associations and control confounding.

Results: 59% and 42% of participants had good knowledge and good practice of iodized salt respectively. Only 8.7% of households had adequately iodized salt. The study showed that the iodine content of the household salt is associated with practices of iodized salt of respondents and their residence. Educational status of respondents was significantly associated with knowledge of iodized salt.

Conclusions: Study participants had low levels of both the knowledge and practice of iodized salt. Availability of adequately iodized salt at household level was very low. Iodine content of the household salt is associated with practices of iodized salt of respondents. Based on the findings of this study, the authors recommend the concerned bodies to design effective health information mechanism to educate the public on iodized salt.

Key words: Iodized salt utilization, Knowledge, Practices, West Ethiopia

Abs 97

Prevalence and Factors Associated with Overweight and Obesity among Primary School Children in Addis Ababa, Ethiopia.

Mitiku Teshome Hambisa

Background: Obesity and overweight has become a public health problem in developing countries in urban areas due to sedentary life styles, modernization, urbanization, availability and accessibility of food markets and economic growth. While under nutrition is still a major concern, one can also observe decreases in under nutrition and increases in the number of obese and overweight people. These may be an indication that the developing countries is facing 'double burden' health problem. However our understanding of the problem, especially in children, is limited due to lack of representative and locally generated data because it varies contextually, geographically, and institutionally.

Objective: This study intended to assess magnitude of childhood overweight and obesity and associated factors among primary school students in Addis Ababa.

Methods: School based cross-sectional study was conducted from November 10 – December 16, 2011. A total of 1010 students were selected by multi-stage stratified cluster random sampling from primary school in Addis Ababa. Finally data was processed and analyzed using SSPS version 17 for windows.

Results: Majority of the participants was females and in age group of 10-14 years old with mean age of 12.96±1.54 (9-17) years. The prevalence of overweight (obesity included) among private and government primary schools were 15.6% (95% CI 12.6%, 18.9%) and 4.4% (95% CI 2.8%, 6.5%) respectively. School type, family car possession, food consumption while watching TV and studying and moderate physical activity were found to be significantly associated with overweight and obesity in multivariate analysis.

Conclusion: The prevalence of overweight/obesity among primary school children was relatively high. Strategies of increasing the time, intensity, and duration of children's physical activity during the school day and out-of-school programs should be integrated into the school curricula to prevent and treat overweight and obesity in school age children.

Abs 98

Undernutrition and Associated Factors among Adult Tuberculosis Patients in Public Health Facilities of Shashemane, Ethiopia.

Adane Tesfaye Anbese

Background: Undernutrition and tuberculosis are the major concerns of underdeveloped regions of the world. Tuberculosis makes undernutrition worse and undernutrition weakens immunity, thereby increasing the likelihood that latent Tuberculosis will develop into active disease. Neverthelesss little has been understood about undernutrition due to infectious disease including Tuberculosis in Ethiopia. This study tried to fill the gap by considering important factors like, smear status, duration on treatment, History of previous treatment and hygein factors.

Objective: The objective of this study was to assess the magnitude of undernutrition and associated factors among Tuberculosis patients in Shashemane Public Hospitals and Health centers from March 12-April 12, 2016.

Methods and Materials: An institutional based cross-sectional study design was used in two Public Hospital and ten Health centers of Shashemane town among 368 adult TB patients who were on tuberculosis treatment follow up . Data on socio—demographic and economic characteristics were collected using a pretested structured questionnaires while, Anthropometric measurements such as height and weights were collected using a height measuring board and digital bath balance. The data were coded and entered into computer using Epidata version 3.3 and analyzed using SPSS version 20. , Bivariate logistic regression analysis were done to assess the association between outcome variable and independent explanatory variables. Odds ratios along with 95%CI were estimated to identify factors associated with nutritional status of study participants using multivariable logistic regression analysis. The level of statistical significance was declared at p - value less than 0.05.

Results: The magnitude of undernutrition was 28.8%,(95% CI=0.25-0.34). (17.4 % mild, 6 % moderate and 5.4 % were in range of severe undernutrition). Being in the age group of forty five and above(AOR=3.39,95%CI=1.6-7.18), Rural residence (AOR=1.95,95%CI=1.07-3.54) ,having problems with eating(AOR=2.361, 95%CI=1.332-4.185) and lack of provision of food supplement(AOR=2.21, 95%CI =1.06-4.58) were factors independently associated with undernutrition among adult TB patients.

Conclusion: The magnitude of undernutrition was found to be high. Age greater than fourty five, Living in Rural kebeles, problem with eating and lack of nutritional care and support were the factors independently associated with undernutrition of TB patients. The nutritional derangement could call for fast nutritional intervention in the management of pulmonary **tuberculosis patients.**

Key word: TB, Undernutrition, BMI, Public Health facilities.

Abs 99

Prevalence and Associated Factors of Undernutrition among School Adolescents in Gobu Seyo District, East Wollega Zone, Oromiya, West Ethiopia.

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Background: Malnutrition continues to be a major public health problem in developing countries including Ethiopia. Currently, there is no sufficient data on nutritional and health status of school adolescents.

Objective: The objective of the study was to assess prevalence and associated factors of undernutrition in school adolescents aged 10 to 19 years in Gobu Seyo district.

Methods: A school based cross-sectional study was conducted in Gobu Seyo district from November to December, 2014. Multistage sampling technique using structured pre-tested and interviewer administered questionnaire was used to collect data from 640 adolescents, and anthropometric measurement (weight and height) was taken. Data entry and analysis was made by using IBM SPSS program version 20 and WHO Anthro plus for determination of nutritional status of adolescents. Multivariable logistic regression analysis was used to identify independent predictors of undernutrition after controlling for confounding variables.

Results: Prevalence of stunting and underweight were 17.0% and 18.8%, respectively. Adolescents who were stunted and underweight were 22.9%. Among the study participants, 1.7% and 2.8% respectively were severely stunted and severely underweight with male predominance. Sex (AOR = 1.62, 95% CI = 1.05-2.49), 10 -14 years age group (AOR = 0.43, 95% CI = 0.25-0.73) and fathers' occupation (AOR = 5.90, 95%CI = 1.16-30.13) were associated with underweight. A single predictor of stunting was only fathers' occupation (AOR = 5.82, 95% CI = 1.15-29.38).

Conclusions: Prevalence of under nutrition in Gobu Seyo district was high. Sex and age of the participants and fathers' occupation were associated factors of under nutrition.

Abs 100

Prevalence and Predictors of Early Breastfeeding Initiation among Mothers of Children Under 24 Months of Age in Rural Part of West Ethiopia.

Tsedeke Wolde, Emiru Adeba, Alem Sufa Wollega University, Department of Public Health.

Background: The World Health Organization recommends initiation of breastfeeding within the first hour after childbirth. In developing countries alone, early initiation of breastfeeding could save as many as 1.45 million lives each year by reducing deaths mainly due to diarrheal disorders and lower respiratory tract infections in children.

Objective: The objective of this study was to determine the rate and the predictors of breastfeeding initiation in East Wollega Zone of West Ethiopia.

Methods: A community-based cross-sectional study was conducted from April to May 2014 among 594 mothers who had children less than 24 months. Multi stage cluster sampling method was used to select the study population. Eligible mothers were invited to interview using pretested questionnaires to gather data regarding sociodemographic, health-related variables, breastfeeding initiation, and current breastfeeding practices. A multivariable logistic regression analysis was used to identify independent predictors of early initiation of breastfeeding after controlling for confounding variables.

Results: A sample of 593 mothers was included in the study. Breastfeeding was initiated by 83.1 % of mothers within the first hour of childbirth. Being a housewife (AOR (95 % CI) = 2.48 (1.54- 3.99)) and infant received colostrum (AOR (95 % CI) =2.22 (1.08-4.55)) were significant positive predictors for early breastfeeding initiation as revealed by logistic regression. The multivariable logistic regression analysis showed that the mothers who had no radio and/or television in the household (AOR (95 % CI = 0.55 (0.35-0.88)), were not exposure to health information (AOR (95 % CI) = 0.44(0.25-0.75)), and infants were provided with prelacteal feeds (AOR (95 % CI) =0.30 (0.14-0.65)) were less likely to initiate breastfeeding.

Conclusion & Recommendation: The rate of timely initiation of breastfeeding was high. Breastfeeding promotion program is essential to encourage the practice of timely initiation of breastfeeding, and reduce the practice of providing prelacteal feeds within three days of life. Thus appropriate health information is vital to boost early initiation of breastfeeding.

Keywords: Breastfeeding, Breastfeeding initiation, Predictors, West Ethiopia

Abs 102

Uptake of Cervical Cancer Screening among HIV Positive Women in Gondar University Referral Hospital, Northwest Ethiopia: Cross-sectional study design.

Abebaw Addis Gelagay

Background: Cervical cancer is one of the leading causes of death in women worldwide in which majority occurs in developing countries. The increasing risk of cervical cancer death and the high prevalence of human papilloma virus (HPV) infection in HIV positive women call for determining the level of premalignant cervical cancer (Ca) screening uptake. So, this study was conducted to assess the uptake of cervical cancer screening and to identify factors associated with the uptake of screening.

Methods: Institution based cross-sectional study was conducted from April to May, 2016 among adult HIV positive women attending care and treatment in Gondar university referral Hospital. A total of 496 respondents were approached using systematic random sampling technique but the data were collected from 460 respondents (92.7% response rate) using interviewer administered questionnaire.

The data were entered into Epi info version 7 and exported to SPSS version 20 for analysis. Bivariate and multivariable logistic regression analyses were used to determine the presence and degree of association between dependent and independent variables. In multivariable logistic analysis, P-value of <0.05 and odds ratio with 95% confidence interval were considered to determine independent predictors for the uptake of cervical cancer Ca) screening.

Results: The life time uptake of cervical cancer screening among HIV positive women was 10% (95% CI: 7.3-12.8). In multivariable analysis, women on primary education (AOR=3.92, 95%CI:1.70-8.99), secondary education (AOR=3.84, 95%CI: 1.50-9.83), and tertiary educational level (AOR=4.16, 95%CI: 1.24-13.98), having child (AOR=3.02, 95%CI: 1.23-7.46), diagnosed as HIV positive ten years back or more (AOR=2.71, 95% CI: 1.06-6.97) and CD4 count less than or equal to 200cell/mm3 (AOR=5.29, 95% CI: 2.58-10.83) were significantly associated with the uptake of cervical cancer screening.

Conclusion: In this study, the uptake of cervical cancer screening was very low. Educational status, parity, number of years passed after diagnosed as HIV positive and CD4 count are predictors of cervical cancer screening. Health care workers and cervical cancer prevention and control program coordinators and implementers need to work on demand creation by increasing their awareness about the disease and the importance of the screening. It is important to integrate the screening service to the routine care and treatment and provide counseling service. Doing qualitative study or a quantitative study triangulated with a qualitative one is also mandatory.

Key words: Cervical cancer, premalignant, cancer screening, HIV, Ethiopia.

Abs 102

Intention to Use Institutional Delivery and Associated Factors in Wollaita Soddo Town, SNNPR, Ethiopia, 2016. Application of Theory of Planned Behavioural Model.

Temesgen Lera Abiso

Background: Ensuring institutional delivery for each child birth is the most critical intervention in reducing maternal and neonatal mortality and morbidity. In Ethiopia the proportions of births delivered in health institutions is very low and even for women who have access to the services. The proportion of birth occurring in health facilities is only 16%.

Objective: The objective of this study was to assess the factors that influence intention of pregnant women to use institutional delivery from March to April 2016.

Methods: A Community based cross-sectional study was conducted in Wollaita Soddo town. Theory of Planned Behavior was employed to evaluate intention of pregnant women for delivery utilization. Data was collected by using pre-tested, structured questionnaire. The data collected was checked for its completeness and consistency, coded, entered and cleaned by using Epi data 3.5.1 and exported to SPSS version 20.00 statistical software.

Result: A total of 326 pregnant women who had ANC follow up were included in the study. On multiple logistic regression husband's occupational status and informed about delivery places were statistically significantly associated with intention to use institutional delivery among ANC attendants from distal variables and Attitude and subjective norms significantly affect intention from proximal variables. The odds of intention to use institutional delivery among pregnant women who were informed about delivery places was 2.658 times more likely than those who were not informed about delivery places AOR=2.658(1.357, 5.207) at P-value 0.005.Those women whose husbands' were employed were 2.2 times more likely to intend to use institutional delivery than women whose husbands' were not employed (AOR=2.2(1.308, 3.7) at P-value 0.003.

Conclusion: The study concluded that the intention of giving birth at health institution increased with being informed by health professionals about the place of delivery and husband's occupational status being employed.

Recommendation: Health institution has to do more on counseling all clients who came for ANC on use of delivery place and women should be encouraged to use institutional delivery.

Abs 103

Factors Associated with Antenatal Depression among Pregnant Women in Pastoralist Areas, Northeastern Ethiopia. *Yihalem Abebe.*

Background: The World Health Organization identifies depressive disorders as the second leading cause of global disability burden by 2020. Depression affects about 20 % of women during their life time, with pregnancy being a period of high vulnerability. The magnitude and risk factors of antenatal depression was less known in developing countries including Ethiopia.

Objective: The objective of this study was to assess the prevalence of antenatal depression and associated factors among pregnant women attending antenatal care at Dubti hospital, Northeast Ethiopia, 2016.

Methods: A cross-sectional study was employed among 363 pregnant women attending antenatal care service at Dubti hospital, Afar, Ethiopia from February 17 to April 17, 2016. Systematic random sampling procedure was employed. Pretested Beck's Depression Inventory standard and a structured questionnaire were used to collect the data. Data was entered by Epidata version 3.1 and analyzed by SPSS version 20 software. Descriptive statistics and logistic regression were used in the statistical analysis.

Results: A total of 357 pregnant women were interviewed. The mean (+SD) age was 25.97 years (± 5.61). Prevalence rate of antenatal depression was found to be 17.9% (95% CI: 14.0 – 22.0%). Those women who had marital conflict were 6.45 times more likely to have antenatal depression than women who had no marital conflict [AOR=6.45(95% CI: 2.1- 17.9)]. Those women who had planned their current pregnancy [AOR=0.04(95% CI: 0.014, 0.114)] were 96% less likely to have antenatal depression than those women who had no planned pregnancy. Women who had medium social support [AOR=0.21 (95% CI: 0.07 - 0.66)] were 79 % less likely to have antenatal depression as compared to those women who had low social support.

Conclusion: The prevalence of antenatal depression was high among women attending antenatal care service at Dubti hospital. Marital conflict, pregnancy planning and social support were significantly associated with antenatal depression. Routine screening of antenatal care attendants for possible associated factors of antenatal depression was recommended.

Abs 104

Determinants of Antenatal Care Service Utilization among Pregnant Women in Kersa Health and Demographic Surveillance System (Kersa HDSS), Eastern Ethiopia.

Addisu Shunu Beyene, Nega Assefa Kassa

Introduction: Antenatal care (ANC) significantly reduces maternal mortality, by identifying pregnant women at risk of complication. In Ethiopia, despite significant effort to increase maternal health service, ANC uptake sluggishly improved. Understanding the factors that hinder the use of the service helps to curb problems in the delivery of the service. The objective of this analysis was to identify factors that affect the use of ANC in Kersa HDSS.

Methods: Kersa HDSS is an open cohort of population in Kersa district, Eastern Ethiopia. It collects data on a period basis since 2007. Data for this analysis was extracted for the year 2014. ANC uptake was the outcome variable and socio-demographic factors were the predictors. That was described and for controlling confounders multiple logistic regression is used.

Results: A total of 1,906 responses were included in the analysis. Thirty four percent of women had at least one ANC visits during their last pregnancy. The study also revealed that Women whose husband is able to read and write (AOR1.39, 95%CI1.03, 1.87), Orthodox Christian religion (AOR 2.99, 95% CI 1.11, 8.13) and urban resident (AOR 6.0, 95% CI 3.81, 9.47) were positively associated with the use of ANC. Women who were able to read and write (AOR 0.43, 95%CI 0.20, 0.92), Household average monthly income 681 to 1000 Birr (AOR 0.71, 95% CI0.54, 0.95), had a less likely to use ANC compared to the literate one and those who had higher income, respectively.

Conclusion: ANC use in Kersa HDSS was low**.** Educational status of women and their husband, religion, household average monthly income and place of residency were the determinants of use of antenatal care services. Advocacy of ANC service through religious leaders and improving community awareness about the benefits of ANC significantly improves its uptake..

Key words: Antenatal Care, Maternal health service, use of ANC, Kersa HDSS

Abs 105

Trends and Determinants of Maternal Mortality in Mizan-Tepi University Teaching and Bonga General Hospital from 2011 – 2015: A Case Control Study.

Kebadnew Mulatu Mihretie

Maternal death is high in developing countries due to five major direct obstetric complications: hemorrhage, infection, unsafe abortion, hypertensive disorders of pregnancy, and obstructed labor. 70–80% of maternal death is due to direct obstetric causes (complications of pregnancy, labor, delivery or the postpartum period). Indirect causes of maternal death account for women who die from any other disease during pregnancy .Indirect causes represent a varying spectrum of the burden of maternal deaths (4% in Latin America, 13% in Asia and 17% in Africa). The aim of this study was to asses Trends and determinants of maternal mortality in Mizan-Tepi university Teaching and Bonga general hospital from 2011 – 2015.

Method: A case control study was conducted. A total of 975 charts, 195 cases and 780 controls were reviewed for the study. Pre-tested and structured questionnaire was used to collect the data. Both bi-variate and multivariate logistic regression were carried out to assess the association of independent variables with hypertension and P value <0.05 was considered as significant.

Result: A total of 595(119 cases and 476 controls) charts were included in the analysis.

The trends of maternal mortality are fluctuating over the year. Attending ANC (AOR = 2.4, 95%CI 1.19 -4.83), length of labor (AOR= 4, 95% CI. 1.86-8.74), Presence of obstetric complications (AOR =7.2, 95% CI 3.08, 16.72), uterine rupture (AOR= 11.4 95% CI 4.27, 30.41), abnormal puerperium (AOR= 10.9, 95% CI 1.96, 59.97), and antenatalrisks(AOR= 3.8, 95% CI 1.64,8.61) were found to be significant factors that influence maternal mortality

Conclusion and recommendation: the pattern of maternal death fluctuates over time. Women who do not have ANC follow up; presence of obstetric complications, women who had ante or intra natal risks and women who had prolonged labour increases the likelihood of maternal death. Health professionals including HEWs should have to work in strengthen approach to improve awareness of the community about pregnancy, its complication and co morbidities, and ANC uptake. Academicians and researchers should dig out others cause and alternative solution for maternal death.

Key words: Trend, associated factors, Maternal death,Ethiopia

Abs 106

Awareness of Female Students Attending Higher Educational Institutions toward Legalization of Safe Abortion and Associated Factors, Harari Region, Eastern Ethiopia: a Cross Sectional Study.

Ayele Geleto, Jote Markos

Background: Unsafe abortion has been recognized as an important public health problem in the world. It accounts for 14% of all maternal deaths in sub-Saharan African countries. In Ethiopia, 32% of all maternal deaths are accounted to unsafe abortion. Taking the problem of unsafe abortion into consideration, the penal code of Ethiopia was amended in 2005, to permit safe abortion under a set of circumstances. However, lack of awareness on the revised penal code is a major barrier that hinders women to seek safe abortion.

Objective: The objective of this study was to assess awareness of female students attending higher educational institutions toward legalization of safe abortion and associated factors in Harari region, eastern Ethiopia.

Methods: Institution-based descriptive cross-sectional study was conducted among 762 female students who are attending five higher educational institutions in Harari Region. Systematic sampling method was used to identify study participants from randomly selected colleges. Self administered structured questionnaire was used to collect data. Data were entered in to Epi Info version 6.04 and analyzed by SPSS version 17.0 statistical packages. Frequency, percentage and ratio were used to describe variables. Multivariable logistic regression analysis was done to control confounders and odds ratio with 95% confidence interval was used to identify factors associated with awareness of female students to legalization of abortion.

Results: 762 study participants completed the survey questionnaire took the response rate 90.2%. Only 272 (35.7%) of the respondents reported that they have good awareness about legalization of safe abortion. Studying other fields than health and medicine [AOR 0.48; 95%CI (0.23, 0.85)], being the only child for their family [AOR 0.28; 95%CI (0.13, 0.86)], having no boy friend [AOR 0.34; 95%CI (0.12, 0.74)], using family planning [AOR 0.50; 95%CI (0.13 and 0.86)], being 25 years or older [AOR 1.64; 95%CI (1.33, 2.80)] were significantly associated with awareness of female students to legalization of safe abortion.

Conclusions: Only slightly more than a third of the study participants, 35.7% have good awareness of legalization of safe abortion. Strengthening information dissemination regarding legalization of safe abortion is required for female reproductive age group in general and higher institution female students in particular.

Abs 107

Time-to-Recovery from Obstetric Fistula and Associated Factors: The Case of Harar Hamlin Fistula Center.

Sultan Hebo Hussen

Background: Obstetric fistula has caused a significant number of morbidity and mortality throughout the world especially in developing countries. The purpose of this study is to determine mean time to recovery from obstetric fistula and identify the potential risk factors associated with time to recovery of patients from obstetric fistula.

Methods: An institutional-based retrospective cohort study was conducted among 433 patients that were selected by simple random sampling. Data were collected by using structured check list. Epi Data, SPSS version 20 and R version 3.0.2 software's were used for data entry and processing. Descriptive nature of data was examined using frequency tables and Kaplan-Meier curve. Furthermore, bi-variable and multivariable Cox proportional hazard regression analyses were used to identify predictors. The crude and adjusted hazard ratios together with their corresponding 95% confidence intervals were computed and interpreted accordingly. To ensure the proportional hazards assumption is valid, the numerical and graphical methods of Goodness of fit test method that contains p-value and schoenfeld plot were used in this study.

Result: The mean survival time of obstetric fistula patients to become recovered in this study is 18.71 days with standard deviation of 6.68 days. The standard Cox proportional hazard analysis shows that being having complete bladder neck distraction (AHR=0.1324, CI: 0.0360, 0.4867), partial urethral damage (AHR=0.6929, CI: 0.4812, 0.9976) and severe vaginal scaring (AHR=0.269, CI: 0.1399, 0.5174) have significant effect on mean time to recovery from obstetric fistula.

Conclusion: In this study, a substantial proportion of obstetric fistula patients had recovered from the obstetric fistula and nearly one third of patients were censored observations. This study provide further evidence on the role of vaginal scarring, urethral and bladder neck involvement in predicting the time to recovery from obstetric fistula.

Key words: Obstetric Fistula, Time to Recovery, Cox Proportional Hazard.

Abs 108

Prevalence of Underweight and Associated Factors among Non Pregnant Women of Reproductive Age in Debre Darkos Town, Northwest Ethiopia, 2015.

Mulatu Ayana (Asst prof), Genet Degu (Asst Prof), Kumneger Kebede (MPH)

Introduction: malnutrition is intergenerational problem. It can be transmitted from mother to baby and from one generation to the other. Children are the future of the country. Children who are borne from underweight mother become underweight. Underweight children grow in to underweight teen age. Underweight teen age becomes small adult women and the cycle continues. Interventions at any stage of this cycle can incompletes this intergenerational cycle. But the best point to break down this cycle is at the stage of non pregnant women.

Objective: The objective of this study was to assess the prevalence of underweight and associated factors among non pregnant women of reproductive age in Debre Markos Town.

Methods: A cross-sectional study design was conducted to assess the prevalence of underweight and associated factors among non pregnant women of reproductive age in Debre Markos town. 423 individuals were selected through systematic random sampling method from June 16, 2015 – August 16, 2015. Study participants were selected from all Kebeles and identified through reviewing records. Weight and height of the participants was measured to calculate BMI. Other variables were collected by using structured questionnaires. Then the data was entered into Epi data version 3,1 statistical software then exported to SPSS version 16.0 statistical package for further analysis. Bi variable logistic regression analysis was carried out to distinguish the effect of each independent variable on the dependent variable. Variables had a p-value <0.25 in the bi variable analysis were used as a candidate for multiple variable analyses. Independent variables with a p-value of less than 0.05 with their respective adjusted odds ratio at 95% confidence interval were considered as having statistical association.

Result: The prevalence of underweight among non pregnant women of reproductive age in Debre Markos town was 31.9%. The prevalence of underweight among non pregnant women of reproductive age was associated with older age AOR = [2.77(95% CI 1.30, 5.87)], annual income AOR = [8.1(95% CI 4.15, 15.72)], and household head AOR = [3.6 (95% CI 1.12, 11.43)].

Conclusion and recommendation: The prevalence of underweight among non pregnant women of reproductive age was high in Debre Markos town. Therefore measures should be taken.

Key words: underweight, reproductive age, body mass index.

Abs 109

Adherence and Associated Factors to Iron and Folic Acid Supplements Among Pregnant Women Attending Antenatal Clinic Iin Asella Town, South East Ethiopia, 2016. *Wendesen Niguse Asmare*

Introduction: Globally 41.8% of pregnant women are anemic with the highest proportion affected in developing countries. Nationally only 0.4% of the pregnant women take Iron supplements more than 90 days of the recommended 180 days. In Oromiya region 75.3% of pregnant women do not take any iron tablets or syrup during their last pregnancy, while 10.8% take for less than 60 days, 0.4% takes for 60-89 days and only 0.3% takes for 90 days or more.

Objective: The objective of this study was to assess the adherence and associated factors to iron and folic acid supplements among pregnant women attending antenatal clinic in Asella Town, south east Ethiopia.

Method and materials: Institution based cross-sectional quantitative study design was conducted in Asella town from September 2015 to June 2016. Purposive sampling technique used to select the health institution. There are six health institution selected for this study. The sample size 317 was selected with systematic random sampling method. Ten percent of pre-test was conducted in one institution which is not included for data collection. Data were collected using structured pre-tested questionnaire. Before data collection verbal consent was obtained. The collected data was analyzed using Epi data and SPSS version 22.00 packages. To show the relationship between adherences to iron/folic acid supplementation and its associated factor a univariate, bivariate and multivariate analysis were done using frequencies, binary and multiple logistic regressions respectively.

Result: The study revealed that 177(59.8%) of pregnant mother in the town adhered to the iron/folic acid supplement. Mothers who completed at least secondary school were more likely to adhere the supplement than those uneducated (AOR= 6.501, 95% CI= 1.945-21.728). Women with early ANC registration were more likely to adhere to the IFA supplement than those with late ANC regestration AOR=4.813, 95%CI= 1.728-13.407. Multigrvida mothers were more likely to adhere the supplement AOR=2.727, 95%CI = 1.170-6.355. In addition, forget fullness, too many pills and fear of side effects were major related factors with non adherence.

Conclusion and recommendation: Adherence of iron/folic acid supplementation found in this study is 59.8%. Factors associated with adherence to ron/folic acid were maternal education, gravidity, ANC visit starting time, family monthly income, knowledge about duration of supplement and problem faced in the facility were identified. Consequently, maternal education, adequate supplement supply to health facility, early starting ANC visit, health education on duration of supplement and ANC visit and women empowerment are recommended.

Key words: Iron/folic acid, pregnant women, adherence

Abs 110

Factors Associated with Non-utilization of Postnatal Care in Ankesha Guagusa Woreda, Awi Zone, Northwest Ethiopia: a Cross-sectional Study.

Tebikew Yeneabat

Background: For both newborns and mothers, the highest risk of death occurs at delivery, followed by the first hours and days after childbirth. Reduction of maternal mortality by half by the year of 2015 is one of the millennium development goals (MDG5). Maternal mortality rate, however, is still the problem of many developing countries including Ethiopia in which maternal mortality rate of Ethiopia was 676 per 100,000 live births. Postnatal care service was considered as one of the key instrument to achieve the MDG5. Despite of its advantages, utilization of postnatal care is low in Ethiopia.

Objective: This study aimed to assess factors associated with non-utilization of postnatal care in Ankesha Guagusa Woreda, Awi Zone, Northwest Ethiopia.

Methods: Community based cross-sectional study was conducted from February 13 to March 03/ 2012. The study included a total of 592 mothers of index infant using multi-stage sampling method. Data were collected by using interviewer administered structured questionnaire. Bivariate and multivariate regression analyses were performed. Level of significance was declared at $P<0.05$ at 95% confidence interval.

Results: In this study 563 mothers were included in the analysis making the response rate 95.1%. The mean (± SD) age of mothers was 29.27 (± 6.29) years. The prevalence of non-utilization of postnatal care in the study area was 42.5%. In multivariate logistic regression, mothers less than 26 years, educational level of the partner being primary, those who have no food insecurity and mothers in the group of richer wealth index were significantly associated with non-utilization of postnatal care among sociodemographic characteristics. Additionally, mothers who have no antenatal care visit, vaginally delivered and those assisted by relatives/friends/neighbors have higher odds of non-utilization of postnatal care. However, non-utilization of postnatal care is less likely in mothers who gave home delivery of their last child and with second and third birth order infants.

Conclusion: Prevalence of non-utilization of postnatal care is high in the study area. This study concluded that non-utilization of postnatal care is evident in younger mothers, in those mothers who have not attended antenatal care.

Keywords: PNC; Non-Utilization; Ankesha Guagusa

Abs 111

Acceptability and Effects of Micronutrient Powder in Improving Hemoglobin Level Among 6-24 Months Age Infants and Young Children June 2016, in Dessie, Ethiopia: A Community-based Randomized Controlled trial.

Kedir Endris Mohammed

Background: Nutritional surveys have shown that malnutrition among infants and young children in Ethiopia is a serious issue. The most recent preliminary results of the national report showed that national rate of stunting, underweight and wasting among children less than five years stand at 40 %, 25 %, and 9 % respectively. Nationally 44 % of Ethiopian children were anemic. Complementary foods are mainly prepared from plant-based foods, their energy, and micronutrient content and density are likely to be low. Diets that are predominantly plant based are usually high in phytate, dietary fiber and polyphenol which limit absorption and results in decrease bioavailability for micronutrients more commonly for iron and zinc.

Objective: The objective of this study was to determine the effects of micronutrient powder in improving hemoglobin level and acceptability among 6- 24 months of infants and young children in Dessie and surrounding communities, Ethiopia.

Method: The study design was a community-based randomized control trial comparing pre- and post-intervention mean hemoglobin concentration and anemia prevalence among children 6 to 24 months of age in an intervention group that received micronutrient powder (MixMeTM) and a control group that did not receive the micronutrient powder until after the two month period intervention. The study was conducted in Dessie, Ethiopia from March –May 2016. A total of 332 infants and young children age 6-24 months were recruited in this study from the city. Study participants were assigned in either of the study groups based on strict randomization process. Data was collected using pretested, standardized, structured questionnaire and checklist. Anthropometric measurements and finger prick blood test were done using Hemocue 301® to measure baseline and end line hemoglobin based on WHO standards guidelines. Data was entered using EpiData Version 3.1, exported and analyzed using IBM SPSS version 21 software. The outcome variable was compared among groups, between baseline and end line data.

Results1.3). The prevalence of anemia was 39.4%, showed slight increament in the control group compared with 47.8% at base line and 20.7% in the intervention groups in the intervention goup compared with 38.7% at base line; intervention has brought statistical significant reduction (P± 1.2) than in the control group (11.1 g/dl ± SD) hemoglobin was significantly higher in the intervention (11.8 mg/dl ± 1.3 in the intervention and control groups, respectively. There was no statistically significant difference between the study groups. At the end of two months intervention time, the mean (±1.3 and 11.2 g/dl ±SD) of hemoglobin concentration was 11.1 g/dl ±: At baseline,

the mean (<0.0001). The supplement was accepted as 70% of mothers liked giving the supplements to their child and the consumption rate of supplement was above 80%.

Conclusion and Recommendation: The multiple micronutrient powder supplement was effective in increasing hemoglobin and well accepted by Infants and young children and their mothers. Use of micronutrients in a controlled home setting, as sprinkled daily supplements, may be promising in preventing and treating anemia in Ethiopia and in many developing countries.

Keywords: Multiple micronutrient powder, supplement, hemoglobin, anemia, infants and young children, mothers, randomized control trial, Dessie, Ethiopia

Abs 112

Maternal Dietary and Nutrition Sensitive Characteristics Associated With Risk of Anemia at Term, in a Prospective Cohort Study, in Rural Ethiopia.

Taddese Alemu Zerfu, Melaku Umeta, Kaleab Baye.

Background: In spite of a direct hypothetical link with dietary factors, less is known about the associations between maternal dietary characteristics and anemia at term.

Objective: To assess the association between maternal dietary diversity and nutrition sensitive characteristics with incidence of anemia at term in rural resource limited settings of Ethiopia.

Setting: Rural health centers in four strategically identified districts of Arsi Zone, Oromia region, Ethiopia.

Methods: A multi-center prospective follow-up cohort study was conducted enrolling a total of 432 eligible pregnant women. Mothers were classified into exposed (n = 216) and unexposed (n = 216) groups, based on women's individual dietary diversity (WIDD) score and were followed from second antenatal care visit and to term.

Results: Incidence of anemia (< 11g/dl) at term of pregnancy was 32.4% ; of which 81.8% mothers had moderate, 9.9% mild, and 8.3% forms. Anemia was associated with dietary factors like poor or inconsistent consumption of animal source food (AOR, 2.36; 95% CI: 1.35 - 4.14) and poor dietary diversification during pregnancy (AOR, 2.22; 95% CI:1.09 - 4.52). Nutrition sensitive factors including: ownership of radio (AOR, 1.93; 95 % CI : 1.12 - 3.39) and mobile phone (telecom) facilities (AOR 3.14; 95% CI : 1.75 - 6.62), completion of primary school (AOR 0.47 ; 95% CI : 0.25 - 0.88) and presence of anemia at enrollment (mid-pregnancy) (AOR 28.56 ; 95% CI : 14.33, 56.79) were independently associated with higher risk of anemia at term.

Conclusion: Anemia is a moderate public health problem in the study area. Dietary and nutrition sensitive factors are important factors determining risk of anemia at term of pregnancy. Structured and integrated efforts responding to each are required to improve current status and associated adverse outcomes

Abs 113

Undernutrition and its Associated Factors among Lactating Mothers in Rural Ambo District, West Shewa Zone, Oromia Region, Ethiopia.

Eshetu Zerihun Tariku, Gudina Egata Atomsa, Firhiwot Mesfin Mengistu

Lactation has different effects on maternal nutritional status. Lactating mothers from low-income settings are considered as nutritionally vulnerable group. Even though, growing number of studies reported the existence of maternal under-nutrition, very few studies especially in Ethiopia highlighted the issue of under-nutrition among lactating mothers. The objective of this study was to assess the prevalence of under-nutrition and its associated factors among lactating mothers in rural areas of Ambo district, West Shewa Zone, Central Ethiopia, February 2016. A community based cross-sectional study was conducted among randomly selected 619 lactating mothers. A pretested and structured questionnaire was used to collect socio-demographic data. Weight, height and Mid Upper Arm Circumference were measured. Body Mass Index was measured to assess the nutritional status. Descriptive statistics was used to describe the data. Binary logistic regression was performed to assess the association between each independent and dependent variable. Adjusted odds ratios with its 95% confidence interval were estimated to identify factors associated with the outcome variable in multivariable logistic regression. The overall prevalence of under-nutrition (BMI < 18.5 kg/m2) was 21.5%; 95% CI (18.3, 24.9). Lactating mothers within the age group of 17-25 had 6.8 times more likely to be undernourished than those mothers in the age group of 36-49 [AOR=6.82; 95% CI (1.84, 25.27)]. Mothers who were unable to read and write were 2.45 times more likely to be undernourished than those mothers who had formal education [AOR=2.45; 95%CI (1.22, 4.94)]. Mothers from poor family wealth index were 1.76 times more likely to be undernourished than rich [AOR=1.76; 95% C I (1.05, 2.95)]. In nutshell, the result of this study revealed substantial proportion of under-nutrition among lactating mothers. Age of mother, educational status of the mother and family wealth were found to be the predictors of under-nutrition. Thus, strong multi-sectoral collaboration targeted at improving women educational status and increasing the family wealth is essential.

Keywords: under-nutrition, lactating mothers, Ambo, Ethiopia

Abs 114

Prevalence, Severity and Determinant Factors of Anemia among Pregnant Women in South Sudanese Refugees, Pugnido, Western Ethiopia.

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Background: Anemia is one of the major health problems among refugee pregnant women in the world. Anemia among pregnant women is multifactorial and results in detrimental consequences on the mothers and infants. The aim of this study was to determine the prevalence, severity and determinants of anemia among pregnant women in South Sudanese refugees, Pugnido western Ethiopia.

Methods: A facility-based cross-sectional study was conducted in Pugnido Administration Refugee and Returnee Affairs health center from April 15 to June 30, 2015. Demographic and related data were collected using questionnaire based interview. Complete blood count was done using CELL-DYN 1800 (Abbott USA). Blood smear and fecal specimen were examined for hemoparasite and intestinal parasite respectively. Bivariate and multivariate logistic regression analyses were done using SPSS-Version 20.0.

Results: The overall prevalence of anemia was 36.1%, from whom 2.3% had severe anemia. Being in third trimester of pregnancy (AOR=3.12, 95%CI:1.16-9.83), eating meat at most once a week (AOR=2.00, 95%CI:1.11-3.58), drinking of tea immediately after meal at least once a day (AOR=3.01, 95%CI:1.74-5.22), having mid-upper arm circumference below 21 centimeter (AOR=3.90, 95%CI:1.94-7.84) and intestinal parasitic infestation (AOR=2.17, 95%CI:1.20-3.91) were identified as independent predictors of anemia in this study

Conclusion: More than one-third of pregnant women had anemia in this study. Intervention based strategies on identified determinant factors will be very important to combat anemia among the group.

Key words: anemia, determinant factors, pregnant women, South Sudanese refugees, western Ethiopia

Abs 115

Food Insecurity among Household with and Without Podoconiosis in East and West Gojjam, Northern Ethiopia: A Comparative Study.

Kassahun Ketema, Girmay Tsegay, Dereje Gedle, Gail Davey

Background: Household food insecurity remains one of the most crucial challenges to economic development and aggravated by health conditions. Nearly, one billion people are undernourished, of which 98% are in developing countries like Ethiopia.

Objective: The objective of this study was to assess household food insecurity among households with and without podoconiosis in East and West Gojjam, Ethiopia 2016.

Methods: A community-based comparative cross-sectional study was conducted in East and West Gojjam in February 2016. Multi-stage sampling technique was employed to select heads of 208 household in which at least one individual was affected with podoconiosis and 400 households in which no one was affected, 32 *kebeles* (small administrative subunits). Structured interview questionnaires were used to collect data. The data were entered into Epi Data then exported to SPSS version 22. Both bivariate and multivariate logistic regression analyses were used. Associations were measured using adjusted odds ratios (AOR), 95%CI (confidence intervals) and $p < 0.05$ was considered statistically significant.

Result: Food insecurity was more common among podoconiosis-affected households than non-affected households were (83.7% versus 53%, p=0.0001). In podoconiosis-affected households, food insecurity was associated with inability to read and write (AOR = 5.84, 95% CI: 2.14, 15.95), lack of off-farm activities (AOR = 4.90, 95% CI: 1.60, 14.95), not using fertilizer (AOR = 4.38, 95% CI: 1.15, 16.67) and living > 5km from a market (AOR = 4.47, 95% CI: 1.38, 14.48). In unaffected households, food insecurity was associated with lack of perennial plant (AOR = 2.11, 95% CI: 1.17, 3.34), not using improved seeds (AOR = 2.20, 95% CI: 1.25, 3.87), no access to asset building programs (AOR = 2.07, 95% CI: 1.27, 3.34), living at medium or low altitude (AOR = 8.87, 95% CI: 1.81, 43.40 and 10.04, 95% CI: 1.90, 52.93, respectively).

Conclusion: Food insecurity was common among households affected by podoconiosis. Being unable to read and write, lack of off-farm activities, not using fertilizers and living at a distance from the nearest market were significantly associated with food insecurity. Emphasis should be given for improvement of food insecurity in podoconiosis households.

Key word: Food insecurity, podoconiosis, households, Gojjam, Ethiopia

Abs 116

Prevalence of Stunting and Associated Factors among Children Aged 06-59 Months in Southwest Ethiopia: a Cross-sectional Study.

Melkamu Beyene Teferi1, Hamid Yimam1, 1Mizan-Tepi University, College of Health Sciences, Department of Public Health, Miz*

Introduction: Nutritional Stunting, which is height for age below that expected on the basis of International growth reference, is a very serious type of malnutrition in that it develops slowly through time before it is evident. Stunting is one of the most important public health problems in Ethiopia. The objective of this study is to assess the prevalence of stunting and associated factors among fewer than five children in southwest Ethiopia.

Methods: A community based cross-sectional study was conducted by simple random sampling technique with sample size of 356 among 06-59months children. Interviewer administered structured questionnaires and anthropometric measurement was used to collect data. The data was entered using SPSS version 20 and analysis was done by SPSS version 20. Bivariate and multivariate logistic regression analysis was used**.** The variables which had significant association were identified on the bases of P value≤0.05 and 95%CI.

Result: A total of 324 children's were participated in the study with a response rate of 91%. In the study, 33.3% of 06-59 months children were stunted in shey bench district. Children aged 12_24months were about 0.06 times [AOR0.06; 95CI (0.02_0.08)] and children above 24 months were 0.12 times [AOR0.12; 95 % CI (0.03_0.56)] less likely to be affected by stunting respectively. Children who had born less than 2 years interval were 2.31 times more likely to be affected by chronic malnutrition [AOR 2.31;95 % CI (1.43- 3.08)]. Children who had started complementary feeding at less than six months or above six months were 3.78 [AOR 3.78; 95 %CI (1.39_4.25)] times more likely to be affected by stunting than those started complementary feeding at the age of 6 months.

Conclusion and recommendation: The result of this study described that the prevalence of stunting among children age 06-59 months was relatively high (33.3 %). Children age, age at which complementary feeding started and birth interval were found to be associated factors of stunting. Promoting appropriate maternal feeding at pregnancy including optimal breast feeding, timely starting of complementary feeding and exceeding of birth interval more than 24 months is essential to prevent stunting (chronic malnutrition) among under five children.

Key words: - stunting, under five children, factors. shey bench district, Ethiopia

Abs 117

Exclusive Breastfeeding and Associated Factors among HIV Positive Mothers Attending Governmental Hospitals in North Gondar Zone, Northwest Ethiopia.

Melaku Kindie Yenit, Haregeweyin Genetu, Amare Tariku

Background: Transmission of HIV from mother-to-child through breastfeeding remains a major public health problem and the worst causes of pediatrics morbidity and mortality. Exclusive breastfeeding, which is feeding breast milk for the first six months of life, reduces morbidity and mortality especially among HIV exposed infants. However, the lower practice of excusive breastfeeding particularly in developing countries still continued a problem. Therefore, this study assessed the magnitude of exclusive breastfeeding and associated factors among HIV positive mothers in governmental hospitals in North Gondar zone, North West Ethiopia.

Methods: An Institutional based cross-sectional study was conducted from February to March, 2016 in governmental hospitals of north Gondar zone administration. A total of three hundred sixty seven mothers-infant pairs were included in the study. All HIV positive mothers who had infants 7-20 months of age and attending chronic HIV care clinic during the study period in the selected hospitals were included in the study. Data were cleaned, coded and entered into EPI info software version 3.5.3 and transferred into SPSS version 20 for further analysis. Both descriptive and analytical analysis was done. The Adjusted Odds Ratio (AOR) with corresponding 95% Confidence Interval (CI) was used to show the strength of association and a P-value of <0.05 was considered statistically significant.

Result: The overall prevalence of exclusive breast feeding among HIV positive mothers were 86.4% (95%CI; 82.9, 89.9). On multivariate analysis, those who got counseling about Exclusive Breastfeeding (AOR= 5.047, 95% CI: 1.40, 18.19), got support during breastfeeding (AOR= 3.66, 95% CI: 1.277, 10.50), and had no immediate obstetric problems (AOR= 3.38, 95% CI: 1.29, 8.82) were factors associated with the practice of exclusive breast feeding at p-value of less than 0.05.

Conclusion: Higher proportions of children were exclusively breastfed for six months, however still 13.6% of them were grown with sub-optimal duration of breastfeeding. Therefore, infant feeding counseling needs to be strengthen to curb the transmission of HIV among exposed infants.

Abs 118

Anemia and Body Mass Index Status of In-School Adolescent Girls from Rural Ethiopia: A School Based Study.

Rediet Takele Regasa

Background: The rapid growth changes that occur in adolescents increase the demand for macro and micronutrients and addressing their needs particularly in females would be an important step to break the vicious cycle of intergenerational malnutrition. Thus we examined the magnitude of anemia and body mass index status of in-school adolescent girls in south west rural Ethiopia. .

Methods: A school based cross-sectional study was conducted among 448 in-school adolescents selected from all government schools of *Wayutuka* district, south west Ethiopia from February to March, 2016. A pre-tested questionnaire was used to collect data on socio-demographic information. Haemoglobin was measured by HemoCue photometer. Weight and height were measured using standard procedures and were and converted to BMI for age z-score based on WHO Anthro-plus software Version 1.0.4. Data were analyzed using STATA version12. Binary logistic regression with 95%CI was used to see the associations between anemia and socio-demographic factors. A p-value <0.05 was considered statistically significant.

Result: The overall prevalence of anemia was 27% (95% CI: 22.9- 31%) of which 23%, 3.8% and 0.2% had mild, moderate and severe anemia, respectively. The proportion of thinness and overweight girls based on the BMI for age z-score was 33% and 3.6%, respectively. The major determinants of anemia were age (AOR=4.8 95%CI=2.7 to 8.5), status of menarche (AOR=2.3 95%CI=1.34 to 4.2), place of residence (AOR=3.7 95%CI=1.9 to7), milk consumption (AOR=3 95%CI=1.5 to 6.7) and inadequate intake of vegetables, (AOR=3.2; 95%CI=1.5 to 6.7).

Conclusion: One in four female in-school adolescents had mild anemia and 12.1% suffered underweight. To improve the prevailing adolescent nutritional problem, policies need to address the aforementioned identified determinants.

Abs 119

Chronic Energy Deficiency and Associated Factors among Adults Living With HIV in Gondar University Referral Hospital: Institution Based Cross-Sectional Study Design.

Melkitu Fentie Melak, Adino Tesfahun Tsegaye, Molla Mesele, Tadesse Awoke Ayele

Background: The relationship between Human Immune Virus (HIV) infection and chronic energy deficiency is bidirectional and multifaceted. HIV can cause or worsen chronic energy deficiency due to increased energy requirements, reduced food intake and poor nutrient absorption. Chronic energy deficiency, in turn, further weakens the immune system, increasing susceptibility to infections and worsening the disease's impact. Even though there is a major advance in antiretroviral treatment (ART) and survival outcomes it remains a significant public health concern among HIV infected adults. The magnitude and factors associated with chronic energy deficiency among adults living with HIV are not well studied particularly in Gondar. The aim of this study was to assess the prevalence of chronic energy deficiency and associated factors among adults living with HIV in Gondar University Referral Hospital.

Methods: An institution based cross-sectional study was conducted and systematic random sampling was used to select study subjects. A total of 317 study subjects were enrolled in the study. Structured and pretested questioner was used to collect the socio-demographic, economic and diet related variables. Laboratory data with Weight and height measurement were taken and medical charts were reviewed. Both Binary and Multiple Logistic Regression analysis were used to assess the effect of different factors on chronic energy deficiency. A p-value <0.05 was considered as statically significant.

Results: The overall prevalence of chronic energy deficiency ,(BMI<18.5kg/m^2) was 18.3% (95%CI: 14.5%-22.7%) of which 36(11.4%), 11(3.5%) and 11(3.5%) were mildly, moderately and severely chronic energy deficient respectively. having no formal education (AOR=2.05, 95%CI:1.005,4.21) , being in the WHO clinical stage three and four (AOR=3.84, 95%CI:1.39, 10.61)and having history of diarrhea in the last two weeks prior to the survey(AOR=4.43,95%CI:1.83,10.72) were significantly associated with chronic energy deficiency.

Conclusion and Recommendation: The prevalence of chronic energy deficiency among adults living with HIV in Gondar University Hospital was relatively high. Educational status, WHO clinical stage, and having history of diarrhea in the last two weeks prior to the survey were risks for chronic energy deficiency. It is better to strength education coverage, integration of nutritional management with ART and health education, early diagnosis and treatment of Diarrheal disease.

Key words-chronic energy deficiency, prevalence, HIV, Gondar

Adherence, no formal education, not taking INH, and not modifying second-line treatment

Abs 120

Low Birth Weight and Associated Factors in Public Health Facilities in Dire Dawa Town, Ethiopia. *Tigistu Yemane Beyene*

Background: Low birth weight is defined as weight of child at birth less than 2500 g measured within 24 hours of birth. It is a public health problem affecting 15%-20% of births worldwide. Low birth weight is the cause of 28%-30% of neonatal deaths. Therefore, this study was conducted to determine the prevalence of Low birth weight and associated factors among newborns delivered in Dire Dawa public health Facilities, Eastern Ethiopia.

Objective: The objective of this study was to assess magnitude of Low Birth Weight and associated factors among newborns delivered in public health facilities in Dire Dawa, Ethiopia, from March 1-30, 2016.

Methods and Materials: Facility based cross-sectional study was conducted among 403 respondents with their neonate. The data were collected using structured, pretested interviewer administered questioner in two health centers and two hospitals in Dire Dawa by recruiting four graduate midwives and samples were selected using systematic random sampling by skipping every third neonate until the needed sample size was met. Data were entered in to Epi-data software version 3.1 and exported to SPSS Version 20 and analyzed using frequency, crosstabs and percentage. To assess association of factors with Low birth weight bivariate and multivariable logistic regression was used. After bivariate regression analysis, variables with P value less than 0.3 were included in multivariable logistic regression. Adjusted odd ratio along with 95% CI was calculated to see strength of association and $P<0.05$ was taken as level of statistical significance.

Result: Data were collected from 403 mothers who had neonates with a 100% response rate. In this study the Incidence of Low birth weight was 13.2% with a mean birth weight of 3106gm (SD±598). Residing in Rural area AOR: 2.86, 95% CI, (1.15, 7.1), maternal MUAC <23 cm AOR: 2.93, 95% CI (1.3, 6.5), maternal Hgb < 11g/dl AOR: 7.5, 95% CI (3.2, 18) and not counseled on nutrition during ANC AOR: 2.9, 95% CI (1.2, 7.0) were found to be a predictor of Low birth weight.

Conclusion and Recommendations: The Incidence of low birth weight in this study was high. Being rural resident, lack of nutrition counseling at ANC, maternal under nutrition and maternal Anemia were predictors of LBW. Health workers should do nutritional counseling and malnutrition screening at all visits of ANC and act accordingly.

Key words: Low birth weight, maternal under nutrition, maternal Anemia, maternal MUAC

Abs 121

Prevalence of Malnutrition and its Associated Factors among Adult People Living with HIV/AIDS Receiving Anti-Retroviral Therapy at Butajira Hospital, Southern EthiopiaTitle2: Food Insecurity and its Associated Factors among People Living with HIV.

Dereje Gedle1, Baye Gelaw2, Dagnachew Muluye2 and Molla Mesele3 [1]Debre Markos University, CMHS, Public Health department, [2]University of Gondar, School of Biomedical and Laboratory science, [3]University of Gondar, institute of public health.

Background: Malnutrition and HIV/AIDS are highly prevalent in Sub-Saharan Africa and they are linked in a vicious cycle. Intestinal parasite co-infection worsens the effect of malnutrition among HIV patients. However, the magnitude of malnutrition and its associated factors among People Living with HIV/AIDS are not well understood at Butajira in particular and in Ethiopia in general.

Objective: The aim of this study was to assess the prevalence of malnutrition and its associated factors among Adult People Living with HIV/AIDS receiving ART.

Methods: Institution based cross-sectional study was conducted and systematic random sampling technique was used to select study subjects. A total of 305 study subjects were enrolled in the study. Structured and pre-tested questionnaire were used to collect socio-demographic, clinical and nutritional related data. From each sampled patient, anthropometric and laboratory data were collected. Both bivariate and multivariate logistic regression analyses were used to assess the effect of the various factors on the level of malnutrition. P value ≤ 0.05 at 95% CI was considered statistically significant.

Results: The overall prevalence of malnutrition was 25.2% (95% CI: 20.0% – 30.2%), of which 49(63.6%), 19(24.7%), 9(11.7%) were mildly, moderately and severely malnourished, respectively. Multivariate Logistic regression analysis revealed that living in rural area (AOR=1.98, 95% CI: 1.10, 3.53), anemia (AOR=1.94, 95% CI: 1.05, 3.57), eating difficulty (AOR= 2.69, 95% CI: 1.41, 5.11), using Ready to Use Therapeutic Food (AOR= 0.18, 95% CI: 0.08, 0.40), and intestinal parasitic co-infection (AOR=2.85, 95% CI: 1.54, 5.27) were significantly associated with malnutrition.

Conclusion: Malnutrition was found to be high among HIV/AIDS patients receiving ART. Living in rural area, anemia, eating difficulty, Ready Use Therapeutic Food, and intestinal parasitic co-infection were found to be significant factors associated with malnutrition. To alleviate the problems, strengthening household food security, following up for intestinal parasites and anemia consistently, and identifying and treating the cause of poor dietary consumption as early as possible, should be considered.

Key words: Malnutrition, HIV/AIDS, ART, Intestinal parasites

Abs 122

Dietary Diversity and Associated Factors among 6 - 23 Months Children, Orthodox Christian Followers during Lent, at Dejen District, North West Ethiopia, 2016. *Mulatu Ayana Hordofa*

Background: Dietary diversity is a qualitative measure of food consumption that reflects household access to variety of foods, and is a proxy for nutrient adequacy of the diet of individuals. Ethiopian Orthodox Christian followers fast approximately 250 days (68.4%) of a year. According to the doctrine; during fasting period, consuming of animal and dairy products is strictly forbidden excluding children less than seven years.

Objective: The objective of this study was to assess minimum dietary diversity score and associated factors during Easter Lent among 6 to 23 months of children of Orthodox Christian followers, in Dejen District, North West Ethiopia, 2016.

Method: The study was conducted in Dejen District,which is one of the Districts from East Gojjam Zone, Amhara Regional state and community based cross-sectional study was conducted from December to May 2016 G.C. All Orthodox Christian mothers or care-givers whose children were 6 to 23 months of age who lived in Dejen District was source population. After categorizing the 23 kebeles in to two strata, systematic random sampling method was used to get the study population. A single proportion formula was used and a total of 967 sample is needed. Ethical clearance and formal later was obtained from college of health science, ethical clearance committee of Debre Markos University. Data was entered and cleared by using Epi data and analysis was done by using SPSS version 20. That variable with P-value during binary logistic regression was candidate to multiple regression model and from these candidate variables with p-value ≤0.05 was considered as significantly associated.

Result: The dietary diversity score among 6 to 23 months age was 13.6%. The study showed that those children who consumed meat, egg and dairy products were only 1%, 2% and 7.2% respectively. Exposure to media and household economic status had an association (AOR, 5; 95% CI, 3.07 – 8.26) and (AOR, 2.32; 95% CI, 1.41 – 3.81). Mothers who did not feed milk and/or dairy products to their child due to fear of utensil contamination or due to it was fasting season was 0.58 times less (AOR=0.58; 95% CI: 0.35 - 0.96, P= 0.03) likely to feed the recommended dietary diversity than those who gave other economic related reasons.

Conclusion: Majority of children (86.4%) of 6 to 23 months of age lacked diversified food. Mothers fasting practice affected the dietary diversity score of children. The health structure should work with religious leaders to create awareness about child feeding during fasting season

Abs 123

Determinants of Anemia among Pregnant Mothers Attending Antenatal Care Service at Asossa Zone Public Health Institutions, West Ethiopia.

Abera Abay, Haile Woldie Yalew, Amare Tariku, Ejigu Gebeye, University of Gondar

Background: Anemia is responsible for 20% of maternal mortality worldwide, which leads to premature births, low birth weight, fetal impairment and infant deaths. In Ethiopia, anemia is still public health problem and about 22% of Ethiopian pregnant women are anemic. This study was carried out to assess the magnitude and possible risk factors of anemia among pregnant women attending antenatal care service (ANC) in Asossa Zone public health institutions, West Ethiopia.

Methods: Facility based cross-sectional study was conducted from February to March 2016. An interviewer administered, pretested and structured questionnaires were used to collect the data. Multi stage clustered sampling technique was employed to recruit study subjects. A 5ml of venous blood was collected to identify anemia. Hemoglobin estimation was done by Sahli's method and anemia was graded according to WHO criteria. Data was entered using EPI INFO version 7 and analyzed by SPSS version 20. In logistic regression, both bivariate and multivariate analysis was done to screen factors associated with anemia. Those independent variables with a p-value of < 0.2 in the bivariate analysis were fitted to the multivariate analysis. Both Crude Odds Ratio (COR) and Adjusted Odds Ratio (AOR) with a corresponding 95% Confidence Interval (CI) were computed to show the strength of association. In the multivariate regression analysis, variables with a p-value of < 0.05 were considered as statistically significant.

Results: This study revealed moderate public health problem of anemia 31.8% [95% CI: 28.9, 35.5] in the study area. Age [AOR= 0.34, 95% CI: 0.14, 0.86], family size [AOR=4.27, 95% CI: 1.58, 11.45], dietary diversity score [AOR= 0.58, 95% CI: 0.38, 0.93], meat consumption per week [AOR= 1.80, 95% CI: 1.11, 2.91], soft drink consumption [AOR =1.96, 95% CI: 1.19, 3.23], mid upper arm circumference level of ≤ 21cm [AOR=7.38, 95% CI: 4.22, 12.91], fruit consumption per week [AOR= 3.29, 95% CI: 1.59, 6.82], inter pregnancy interval [AOR=0.59, 95% CI: 0.34, 0.99] and gestational age of 3rd trimester [AOR= 0.33, 95% CI: 0.20, 0.57] were independently associated with anemia.

Conclusions and recommendations: Anemia continued as public health problem in the study area. Age, family size, meat and fruit consumption per week, poor dietary diversity score, soft drink consumption per week, having MUAC status of ≤ 21 cm, inter pregnancy interval and gestational age of 3rd trimester were significantly associated with anemia. Interventions approaching nutritional assessment, counseling, and supports to improve the hemoglobin status of pregnant mothers are crucial in the study area.

Key words: Prevalence; Anemia; Pregnant mother; Associated Factors; West Ethiopia; 2016.

Abs 124

Prevalence of Goiter and Associated Factors among School Aged (6-12 Years) Children in Dabat District, Northwest Ethiopia. A School Based Cross-Sectional Study.

Zegeye Abebe, Ejigu Gebeye, Amare Tariku, University of Gondar

Background: Globally, more than two billion people are at risk of iodine deficiency disorders, of which 32% are school aged children. It is a severe public health problem in Ethiopia. However, little is known about the magnitude of goiter in the Northwestern part of Ethiopia.

Objective: The objective of this study was to assess the prevalence and associated factors of goiter among school aged children (6 to 12 years) in Dabat District, Northwest Ethiopia.

Methods: A school based cross-sectional study was conducted from February 21 to March 31, 2016. A total of 735 school aged children were included in the study. A stratified multistage followed by systematic random sampling technique was employed to select the study participants. Thyroid physical examination was done and classified according to World Health Organization recommendation. The level of salt iodine content was determined using the rapid field test kit. A Binary and multivariable logistic regression was fitted to identify factors associated with goiter. Both Crude and Adjusted Odds Ratio with the corresponding 95% Confidence Interval were calculated to show the strength of association. In multivariable analysis, variables with a P-value of <0.05 were considered statistically significant.

Results: In this community**,** the overall prevalence of goiter was 29.1% [95% CI: 25.9, 32.6%], of which about 70.9% of children had no goiter while about 22.4% and 6.7% had goiter grade one and grade two, respectively. The age of children (AOR= 1.13; 95% CI: 1.01, 1.26), being housewife mother (AOR=1.49; 95%CI: 1.08, 2.15), use of unprotected well water source for drinking (AOR= 6.25; 95%CI: 2.50, 15.66), medium household wealth status (AOR= 1.78; 95% CI: 1.18, 2.92), use of inadequately iodized salt (AOR= 2.79; 95% CI: 1.86, 4.19), poor dietary diversity score of the child (AOR= 1.92;95% CI: 1.06, 3.48), and medium maternal knowledge (AOR= 0.65; 95% CI: 0.42, 0.94) were significantly associated with goiter.

Conclusion and Recommendation: In this community**,** the prevalence of goiter was higher which confirmed the moderate public health significance. The age and dietary diversity score of the children, occupation and knowledge of mothers, source of drinking water, wealth status, and level of salt iodine content were significantly associated with goiter. Regular monitoring of household salt iodine content, improving access of safe water supply, promoting the importance of diversified food for children is recommended to address the higher burden of iodine deficiency.

Key words: school children, goiter, salt iodine content, Northwest Ethiopia.

Abs 125

A Single 24 Hour Recall Overestimates Exclusive Breast Feeding Practices among Infants Aged Less than Six Month in Rural Ethiopia.

Esete Habtemariam Fenta

Background: Exclusive breast feeding (EBF) practice is one of the WHO Infant and young child feeding core indicators of appropriate feeding practices in children aged 6–23 months. Measurement of EBF practices is based on a single 24 hour recall approach. Although it is shown that the 24 hour recall approach results in overestimation of EBF practice, little is known the degree of overestimation in developing countries.

Method: A total of 422 infants under the age of 6 months were followed for seven days in Butajera, rural Ethiopia. We collected dietary information of the infants using a 24 hour recall for seven consecutive days. We also collected exclusive breastfeeding practices using recall since birth. We calculated exclusive EBF practice based on single 24 hour recall, multiple 24 hours recall and recall since birth. Mcnemar's test was done to asses if a significant difference exists in rates of EBF. Sensitivity, specificity and positive predictive value were computed by using 7 repeated 24 hour recall as a reference.

Result: Our result indicates that compared to the EBF estimates obtained from seven repeated 24 hour recall, the EBF estimates derived from single 24 hours recall overestimated EBF by 23 percentage points (95% CI: 19.2,27.8). A significant decrement in overestimation of EBF was observed when the number of repeated 24 hour recall increased. Taking seven repeated 24 hour recall as a gold standard, single 24 hour recall had the lowest specificity (i.e. 49.7%) and the lowest positive predictive value (i.e. 69.3%). Recall since birth was found to have a high specificity (i.e. 93.8%) and positive predictive value (i.e. 94.2%).

Conclusion: A significant overestimation was observed when single 24 hour recall was used to estimate prevalences of EBF. By increasing observation days we can significantly decrease the degree of overestimation. Recall since birth presented estimates of EBF that is close to seven repeated 24 hour recall. Recall since birth could be a feasible alternative to assess EBF practice.

Keywords: exclusive breast feeding, accuracy, 24 hour recall, overestimation, IYCF

Abs 126

Dietary Diversity and Associated Factors among Infant and Young Children in Northwest Ethiopia: A Community Based Cross-Sectional Study.

Aysheshim Kassahun Belew, Bekri Mehammed, Zegeye Abebe Abitew, Berihun Assefa Dachew

Background: Insufficient quantities, frequencies, and inadequate quality of complementary foods have a negative effect on health and growth of children in the first two years of life. Therefore, the aim of this study was to assess minimum dietary diversity and its associated factors among infants and young children aged 6-23 months at Dabat District, northwest, Ethiopia.

Methods: A community based cross-sectional study was conducted from February 15 to March 15, 2016. Simple random sampling method was used to select the study participants. Interviewer administered structured questionnaire was used to collect data. Both Crude and Adjusted Odds ratio with the corresponding 95% Confidence Interval were calculated to show the strength of association. In multivariable analysis, variables with a P-value of <0.05 were considered statistically significant.

Results: The proportion of children who meet minimum adequate dietary diversity was 17 % (95% CI: 14.9, 19.4%). Satisfactory media exposure (AOR=2.79, 95%CI: 1.74, 4.47), having postnatal visit (AOR= 1.96, 95% CI: 1.32, 2.88), participation in child growth and monitoring follow up programme (AOR= 1.65, 95 % CI: 1.14, 2.39), age of the children (AOR=2.34, 95%CI: 1.33, 4.11) and age the mothers (AOR=1.89, 95% CI:1.09, 3.27) were positively associated with dietary diversity.

Conclusion and recommendation: In the community, the proportion of children received minimum dietary was low. Media exposure, the age of the mother and children, postnatal care visit, and participation in monthly growth monitoring follow up program were significantly associated with dietary diversity. Thus, encouraging all mothers to participate in the monthly growth monitoring program, intensive media advertising and strengthening counseling of mothers attending postnatal care visit are highly recommended to achieve the recommended dietary practices.

Keywords: children, dietary diversity and Ethiopia

Abs 127

Essential Nutrition Action Practices and Associated Factors among Pregnant Women in Ambo District, West Shoa Zone, Ethiopia.

Mitsiwat Abebe

Background: Pregnancy is a critical time of human development. Anything that compromises the fetal environment may have important and lasting effects on the child's future health. During pregnancy, the expecting mother needs optimal nutrients of superior qualities to support the developing fetus. Essential nutrition actions have been adopted by the Ethiopian government and as an intervention framework with specific doable actions since 2005. This intervention has been rolling out both during contact with health facilities and through the health extension workers. However, there is no study that documented the practice of pregnant women in this regard.

Objective: The general Objective of the study was to assess essential nutrition action practice of pregnant women and associated factors.

Methods: A cross-sectional study was conducted in Ambo district, Western Shewa Zone during March, 2016 to April 2016 among 724 pregnant women. The study participants were selected from thirteen Kebele's (two from urban and eleven from rural strata) of Ambo district based on probability proportional to size (PPS) allocation technique. Data were edited, coded and entered into EPI-data 3.1, and then exported to SPSS for windows version 20 for cleaning and analyses. Both descriptive statistics and multivariable logistic regression analyses were used to describe essential nutrition action practices and to isolate their independent predictors, respectively.

P value <0.05 was used to declare statistical significance.

Results: It was observed that 28.7% of participants practiced ENA, 32% had favorable attitude towards ENA and 39% had good knowledge on ENA, respectively. Pregnant women had limited quality of meal 11%, quantity of meal 42%, disease prevention and treatment10%, limited provision of iron/folate supplements30% and supportive life style 89% given to pregnant women in the study area. With regard to food taboos, a significant number of pregnant women restricted some important foods (cabbage, milk, chilies, meat and fish) due to misconception of these foods to be the cause of 66% plastered on the child, 60% baby become whitish, 51% big baby, 43%)burn the child and 32% injure the child.

The results of multivariable logistic regression analyses showed that, knowledge (AOR= 3.12, 95%CI [1.86, 5.25]), Health service availability (AOR= 3.76, 95%CI [2.39, 5.92]), Health & nutrition information (AOR= 3.25, 95%CI [1.94, 5.43]), Mother's education(AOR= 3.41, 95% CI: [1.40 - 8.29]), husband education, (AOR= 5.6, 95% CI: [1.79- 17.5]), husband occupation(AOR= 3.57, 95% CI: [1.34- 9.53]), gestational age(AOR= 2.7, 95% CI: [1.47 – 4.92]), number of children(AOR= 0.25 &

0.14, 95% CI: [0.13-0.46]) and number of pregnancy(AOR= 0.44, 95% CI: [0.21- 0.91]) were independent predictors of ENA practice of pregnant women.

Conclusion and Recommendations:-The ENA practice of pregnant women was Low. This finding showed that, quantity & quality of meal, iron/folate supplement and disease prevention and treatment practice of pregnant women was very low in the study area. Knowledge, mother & husband education, father occupation, number of child & pregnancies, gestational age health service availability and health & nutrition information were significant independent predictors of optimal ENA practice. The finding imply, the need for strengthening the ENA BCC to create the demand for ENA services and refreshment training of health providers on ENA guidelines to improve ENA prcatices dring preganancy.

Key words: Essential Nutrition Action, Pregnancy, Ambo, Ethiopia. Essential Nutrition Action Practices and Associated Factors among Pregnant Women in Ambo District, West Shoa Zone, Ethiopia

Abs 128

Predictors of Anemia Severity amongst Children Aged 6-59 Months in Gondar Town: A Community Based Cross-Sectional Study.

Mulugeta Melku, Bamlaku Enawugaw Enawugaw, Kefyalew Addis Alene, Be;ete Biadgo, Betelihem Terefe, Kinde Fentahun Muchie

Background: Anemia is a public health problem affecting both developed and developing countries. One-third of the world's population has been suffering from anemia; of which preschool children and pregnant mother are the most vulnerable groups. Childhood anemia is associated with serious consequences including growth retardation, impaired motor and cognitive development, and increased morbidity and mortality. Hence, this study aimed to assess prevalence and predictors of severity levels of anemia amongst children aged 6-59 months in Gondar town, Northwest Ethiopia.

Method: a community-based cross-sectional study will be conducted on 707 children. A systematic random sampling technique was employed to select study participants. A combination of measurement (anthropometric and hemoglobin value) and interview using structured pretested questionnaire were employed for data collection. The data were entered using EPI info version 3.5.3 and analyzed by SPSS version 20. Frequencies, proportion and summary statistics were used to describe the study population in relation to variables. Both bivariate and multivariate ordinal logistic regression was done, and proportional odds ratio with 95% confidence interval was used to see the effect of each independent variable on the severity level of anemia. A p value less than 0.05 in multivariate ordinal logistic analysis was considered as statistically significant.

Result: Of the total children participated in the study, 53.5% were male. The median age of children was 30 months. About 202(28.6%) of them were anemic: 124(17.5%), 73(10.3%) and 5(0.7%) of them were mildly, moderately and severely anemic, respectively. Younger age, low frequency of complementarily feeding per day and primary education status were remained to be the predictors of severity of childhood anemia.

Conclusion: In conclusion**,** there was high prevalence of anemia indicating a moderate public health problem. Child age, complementary feeding frequency and maternal education were found to be the predictors of anemia. Hence, we recommend a regular community-based screening and controlling program of anemia in this particular population.

Key words: Anemia, children, severity, predictors

Abs 129

Under Five Diarrhea and Risk Factors among Model Household and Non Model Households in Yeka Sub-City, Addis Ababa, Ethiopia: A Comparative Cross-Sectional Survey.

Menelik Legesse Tadesse

Background: Worldwide diarrheal disease is the second leading cause of death in under-five year's children. In Ethiopia diarrhea kills half million under-five children every year second to pneumonia. Poor sanitation, unsafe water supply and inadequate personal hygiene are responsible for 90% of diarrhea occurrence; these can be easily improved by health promotion and education. The Ethiopian government introduced a new initiative health extension program in 2002/03 and Urban Health Extension Program by the year 2009 as a means of providing a comprehensive, universal, equitable and affordable health service. As a strategy of the program; households have been graduated as model families after training and implementing the intervention packages. Therefore the aim of the study was to assess risk factor of diarrheal disease in under-five children among health extension model and non-model families.

Method: A community based comparative cross-sectional study design was employed in May 2015 at Yeka sub city. Multi-stage sampling technique was employed to select 275 model and 550 non-model households that had at least one under-five children. Data was collected using structured questioner and checklist by trained data collectors. A summery descriptive, binary and multivariate logistic regression was computed to describe the functional independent predictors of childhood diarrhea.

Result: During the data collection time 196 (25.9%) non model households and 93 (12.3%) model households were earn monthly income less than or equal to 1100.00 Ethiopian Birr. About 22(2.7%) of model households have three or more rooms compared to 19(2.3%) in non- model households, which is significant difference between the two groups. 97(12%) of the non- model households were live with animals in the same room as to compare 46(5.7%) of the model households. In this study 174(21.6%) of the model households had have separate kitchen as to compare 311(38.7%) of the non- model households.

The two weeks diarrhea prevalence in under-five children among model and non-model households were 6.2% and 9.6%, respectively.

Conclusion: The level of diarrheal disease variation was well explained by maternal education, income, personal hygiene, waste disposal system and the effect of health extension program. Thus encouraging families to being model families for the program and enhancing community based behavioral change communication that emphasize on personal hygiene and sanitation should be strengthening to reduce childhood diarrhea.

Abs 130

Prevalence of Schistosoma Mansoni Infection Intensity and Determinant Factors among School Children in Mana District, Jimma Zone, Oromia Southwest Ethiopia.

Mitiku Bajiro Weltagi

Background: Schistosomiasis is one of the neglected tropical parasitic diseases caused by trematodes of the genus Schistosoma. In Ethiopia, epidemiological studies indicate wide distribution of intestinal schistosomiasis due to S. mansoni among school children. But there is limited data on the prevalence of S. mansoni in our study area (the newly emerging focus for S. mansoni).

Objective: To determine the prevalence of S. mansoni infection intensity and determinant factors among School Children of Mana District, Jimma Zone, Oromia, Southwest, Ethiopia.

Method: A school based cross-sectional study was conducted from March to April 2014. A total of 584 school children were selected by simple random sampling technique from three primary schools and screened for S. mansoni infection by Kato-Katz techniques. Structured questionnaire was used to collect socio-demographics data and the determinant factors for S. mansoni infections. Students who were positive for S. mansoni were treated by 40 mg/kg of praziquantel. Simple frequency, percentage, geometric mean, chi-square, logistic regression and odds ratio were used for data analysis.

Results: The overall prevalence of S. mansoni infection in school children of three primary schools was 23.6%. The prevalence for males and females were 25.6% and 22.5%, respectively. Majorities of infection intensity were low with minimum of 24 eggs per gram and maximum of 1848 eggs per gram with mean fecal egg count was 202 and geometric mean egg count was 71. Frequency of swimming (AOR = 114.9, p-value = 0.001, 95%CI), bathing in rivers/ponds (AOR = 0.088, p-value = 0.039, 95%CI), habit of crossing rivers on bare foot (AOR = 0.058, p-value = 0.002, 95%CI), and washing clothes in the river (AOR = 0.075, p-value = 0.002, 95%CI) were the independent predictor for S. mansoni infection ($p < 0.05$).

Conclusion and Recommendation: The prevalence of S. mansoni infection among school children was moderate and its infection intensity was low. The communities in the study area are considered as moderate risk to S. mansoni infection. Bathing in rivers, frequency of swimming rivers, crossing the rivers on bare foot, washing clothes in the rivers are the independent predictor for S. mansoni infection among the SC of the study area.

Abs 131

Risk Factors for Acute Malnutrition among Under-Five Children at Public Health Facilities in Gedeo Zone, SNNPR, Ethiopia 2015, Case Control Study.

Teshome Abuka Abebo

Background: Poor nutritional status of children continues to be serious public health problem in Ethiopia. Despite there is persistently high magnitude of childhood acute malnutrition in the Gedeo Zone, there is no study previously conducted to determine risk factors for acute malnutrition. The main aim of this study was to identify risk factors for acute malnutrition among under-five children in Gedeo Zone, Ethiopia.

Methods: Facility based unmatched case control study was conducted on 451 under- five children (151 cases and 300 controls) to assess determinates for acute malnutrition. Consecutive sampling technique was employed to select study subjects. Data were collected by pre-tested questionnaire and mid upper arm circumference. Odds Ratio along with 95 % confidence interval was estimated to identify determinants of acute malnutrition (wasting) using the multivariable logistic regression. Level of statistical significance was declared at $P < 0.05$.

Results: Predictors for acute malnutrition identified in this study are; diarrheal diseases (AOR= 3.601 CI= (1.36, 9.53)), complimentary feeding started before or late after 6 months (AOR= 4.4CI= (1.6, 11.84)), household monthly income <750ET.Br. (AOR= 4.6 CI= (1.1, 21.6)), maternal illiteracy (AOR= 4.18 CI= (1.36 , 12.8)), merchant occupational status of mother (AOR= 7.45 CI= (2.6, 21.2)),infrequently hand washing of mother/care givers (AOR= 5.4 CI (1.15 ,25.8)) and family size more than 4 (AOR= 5.9 CI (2.1 ,16.7)).

Conclusions: In this study several factors were identified as risk factor for acute malnutrition. Factors identified were diarrhea in last two weeks, preceding the survey, early or late initiation of complimentary feeding, monthly income, maternal illiteracy, maternal occupation, infrequent hand washing and large family size. Therefore; collaborative effort is needed to prevent diarrhea, promote hand washing practice, create mass awareness about complimentary feeding, make family planning methods available and empower women to limit family size.Key word – under five acute malnutrition (wasting)

Abs 132

Rate of HIV Transmission and Associated Factors among HIV Exposed Infants in Selected Health Facilities of East and West Gojjam Zones, North West Ethiopia. Retrospective Follows up Study.

Nurilign Abebe Moges, Getachew Mullu, Dube Jara

Introduction: In 2014, there were 170,000 new infections among children, in the same year rate of HIV transmission from mother to child in Ethiopia was 18% and currently (2015) 11% nationally. Though there are number of HIV related studies done in Ethiopia, there is scarcity of evidence on the rate of mother to child transmission especially after the initiation of the new strategy of option B+. Hence, the aim of this study was to determine rate of HIV transmission and associated factors among HIV exposed infants in selected health facilities of east and west Gojjam zone, northwest Ethiopia.

Methods: Retrospective cohort study design was used to collect data from all complete registrations of HIV exposed infant-mother cards were taken from seven health facilities (Debre Markos referral hospital, Finote Selam hospital, Debre Markos, Amanuel, Dembecha, Dejen and Bichena health centers). Data were collected using checklists developed from clinic working documents. Data were entered using epidata version3.5 and analyzed by SPSS version 22. Odds ratio at 95% CI and p-value <0.05 were used to declare statistical association.

Result: Three hundred five infant-mother pair registrations were studied. Maternal mean age is 27.4 (+SD 4.3). One hundred ninety four (63.6%) were married and 145 (47.5%) were cannot read and write. About 96.4% of infants before 6 month were exclusive breast feeding. Rate of HIV transmission is 18 (5.9%) at 95% CI of 3.88%-7.9%). And 10 out 24 (41.67%) were HIV positive while 8 out of 281 (2.85%) were HIV positive from those on ARV prophylaxis. Based on program shift from option B to option B+ there 14 children were positive out of 136 (10.29%) before option B+ and only 4 out of 169 (2.37%) after option B+. Children born from older mothers were 5.4 times more likely to be HIV positive (AOR=5.4, 95% CI=1.15-25.70), Infant whose mother with no PMTCT intervention was 16 times more likely to become HIV positive compared to their counter parts with intervention (AOR=15.95, 95% CI=3.35-75). Mother who become pregnant after they were known HIV positive were less likely to have HIV positive children (AOR=0.22, 95%CI=0.049-096).

Lesson learnt: There is significant progress on decrease of rate of HIV transmission from mother to child. Older age mother, status of the mother at entry to prevention of mother to child care and mother to child prevention interventions were significant factors.

Conclusion: Hence, government and clinicians should keep their effort and tackle maternal factors that favor HIV transmission from mother to child so as to realize "HIV free generation by 2030".

Abs 133

Magnitude of Sexually Transmitted Diseases and Associated Factors among Street Daily Laborers in Debre Markos Town, Northwest Ethiopia, 2015: A cross sectional study.

Tenaw Yimer

Introduction: Sexually transmitted Diseases are continue to be major public health problems globally, the majority occurring in developing countries. In Debre Markos town, Urbanization and rural-urban migration is a growing phenomenon for job opportunity that set youth daily laborers at high risk of Sexually transmitted Diseases. However, there is lack of evidences regarding daily laborers in urban areas and their unprotected sex and Sexually transmitted Diseases status. So, the objective this study was to assess magnitude and associated factors of sexually transmitted Diseases among street daily labourers' in Debre Markos town, Northwest Ethiopia from November 15/2015- December 15/2015.

Methods: Quantitative community based cross-sectional study was carried out among 423 conveniently selected street daily labourers'. Interviewer administered questionnaires used for data collection. Sexually transmitted Diseases status was measured based on respondents' self-report on the major syndromes of Sexually transmitted Diseases (vaginal discharge, urethral discharge, genital ulcer for both sexes and lower abdominal pain) during the past 12 months prior to survey. Bivariate and multivariate Logistics regression with odds ratio along with the 95% CI was used.

Results: The prevalence of sexually transmitted disease syndromes among street daily labourers' was 26.7% (CI (confidence interval), 21.3% - 29.1%). Short length of stay (less than 1 year) (AOR (adjusted odds ratio) = 3.19(1.71, 6.41)), have no comprehensive HIV/AIDS knowledge (AOR = 4.2, 95% CI 1.9–9.0)), inconsistent condom use (AOR = 5.6, 95% CI 3.7–11.2)) and had sex with commercial sex worker (AOR = 3.05, 95% CI; 2.31, 11.71)) were factors independently associated with experience Sexually transmitted Diseases than their counter parts. Conclusions: In this study, the prevalence of sexually transmitted diseases syndromes is very high which may lead to a serious health and economic consequences. Thus, targeted efforts should be made by all concerned stakeholders to reduce the problem in the study area.

Key words: Sexually transmitted diseases, syndromic approach, street daily laborers, associated factors, Debre Markos, Northwest Ethiopia.

Abs 134

Knowledge and Practice of Immediate Newborn Care among Midwives: Across Sectional Study in Governmental Health Facilities of Central Zone, Tigray Regional State.

Tesfay Tsegay, MSc, Department Nursing, Adigrat University.

Background: Newborn is considered to be tiny and powerless, completely dependent on others for life. The first hours are crucial because multiple organ system is making the transition from intrauterine to extra uterine functions. In Tigray region there was death of 11 %(3,515) neonates and 0.2% (70) mothers among the deliveries conducted in health facilities in 2011. In the study area there was no clear information regarding the knowledge and practice of midwives towards immediate newborn care. Therefore, the main aim of this paper was to assess the knowledge and practice of midwives towards immediate newborn care.

Objective: The objective of this study was to assess Knowledge and practice of immediate newborn care among Midwives in governmental health facilities at central zone, Tigray regional state, north Ethiopia, from January- June, 2015.

Methods: An institutional based cross-sectional quantitative descriptive study design was used. Sample size was calculated by using sample correction formula and sample size was 150 midwives. In Central zone all woreda health facilities were included in the study. Final study subject were selected using non probability convenience methods. The data was collected after pre-tested the questionnaire. Observation method was used standardized checklist adopted from save the children international followed by interview. The collected data was coded and entered to EPI-Info version 3.5.1 and data was exported to SPSS version 21.0. Finally, result was presented in texts, graphs and tables.

Result: Out of 150 samples size 147 were participated in the study making the response rate of 98%. Of these, 59.9% midwives were working in health center, 99.3% were ethnicity of Tigray and 79.6% were females. The mean age of the study participants was 34.1 years. Majority of the participants (83%) were diploma midwives. The score of knowledge of participants on immediate newborn care was 17.7% good and 25.2% poor. More than half (52.4%) of midwives practiced immediate newborn care. The rest, 47.6% participants have not practiced it. Midwives working in health center have 82% lower odds of newborn care compared to those working in hospital (p=0.000, OR=0.18 (0.07, 0.43).

Conclusion: Midwives had knowledge and practice gap on immediate newborn care.Significant numbers of midwives have improper practice of newborn care like avoiding the colostrums, improper cord tie and placement of baby identification band in the baby's wrist or ankle. Statistically significant difference of newborn care was observed among the midwives working in the health center and hospital.

Keyword: Knowledge, practice and newborn care

Abs 135

Prevalence of Diarrheal Diseases and Related Factors in Under Five Children among Health Extension Model and Non Model Families in Gozamin District, Northwest Ethiopia, 2015.

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Background: Globally, diarrhea is the second leading cause of mortality and morbidity among children under the age of five years. According to the World Health Organization (WHO) and UNICEF, there are about two billion cases of diarrheal disease worldwide every year. In Ethiopia, diarrhea plays great roll for the increasing of child mortality and it attribute 20%.These problems are clear at East Gojjam Zone Dejen district where childhood diarrheal disease prevalence is 23.8%. The aim of this study was to assess prevalence of childhood diarrheal diseases and associated factors in the rural community of Gozamin district, northwest Ethiopia, 2015.

Method: A community based comparative cross-sectional study design was employed in 2015 at Gozamin district. Multi-stage sampling technique was employed to select 159 model and 317 non-model households that had at least one under-five children. Data was collected using structured questioner by trained data collectors. A summery descriptive, binary and multivariate logistic regression was computed. Possible associations were measured using odds ratio at 95% CI and data were presented using appropriate tables.

Result: The two weeks diarrhea prevalence in under-five children was16.5% on which the prevalence among health extension model and non-model households were 15.5% and 17%, respectively. The independent predictors of childhood diarrhea were the following: maternal occupation, number of under five children in the house and sex of the index child were the risk factors of diarrheal diseases while water source of the family, method of water transportation, water storage cover, refuse disposal method and separate house use for animals live were the preventive factors of childhood diarrheal diseases.

Conclusion: Diarrheal disease in under-five children is high in this district. Therefore, strategies, and interventions should be further strengthened.

Abs 136

Assessment of Premarital Sexsual Practice and Associated Factors among Yekatit 12 Preparatory School Adolescents in Addis Ababa.

Abebaw Eshete Woldekiros

Introduction: Sexual activities among adolescents have been reported to be increasing worldwide. Several studies in Sub-Saharan Africa have also documented increasing premarital sexual activities among adolescents. In Ethiopia, 1.6 % of unmarried young women and 6.5 % of unmarried young men had sex before age 18. The proportion of sexual debut before age 15 among the 15-19 years old boys and girls is high, and significantly higher among girls (11.1%) than boys (1.7%) EDHS. The mean age reported for first sexual initiation among youth was between 13.6 and 19 years.

Objective: The objective of this study was to Assess Premarital Sexual Practice and Associated Factors among Yekatit 12 Preparatory School, Addis Ababa, Ethiopia.

Methods: School based quantitative cross-sectional survey was conducted from April to May 2012. To undertake data collection the preparation of self administered structured questionnaires was used. The data was collected from a total of 293 respondents using simple random sampling technique. SPSS windows version 19 was for data analysis. The data was analyzed using descriptive statistics, cross tabs, etc. And to see further relations among variables binary logistic regressions was used.

Result: One hundred forty six (49.8%) males and 147 (50.2%) females were participated in the study. Two hundred eighty (95.6%) of the participants were found in the age group 15-19 years. The mean age was 17.82 years with a standard deviation of 1.08. With regard to religions, 254 (86.7%), 19(6.5%), 18(6.1%) and 2(0.7%) were Orthodox, Protestant, Muslim and traditional, respectively. The proportion of premarital sex was 36.2%. The bivariate logistic regression analysis showed that from socio-demographic characteristics sex, age, grade level, father's education and work for income and from behavioural factors cigarette smoking, khat chewing and alcohol drinking had significant association with premarital sexual practices. Multivariate analysis showed that grade level and sex were important variables identified as predictors of premarital sexual practices (Odds ratio [95% CI] = 4.076 [2.349 - 7.074]) and (Odds ratio [95% CI] = 0.222 [0.107–0.460]), respectively.

Conclusion and Recommendation: A significant number school adolescents were involved in premarital sexual practice. There is a need for intervention targeting on premarital sexual practice and associated factors such as, substance use and peer pressure. Promoting and provision of school health education especially on the reproductive health issues, consequence of premarital sex and risk behaviours should be necessary.

Abs 137

Work Related Musculoskeletal Disorder and its Associated Factors among Nurses Working in Jimma Zone Public Hospitals, South west Ethiopia.

Tilahun Mekonnen Regassa

Background: Hospital nursing is a high-risk occupation for developing work-related Musculoskeletal disorders like low back pain/injury, neck and shoulder and problems have been reported to be common among nursing personnel. Musculoskeletal disorders represent a significant occupational problem among nurses; however, there is paucity of information on work related musculoskeletal disorder among nurses in Ethiopia.

Objective: The objective of this study was to assess work related musculoskeletal disorder and its associated factors among nurses working in Jimma Zone Public Hospitals, South west Ethiopia.

Method: Institutional based cross-sectional study was conducted in Jimma Zone public Hospitals for two weeks, from March 12-27, 2015. The study was conducted on 333 participants and Sample size was proportionally allocated to the respective hospitals. The participants were selected by systematic random sampling technique. Data were analyzed by logistic regression and Odds ratio with 95% confidence interval was used to examine associations between dependent & independent variables.

Results: Three hundred thirty three questionnaires distributed and 301 returned yielding response rate 90.3%. A 12-month prevalence of Work related Musculo skeletal Disorders at anybody site was 60.8% and highest report was seen in the low back one 124(67.8%) followed by the neck 44(24%) and knees 43(23.6%).Lifting and transferring dependent patients [AOR 2.1(1.1-4.3)], wound care [AOR 4.2(1.9-8.9)], medical ward [AOR 9.6(2.4-38.3)] and theatre/Intensive care unit [AOR 3.4 (1.2-9.7)], Working in awkward and cramped position [AOR 9.7 (2.2-42.6)], Working in the same positions for long period [AOR, 6.1(1.3-28.7)]and Bending or twisting back during work [AOR 5.1(1.1-23.7)]were independent predictors of Work related Musculo skeletal disorder.

Conclusion and Recommendation: The prevalence of Work related Musculo skeletal disorder among nurses working in Jimma zone public hospitals was 60.8%. Lifting and transferring dependent patients, wound care, working with confused patients, working unit, working in awkward postures, working in the same positions for long period and Bending or twisting back during work were significant factors associated with work related musculoskeletal disorder among nurses. In service refreshment training about Safe patient handling and ergonomics and creating conducive working environment were recommended

Key Words: work related musculoskeletal disorder, predictors, nurses, Jimma

Abs 138

Preventable Causes and Factors Associated with Neonatal Mortality among Neonates Admitted to NICUs of Addis Ababa Public Hospitals from 2011-15GC. *Lalisa Chewaka Gamtessa*

Background: Ethiopia witnessed an unprecedented decline in under-5 mortality from 166 per 1000 in 2000 to 88 per 1000 live births in 2011; an average decline of 47%. But still today, approximately 42% of mortality in Ethiopia attributes to high neonatal deaths; which needs further action like implementing SDG. Objective: To assess preventable causes and factors associated with neonatal mortality among neonates admitted to NICUs of Addis Ababa Public Hospitals from 2011-15GC.

Methods and materials: Facility based retrospective study was conducted at NICUs of public hospitals in Addis Ababa using secondary data of neonatal mortality among neonates admitted in Neonatal Intensive Care Units from 2011-2015 GC. The sampling has two stages and the overall design effect of 1.5 was considered. Data was collected using the data extraction checklist after conducting pre-test. Then the collected data was coded and entered in to Epi data of version 3.1 and exported to SPSS for windows version 21.0 for cleaning, editing, and analysis. Binary and multiple logistic regressions have been used to observe the association between independent Variables and dependent variable.

Result: The study included 561 neonates died after admission to NICUs in Addis Ababa Public Hospitals and data were collected for different variables of interest like obstetrics and gynecologic related, medical problems on admission including time of death to find significant association with neonatal mortality. The two variables with significant association with neonatal mortality using multiple logistic regression were Hypothermia on admission (AOR=1.68, 95%, CI: 1.054-2.67, p=0.029) and sepsis (AOR=1.80, 95% CI: 1.119-2.934, P=0.016) from all causes of death records.

Conclusion and Recommendation: In general, the study has found significant association of neonatal mortality with hypothermia and sepsis which are both potentially preventable. The concerned bodies are then recommended for general respective preventive mechanisms. Key words: Neonatal Mortality, Perinatal Mortality, Causes of Death in NICUs.

Abs 139

Exclusive Breast Feeding Practice and Associated Factors among Mothers in Debre Markos Town and Gozamen District, East Gojjam Zone, North West Ethiopia.

Yeshambel Sinshaw, Mulugeta Tesfa, Kassahun Ketema

Background: Breastfeeding is an important public health strategy for improving infant and child morbidity and mortality. It plays a great role in preventing morbidity and mortality in the first six months of life. It is one of the six targets in global nutrition set to increase it practice by 50% by 2025. Despite its great benefits, the prevalence in Ethiopia is only 52% with limited information on associated factors.

Objective: The objective of this study was to assess exclusive breastfeeding practices and associated factors in Debre Markos town and Gozamen district, East Gojjam Zone, North West Ethiopia, 2015.

Methods: A community-based cross-sectional study was conducted in May 2015. A total of 483 mothers were randomly selected. Semi-structured and pretested questionnaires were administered to collect data. One day training was given for data collectors and supervisors. The collected data was entered in to Epidata version 3.1, cleaned and transported to SPSS windows version 16.0 then analyzed. The crude and adjusted odds ratio (AOR) together with their corresponding 95% confidence intervals was computed. Bivariate and multivariate logistic regression analysis was computed to identify factors associated EBF. A P-value<0.05 was considered to declare a result as statistically significant in this study.

Results: The prevalence of exclusive breast-feeding was 89(55%) and 207(64%) in Debre Markos town and Gozamen district respectively. In Debre Markos town, being unemployed (AOR=2.77, 95%CI= [1.13, 6.74]), and counseling on EBF during Antenatal care (ANC) (AOR=4.02, 95%CI= [1.65, 9.78]), were significantly associated. Whereas in Gozamen district, mothers age15-35 (AOR=2.55, 95%CI= (1.27, 5.1]), counseling on EBF during ANC (AOR=5.7, 95%CI= [2.62, 12.3]), and colostrums feeding (AOR= 2.24 95%CI= (1.28, 3.9]) were significantly associated.

Conclusions: The prevalence of exclusive breast-feeding in both areas was lower than the target set by Ethiopia ministry of health at the end of 2015, (70%). Unemployment, getting counseling during ANC was significant factors in Debre Markos town whereas maternal ages, getting counseling during ANC, and early initiation of breastfeeding were significant factors in Gozamen district. Giving emphasis to promoting the EBF should be given and strengthen ANC counseling.

Keywords: Exclusive Breastfeeding, Colostrum, Infants, Mothers, Ethiopia

Abs 140

Protracted Exposure to Malaria Infections Did Not Have Association with Hemoglobin Level among Children 2-9 Years Old: A Community Based Cross Sectional Study in Ethiopia. *Zewdie Birhanu Koricha*

Background: Malaria and anaemia is one of the major health challenges among children. In the context of reduced transmission of malaria, it is essential to examine malaria attributable anaemia among the vulnerable groups.

Objectives: This study measured magnitude of anaemia among children 2-9 years old and examined its relationship with malariometric indices.

Methods: A community cross sectional study was conducted, during June 2016, among 763 children age 2-9 years old. Children were sampled from ten sites representing different malaria transmission settings. Hemoglobin Concentration was determined using HemoCue analyzer in the field. Malariometric indices data (splenomegaly rate, parasite rate, and antibody rate/ Enzyme immunoassay (EIA)) were measured. The data were analyzed using SPSS 21.

Results: The overall prevalence of anaemia was 17.30% (95%CI: 14.6-19.9%) and mild, moderate and severe anaemia constituted 7.3%, 7.2% and 2.8% respectively. Of the children with anaemia (132), only 7 (5.3%) had detectable malaria parasiteamia. The prevalence of detectable malaria parasiteamia was 2 (3.6%), 5/55 (9.1%) and zero among children with mild, moderate and severe anaemia, respectively. Malaria reactive antibody and anaemia was co-occurred in 3.13% (21/672) of the samples available for EIA antibody test. Of the children with anaemia, only 21 (19.3%) were reactive to malaria antibody test. Protracted exposure to malaria (as measured by malaria antibody), malaria parasiteamia, and malaria parasite species infection did not have statistically significant association with anaemia ($p>0.05$). However, enlarged spleen associated with increased risk of anaemia (AOR=14.93, 95%CI: 3.57-62.40; $p=0.001$). On the other hand, anaemia was significantly higher among children 2-4 years old (22.2%), and among children living in households without any ITN (34.0%). Prevalence of anaemia was lower by 55.0% among children living in households with at least one ITN (AOR=0.45, 95%CI: 0.21-0.96). The prevalence of malaria parasiteamia was 19 (2.4%) and generally, malaria and anaemia was co-occurred in 0.92% (7/763) of the children.

Conclusions: Repeated exposure to malaria infections was less likely contributes to development of anaemia among children 2-9 years, in the present study setting. Hence, in malaria endemic settings, anaemia prevention and control program required to rethink the historical knowledge that label malaria as a major risk for anaemia.

Abs 141

Performance Evaluation of Malaria Microscopists Working at Malaria Slides Rechecking Laboratories for External Quality Assessment in Ethiopia.

Abnet Abebe, Abnet Abebe

Background: Microscopic diagnosis of Giemsa stained thick and thin blood films has remained the standard laboratory method for the diagnosis of malaria. The Performance of Malaria Microscopists in all health facilities have been raised concerns by many experts.

Methods: A cross-sectional study was conducted to assess the performance of 107 Malaria Microscopists who are working at 23 Malaria Rechecking Laboratories in Ethiopia. A set of 12 blood film slides were distributed to each Malaria microscopists. Data was collected and exported to SPSS version 20 for analysis. Different Statistical parameters were used to assess laboratory professionals' performance in detecting and identification of Plasmodium specie. Association was taken as significant at $P < 0.05$.

Result: A total of 107 study participants were involved in this study. The mean age of the participants was 30+/- 5.04 years and most of them (54(50.5%) were working at regional reference laboratories. Overall, the sensitivity of participants in detection and species identification of malaria parasites were 96.8% and 56.7%, respectively. The overall agreement on detection and identification of malaria species was 96.8% (Kappa = 0.9) and 64.77% (kappa = 0.33), respectively. The least malaria species which were identified correctly by the participants were P. malariae (2.8%) followed by P.ovale (32.7%). Study participants who were participated on malaria microscopy and quality assurance training had a better performance on parasite quantification ($P<0.001$).

Conclusion and Recommendation: Agreement on the identification of different malaria species and quantification were very low. Therefore, policy backed regular competency assessment and training for malaria microscopists is essential and mandatory to assure proper diagnosis and management of malaria in Ethiopia.

Key Words: Malaria Microscopists, Competency Assessment, Rechecking sites

Abs 142

Smear Positive Pulmonary Tuberculosis and HIV Co-Infection in Prison Settings of North Gondar Zone, Northwest Ethiopia. *Teklay Gebrecherkos Teklu*

Background: In correctional settings tuberculosis is a public health concern. The incarcerated population is at greater risk for tuberculosis (TB) than the general population. The aim of this study was to determine the prevalence of smear positive pulmonary tuberculosis (PTB), HIV co-infection and associated risk factors in prison settings.

Materials and Methods: A cross-sectional study was conducted among prisoners of North Gondar zone where all inmates with a history of cough for ≥ 2 weeks were included. Socio-demographic characteristics and potential risk factors were assessed using a structured questionnaire. Spot-morning-spot sputum samples were collected, smears were prepared and stained with Auramine O stain and examined through light emitting diode- fluorescence microscope. All samples positive for acid-fast bacilli were further examined by GeneXpert MTB/RIF assay. Data was analyzed using SPSS version 20 and a P-value < 0.05 was taken as statistically significant. The multivariable logistic regression analysis was used to determine the association between risk factors and prison tuberculosis.

Results: A total of 282 prison inmates suspected of PTB were enrolled in the study. The overall prevalence of smear positive PTB infection was 5.3% (15/282), but none of the smear positive TB cases were resistant to rifampicin. The prevalence of HIV infection among TB suspected prisoners and smear positive PTB cases was 6% and 27%, respectively. Moreover, smear positive PTB disease was significantly associated with smoking status, malnutrition, number of prison inmates per cell, poor cell ventilation, and a history of contact with TB patients.

Conclusion: The prevalence of smear positive pulmonary tuberculosis among north Gondar prison inmates was still high although lower than previous reports. There was a high prevalence of HIV among smear positive PTB cases. Reducing the burden of prison inmates in a particular cell, preventing malnutrition, establishing ventilation system can possibly minimize the transmission of tuberculosis among prisoners.

Keywords: Prison, Pulmonary tuberculosis, HIV, malnutrition, poor ventilation, TB contact

Abs 143

Prevalence of HIV Positive Status Disclosure to Perinatally HIV Infected Children and Associated Factors in Dire Dawa and Harar: Facility Based Cross Sectional Study.

Melkamu Merid Merid, Melkamu Merid Mengesha, Yadeta Dessie Bacha

Background: With increasing availability of accessible, effective combination of ART, more children with perinatal HIV infection are reaching to adolescence and adulthood. An important challenge emerged with this is determining how and when to inform children about their HIV positive status. This study assessed the proportion of caregivers who disclosed the HIV positive status of children with perinatally HIV infection and associated factors.

Method: Facility based cross-sectional study was conducted among 310 caregivers in public health facilities in Dire Dawa and Harar from January to February in 2015. Health care workers in ART unit collected the data using structured questionnaire. Descriptive summary measures are calculated and presented in tables and graphs as appropriate. Binary logistic regression was used to identify factors associated with caregiver's disclosure. All statistical tests are declared significant at P-value<0.05.

Result: The proportion of caregivers who disclosed children's perinatal HIV infection status was 49.4% (153/310). Majority of caregivers, 86.3% (132/153), reported that they had prepared children before the actual disclosure. The mean (SD) age at disclosure was 11.03 years (± 2.66). Similarly, the mean (SD) age of undisclosed children was 10.13 (±2.34). The factors that are significantly associated with disclosure in this study were whether the child frequently asked questions, child age below 14 years, caregiver's deception and caregivers perceived appropriate age for disclosure.

Conclusion: it is encouraging that more caregivers in Dire Dawa and Harar compared to other settings in Ethiopia are disclosing the HIV infection status of children with perinatal HIV infection. However, more effort is needed to help parents equip with skills on how to communicate correct and age appropriate information to their child to scale up the disclosure practice.

Abs 144

Transmission Dynamics, Drug Resistance and Population Structure of M. Tuberculosis in Ethiopia: A Comparative Cross Sectional Study between Prisons and Communities.

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Background: The population structure, transmission dynamics and drug resistance pattern of *Mycobacterium tuberculosis* complex (MTBC) isolates in Ethiopian prisons and some communities is still unknown.

Methodology: A comparative cross-sectional study was conducted on 126 MTBC strains isolated from prisons and hospitals in southwestern, southern and eastern Ethiopia. Phenotypic drug susceptibility testing was performed with the MGIT960 system. Combined 24-loci *Mycobacterium* interspersed repetitive unit-variable number tandem repeat and spacer oligonucleotide typing methods were used to study the MTBC population structure and transmission dynamics. The obtained data from prisons and communities were compared using statistical tests and regression analysis.

Results: A diverse population structure with 11 different lineages was identified. The predominant lineages were the recently described Ethiopia_H37Rv like (27.52%) and Ethiopia_3 (16.51%) with equal lineage distribution between prisons and community. The cluster rate in prisons was 28.57% whereas that of community was 31.82%. The multidrug-resistance (MDR) prevalence of the community was 2.27% whereas that of prisons was 9.52%. The highest mono resistance was seen against streptomycin (15.89%).

Conclusion: Tuberculosis in communities and prisons is caused by a variety of MTBC lineages with predominance of local Ethiopian lineages. The observed overall clustering rate is low, indicating reactivation of a remote infection rather than new transmission. The increasing prevalence of MDR MTBC strains is alarming. These findings suggest the need for new approaches to address latent tuberculosis infection to further avert the epidemics and effective control of MDR tuberculosis in Ethiopia.

Keywords: TB genotypes, transmission dynamics, drug resistance, TB in Ethiopia

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Predictors of Pediatric Tuberculosis in Public Health Facilities of Bale Zone, Oromia Region, Ethiopia: A Case Control Study. *Bereket G/Michael Menota*

Background: Tuberculosis has infected around one-third of the world population. It is among the top 10 causes of death among children globally despite the fact that children with TB are given low priority in most national health programs. Moreover, reports on childhood TB and its predictors are very limited. Globally there are estimates of one million cases of TB in children, 76 % occur in 22 high-burden countries, Ethiopia ranking the 7th among high-TB burden countries. Understanding the main risk factors among children will be of a great importance to mitigate the problem.

Objective: The aim of this study was to assess predictors of pediatric Tuberculosis in Public Health Facilities of Bale Zone, Oromia Region, 2015/16.

Methods: Unmatched case control study among a total samples of 432 (144 cases and 288 controls) were done from February to June 2016 in Bale zone. Pediatric TB patients who attended health facilities for DOTS and those who attended health facilities providing DOTS service for any health problem except for TB were the study population for cases and controls, respectively. For each case two consecutive controls were sampled. Ethical clearance was obtained from research and community service director review committee. Data was collected using pretested and structured questionnaire through face to face interview with parents. Binary and multivariable logistic regression analyses were employed to identify predictors of Tuberculosis.

Result: Among cases 71(50%) were male and 71(50%) were female. The mean (standard deviation) of age among cases was 8.4 (±4.3) and controls were 7.3 (±4.1). The odds of TB were 2 times (AOR, 95%CI= 1.94(1.02-3.77)) more likely among 11-15 age group children when compared with children of age group ≤5. HIV status of the child, family history of feeding children raw milk and BCG vaccination status of the child were the other predictors of pediatric TB with AOR 13.6(3.45-53.69), 4.23(2.26-7.88), and 5.46(1.82-16.32) respectively.

Conclusion: Adult individual with TB spread the infection to the children. BCG vaccination status, HIV status, age of the child and family practice of feeding children raw milk are the independent predicators of pediatric TB.

Key words: Tuberculosis, pediatrics, predictors of pediatric TB, Bale zone,

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Disclosure of HIV Sero-Status and Use of Memory Aid Has Strong Association with Adherence to Anti-Retroviral Treatment among People Living with HIV/AIDS at Teppi Health Center, Southwest Ethiopia.

Deneke Desta, Workagegnehu Hailu, Ejigu Gebeye, University of Gondar, Ethiopia.

Background: Adherence to Anti-Retroviral Therapy is the most important determinant of survival for people living with Human Immunodeficiency Virus and is a major tool for optimal virologic suppression and increase CD4 cell count. In several studies, non-adherence in patients on Highly Active Anti-Retroviral Treatment is the strongest predictor of failure to achieve viral suppression below the level of detection. Even though not explored in the study area, the rate of being non-adherent to ART is high among people living with HIV on ART in different settings and remains to be the key programmatic challenge of ART.

Objective: The objective was to assess adherence to ART and associated factors among adult people living with HIV/AIDS on ART in Teppi health center, Southwest Ethiopia.

Methods: Institution based cross-sectional study was conducted from May to June, 2015. A total of 361 patients on ART were selected by simple random sampling technique from adult ART clinic. A structured and standard questionnaire adapted from adult AACTG was used. Epi Info 7 and SPSS version 20 were used for data entry and data analysis respectively. Multivariate binary logistic regression was used to explore significant variables. Variables having p-value≤0.05 were considered as statistically significant with 95% confidence interval.

Results: Adherence to ART is 81.7%. Use of memory aid [AOR: 4.87, 95%CI: (2.12, 10.96)], regimen change [AOR: 5.26, 95%CI: (1.65, 16.3)] and HIV sero-status disclosure [AOR: 8.51, 95%CI: (2.6, 27.8)] were factors significantly associated with ART adherence.

Conclusion and Recommendation: Adherence to ART among PLWHA is low compared with World Health Organization standards. Sero-status disclosure, use of reminder aid and initial ART regimen change are the main factors associated with ART adherence. Therefore, improving disclosure of HIV sero-status and memory aid use is important to improve ART adherence.

Keywords: ART adherence, Disclosure status, Use of memory aid, Ethiopia.

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Anti Malaria Drug Utilization Pattern in Selected Malarious Areas of Ilu Aba Bora Zone Health Facilities, Oromiya Regional State, South West Ethiopia.

Sileshi Dubale

Background: Effective and safe drugs should be prescribed, dispensed and used rationally. Inmuch of the tropics drug resistance to malaria is ever increasing. Then, malaria should be treatedappropriately.

Objective: The objective of this study was to evaluate the utilization pattern of anti-malarial drug in selected Ilu Aba Bora zonedistrict, Oromiya region, south west Ethiopia.

Methods: Prospective cross-sectional study was conducted. Health care worker and Patient wasselected using stratified random sampling technique in each malarious area of Ilu Ababor zonedistricts. Data was compiled and analyzed by using Statistical package for Social Sciencessoftware (SPSS) version 16.0. The explanatory factors were calculated using multiple logisticregressions. The Odd ratio of anti-malarial drug miss utilization was calculated using totalnumber of anti-malarial drug used as the denominator. Statistical significance was defined at alevel of 0.05 and data was described with a confidence interval of 95%.

Results: The most prevalent type of malarial case was plasmodium vivax (40.3%), Artemeteren+Lumefantrine (Qoartem®) (42.9%) were the most prescribed for the patients.About 46.8% of prescription was prescribed out of national malarial treatment guide-lineprotocol. The most significant associated factors for anti-malarial miss utilization wereeducational level of the prescribers, profession of the dispensers, prescriber working experiences.

Conclusion: New anti-malaria drug on the market in Ethiopia, Qoartem® was exposed to missutilization and it is the signal for development of drug resistance.Keywords: Malaria; Drugs; Use patterns; Health facilities.

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Risky Sexual Behavior and Attitude towards HIV/AIDS among Mizan-Tepi University Students, South West Ethiopia

Fira Abamecha, Niguse Tadele, Mohammed Muze, Mezmur Tadesse

Background: Risky sexual behaviors such as sex with a number of partners exist among adolescents and young adults including students in university campuses. Sexually transmitted diseases including HIV/AIDS are important causes of morbidity on many campuses and unwanted pregnancies continue to occur despite the availability of reliable contraceptive methods. Hence this study assessed risky sexual behavior and its associated factors among Mizan-Tepi University students.

Methods: Institution based cross-sectional study design was conducted in Mizan-Tepi University in May, 2015. A total of 659 randomly selected students were included in the study. Data was collected using a structured questionnaire which includes the standardized AIDS Attitude Scale and HIV Knowledge questionnaire. Data was entered to Epi Data 3.0 and exported to SPSS version 20 for analysis. Multiple logistic regression analysis was used to see the effects of each independent variables on the outcome variables and the strength of association was expressed in odds ratio (OR) and its 95% confidence interval (95% CI).

Results/Findings: Of the total 659 respondents (with a response rate of 91%), 463 (70.3%) were knowledgeable about HIV/AIDS. The mean attitude score of study participants about HIV/AIDS was 83 with standard deviation of 9.68. Among the students, 167(25.3%) replied that they had sexual intercourse. The mean age at first sexual intercourse was 18.05±2.03 years. From 492 students who haven't had sexual experience 121(24.6%) planned to do it recently; and they reported that they had different sex related activities like kissing on the lip (55, 11.2%) and deep kissing on the tongue (10, 2%) which may enforce to sexual intercourse. Over half (113(67.7%) of sexually active students had their first sexual intercourse with their regular friend or fiancé, 39(23.4%) with their classmate and 5(3%) with commercial sex worker. Only 58(34.7%) have used condom during the first sex. Of these sexually active students, 35(21.0%) had unprotected sex in the last 3 months most of them (17, 48.6%) with a reason of getting sexual pleasure; and 21(12.6 %) responded that they have more than one partner currently. Concerning substance use, majority of students (501, 76.0%) reported that they haven't used any substance and 89(13.5%) students had taken alcohol. This study has shown that age, religion, VCT and knowledge about HIV/AIDS had significant association with risky sexual behaviors.

Lessons and Recommendations: Risky sexual behavior such as having multiple sexual partner and sexual practice without condom with non- regular partner exists. The university and local health bodies should work together to address the identified risky behaviors with particular focus on Behavior change communication (BCC). Therefore, strengthening BCC on risk perception, life skill training, peer-education and working together with all stakeholders and the surrounding community is recommended.

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