TANZANIA PUBLIC HEALTH ASSOCIATION

(TPHA)

(Chama cha Afya ya Jamii Tanzania)

20th Annual Scientific Conference

Public Health Situation in Tanzania:

Re-packaging Knowledge for Health Promotion

19– 23November 2001
NBC Karume Road Branch, Mbeya,
Tanzania

Abstract book

Themes and sub-themes

1. **Communicable diseases**
   - (a) Malaria
   - (b) HIV-AIDS/STDs
   - (c) Diarrhoeal diseases
   - (d) Tuberculosis
   - (e) EPI

2. **Reproductive health**
   - (a) Safe motherhood
   - (b) Gender and health
   - (c) Family planning
   - (d) Youth reproductive health

3. **Non-communicable diseases**
   - (a) Mental health
   - (b) Accidents and injuries
   - (c) Disasters
   - (d) Occupational diseases

4. **Health and the Environment**
   - (a) Safe water and sanitation
   - (b) Disposal of waste
   - (c) Pesticide burden
   - (d) Air, water and ground pollution

5. **Health management**
   - (a) Quality of care
   - (b) Health financing
   - (c) Care of chronically/terminally ill patients
   - (d) Corruption in public health
   - (e) Epidemics and their management
   - (f) Disparities and inequalities in health care (Urban vs. Rural)

1A12-O **Malaria sociological survey among communities of the lowlands and highlands of Same District, North-eastern Tanzania: *Mboera LEG, Mushi AK, Kamugisha ML et al.***

A survey was conducted to assess knowledge, attitudes and practices related to malaria among communities of Gonja in Same district of northern eastern Tanzania. Semi-structured household questionnaires were administered to a total of 334 individuals. Of the respondents, 207 (62%) and 127 (38%) were from Maore and Bombo respectively. A total of 292(88%) of the study population ranked malaria as the most important health problem in both highland and lowland areas of Gonja. The respondents mentioned fever, Diarrhoea, convulsion, general body weakness, joint pain headaches, loss of appetite vomiting and cough as the most common symptoms of malaria illness. The frequencies of knowledge on these symptoms however varied from lowland to highland area although there was no significant difference in some of the symptoms mentioned between the two areas. The classification of the malaria problem was significantly different amid the two areas ($P<0.01$). The usage of both untreated and insecticide treated nets was observed to be lower in highland as compared to the lower land areas. The results of the present survey are discussed in line with those obtained before dieldrin spraying of 1995, at the suspension of the spraying in 1959, and 11 and 20 years after the cessation of spraying. Despite community awareness about malaria transmission, the preventive and treatment practices remain as important challenge.

1A15-O **People's knowledge, attitude and perceptions on malaria treatment seeking behaviour in Mpwapwa District, central Tanzania. *Mboera LEG, Barongo V., Kamugisha ML et al***

A study aimed at determining people's knowledge, attitudes, and perception on malaria treatment were conducted in villages of Makose, Chogola, Kibakwe, Kidenge, Mwanawota and Wangi in Mpwapwa district of central Tanzania. Data was collected using semi structured household questionnaire and focus group discussions. The general health problems for adults in the district included malaria, diarrhoea, typhoid fever and pneumonia. Malaria, pneumonia and diarrhoea were also the major causes of and morbidity and mortality in children. According to most respondents, malaria causes fevers and convolutions at low and intermediate altitude. Cold weather was considered as the main predisposing factor to most of the fevers experienced in the highland villages. The use of Mosquito net was common among the individuals living in the villages of Kibakwe and Kidenge at intermediate altitude. In the district, the use of mosquito net was higher in villages with health facilities than those without health facilities. Only 2.1% of the children in Mpwapwa district were sleeping under the mosquito nets. The common antimalarial drugs used in Mpwapwa district included chloroquine and quinine. Most of

people in the district were not aware of the drugs used for the treatment of convulsions. The cost of antimalarial drugs ranged between Tshs. 10/- and 20/- for one tablet of chloroquine, 600/- for chloroquine syrup, and 320/- for a single does of chloroquine injection. Traditional medicine practitioners were most frequently consulted for management of convulsions in all villages under study. Generally, long distance to health facilities and inability to pay for health services was mostly considered as the main constraint in obtaining proper health care. There is a need to involved traditional healers in improved malaria control measures especially in areas with limited access to health care facilities.

1A16-PO: Malaria infection among school children in relation to attitude and accessibility to health services in Mpwapwa district, central Tanzania. *Kamugisha ML., Mboera LEG., Rumisha SF et al.*

Studies on malaria epidemiology were carried out in villages of Makose, Chogola, Kibakwe, Mwanawota and Wangi in Mpwapwa District of Central Tanzania. The area lies between 975 and 1859m above sea level. The average malaria prevalence rate in the district was 25.8% (1.5-53.8%). Higher malaria prevalence was observed in villages at lower altitudes than at intermediate or higher altitudes. Communities living in areas with health care facilities were less at risk of acquiring malaria by 33.4% as compared with those living in areas without health facilities. *Plasmodium falciparum* was the predominant malaria species accounting for 92.8% of all species diagnosed in Mpwapwa district. The geometric mean parasite density for *P. falciparum* was 361 (N = 286) per micro litre of blood respectively. Mean packed cell volume in schoolchildren was 38.5% (35.2-41.0%). Enlarged spleen was observed in 18.1% (0.40.2%) of the schoolchildren examined. Adult *An. Gambiae s.l.* was found in all villages and at all altitudes. Sporozoite rate in *An. Gambiae s.l.* ranged from 0.10.5%, with the lowland villages recording the highest rates. Sporozoite-positive mosquitoes were found in Wangi (8.3%), Kibakwe (10.5%) and Makose (5.3%). Breeding of *Anopheles* mosquitoes was observed in ditches, water canal, small-ponds, open drainage and pits. The presence of infective *An. Gambiae* in villages at higher altitude (>1800m) indicates the likelihood of epidemics. Continuous malaria surveillance is therefore necessary to avoid higher morbidity and mortality rates in such highland areas.

1A17-O: **Community knowledge, attitude and perceptions on malaria treatment seeking behaviour in Iringa district, Tanzania. *Rumisha SF., Mboera LEG., Kitua AY and Molteni F.***

A study on community knowledge, attitude and perception on malaria and its control was conducted among communities of Iringa Rural District, Tanzania. In each community a range of qualitative data collection techniques including focus group discussions, individual in-

depth interviews and direct observations were made. The Roll Back Malaria Guidelines were used in these assessments. Most communities considered malaria as the most important health problem in their areas. Classification of malaria differed between communities of the low and higher attitudes. Knowledge on the cause of malaria was poor among residents in the highlands. The use of coils, plant repellents and environmental sanitation were the major means of mosquito control. On average 16.5% of the children were sleeping under mosquito nets. Some 38.3% of the households owned at least a mosquito net of which 30.4% had insecticide treated mosquito nets. The price of a mosquito net was TShs. 2680-4050/- (US$-4.5). chloroquine and quinine were the most commonly used antimalarial drugs in the district. People living in villages without health facilities used more quinine than chloroquine. Chloroquine resistance was known among community members. Generally, 55% of treatments for malaria were obtained from health care facilities. However, home medication played an important role in the treatment of malaria and fever cases. Health facilities were considered as the best source of care for malaria and convulsions. Frequent travelling and cold weather were mentioned as the main predisposing factors in the occurrence of malaria in the highlands. The use of mosquito nets was higher in villages at lower than higher altitudes. Moreover a significantly high proportion of net users were from the village with health facilities than from those without. In conclusion the knowledge of malaria among residents of Iringa varies according to the endemicity of the disease and presence of health facilities.

1A18-O: **The impact of attitude and access to health services on malaria prevalence in school children in Iringa District, Tanzania.** ***Mboera LEG., Kamugisha ML., Rumisha SF et al.***

Malaria epidemiological studies were conducted in villages of Idodi, Makifu, Tosamaganga, Mangalali, Kilolo and Lulanzi in Iringa rural district, south central Tanzania. The areas lie at different altitudes and included those with and without health facilities. A total of 1643 schoolchildren were screened for malaria parasites. Malaria parasites were found in 26% of the children examined. The main malaria parasite was *Plasmodium falciparum* accounting for 93.1% of all infections. The average geometric mean parasite density for *P. falciparum* was 240 per micro litre of blood. The average spleen rate for the district was 10.5%. Mean packed cell volume for schoolchildren average 41.1%. Higher malaria prevalence was observed in villages at lower than higher altitudes and in villages without health facilities. People living in areas without health facilities were at a higher risk of malaria infections than those living in areas with health facilities. *Anopheles gambiae sensu lato* and *Culex quinquefasciatus* were the dominant indoor resting mosquitoes. Infective malaria mosquitoes were not found at altitudes higher than

1900 m above sea level. On average malaria contributes to 32.2%, 39.5% and 71% of all outpatient attendance, admission and deaths in children < 5 years of age in hospitals. In children aged above years, malaria contributes to 39.6%, 22.0%, and 62.9% of all hospital outpatients, inpatients and deaths respectively.

1A27-O: **Fighting malaria and challenging tradition: what are the politics of knowledge in Kyela District, Tanzania?** ***Marsland, R.***

It has been said that one of the factors contributing to the continuing failure to reduce the devastating impact of malaria in Tanzania is the lack of knowledge held by lay people about malaria and their persistence in clinging to certain 'harmful' and 'backward' traditions in this paper, I use the experiences gained during the first months of anthropological field work in Kyela District to reflect on the reality of this perception. Certain traditional practices of the Nyakyusa have been identified as contributing to malaria transmission and local by laws have been instituted in order to discourage them. I examine these traditions and question the extent to which they increase the malaria morbidity and mortality rates. Is it constructive to blame tradition for the burden of diseases within the context of an overstretched health infrastructure? Further, I ask if there is evidence to suggest that people are ignorant about malaria or if this is an oversimplified representation. I also propose that rural traditions should be evaluated alongside traditions of the medical profession. How can we compare the period of time it took to assimilate and act on 'new' knowledge and break with the chloroquine tradition (to produce the new national drug policy) with the internal dynamics of social change amongst the Nyakyusa? The question of 'knowledge' can be evaluated in terms of power relations, by asking who is in a position to define the epistemological framework, and who, in contrast, is defined as being outside the boundaries of determining what can and cannot be known. Finally, I suggest that it would be counterproductive to begin a malaria control project with the assumption that the community is uniformly ill-informed and unreceptive to innovation. The success of any control programme instead depends on a healthy respect for the intelligence of the local community.

1ABC77-O: **A case study in implementing the community component of IMCI.** ***DiCarlo M., Mwandemani KK***

The Child Survival and Development Project in Temeke District aims to improve child health and development by enhancing behaviour that promotes child health and prevents child morbidity and mortality at the household and community level. While the project addresses the health facility and health system components of the Integrated Management of Childhood Illness (IMCI), particular emphasis has been placed on the community component. Interventions focus on

the early recognition of childhood illness by family members, early and appropriate care seeking behaviour, and appropriate care of the sick child at home. The community component is being implemented through a series of interventions based on the Community Based Health Care (CBHC) concept. These include household visiting, community education and training, village health days (VHDs), community based health activities, and strong supervision and support to Trainer of Trainers (TOTs) and Community Own Resource Persons (CORPs). Capacity building results include 230 CORPS, 23 TOTs and 180 Village Health Committee members trained in CBHC, IMCI, inter-sectoral collaboration, learner-centered teaching methods, community participation and other development concepts. The results show that with adequate training, support, and supervision, CORPS can be a powerful and influential force on improving household and community health practices. CBHC is an effective tool in implementing the community component of IMCI. When messages are reinforced over a long period of time, health care and health seeking behaviour at the household and community level can be improved. CORPS, however, needs a high degree of motivation and consistent and strong support. They cannot be expected to volunteer for long periods of time or the quality and quantity of their work will greatly decline.

1A78-O: **Monitoring antimalarial efficacy in routine clinic practice in Tanzania. *Premji Z., Ocheng D., Makwaya C***

To establish a systemized procedure for data collection that will reflect anti-malarial drug resistance in routine clinical practice. A clinical study was carried out at three health centres situated in malaria holoendemic areas: two in Kisarawe and one in Morogoro rural. The pattern of illnesses, health indicators and staffing of these health facilities was comparable. The WHO protocol for assessment of the therapeutic efficacy of anti-malarials against uncomplicated falciparum malaria in areas with intense transmission was followed to identify early treatment failures. Children aged 60 months or below and attending the outpatients departments were examined clinical (axillary temperature, weight, parasitaemia count) to exclude other causes of fever. All children were initially treated with three does of chloroquine. Children were re-examined on day 3 and in case of treatment failure rate, Fansidar was given. For ethical reasons, paracetamol was also given for the first 13 hours and when fever persisted. All blood slides were validated by an expert and those children whose parasitaemia count was $\geq$2000 asexual parasites per ul were considered for the analysis of treatment failures. Early treatment failure rate for chloroquine among the 1562 children enrolled in the study was found on average to be 49.7% (Manarumango 51.6% and Ngerengere 47.7%). Malaria misdiagnosis, based on clinical

parameters, was significantly more common at Manarumango than at Ngerengere (10.2% vs. 0.4%, p=<0.001). The quality of laboratory diagnosis at all health centres, based on correlation of laboratory results of all blood-slide with a count of 50 or more parasites per 200 leukocytes, was extremely poor. It is possible to collect data on anti-malarial treatment failure in clinical practices with a laboratory facility, provided clinical and laboratory staff are appropriately trained and supervised in malaria case management and diagnosis. The WHO protocol acts as a cost-effective and sustainable alarm bell, and it applicable to any antimalarial.

1A99-PO: Severe and complicated malaria in Iringa Regional Hospital: retrospective analysis and proposal for Progress-Observation-Treatment Chart. *Kadete L., Kihatura A., Luvanda PJ et al.*

To reinforce the hospital malaria management, we conducted a retrospective study on malaria admissions and we proposed the use of the *"Progress-Observation-Treatment Chart"*(POTC) *for severe and complicated malaria (WHO, 2000. Severe Falciparum Malaria. Transaction of the Royal Society of Tropical Medicine and Hygiene, 94,* supplement 1). The RBM Monitoring and Evaluation form 7, and CFR/FORM111 were used. Data of January –April 2000 were collected from male, female, and paediatric wards. The implementation of the POTC was discussed after analysis of retrospective data. Orientation meetings on chart use, experimental use and interim analysis were agreed. 1051 malaria admission (34.2%) and 74 deaths (43%) were recorded. The highest rate of malaria deaths was observed in male ward *53.7% vs. 45% {female} and 31% {paediatric}). The malaria fatality rate was 7%, the attributable mortality 2.4%. Complicated cases were 214 (20.5%), the most frequent being anaemia and cerebral malaria. Deaths occurred in all age groups. 63.8% (655 out of 371) were from Iringa Municipality. Five orientation meetings on POTC were performed, attended by clinicians (41) and nurses (31); 150 POTC were distributed, for experimental use. All severe malaria cases were charted. The hospital information system was found insufficient cerebral malaria was the commonest complication (7.4%) followed by anaemia (6.1%). When considering age group, anaemia appeared prevalent below 5 year, and cerebral malaria over 5. The high number of complicated malaria in adults, reflects the highly unstable malaria transmission. The number of uncomplicated malaria admitted (76%) seemed high. The hospital utilization is mainly from municipality inhabitants. POTC revealed that the support from the laboratory should be reinforced. The regular use of the chart seems to lead to a more selective admission, and it is regarded as a practical tool for the management of severe malaria.

1A105-O: **Choosing 1st line antimalarials *Goodman C***

"Should the first line drug for malaria treatment be changed?" and if

so, "What should the replacement be?". In the face of high and rising rates of antimalarial drug resistance, policy makes in East Africa are faced with these highly complex drug policy dilemmas. Policy makers need information on the impact on health outcomes, costs, and cost-savings, both immediately and in the future, but generally have only limited information on current resistance levels and drug costs. This is highly inadequate for addressing such a complex decision, involving trade-offs in a wide spectrum of costs and health outcomes over time: and high levels of uncertainty. A decision tree mode was developed to predict the costs and health outcomes associated with different drug regimens over a 10-year period, allowing for the growth of resistance over time. Regimens using chloroquine and sulfadoxine-pyrimethamine (SP) as first line were evaluated for Tanzania. Estimates for the mode input variables were drawn from a review of published and unpublished literature from Tanzania and other African countries, consultation with researchers and clinicians. Results and conclusions: The SP regimen was predicted to be both more effective and highly cost-effective, despite higher anticipated growth rates of resistance to SP, a conclusion which was robust to changes in input parameters over reasonable ranges. More work is needed to improve data sources, and further develop and model to evaluate a wider range of treatment regimens.

1A109-O: **Assessment of malaria situation and control activities in seven districts of Tanzania.** ***Mshinda H, Mrisho M***

Malaria continues to be a major public health importance in Africa. The National Malaria Control Programme in Tanzania implemented an assessment of malaria situation and baseline malaria control status in seven sentinel districts (Morogoro-Rural, Rufiji, Magu, Lushoto, Muleba, Chunya, Tunduru). Malaria morbidity, mortality and quality of care at formal facilities were assessed in one district hospital and three health centers of dispensaries. For each of the selected health facilities, two communities (nearest and farthest) were identified for the survey. Community issues and case study of children with recent history of febrile illness and malaria prevention practice of expectant mothers was assessed. Data was collected using RBM tools designed for specific study population. The results indicate that between 40-47% of all hospital attendance are due to malaria. It is widely believed that malaria is mainly a problem of children under five in Tanzania. But the results show that total attendance for malaria for children under five exceed those for above five only in districts with high malaria transmission (e.g. Morogoro & Rufiji) and on average the attendance for cases of malaria in children exceed those for adults by only 13%. In hospital admission and case fatality rates are higher for children but the difference not significant. There is a low proportion of recent training on malaria case management (11.5%), low numbers with correct OPD diagnosis and treatment, and low proportion of

cases of malaria confirmed. Two thirds of all health facilities surveyed had a stock out of either the first or second line antimalarial in a three months period. For in patients only about 54% of children admitted with malaria is correctly managed. Assessment of children under-fives who had a history of febrile episode indicate that only 42.2% of the children an action had been taken within 24 hours. Of these 25.4% the action involved some treatment at home and 14.6% had been sent to the health facilities or a village health worker. Lastly 2.1% of the mothers/guardians admitted to attending to traditional healers as the first action within 24 hours. The proportion of children with a febrile or uncomplicated malaria episode getting appropriate treatment within 24 hours was 11.3%. The proportion of the general population covered by bed nets was 39.9%. On average only 11.9% of all households had at least one ITN. In summary, this work highlights some of the important areas that need strengthening in order to effectively control malaria in Tanzania.

1A111-O: **Determinants from the household for prompt and appropriate health seeking for malaria in under-five children: Experiences from Rufiji and Morogoro Rural Districts, Tanzania.** ***Mayombana C., Nyoni J., Makemba A***

Malaria remains a major disease burden and priority public health problem. And children under five years are the most affected. Worldwide 38% of incidence, 67% of mortality occurs in children under the age of five. Every 20th child has a risk of dying of malaria related illness before the age of five years. While prompt diagnosis and treatment remains the cornerstone in the control of mortality associated with malaria the success of this strategy largely depends on the level of promptness in the seeking appropriate health service and its determinants at household. A study using qualitative and quantitative methods was carried out between 1998-2000 to analyse determinants at household level for prompt care seeking for malaria related episodes in under five children of Rufiji and Morogoro Districts as part of household health seeking behaviour component of the Tanzania Essential Health Intervention Project (TEHIP) research. Random samples of 160 households drawn from 8 villages in each district were selected for the study. Childcare takers of under-five children and household heads were interviewed on illness recognition, sign and symptom definition and perceive aetiology as well as immediate action taken on recognition of illness and process involved. Results show that delays in seeking appropriate health care seem to root from local illness concepts in the form of associated aetiology, complexity in decision and perceived order of treatment options. 52% of household heads in Morogoro and 46% in Rufiji did not know the aetiology of febrile illness accompanied with seizures. Only 9% respectively associate it with malaria. 69% of households in Morogoro and 67% for Rufiji favoured to use traditional healer for

treatment of febrile conditions accompanied with seizures and only 31% and 33% respectively for formal health facility. The results further indicate that over 70% of households reacted by purchasing medication from private outlets on recognition of illness episode. Implications of the results for future malaria information communication and education are discussed.

1A114-O: **Intermittent treatment for malaria and anaemia control at time of routine vaccinations in Tanzanian infants: a randomised, placebo-controlled trial.** ***Kahigwa E.***

Clinical malaria and severe anaemia are major causes of paediatric hospital admission and death in many malaria-endemic settings. In the absence of an effective and affordable vaccine, control programmes continue to rely on case management while attempting the large-scale deployment of insecticide-treated nets. We did a randomised, placebo-controlled trial to assess the efficacy and safety of intermittent sulphadoxine-pyrimethamine treatment on the rate of malaria and severe anaemia in infants in a rural area of Tanzania We randomly assigned 701 children living in Ifakara, southern Tanzania, sulphadoxine-pyrimethamine or placebo at 2, 3, and 9 months of age. All children received iron supplementation between 2 and 6 months of age. The intervention was given alongside routine vaccinations delivered through WHO's Expanded Program on Immunisation (EPI). The primary outcome measurers were first or only episode of clinical malaria, and severe anaemia in the period from recruitment to 1 year of age. Morbidity monitoring through a hospital-based passive case-detection system was complemented by cross-sectional surveys at 12 and 18 months of age. Results were expressed in terms of protective efficacy (100 {1-hazard ratio}%) and analysis was by intention to treat. 40 Children dropped out (16 died, 11 migrated, 12 parents withdrew consent, and one for other reasons). Intermittent sulphadoxine-pyrimethamine treatment was well tolerated and no drug-attributable adverse events were recorded. During the first year of life, the rate of clinical malaria (events per person-year at risk) was 0.15 in the sulphadoxine-pyrimethamine group versus 0.36 in the placebo group (protective efficacy 59% {95% C1 41, 72}), and the rate of severe anaemia was 0.06 in the sulphadoxine-pyrimethamine group versus 0.11 in the placebo group (50% {8,73}). Serological responses to EPI vaccines were not affected by the intervention. This new approach to malaria control reduced the rate of clinical malaria and severe anaemia by delivering an available and affordable drug through the existing EPI system. Data are urgently needed to assess the potential cost-effectiveness of intermittent treatment in areas with different patterns of malaria endemicity. Lancet 2001; 357: 1471-77

1A125-O: **Insecticide treated nets – implementation strategy for nationwide coverage.** ***Unwin A***

Approximately 31.6 million people are at risk from malaria in Tanzania, expected to rise to about 40.9 million by the year 2010. The majority (75%) live in areas of stable perennial or stable seasonal transmission. The consequence is a heavy burden of malarial disease that consumes an estimated US$ 119 million of national resources per year. Malaria contributes to the continuing cycle of poverty and stifled economic performance. Malaria kills about 39,000 children under five years of age, year on year in Tanzania. Health service statistics do not represent the full burden of malaria. Between 40 and 50% of acute febrile illnesses that end in death have no contact with formal health facilities and in excess of 80% of all deaths occur at home. ITNs can reduce all cause mortality in children under 5 years of age by 20% and the number of malaria episodes experienced by protected children by 50%. Prevalence of anaemia and parasitaemia in children is also reduced in ITN users. Ensuring that the scaling up of this highly cost effective intervention occurs, along side improvement in early fever case management with SP drugs, is a health priority for Tanzania. Increasing the standing crop of ITNs by 9 million is possible in the medium to long term (10 to 15 years) but the short term targets need to be more modest. The Implementation plan for increasing ITN coverage identifies demand creation as the key task for the public sector with production, distribution and sales being the task of the private sector. All children in endemic areas are at risk of infection so efforts will be made to increase coverage to all groups at high physiological risk. Inducements, which encourage ITN usage in economically high risk groups, will be linked to other essential health packages.

1A149-O: **Malaria situation and strategies for its control in Tanzania: Issues and perspectives of antimalarial drug policy.** ***Mwita A***

Malaria is still the first disease in Tanzania in term of morbidity and mortality. In order to role back the problem, the NMCP has recently elaborated a Medium Term Strategic Plan for the Years 2002-2006. The proposed main strategies are: effective treatment of malaria cases, use of ITNs, and prevention of malaria in pregnancy and control of epidemics. Three out of the four strategies are depending on an adequate antimalarial drug policy. The guiding principle of a rational anti-malarial drug policy is to provide safe, effective, good quality and affordable anti-malarial and to promote rational drug use to minimize the development of resistance. The purpose of an anti-malarial drug policy is to provide rapid and long lasting clinical cure, reduce morbidity, halt the progression into severe disease, to reduce placental infection. Conditions for re-evaluation of drug policy include the Increase in malaria associated morbidity and mortality, evidence from therapeutic efficacy tests, consumer/provider dissatisfaction, presence of alternative costs effective strategies and approaches. Chloroquine was introduced in TZ in 1950s; in 1950s-1960s was highly efficacious

at a dose of 2.5mg/kg; in mid-1970s dose increased to 10mg/kg due increase in parasite resistance; in 1980s dose further increased to 25mg/kg. Loss of efficacy was noted through research and consumer and provider dissatisfaction for over 20 yrs. In 1998 a Task Force was selected to critically examine the problem. Therapeutic efficacy tests were promoted in 8 sentinel sites. A cost-effectiveness study evidenced that opting for SP would cost half compared to CQ since re-treatment costs due to drug failure would increase significantly. The task force proposed to promote SP to 1st line, AQ re-emerged to become 2nd line and Quinine remained 3rd line or 1st line for severe malaria. The proposal was presented to Ministry in Sept. 99; to the Parliament in July 2000 and implementation begun in August 2001.

1A138-O: **Community perspectives on malaria situation and control activities in Tanzania. *Mushi AK***

Rapid assessment was done between March and April 2001 as a part of RBM Malaria situational analysis, to explore the issues related to community Knowledge, attitude, practice and voice in relation to malaria illness and its health care seeking practices in seven districts namely, Morogoro rural, Rufiji, Lushoto, Magu, Chunya, Muleba and Tunduru. Four focus group sessions were held in the catchment's population of each selected health facility. Separate groups comprised of 6-8 males and female community members participated in the discussion. In each session a moderator discussed the issues in with participants using a common discussion guide. The results show that, malaria is widely associated with mosquitoes in all surveyed districts. However, the complicated form of malaria in form of convulsions is highly associated with other causations hence perceived to deserve different treatment seeking and preventive practices. In some cases the severe form of malaria was believed to be unpreventable. Health service problems noted were mainly associated with long distance to health facilities, lack of drugs and personnel to meet the demand of community according to responses of participants in most sessions. Community based groups for dealing with health were generally said to be non-existent. Though mentioned in some places, the in availability of treated nets in most visited places and variant prices were found as major constraints. In conclusion, the results are of significant implication malaria control policy in Tanzania. Successful community based interventions have to be participatory oriented..

1A147-O: **Information for action: establishing a district data-base for planning evidence based malaria control activities. *Molteni F***

This study is presenting an original way to analyse information to reinforce the implementation of evidence based activities for malaria control in Mpwapwa, Mufindi and Iringa districts. Retrospective data (5 years) from the HIMS were collected in all the 143 health facilities of the three districts. The selection of the indicators was done

according to the indication of the NMCP manual for *District Malaria Control Planning at District Level* (May 2000). A check list containing operational information has been also filled. Available Meteorological data were also recorded. The data were entered in a original matrix and analysed. A high proportion of the facilities are compiling the MTUHA regularly. The quality of data has not been evaluated. Data are largely under utilized both at peripheral and district level. The existing HIMS is largely insufficient for malaria mortality information. The system is also missing valuable information on clinical management (e.g. management of severe malaria and notification of early treatment failure). The MCH indicators are as well not useful for determining the burden of malaria in pregnancy. Some indicators are influenced by the availability and utilization of health services and their accessibility. Incidence and prevalence data should be reinforced through specific morbidity surveys. Summary tables and charts are presented by district, divisions, wards and health facility. This allow as a better understanding of malaria situation at each level in order to localize malaria epidemiology. The establishment of the database should be considered as a step towards the stratification of malaria transmission patterns and malaria control opportunities in the district. Malaria control should be always considered in focalised context. The understanding of malaria epidemiology in the district is essential to guide the DHMT's in the planning and allocation of the available resources for malaria control activities.

1A148-O: **Early detection of malaria epidemics: the first step to control and under-rated killer. *Molteni F, Nyange A***

Malaria epidemic prevention and control is one of the main strategies identified by the NMCP in Tanzania for rolling back malaria. According to suitability geographical models for malaria transmission (MARA) it is calculated that about 25% of the country (8,400,000 people) are living in epidemic prone areas. In spite of this finding, only a few malaria epidemics were described and reported in the country in 9 districts (Mboera and Kitua, 2000). This paper is presenting a model for early detection of malaria epidemics based on the existing information available in the HMIS. In three epidemic prone districts (Iringa Rural, Mpwapwa and Mufindi) all the health facilities (82, 28 and 43 respectively) were visited. Monthly malaria cases recorded in OPD in the last five years in each facility were recorded. A surprisingly high proportion of data were found in the health units (83-100%). Monthly frequency distribution for the previous five years was plotted into simple line charts, one for single facility. For each facility service area it has been calculated an alert line (mean of the middle values for each month) and an action line or epidemic threshold (with simple statistical calculation). The statistical method is presented in the paper. Unreported epidemics were detected in 42% of the health facilities. In one district (Mpwapwa) it

has been possible to correlate retrospectively the detected epidemics with a significant increase of severe malaria cases, blood transfusions and deaths in patients admitted in the district hospital. Through this method DHMT's and the frontline health workers will be empowered to promptly recognize epidemics by plotting the data on weekly bases in the warning charts.

1B10-O; **HIV/AIDS response in Tanzania: A case study of Bukoba Rural, Bagamoyo and Lushoto Districts.** ***Muna DSRM, Mahigi HI***

A study was conducted between October 1997 and April 1998 to find out how the districts are responding to HIV/AIDS epidemic. Three districts were purposely selected for this study, namely, Bukoba Rural, Bagamoyo and Lushoto districts. The objective of the study was to explore ways of reducing both the risk factors and potential vulnerability of communities, by learning from them how they are responding to health, social and economic problems, and use the findings to strengthen the risk strategies that have been in place and at the same time to try to find strategies for reducing vulnerability to HIV/AIDS infection which is increasingly recognized as an important area to direct efforts to. Of the three districts studied Bukoba rural district was far ahead of the other two districts in responding to HIV/AIDS epidemic. This was true both at the level of the district as well as the level of the community or village. This could be attributed to a number of Non-government Organizations dealing with HIV/AIDS issues operating in the district. This was not the case with Bagamoyo and Lushoto districts. The paper proposes for an expanded response toward HIV/AIDS epidemic at the district level.

1B28-O: **Sexually transmitted diseases: Patients, health care seeking behaviours, treatment and treatment outcomes in Dodoma Region.** ***Simonelli M.***

The control of STDs has been recognised as a priority strategy in the attempt to reduce the transmission of HIV. Appropriate and early treatment of STDs is a key to achieve this goal. A STD control project has been launched in recent years in Dodoma region. About half of the health facilities in the region have been involved in the project and are now delivering improved case management for patients with STDs. Syndromic approach has been advocated as the most effective way for treating STDs and has been applied on a large scale in the 90s. Monitoring the efficacy of drugs at community level should be considered as a routine activity in order to detect the optimal selection of drug combinations in terms of safety, low cost and adequate patient compliance. Health Care Seeking Behaviours (HCSB) of the population have to be monitored too being these usually affected by many factors such as: availability and accessibility of health services, affordability of health care and the social and

cultural environment. This paper present the results of a recent study carried out in five health facilities in Dodoma region involving 275 patients suffering from STDs concerning socio-demographics characteristics of STD patients, their sexual behaviour and condom use (before and during treatment), health care seeking behaviours/treatment delay and finally the treatment outcome. The treatment outcome is showing an excellent response in terms of cure rate following the administration of standardized drug combinations. Although the therapeutic approach seems to be effective, the overall objective of the control interventions is still hampered by the delayed individual response of the public on seeking the appropriate care: in fact, several patients are still delaying treatments up to 3-4 weeks from the onset of the symptoms. Recommendations are given concerning the constraints above.

1B60-O: **The quality of care of STD's syndromic case management and associated factors in Mbeya Municipality.** ***Kuya P.***

The proper management of sexually transmitted diseases (STDs) is a vital importance for two reasons; because of their magnitude and their potential for causing complications, especially HIV infection. The main objective of this study was to determine the quality of care of STD Syndromic Case Management (SCM) and associated factors among government and private health facilities in Mbeya Municipality. A total of 55 out of 72 trained STD-SCM providers, from 36 clinics both public and private were surveyed with regard to their knowledge about, and performance in STD-SCM. Focus group discussions (FGDs) were conducted among the providers and clients to determine problems in relation to STD management. With regard to the providers knowledge about STD-SCM, 53(96.4%) of providers were able to re-call the 8 commonest std syndromes in Tanzania while over 41 (74%) could recall treatment for the 8 most common syndromes. 40 (72.7%) of the providers were able to list 3 of the changes in behaviour that they are required to emphasize to STD patients they treat. Regarding the advantages of STD-SCM, 45(81.8%), were able to recall at least two out of the three major ones. Only 37(67.3%) were able to mention 3 serious complications of STD. Out of the 72 trained providers, only 6(10.9%) were able to carry out proper history taking, physical examination, diagnosis, treatment, educating patients and record keeping. The clients were satisfied with the accessibility of the clinics, the waiting time before being attended and the reception they obtained from the providers. However, the clients major dissatisfactions were failure to obtain drugs at the clinics, inadequate health education, and the degree of privacy and confidentiality at the clinics. The majority 42(76.4%) of clinics had either none or insufficient equipment and supplies. Gloves were available in only 8(22.2%) of the clinics while only 14(38.8%) had facilities for hand washing. Examination beds were the only

essential items of equipment for conducting physical examination that were available in all STD clinics. About half of providers 27(49.1%), reported that they had never received even one supervisory visit since beginning work as STD-SCM providers. Neither had they received refresher training of any kind.

1B74-O: **Prevalence of syphilis and HIV infection among pregnant women attending antenatal clinics in Mwanza Region.** ***Mwaluko G., Urassa M., Yusuf Y et al.***

The study has three objectives i.e. determining the prevalence of Syphilis and HIV-1 infection, to asses level of compliance to syphilis treatment and finally to compare HIV estimates from antenatal surveillance and those of the general population A cross-sectional (sentinel surveillance) study was carried out in three rural and two urban health facilities in Mwanza region, Tanzania. All pregnant women attending antenatal clinic for the first time for any pregnancy during the quarter were enrolled. They provided blood for Syphilis testing and anonymous HIV testing. Those who tested positive for syphilis were requested to bring their spouse/partners for treatment. A total of 1370 pregnant women were recruited into the study. Their mean age was 24.7 years. Eighty five percent of the participants had formal schooling and included 75.5% and 87.5% from rural and urban health units respectively. Of those who participated, 155 tested positive for RPR representing a prevalence of (11.3%). However, rate of Syphilis infection was higher among rural clinics attendees (20.9%) compared to the urban counterpart (8.2%) [P=0.000]. Level of treatment as well as contact tracing was below expectation. Treatment of women testing positive for Syphilis and their contacts was 63% and 50% respectively. Overall HIV prevalence was 13.6% (186) but higher among urban (15.3%) against rural attendees (8.3%) [P=0.01]. Reliability of the ANC's HIV estimate is justified by the fact that the prevalence recorded in the rural health facilities were very close to what has been recorded in the population based surveys in the same area. Antenatal clinic surveillance can provide true estimates of HIV prevalence in the general population and therefore resource stricken communities can rely on the ANC estimates. New strategies need developed to improve treatment compliance.

1B107-O: **The role of religious groups in the provision of care and support to AIDS patients and other chronically ill people in a rural ward, North-western, Tanzania.** ***Siza J, Nnko S, Chiduo B et al.***

Religious groups appear to be invariably effective in the provision of psychosocial care and support to HIV/AIDS patients and other chronically ill people particularly in rural settings. The care and support provided by these groups seem to be more permissible to both the patients and their relatives as they encompass spiritual elements. The study aimed to identify and describe the role played by

various religions in the provision of care and support to AIDS patients an other chronically ill people in Kalemela ward. This paper presents the findings from 28 in-depth interviews with patients 50% of whom were AIDS patients suspects; 23 care providers; 10 group interviews with key informants (including Religious leaders) and health care facilities; 16 focused group discussions with youths and adults (men and females) and 143 questionnaires with community members. Six groups namely African Inland Church (Tanzania), Pentecostal Church, "Fatma"(Roman Catholic), "Dorcas"(Seventh Day Adventist), New Apostolic Church and Pentecostal Assemblies of God followers were found to be effective in the provision of care and support to patients and relatives of the affected. The services provided were both psychosocial and economic in nature. ;However the services were directed to followers of the respective denominations rather than the whole community.

1B137- O: **STIs prevention and control intervention strategies in Tanzania.** ***Mshana MA***

STIs are a major health problem in Tanzania compounded by the advent of AIDS and HIV infection. NACP has targeted on comprehensive management of STIs as a major primary preventive component in the NACP strategies and interventions against HIV/AIDS. The objective of the STIs prevention and control programme of the NACP is to prevent the transmission of STI and HIV in the population through proper management of patients with STIs, effective tracing and treatment of contacts and partners of STI patients. The objective is achieved through various strategies including training of health workers, ascertaining availability of effective STI drugs and supplies in the service delivery points, community involvement, integrating STI activities into the PHC system, development and distribution of Clinical/counselling Management Guidelines for STI/HIV/AIDS at the different levels of care. The other strategies include contact tracing and treatment, regular monitoring and supportive supervision of the STI services provided by different actors. In addition in order to facilitate diagnosis, the programme has distributed laboratory equipments and reagents for the diagnosis of STIs. The programme by utilizing the above strategies has improved the quality of care in STIs management resulting into a significant increase in the number of patients treated for STIs in the health facilities. Districts and Regions involved in the programme have shown continuous increase in STI services utilization data. As control of STIs is an effective control measurer in HIV/AIDS, this programme is a major contribution towards the control of HIV/AIDS in Tanzania.

1C143- O: **The environment and intestinal helminths among school aged children in Kisarawe District.** ***Mamuya SHD, Mubi M***

A cross sectional descriptive study was carried out in Kisarawe district Coast Region. The aim was to determine the prevalence, pattern and determinants of intestinal worm infections among school age children. The study population was children aged 6 to 18 years old. Multistage random sampling was applied to obtain six villages where a sample size of 1429 children was studied. A structured questionnaire was used to collect demographic information. Focus group discussion was used to obtain qualitative information. Observation was employed to collect information related to physical environmental facilities such as latrines and water sources. Stool samples were collected from the study population and examined for eggs by Kato Katz thick smear technique. The study results showed that, the prevalence of intestinal worms infection by species were 27.8% for hookworm, 46% for *Strongyloides stercoralis*, 0.5% *Trichuris trichiura* and 0.1% for *Ascaris lumbricoides*. The prevalence of hookworm infection for male children was higher than female children (30.8 vs. 24.8% and the difference was statistically significant as ($P<0.001$). The finding is similar to the one done in Nigeria by Agi (1995). Also the study showed that the highest prevalence was in age group 10-13 although the difference was not statistically significant. Latrine coverage was 95% and almost all latrines had sand soil floors material. It also showed that out of the latrine visited, 50% had dirty floors with traces of faecal matter. About 71% of latrines had no roof and 26% had superstructure thus no privacy. It was noted that all households had two dwellings, one in the village and other in the farmlands (former traditional villages). While 65% of the households relied on water from shallow wells, 22% relied on ponds, which get dried during the dry season. It was also noted that only 32.5% of the children were wearing shows and the percentage increases with age. Proportion of female children wearing shoes was higher than of male children (35.5% Vs 30.9%). There was marginal association between wearing of shoes and hookworm infection ($X^2=3.86$, p value = 0.05). Despite the high coverage of latrines, still the prevalence of intestinal worm is high. Provision of low cost squatting slabs to the household's latrines and the introduction of similarly constructed latrine into the farmland are recommended. Hygienic measure such as latrine cleanliness needs to be reinforced through health education.

1C144- O: **Intestinal worm infections, anaemia and nutritional status of school aged children in Kisarawe district, Coast Region.** ***Mubi M., Mamuya SHD***

A study was carried out in Kisarawe district with the objective of determining the prevalence, pattern and determinants of intestinal worm infections among school aged children. A total of 1429 children aged 6-18 years were included in the survey. Stool samples were collected from the children and examined for the presence of intestinal worm infections using the Kato Katz technique. The

haemoglobin levels of the children were estimated using the Heamocue haemoglobinometer. Height and weight were measured using standard measuring boards and bathroom scales respectively. The overall prevalence of intestinal worm infections was 32.8%, with hookworm infections leading at 27.8%. Hookworm infections were more prevalent in males than in females. Other infections that were found at much lower levels were *Strongyloides stercoralis, Trichuris trichiura* and *Ascaris lumbricoides*. The prevalence of Anaemia ($Hb<12g/dl$) was 79%, much higher than that of hookworm infections. This points to the existence of other causes of anaemia in the population. The study also showed that 27.6% of children aged 9-18 years had low Body mass Index (BMI). Children aged 12 years were the most affected (39.9%) while those aged 18 years were the least affected. As with hookworm infections, males were more affected than females. The study recommends that a follow-up study to investigate the cause of anaemia in the population be carried out. The impact of both anaemia and intestinal worms on the health and well being of the children should also be investigated, and findings from the investigation be used to enlighten and motivate the community to take an active role in controlling these problems.

1D13-O: **Epidemiology of TB in Same District.** ***Kilale AM., Lema L., Mfinanga GS., Sekiboja PM., Irongo J***

According to the Tanzania National Tuberculosis/Leprosy Program annual records, there was an impression that in Same district tuberculosis cases were increasing. This prompted the researchers to study the epidemiology of the disease in the district. District and Unit registers of five health facilities randomly selected were reviewed. A total of 452 tuberculosis patients were reported from 1995 to 2000. The proportions of smear positive pulmonary tuberculosis cases decreased from 70% to 61.6% in 1995 and 2000. There was a high prevalence of smear negative and extra-pulmonary tuberculosis (EPTB) cases. Patients diagnosed to have EPTB were 13(22%), 5(12.5%), 14(24.6%), 16(15.8%), 15(15.8%) and 25(25.3%), respectively. Most of the EPTB cases had tuberculosis of the spine. In 1997, 2 (14.3%) of the 14 EPTB cases had tuberculosis of the spine and 8(50%), 2(13.3%), 6(5.7%) in1998, 1999 and 2000, respectively. Patients diagnosed to have tuberculosis of the spine were from Gonja Lutheran Hospital presenting a prevalence of 22.2% in 1997, 80% in 1998, 40% in 1999 and 54.4% in 2000. Cure rate was observed to be relatively good and the death rate was as high as 17.5% in 1996 while the average was 11.5%. The result shows that tuberculosis is a growing public health problem in the district. Cure and treatment completion rates, which are appreciably higher, indicate good compliance and/or sufficiency of the programme in the district. Children presenting with tuberculosis are increasingly becoming a time problem in the area. Higher age was a risk factor to develop

tuberculosis. Males 46 years and above were likely to develop tuberculosis than females the high proportion in smear negative and EPTB cases indicates presence of atypical presentation of the disease in most of the TB patients.

1D1-PO: Health facility DOTs versus community based DOTs for control of tuberculosis, experience from Kilombero district. *Lwilla F*

With advent of HIV/Aids, tuberculosis has reappeared as a serious public health problem. Non-compliance to treatment has been cited as the major cause of the epidemic In response to non-compliance, directly observed treatment short-course (DOTS) has been recommended. Nevertheless, in Tanzania despite the fact of having 100% coverage of health facility based DOTS since 1986, recently there has been an increased number of tuberculosis cases with low adherence and cure rates. In Kilombero district for instance, in 1995 and 1996, there was a two-fold increase of tuberculosis with increased defaulter rates and low cure rates. With economic constraints facing the country, we decided to explore another maybe cheaper and effective strategy for the control of tuberculosis in Kilombero district. With the hypothesis of community based DOTS (CBDOTS) is as efficacious as the institutional based DOTS (IBDOTS, we conducted an open randomised controlled trial with intention to treat analysis to evaluate the conversion rate at 2 months of treatment and cure rates at 5 months treatment between the CBDOTS and IBDOTS. A total of 522 patients AFB + under short course chemotherapy (SCC) were followed up. The results showed that there was no significant difference in conversion and cure rates between the two strategies. These findings compare favourably with the findings from other studies done in China, Bangladesh and South Africa. We recommend that for the larger coverage of tuberculosis control activities in Kilombero and Tanzania, community based DOTS can be used, as an alternative strategy where the health facility based DOTS is not available.

1D102 – O: **Community acceptance of community based directly observed therapy for tuberculosis treatment in Kilombero District. *Khatib RA***

This study was carried out in nine villages of Kilombero District to compare acceptance of Community Based Directly Observed Therapy (CB-DOT) versus Health facility Based Directly Observed Therapy (IB-DOT) during the initial two months called intensive phase in the treatment of tuberculosis (TB). Specific objectives of this study were: To compare the attitude of TB patients towards CB – DOT strategy against IB – DOT; to compare the attitude of health workers towards CB – DOT against IB – DOT; to compare the attitude of the community towards these two TB treatment delivery strategies and to assess the willingness of the community observers in

doing what they were required to do. Data were collected using administration of questionnaires to TB health workers, TB patients and TB community observers together with focus group discussions. Results suggest that overwhelmingly 77.8% of TB patients, all health workers and community observers prefer the supervision of the community-selected representatives at home during the intensive phase of TB treatment to supervision by the health workers at health facilities in the treatment of TB. Most participants of focus group discussions similarly supported these views. The study concludes that if data analysis from the effectiveness component of the study indicates (which at present is the case) that CB-DOT strategy is better then this approach it should be scaled up nationwide subject to the adoption of the list of recommendations that this study provides.

1E61-PO: Immunization coverage in under one year of age in Inyonga and Kabungu Divisions, Mpanda District. *Nyenyeri G*

A descriptive cross-section study was done using an open-ended and close-ended questionnaires to explore factors contributing to low immunization coverage in under one year of age. The study was conducted in 8 villages of Inyonga and Kabungu divisions of Mpanda district, from December 2000 to February 2001. The main objective of the study was to identify factors contributing to low Immunization coverage in under one year children in two divisions of Mpanda district. A total of 265 mothers with under one year children and 7 health units in charges were included in the study. From the research findings it was noted that the majority 59% of mothers interviewed were not knowledgeable on immunization schedule, 26% were highly knowledgeable and 15% had moderate knowledge. The study found that children living near the MCH-clinics have higher immunization coverage than those living far from immunization clinics. The time taken to reach health facilities by many respondents ranged between 1-2 hours, 34%. 31% of respondents took 3-4 while 27% took less than one hour and minority 8% took more than 5 hours. The study has revealed that the immunization coverage fro Inyonga and Kabungu divisions were about 12.5%. Factors leading to the low coverage are due to lack of outreach, and mobile services, shortage of health personnel, lack of vaccine, lack of kerosene and inaccessibility of mothers to vaccination centers. From the study findings, it is recommended that immunization coverage can be improved by adhering to the following: Improve vaccine and kerosene distribution, conduct outreach and mobile services, employ adequate health personnel to each health facility, not to forget educating mothers on the importance of immunization schedule and also multi-sectoral collaboration is essential so as to raise the coverage.

Reproductive health

2A23 –O: **Prevalence of abortion and its influencing factors amongst**

women of child bearing age in Rombo District ***Shirima MP***

This study was carried out in Rombo District North Eastern Tanzania on the slopes of Mountain Kilimanjaro. The main objective of the study was to look for the community based abortion prevalence and its contributing factors in women of child bearing age (15-49 years). The study was descriptive and cross-sectional. Multistage random sampling was used that gave a sample size of 440 individuals. All ethical considerations were taken into account before using structured questionnaires. Data analysis revealed that 136 (30.9%) respondents out of 440 had experienced an abortion. Factors found to contribute to the problem were high parity, education level, low Family Planning utilization rate and age. Majority of those affected 85.3% had attended health facility for attention. Abortions were high during the first and second trimesters. Awareness on causes and consequences of abortion was low and 20.8% knew nothing on this. However, awareness on family planning was high 98.6% but the user rate was low 58.6%. The study concluded that, there is high community based prevalence of abortion in women of child bearing age especially during the first two trimesters. Results of this study will enable the Council Health Management Team to address abortion problem in line with Safe Motherhood Initiative, which form an important component of National Essential Health Package. From the study results it recommended that, adequate health education and follow up should be strengthened in the District especially in the community on Reproductive Health and Family planning utilization. In order to achieve health education goal, Health Belief Model (HBM) and preventive model will be used as a descriptive framework for factors contributing to abortion among women in childbearing age.

2A37 –O: **Comparison of rapid plasma regain test (RPR) results obtained on site and NIMR STD reference laboratory** ***Kashangaki PJ., Watson-Jones B., Changalucha J***

Availability of simple and cheap laboratory screening tests could enhance the impact of Sexually Transmitted Diseases (STDs) control through treatment services. However, most laboratory tests are not done on site and it may take several days before results are available. This could affect treatment coverage and provide opportunity for further transmitting infections. Thus simple, quick and cheap on site screening laboratory procedures could provide an efficient alternative. To determine the comparability of RPR results obtained at the clinic and NIMR STD Reference Laboratory for pregnant women attending Makongoro antenatal clinic, in Mwanza Municipality. A cohort of 299 pregnant women attending Makongoro antenatal clinic for the first time during the current pregnancy have been recruited for a prospective study on impact of syphilis screening and treatment with single does benzathine penicillin on pregnancy outcome. RPR testing was done at the clinic before recruitment and for those enrolled in the

study, their sera were tested by both RPR and TPHA at NIMR STD Reference laboratory. Two hundred and ninety sera were RPR tested at the clinic and NIMR STD Reference laboratory. Ninety-two were positive at both sites. There were discrepant results for six, which were positive at the clinic and negative at NIMR STD Reference laboratory. All of the six sera were also negative by TPHA. The comparability of RPR results for the two centres was excellent (kappa=0.931). There was excellent agreement for RPR results obtained on site and NIMR STD Reference laboratory for screening syphilis in pregnant women. All sera that tested positive at the STD reference laboratory were also detected at the clinic. Although a slight over reporting of positives was observed at the clinic, the advantage of having immediate results and treatment could outweigh the problem of over treatment.

2B36- O: **Illness experience and health seeking behaviour: A study of knowledge, experiences and perceptions of female genital schistosomiasis in Northern Tanzania.** ***Ahlberg BM., Mwangi R., Poggensee G., Feldmeier H., Krantz I***

This paper is about perceptions of urinary schistosomiasis and more specifically female genital schistosomiasis (FGS) or schistosomiasis of the reproductive tract. As a disease, FGS presents itself with a variety of symptoms, which neither the affected women nor the medical professionals usually recognize as schistosomiasis. The study therefore focused on symptom recognition, the question being whether living in an endemic area woman can distinguish symptoms of urinary and genital schistosomiasis from those of other diseases presenting in similar ways. Data was collected using qualitative methods including individual interviews, focus group discussions (FGD) and observation. A variety of stakeholders-women, men, teachers and healers including public health staff, traditional healers and traditional birth attendants (TBAs)-were interviewed. All those interviewed were aware of the link between water and infection. Because the disease is associated with farming and livelihood, there was a feeling among those interviewed that treatment whether hospital or traditional medicine could not effect permanent cure. Re-infection was expected and as schistosomiasis was said not to be as poisonous as malaria, it was felt there is little choice between being infected and having food. Moreover making sense of the symptoms was considered difficult. Both women and men however said they could tell whether blood in urine was due to urinary schistosomiasis or other conditions such as STDs, which present similar symptoms. The similarity with STD symptoms was said to be problematic also because of the sensitivity and stigma in STDs. Urinary schistosomiasis is therefore a complex health problem and for any effective control there is clearly a need to understand this complexity.

2B53 –O: **Gender and health: New strategy for MCH/FP services to be more adapted to women and men's need.** ***Cloutier L., Majapa Z***

The MCH/FP services offer limited services that do not cater not the multiple and complex problems that urban women face during their productive lives neither the changing conditions related to proletarisation process that affect both men and women in Dar es Salaam. Moreover, men are rarely integrated in those health programmes from a family or fathering perspective. There is a lack of attention to women's health beyond the context of their biological reproductive roles. Gender relations have a considerable significance in explaining the differential consequences of diseases on men, women and children. Socio-economic changes have profound but different implications for both sexes. The recognition of women in their different roles in biological reproduction, production and social reproduction calls for the development of a gender sensitive approach that cannot ignore the complexity of women's needs. Strategies must take into account the interaction of processes of production and social reproduction and their impact on women's lives. The worsening of the quality of life for many women is clear enough. By breaking down the issues into the different roles that women have, under different production processes it is possible to see that different strategies are possible. First, a gender approach necessitates that women be seen as individuals with personal health needs that go beyond their roles of biological reproduction. Second, women's health must be understood within a holistic framework, which includes both productive and reproductive contributions, their relationships with others and their views of themselves. Third, population policies through family planning programmes still almost exclusively target on women as they assume that women's reproductive and sexual health depends on women's ability to control their reproduction safely and effectively. But female reproduction and sexual behaviour cannot be separated from that of men. Women are still subservient on men in sexual domain.

2C4-PO: Abortion and family planning in Tanzania. ***Ross Kinemo, Stella Kinemo***

Abortion has been defined as the termination of pregnancy, either spontaneously or be intervention before the foetus reaches viability. The term abortion covers both accidental and intentional interruption of pregnancy, although the word termination is often used for intentional act. The causes of abortion are many and sometimes no cause can be established. Studies in recent years have shown that in many cases pregnancy occurs without the development of an embryo, the so called "blighted ovum", in these cases abortion of the fruitless pregnancy will occur in due course. Induced abortion may be criminal or therapeutic. This can be achieved by various means, which are dangerous. Therapeutic abortion is artificial termination of pregnancy

in the interest of the mother's life of health. Family planning refers to practices consciously adopted by a family to determine the number of spacing and pregnancies in the interest of the welfare and well being of the members of the family. The methods of Family Planning are stated in Family planning policy, which include Barrier Methods, Intrauterine contraceptives devices (IUCEDS) and Hormonal Contraceptives. However, of late it has been revealed that some women have been conducting abortion to terminate an unwanted pregnancy as a method to achieve Family Planning. Thus, this paper analyses abortion law in relation to Family Planning in Tanzania, pointing out that although people for centuries have been regulating Family size through abortion, this practice is illegal and contravenes not only the constitution of United Republic of Tanzania, but also the Family Planning Policy. Subsequently, the author concludes that although the government has taken initiative efforts to prohibit abortion as a method of family planning in Tanzania, there is no machinery to investigate, control and prosecute the offenders. Therefore, there is a lot of room for the government to improve this law and ensure greeter and more effective prohibition of abortion as a method of Family Planning in Tanzania.

2C39-O: **Knowledge, attitudes and practice of family planning as correlates to fertility among men in Ngara District, Tanzania.** ***Ndenzako F***

This was a study to investigate the knowledge, attitude and practice of family planning among men in Ngara district Tanzania. The first objective of the study was to assess the knowledge of different types and magnitude of contraceptive use among men. The second objective was to assess the level of contraceptive availability and reasons for using/not using contraceptive methods as well the men's reproductive preferences. It is a cross-sectional study conducted in August-December 2000, including 275 men aged 15-59 years who were randomly selected from 18 villages. Men who had no sexual experience or were mentally ill and those who did not consent were excluded from the research. The data were collected using structured questionnaire, in addition focus group discussions were done and association between different factors and contraception use was calculated. The male contraceptive prevalence was low (18%), with periodic abstinence as a common method in use (9%). The knowledge of male methods was limited. Though a majority of men has heard about condoms (96%), only 70% have been one and a majority reporting to have seen condoms only in packets during focus group discussions. Few men know of vasectomy (48%), associating the method with castration of animals. Desiring more children (25%), poor knowledge of male methods (20%) and difficulties in using the methods (10%) were the most frequent reasons given by non-users. Men desired a large family size and preferred boys rather than girls.

Contraceptive approval among men was high and men believed to be the prime contraception discussion initiators in their families. We conclude that low knowledge and misconception about male methods, large desired family size might have been associated with low male contraceptive prevalence. Therefore, there is a need to find better ways to reach men especially in rural areas, to provide access to appropriate and adequate information regarding a range of family planning methods.

2D62-O: Young men as equal partners in sexual and reproductive health. ***Maendaenda C***

Men and young men in particular have little knowledge on HRH and gender, and have negative attitude against female sexuality. As a result, males are perceived by females to be selfish in relationships and decision making. A baseline study I conducted to establish a project for young men in Tanzania (UMATI, 2000) revealed serious gaps among young men aged 13-24 years in relation to their SRH knowledge, attitude and behaviour. While 70% (n=608) of respondents admitted to be sexually active, nearly half of them said that with unprotected sex they only fear STIs and HIV/AIS and nothing else. While adults and religious institutions believe that abstinence is the best protection against HIV/AIDS scourge among youth, 60% of the young men reported of not knowing any other means of showing love apart from sexual intercourse. About 61% reported that those who masturbate are bad mannered; and only 37% approving relationships with apposite sex without sexual intercourse. Condoms use among the young men in restricted to new sexual partners. More risky, half of the respondents (n=608) believing that there are different types/flavours of vagina and therefore one need to test them (without a condom) as many as possible to get his preferred type/flavour. They also believe a woman becomes sexually satisfied when a man takes several rounds (ejaculations). This belief makes them strive to maximize sexual satisfaction of girls. Young men feel proud to father a baby before married ("testing your poison"), however, they are not ready to marry girls or who already had baby before. These are some facts indicating that young men have unmet SRH needs. Males being key in decision making need to be equally targeted so as to enable them make responsible decisions in their relations with their partners.

2D73-O: **Non friendly youth sexual and reproductive health services: An in-depth study of urban and rural settings.** ***Chenya E., Masesa E., Ngalaba SE., Hugo AM., Karoko WA***

Youths in this study are defined as individuals aged 10-24 years and constitute about 21.5% of the country population. Reports suggest that youth in the country have no easy access to the Sexual and Reproductive Health (S & RH) services. The extent of unfriendliness

of such services is so far unclear. This study seeks to explore and describe youth's needs and services availability. The study will also suggest solution to the identified gaps. The study used cross-sectional design and was conducted in Magu and Mwanza districts. Data were collected using personal interviews and involved 81 health providers (from 32 randomly selected health facilities), 92 youths and 92 parents. The main types of S&RH services provided in the health facilities studied are family planning (52%) and treatment of STDs (38%). Awareness of Family planning method was 86.7% and 82.7% among youth and parents respectively. Sixty percent of the youth reported poor provision of S&RH services and the main reason was hostile attitude among health providers. Moreover, inequality in the provision of STD supplies between urban and rural areas was noted. STDs Kits are only supplied to 25% of rural health facilities compared to up to 87.5% in urban ones. Other reported constraints with regards to S&RH services were; fear among youth of being noticed by parents or relatives, poor reception by health providers, shyness and cost of drugs. The constraints voiced by the youth in this study may be addressed by developing an intervention for establishing friendly S&RH services in health facilities. Moreover, there is need to produce health learning materials for health providers addressing the needs.

2D75-PO: Awareness, Knowledge on HIV/AIDS and the extent of coital exposure amongst youths ***Mgine R***

The assumption that exposing youths to sex education and family planning services might prompt promiscuous behaviour is still ambivalence in the society, while existing data shows that a large number of youths has already indulge in sexual intercourse mostly being unprotected sex. Many do so in an atmosphere of inadequate information and misconception thus exposing themselves to a series of public health problems, which are costly to themselves, parents and the society at large. In this paper descriptive study was carried out at Kiluvya Secondary school where there was no sex education or family planning programme, to determine awareness, knowledge on HIV/AIDS and the extent of coital exposure. A simple random methods used to draw a sample of 100 students aged 14-24 years using structural self-administered questionnaires. 92% of respondents were aware of HIV/AIDS, 86% knew that yet there is no cure for HIV/AIDS yet nearly half of the study population i.e. 49% were sexually active at the time of data collection, male students rate being as twice to that of females while only 14 students used condoms during the act. It was learned that the major reason given on failure to use condom is a misconception that it doesn't prevent HIV/AIDS transmission. The author recommends that more studies are to be carried out to determine why do youths had the misconception that condoms does not prevent HIV and to disseminate adequate

knowledge on how safe condoms are or else youths are real at jeopardy. Youths must also be involved in discussing on how to protect themselves in contacting HIV-AIDS/STDs.

2D79-O: **An innovative sexual and reproductive health education package for primary school students in Tanzania. Lessons learnt during the first 3 years of implementation *Chima K., Gavyole A., Obasi A et al.***

Since 1998, the MEMA kwa Vijana Project has implemented an innovative package of sexual and reproductive health education in primary school (years 5, 6 and 7). The intervention aims to reduce the frequency of STDs, HIV and pregnancy. It is being evaluated within a randomised controlled trial in Mwanza, Tanzania. The intervention consists of 10 sessions per year. Teachers equipped with teacher guides developed by the project deliver these. 186 teachers in 62 schools were trained to teach the sessions using participatory methods. Careful process evaluation has been an integral part of the intervention. This was carried out through quarterly supervisory visits, annual teachers' evaluation workshops and external expert studies. An average 80 - 89% of sessions have been taught over the 3 years, reaching directly at least 25,000 students. MEMA annual exams indicate greatly improved knowledge and reported attitudes amongst pupils. Teachers' own attitude to the need of such education has dramatically improved as their own knowledge of the issues increased. The teachers report that pregnancy has notably declined among pupils since the intervention started. A teacher-led participatory sexual and reproductive health approach is acceptable, feasible and replicable in Tanzanian primary schools. It is highly effective in improving pupils' knowledge and reported attitudes. Also, regular supervision and evaluation is essential in fostering teacher motivation, gaining crucial insights and making the intervention more responsive.

2D80-PO: Community centered life skills education to promote sexual and reproductive health among out of school youths in Kinondoni District, Tanzania. *Bumpamba M., Pieroth V*

In 2000, AMREF developed a life skills education package that aims to promote positive sexual and reproductive health behaviours among out of school youths in Kinondoni, and facilitates communication between parents and their adolescent children. Findings from a rapid needs assessment using community participatory theatre technique guided the development of the life skills education programme, which consists of 12 training sessions – once a week – conducted by young community members who are trained as life skills trainers. Participants are introduced to the ten generic life skills for psychosocial competence as identified by WHO. Parents of young people are trained by parent-trainers in psychosocial skills that enable them to understand the challenges their children face. Para-professional counsellors-community volunteers trained in youth

counselling – provide counselling sessions to youth clients in their respective hamlets. The programme consists of various training curricular, for youths, parents and para-professional counsellors; a trainers guide for each of the three training components; a brochure on life skills for young people; and a quarterly newsletter. Monitoring includes the collection of demographic information on life skills trainers and youth participants' attendance of training sessions, weekly supervision by community supervisors and technical backstopping by project staff. Impact of the training will be established by determining skills improvement through pre- and post-training assessments. To date, there are 76 life skills trainers; 300 youths have completed life skills training and 528 from 20 organized youth groups are undergoing training. Eighty-four parents have been trained as trainers; 39 para- professional counsellors provide regular counselling services to youths in 35 hamlets. The implementation of a complementing skills building education package focusing on youths and parents, and supported by a system of community para-professional counsellors is feasible and popular; an increasing number of organized youth groups from outside the project area wish to participate in the training. Collaboration with existing community based groups, religious groups and the local government facilitates high coverage and contributes to project sustainability. Participation of community leaders has resulted in increase cooperation of parents who in turn try to mobilize young people to join life skills classes. However, an absence of incentives occasionally leads to drop outs of trainers and participants. Regular supervision of skill building classes are crucial to sustain participant enthusiasm and counteract potential decrease in motivation due to lack of material incentives.

2D151-O: **Negotiating sex: empowering adolescents in decision making for sex in the era of HIV/AIDS *Ndonde S., Nyamhanga T***

This paper is part of the main study entitled "Adolescent Sexuality, Sexual behaviours and Implications on HIV/AIDS prevention in Morogoro District" conducted in May-June, 1999. The study aimed at exploring circumstances surrounding adolescent sexuality and their sexual behaviours with regard to HIV/AIDS and other STIs. The present paper aims at exploring factors related to adolescent's ability to negotiate for responsible sex encounter. These include among others knowledge of different aspects of sexuality and HIV/AIDS. The study was a descriptive cross-sectional in which data was generated through semi- structured questionnaires. A purposive random sample of 723 subjects (380 boys and 343 girls) was selected aged 10 19 from in school and out of school adolescents. Results indicate that about 41% of adolescents engage in high-risk sexual behaviours. 54% of adolescents who ever had sex thought they were not at risk of contracting HIV infection. 64% of boys and 44% of girls had their first sex intercourse before attaining puberty. 44% of

girls reported not to have enjoyed the act. About 40% of boys had used deception, presents and money to initiate sexual relationship with girls. Low functional knowledge was found on the HIV transmission, conception and contraception to both sexes. The paper concludes by stressing the role of comprehensive knowledge of sexual and reproductive health and individual responsibility in negotiating sex. Implications for research and intervention strategies for empowering adolescents for informed decision- making are discussed and suggestions are made

Non-communicable diseases

3A19-O: **Validity of the Hopkins Symptom Checklist –25 amongst HIV positive pregnant women in Tanzania.** ***Kaaya S., Smith-Fawzi MC., Mbwambo JK., Lee B., Msamanga G., Fawzi W***

The objective was to validate the Hopkins Symptom Checklist-25 (HSCL-25) for use as a depression screen amongst HIV positive pregnant women. Amongst 903 (mean age 24.8 years) HIV-positive pregnant women, a two-phased design included measures for health-related quality of life, perceived social support, and the HSCL-25 screen for depressive (HSCL-15 subscale) and anxiety symptoms. The Structured Clinical Interview for DSM-IV (SCID) was independently administered on a stratified random sub-sample. Internal consistency of the HSCL-25 (alpha 0.93) and HSCL-15 (alpha 0.9) was adequate, with expected findings demonstrated in discriminant validity analysis. A depression-anxiety construct explained nearly 40% of the variance. Eight individual HSCL-25 items demonstrated an area under the curve (AUC) greater than 0.6 for DSM-IV major depression and the HSCL-25 and HSCL-revised had an optimal depression cut-off score of 1.06 and 1.03 for the HSCL-15. The HSCL-25 demonstrated utility as a screen for depression; its inability to gauge severity of symptoms in this cultural context is discussed.

3A130-O: **Framework convention on tobacco control: problems of adoption by third world countries - the case of Tanzania.** ***Machang'u RS***

The importance of tobacco as a major source of direct revenue (taxes) to some Third World countries may be the single major obstacle for these countries' governments to adopt the global Framework Convention on Tobacco Control (CFTC). Tanzania for instance, has until now not publicized the Framework Convention 'sufficiently' despite having been represented at a on going sessions of the International Negotiation Bodies of the Convention. The government has recently sold its shares to individuals in the once wholly government owned cigarette factories, and promotion of tobacco farming and marketing is now in the hands of rich multinational tobacco companies. These developments have made tobacco control much more difficult, at this time when the FCTC negotiations are nearing ratification (tentatively in 2003) by WHO

member nations. There is therefore an urgent need for joint research and interventions by public health associations and anti-tobacco movements worldwide to convince the governments in the Third World, in particular, to explore feasible alternative resources of revenue to tobacco. Popular education of the citizens on the hazards of tobacco to health and the environment is particularly important because in the long term these hazards outweigh by many folds the "apparent" short term economic benefits of this industry. The WHO must now make a stronger commitment to empower the anti-tobacco groups in their efforts to achieve these goals.

3B14-O: **Road traffic accidents along the Kiluvya-Bwawani and Chalinze-Segera Highways in Coast Region: an epidemiological appraisal.** ***Kilale AM., Lema AL., Kunda J. et al***

A descriptive analysis was done using routine road traffic accident records along the Kiluvya-Bwawani and Chalinze-Segera Highways, from the Coast Region Traffic Office and Tumbi Special Hospital in order to ascertain the trends in the main indicators and road users. Data of a time series from 1995 to 2000 were reviewed and analysed. A total of 3,098 road traffic accidents (RTA) occurred along the area with an average of 516 accidents per year. This corresponds to 1.4 accidents daily. Ordinary accidents had the highest toll in the area, whereas injury accidents increased from 28.55% in 1995 to 43% 1998. An important observation on the trend of accidents in the study was the significant decrease in number of accidents in 2000 but with an appreciable increase in fatal accidents. There were a total of 768 deaths due to RTA of which 665 were males and 103 females. Males died more than females. The average annual deaths of males were 111 and 17 for females. The male to female death ratio was 6.5:1. From 1996 to 1999, annual case fatality rate (CFR) in passengers was higher than other groups. The overall CFR for passengers was 42.1% while for pedestrians was 37.8%, 13% for cyclists and 9% for drivers. In the year 2000, vehicle-pedestrian collisions were most severe and had the highest CFR of 52.94%. The trends of RTA in this study illustrate a rapidly growing problem in the country. The high pedestrian and passenger deaths imply the need to investigate the underlying risk factors, operational and policy issues involved in the transportation system, and to develop and implement appropriate responsive road safety interventions. A well planned scientific approach to study the characteristics of injury-producing accidents including trends, distribution patterns, type of vehicles involved, and road-users injured or killed has to be made.

3B91-PO: **Is the community aware of the impact of eye injuries existing within them?** ***Mushi RM***

Ocular trauma/injury is a common cause of unilateral blindness in children and young adults. Persons in these age groups sustain the

majority of severe ocular injuries. Young adults especially men are the most likely victims of penetrating ocular injuries. Domestic accidents, violence, assaults, exploding batteries, sports related injuries and motor vehicle accidents are the most common circumstances in which ocular trauma occurs. A cross-sectional study was conducted at KCMC Eye Unit within three months of which 33 patients were selected particularly with eye injury either penetrating or blunt injuries among 420 patients admitted in the ward. Among 33 patients 22 were males = n = 72.6%. 11 were female n = 36.4%; Age 10-8 males and = 4 females; Age 20 = 4 males; Age 30-40 = 6 males and 6 females. 4 patients were discharged with good vision = 16.8%; 22 with fair vision = 92.4% and 7 with blindness = 29.4%. Is true that eye injuries are very common to men and especially children. In the long run the individuals with fair vision they might also become blind. I recommend awareness seminars to the community as a whole as they suffer the consequences especially when blinded people are many in their environment.

3B131-O: **Burns injuries in children in Dar es Salaam: pattern and perception on prevention.** ***Mbembati NAA., Museru LM, Leshabari MT***

A prospective study was done in the three city hospitals of Dar es Salaam and two national reference hospitals to describe the pattern of burn injuries and to determine the victims and parents or guardians_ perception on causes and prevention of burns. The study included all children under the age of 18 years attending Mwananyamala, Ilala and Temeke city hospitals, Muhimbili National Hospital and Muhimbili Orthopaedic Institute for injuries between May and November 1999. Data was obtained by filling in a prepared questionnaire. A total of 253 children attended to these hospitals in the 6 months period due to burns. 63.8% of the victims were under fives. Scalding from hot liquids accounted for 75.8% of the burns followed by open flame burns (16.2%). 82.9% of burns occurred in the low social status and 94.4% of burns occurred at home. 51.5% of parents thought that burns could not be prevented as accidents are unpreventable and it is difficult to control children; while 48.5% of parents thought burns could be prevented. It is concluded that burn injury is most common in under fives especially in the low socio-economic status, with most of the injuries occurring in the home, and that there is a need to change the attitude and belief of most parents and guardians that burns are unpreventable if any interventional programmes are to be effective.

3B132-O: **Risk taking and childhood injuries in Dar es Salaam: A common public health problem perceived to be occurring elsewhere.** ***Leshabari MT., Museru LM, Mbembati NAA***

Risk taking appears to be fairly common among teenagers in Dar es Salaam but little is known about the extent of morbidity and mortality

caused by observed behaviours. In this prospective study, a total of 1,810 children with different types of injuries were observed in five public hospitals in the city of Dar es Salaam. The sample collected during the 6 months study period included 1,100 males and 710 female. Almost one-third (32.3%) of these injury victims were under-five children, a similar proportion were between 5 and 9 years old. Over 83% came from high density residential areas and over 78% had married parents. Only 7.2% were out of school and about half of the study sample was pre-school children. Falls including injuries sustained while playing accounted for over 55.3% and road traffic accidents and burns contributed 14.1% and 13.3% of the study sample respectively. A fairly large proportion of parents/guardians believed the injury were not preventable and over 51% believed risk-taking behaviours, which lead to injury, were much higher at national level (51.%) compared to their own neighbourhoods (20%). Low perception of potential risks for injury at household/community level call for a need for public health education in order to reduce the burden of morbidity and mortality due to various types of injuries in the city.

3B145-O: **Road traffic accidents in school aged children in Dar es Salaam.** ***Museru LM., Leshabari MT., Mbembati NAA***

Between May and October 1999 a prospective study to describe the patterns of injuries due to road traffic accidents in school-aged children was done in the city of Dar es Salaam. The study included all children under the age of 18 years attending Muhimbili Medical Centre, Muhimbili Orthopaedic Institute and the three city hospitals of Mwananyamala, Temeke and Ilala sustaining injuries following road traffics. Data was obtained by filling in a special questionnaire. A total number of 286 children were attended during the study period that sustained injuries in road traffic accidents. The majority of these children were in the 5-9 years age group (37.4%) and were either pre-school (23.4%) or in primary school. Of the different types of injuries, head injuries and fractures were the main causes of hospital admission. Most of the injuries occurred in the areas designated as low socio economic (87.2%) with only 2.2% of the victims coming from areas designated as high social class. Almost 1/3 of the victims (31%) had the wrong perception as to the direction of walking while on the road with 9.2% saying one should walk on the same direction as vehicles and 22.1 saying it made no difference. This ignorance also included parents. 67.8% thought that the accidents could not be prevented in children, reasons given being that accidents are unpreventable or that it is difficult to control children. This study showed that school aged children especially those aged 5 to 9 years are highly susceptible to road traffic accidents Despite this, the risk perception and proper use of roads by parents is very low. Furthermore the study shows that perception of the magnitude of the

risks of road traffic accidents is very low among the general population. Therefore for any preventive measures to be effective the community has to realize and acknowledge the problems of road traffic accidents in our society. Only this will preventive measures work.

3C44-PO: **Disasters and responses to its various stages. *Kalabwe F***

Disaster are classified and discussed with regards to issues of their management, coping and the mitigating role of preparedness.

3D142-O: Healthy workers – NOREMCO initiatives. *Ndenzako F*

A health workforce is not only a pre requisite for achieving decent work, but also a major positive factor in favour of productivity and economic growth. It has been documented that systems that provide health for employee and overall well being lead to higher productivity. The capacity of employees to perform their jobs should therefore be a prime management concern. In fact it may have direct bottom line implications when key technical staff get ill or die. Even when there is abundant labour supply to replace employees, it may take years to new employees in technical areas to reach the competence levels of their processors. In view of this, Noremco as a construction company has been dedicated to the promotion and protection of the health and well being of its workforce. It has been enjoying good reputations for performance and quality of work in the local and international market because of the skilled labour force. The company has been providing free clinical health services for employees and their family members for a number of years and workplace safety is a clear company priority. Currently the company is implementing a project targeting common diseases among Tanzanian society including HIV/AIDS and STDs, malaria and diarrhoea. Workers are being provided with HIV/AIDS and STDs education and peer health educators have been trained to educate their friends. Voluntary counselling and testing have also been introduced and workers are being provided constantly free male and female condoms. Clinical health services are also being improved and workers are offered mosquito bed nets and repellents at reduced cost. For those who are working at night and outdoors, mosquito repellents are being provided. All these efforts are being done to maintain the good skilled Noremco workforce and health of workers and their families. It is hoped that after a year of this project, the increase in new HIV infections will be lower, STD cases will be fewer, and that malaria and diarrhoea diseases will also come down for the workers and their families.

Environmental health: Sanitation and water; waste disposal

4A8-PO: **Sustainability of waste water (sewerage structures) *Kiula FA***

The Government has embarked on improving sanitation and environment in urban centers. Among the efforts made include construction of the sewerage systems in major urban centres. Urban centers, which had sewerage systems constructed by mid 1980s, are: Dar es Salaam, Tanga, Mwanza, Moshi, Arusha, Tabora, Dodoma, and Mbeya. The sewerage systems in all these towns more or less have common problems, which ultimately reduced their efficiencies to minimum. In mid 1990s, the government received a soft loan from the World Bank to rehabilitate urban infrastructures among them being sewerage systems in major urban centres. The towns covered in the project are: Arusha, Moshi, Tanga, Mwanza and Tabora while Morogoro and Iringa being newly constructed sewerage systems. The problems which led to collapse of the sewerage systems in the country were: (i) lack of maintenance culture (ii) too little attention given to the sector by Local Authorities Managing Them (iii) lack of sustainability culture among the users (stake holders). Some of the problems in few urban centers are discussed in subsequent sections a representative of other towns as follows: Mwanza: the system was constructed in 1969-71 and was planned to serve 12,000 people, but only 20% was served. The system had not operated since 1990 due to break down of the pumps, many parts of the sewers were blocked, inspection chamber were full of sand and debris, stabilization ponds were dry and they were turned into play grounds, bad enough the sewerage was directed into the lake through Mirongo river without even pre-treatment and it was estimated that about 3.5 million litres of raw sewerage were entering the lake daily. Arusha: Like Mwanza the system was constructed in 1969 and commissioned in 1970. IN 1992 the system was almost out of use since there were: frequent blockage of sewers, over floating and other flowing of sewage along the streets, sludge from cesspit emptier were disposed through chambers, some of the manhole covers were missing, manholes were covered with soil and some manholes were completely deteriorated etc. Dar es Salaam: e.g. Mikocheni pond: The facultative pond of Mikocheni was out of use in the year 1997 due to: siltation problem at the inlet, the pond was characterized by mass of floating debris and scrum. Foul smell, the transmission sewer had got much silt, infiltration of ground water to the transmission sewer, silt from surface rain water. From previous experience, there is no point of view that the already constructed sewerage systems under Urban Sector Rehabilitation (USRP) can operate to their design life if they will be treated like the former. This paper highlights steps that have to be taken to make the system sustainable includes procedures for: operation and maintenance, monitoring and evaluation, rehabilitation and upgrading, equipment and training etc.

4A117-PO: Poster session on PHAST. *Nchimbi E*

Participatory Hygiene and Sanitation Transformation (PHAST) is an initiative for promoting hygiene and sanitation. It started being implemented in Tanzania in 1997. The objective of this initiative is to enhance community improved hygiene behaviours, prevent diarrhoeal diseases, encourage community management of water and sanitation services. The methodology for the PHAST initiative implies the concept of community participatory interactions. This includes community group discussions and plenary, role-plays, brainstorming and buzzing. The participatory techniques used in the PHAST initiative have proved to be very successful and rewarding for communities and for facilitators. So much that community workers who took part in the initial pilot study to test the use of participatory techniques for improving hygiene behaviours did not want to go back to their previous methods. They wanted to continue with participatory approach because results were much better and the process was more enjoyable. The participatory techniques use tools for discussion. These tools are hereby displayed showing the seven steps to be followed. You are welcome to see these posters.

4A120 –O: **Quality of potable waters available in Morogoro municipality and selected areas of Dar es Salaam, Tanzania. *Nnko SA., Jiwa SFH., Morungu RL.***

The quality of potable waters available in Morogoro Municipality and Dar es Salaam City was assessed by determining the levels of bacteriological contaminations and physico-chemical parameters. Three types of potable water, namely; tap, in-sachet and bottled waters were analysed for a period of 2 months. The results obtained were compared with the existing standards such as TBS and WHO. Of concern to the health of consumers were the microbial qualities of Tap and In-sachet packaged waters. These brands were grossly contaminated with mean coliforms of 9.25/100ml and 17.1/100ml, respectively. This represents 50% and 25% of the 2 sample types, respectively. Contamination of the water with faecal coliforms was 3.5/100ml and 1.0/100ml for tap and in-sachet samples, respectively. The mean coliform contamination levels for bottled water was 1/100ml giving a gross contamination of 25% of the analysed samples. There was no sample of bottled water that was contaminated with faecal coliforms. The total microbial count was highest for tap water (10^5-10^6/ml) followed by in-sachet samples (10^4-10^5/ml). The lowest contamination of 10^1-10^4/ml for the total count was observed in bottled water sample. Physico-chemical parameters were well within the accepted levels with the exception of iron that stood at 0.345mg/L in In-sachet samples. Potassium levels and total hardness were significantly high in bottled and tap water samples. These findings underscore the need for additional treatment of potable water supplies available in the market with the view to safeguard the

health of the consumers. Especially when a similar survey in 1991 of potable waters supplying Morogoro municipality and its outskirts had also revealed unacceptable levels of total coliforms, faecal coliforms and faecal streptococci. Albeit, without ensuing the remedial and monitoring interventions by the local authorities.

4A127–O: **Participatory planning workshops for sanitation projects in rural areas: an experience for Lushoto*. Ntakamulenge RGN***

A research project is going on involving twelve villages located in the highlands of Lushoto district. In this study, the infection with *Ascaris lumbricoides* among pre-school children is being investigated and shall be correlated with the children's excreta disposal behaviour, the hygienic condition of the homesteads compounds, the knowledge, attitude and practice of mothers in relation to children's excreta disposal. The main objective of this study was to develop and implement intervention strategies aiming at encouraging safe children's excreta disposal at homes without contaminating the compound soil. This is to test a hypothesis that there is a correlation between the prevalence and intensity of *Ascaris lumbricoides* infection among pre-school children and unhygienic disposal practices of children's faeces. Village planning workshops were conducted, using Learner Centred Problem Solving Action Oriented Learning (LePSA) technique and Participatory Planning Approach (PPA). In these workshops, the villagers were able to digest the problem of *Ascaris* infection among their children. They explored the possible causes that make the disease to persist in their villages, and suggested possible solutions and strategies to be followed to alleviate the problem. Finally they came up with an action plan for the implementation of the intervention strategies agreed upon. The action plan so developed is now being implemented in six study villages. The main actors are the villagers themselves using locally available resources. This paper intends to give the experience gained during the village planning workshops, and provoke discussion on how it can be applied in other sanitation projects anywhere in Tanzania and developing countries in general.

Health management

5A7-O: **Knowledge, attitude and practice of health workers towards the use of information from health management information system (MTUHA) in Mbinga District. *Kalowela M***

The generation and use of health facility information is very important in order to improve the quality, efficiency and equity of health services. However, in Tanzania non-use of information at health facility is a big problem affecting the whole country (MOH 1993, Afro aid 1997, HERA 2000). This Descriptive cross-sectional study was done to determine knowledge, attitude and practice of health workers at health facility towards the use of information from Health management Information

system. This study was conducted in 36 health facilities in Mbinga district, 2 Hospitals 4 Health centres and 30 dispensaries, commencing from November 2000 to April 2001 Stratified, convenient and simple random sampling were used to obtain a sample of 36 health facilities and 144 respondents. Data were collected through self-administered questionnaire, focus group discussion guide and checklist. The study found that out of 34 health facilities 3% had average information use 15% low while 82% did not use the information generated. Majority health workers 82% has low knowledge on the use of information. A health workers level of knowledge on data analysis was associated with their training in MTUHA ($P<0.05$). 88% of respondents have positive attitude towards the use of information. This study also shows that 70% of health facilities were not supervised on information use. However the use of information at Health facilities was in association with supervision on use of information ($P<0.001$). The study has therefore revealed that, most of the information is not used at the health facility. There is low knowledge among health workers on the use of information from Health management information system. Majority health worker s have positive attitude towards the use of information. Most health facilities do not get adequate supportive supervision on the use if information. It is therefore appropriate to recommend for the government to train health workers on data analysis and the use of information from HMIS. At health facility health workers should be encouraged to hold monthly management meetings so as to discuss the problems identified and arise into decision for the use of information. It is important to strengthen supportive supervision of MTUHA activities at health facility by the Council Health Management Team with emphasize o the use of information. Hence it is necessary for the Council Health management Team to be trained in MTUHA, the training should address effective supportive supervision on the use of information of health facility.

5A54-Opl :**Re-packaging knowledge for health promotion: from management of disease to management of health system.** ***Pichette P., Mtasiwa D***

Re-packaging Knowledge for health Promotion-addresses the concerns of public professionals on the observed disparity between the inputs into the health sector and the outputs and impacts the health services have had on the health status as shown by the health indicators". The ongoing Health Sector Reform process, provided an opportunity for, and requires amongst other things, a re-examination of our current base and strategies in order to develop innovative ways to allow for the translation of theory into evidence based health policy and practice". Based on the Dar es Salaam Urban Health Project 10 years "evidence based" experience, one may say that the major problem encountered in the implementation of the Health Sector Reform (HSR) in Tanzania is related to its implementers' strategic focus on diseases management. Indeed, new resources have

been injected in health and, numerous evidence based" scientific studies have been carried out and made available with, so far, show little impacts on the population's health status. Thus, the major issue is not related to resources but to their administration and management by a sound organization. Our assumption is that too little concern was brought to the management of the health system as such, to its organization, structural and functional processes. The focus put, so far, on the management of diseases remains a vertical approach that doesn't address the system as a whole. It doesn't link the resources (inputs) to the results (outputs) through administration (throughputs) and management (feedbacks). Doing so, we are working with isolated sub-systems and not developing the organization capacity. Thus we are not utilizing the available resources optimally. In all organizations, each mandate has to correspond to a specific function/provision in its charts. And, to be efficient an organization needs to put in place formal liaison mechanisms to secure that the links between its sub-systems are properly taken care of. Furthermore, one has not to underestimate the importance of the other systems" surrounding the health systems. These systems, indeed, are generating so much interferences (noise, ad hoc activities, etc). and emerging objectives that they have to be truly considered in the organizations plans if one would dream of achieving some of its planed results. We are in conclusion, advocating for the introduction of a systemic health system management approach, philosophy or paradigm. An approach that is going from "The Management of Diseases to the management of a Health System".

5A57-O **Community involvement in health boards; the Dar es Salaam experience.** ***Rwiza VMK***

In Tanzania we embarked on the Health Sector Reform with the main objective to provide better quality health care than before in line with the needs of the community. The involvement of the community as an important pillar in the provision of quality of care was acknowledged and implemented as a policy by technocrats by establishment of health boards. It was envisaged that district and facility boards would be the means to achieve community – based structures and institutional arrangements for the public health service. This would bring true realization of community ownership, make people have a voice and question on the ways their resources and health care services are managed and administered. HB would be able to identify the real need of the community, push development in their communities, and sensitise them to accept changes that will make their life better. The Dar-es Salaam Urban Health Project developed a health board structure ahead of the rest of the country. Dar es Salaam has 64 HB's :18 Ilala, 24 Kinondoni and 22 in Temeke Municipalities. The HB's have performed well beyond expectations in

helping to bring improvements in DSM Public Health Delivery System by ensuring steady supply of essential drugs, services and equipments. Ways need to be found to empower communities to work with and assist HB's to improve their performance. Following the election of health board members the Health Boards Association was created in December, 1999 (awaits legal recognition) to support health boards in their bid to promote the involvement of the population of Dar-es-Salaam in their own health. It has succeeded to cultivate a sense of togetherness among its members and as a forum where experiences are shared, decisions of common interest are made and advice given to members. The HBA be facilitated to acquire legal status (Registration) and supported to accomplish its mandates.

5A93-O **Utilization of indigenous knowledge in community nutrition education and health education: A case study of community participation from Northern Zambia *Nangawe E***

An applied health research that set out to investigate people's perceptions, beliefs and practices contributing to under fives malnutrition was carried out in Northern Zambia between 1995 and 1997. The intervention phase of the research developed into a community based health promotion programme using Bemba IK as an entry point. The researcher uses data and experience from the research project including its intervention phase currently ongoing in two districts, to investigate how participation in PHC works using a multilevel perspective I analysis. The study is intended to be a critical auto analysis done in the context of Health Sector Reform Reforms in Zambia. How indigenous ideas and knowledge were utilized or not utilized to shape and guide the intervention phase is investigated. The study seeks to generate an understanding of the nature of interaction between biomedical and indigenous knowledge as experienced in the project and whether in this interaction there are lessons to be drawn on community participation.

5A103-O **The health consumers voice in quality monitoring *Burke M***

The Health Consumer Voice in Quality monitoring. Civil society organizations are vital to ensuring that public institutions function in an optimal way providing quality service to all stakeholders. The Tanzanian Health Sector is undergoing health sector reform. There is now a process of decentralisation of decision making and policy to the district level. Health will be managed by a district health management team in each district. Community representatives will participate in these district health management teams. These community representatives will represent faith communities' non-government organizations and the society in general. A Health Consumers Association will provide training for district community representatives on DHMT's. They will be skilled in understanding health sector reform policy, networking, mapping of community

health needs, lobbying for support and distribution of information to community forums. Also this district-based information will be centralised for a consortium to analyse and for a secretariat to then lobby and advocate on the identified areas of policy and implementation need. A wide range of civil society groups will participate in this consortium. Community representatives are well placed to provide a counter balance of consumer view point to develop the services rendered by suppliers, both government and non-government. Access to health information is difficult to come by. And civil society seeks greater opportunity contribute to policy development and formulation. A Tanzanian Health Consumers Association is an appropriate body to develop to capture and give voice to the concerns of civil society in the health sector.

5A110-O **Update on the multi-country evaluation of integrated management of childhood illness (IMCI) in Tanzania. *Armstrong-Schellenberg J.,Manzi F., Wilczynska K., Schellenberg D et al.***

The IMCI strategy through improvement of skills of health staff, health systems and family and community practices addresses five leading causes of childhood deaths in the world: pneumonia, malaria, diarrhoea, measles and malnutrition. The multi-country evaluation of IMCI (MCE) is a set of studies, using complementary designs, that assesses the effectiveness, cost and impact of IMCI. It is underway in four countries, namely Tanzania, Uganda, Bangladesh and Peru. In Tanzania there is a special opportunity for a 'plausibility design' approach in which it is possible to document outcome indicators in two intervention districts (Morogoro rural and Rufiji) and in two similar, contiguous comparison district (Kilombero and Ulanga) where IMCI has not yet been implemented. This year's presentation of the MCE IMCI Tanzania will focus on the 2000 Child Health Facility Survey results, which suggest a major improvement in case-management and service support in the areas with IMCI compare to those without IMCI. It will be noted that there is still some room for improvement even in the districts IMCI. Data will be presented on the quality of care (e. child vaccination status checked in 93% of children in IMCI vs. 24% of children in non-IMCI districts) and health systems support (e.g. 16% of IMCI health facilities having essential equipment and materials vs. 6% of non-IMCI). Mechanisms for dissemination of such results and their potential for health promotion will be discussed. The Health Facility Survey is one of the six sub-studies within the Evaluation. An update will be provided on the progress of the remaining five.

5A119-O **Integration of traditional systems of medicine with allopathic medicine: A panacea to improve quality of health care in Tanzania. *Kimati VP***

The aim of this paper is to put arguments in favour of integration of allopathic and indigenous traditional medicine, which can achieve better quality of health through the "whole person approach" in recognition of cultural connections in health. The methods of getting information was through extensive literature reading, motivation and past experience as head of the Medical Division at the Muhimbili Medical Centre between 1977-1979, which included the Traditional Medicine Unit of the University of Dar es Salaam. The studying of the 1990 Ministry of Health Policy, the studying of the 1994 Health Sector Reform documentation, personal publication in international teaching paediatric book, my recent appointment as facilitator in the Ministry of Health workshop on traditional and other systems of alternative medicine (June 11-13, 2001), working with a British consultant in the 1960s who used to refer patients regularly to Traditional healers in Dar es Salaam and Bagamoyo, are experiences that have supported my gathering the information used in this paper. The factors in favour of developing traditional medicine and integrating it to allopathic system of medicine are the deep rooted cultural knowledge, beliefs, practices and behaviours which are hard to change for the majority of Tanzanians; constant shortages in the allopathic system of medicine like health facilities, staff, drugs etc.; and easy availability locally of medicinal herbs which contain antimalarials, antibiotics and other therapeutic properties. Other factors include prevention of harmful traditional medicine practices like uvulectomy, extraction of "nylon teeth", circumcision, and the increasing poverty for many Tanzanians disabling them to pay for allopathic medicine. The current rising of Infant Mortality Rate, Under fives Mortality Rate, Maternal Mortality Rate (due to ruptured uterus for example), Malaria and HIV/AIDS; the current existence of a traditional medicine policy in the year 2001 leading to the registration, control, Information Education and Communication and creation of legal instruments is indicative of the ripe time to pursue the integration of both systems of medicine combined to improve the quality of health care for all the Tanzanians.

5A140-O **Issues of quality of health care in relation to health care practices in Tanzania.** ***Ngonyani HAM***

Quality health services follow set norms, guidelines and standards. Health Sector Reforms (HSR) focus on decentralization, liberalization in the management and provision of health services, which need to guided and regulated so as to avoid wide variation and haphazard development of health services of undetermined quality. The key role of central Ministry in HSR is to develop and supervise health services norms, guidelines and standards (NGS) aiming at ensuring quality services. In this paper, the author analyses the current situation of poor health services delivered as evidenced from recent studies, supervision and inspection visits in health facilities both government

and private owned. The problems arise due to the following reasons: health personnel development problems, inadequate supervision and inspection at service delivery points, inadequate community involvement in health care plans and services, problems in communications between providers and clients, poor adherence to infection prevention measurers , HMIS related problems, Vertical programs related issues, professional ethics related problems and inadequate financial resources.

5B86-O **Investigation of the coping strategies used by households to obtain cash to pay for health services in Morogoro Urban area.** ***Msuya JM., Amury Z., Nyaruhucha CNM***

Over the past decade Tanzania has struggled to maintain the provision of basic health services in the face of economic problems. Various prescriptions have been advanced for redressing the widening gap between need and available resources. One such prescription is the introduction of user charges in the health services. This study attempted to assess the ways (coping strategies) that households are using to obtain cash money to pay for health services in Morogoro urban area. Both primary and secondary data were used to provide necessary information for the study. A total of 100 households were randomly selected from 5 wards that were purposively chosen to reflect various socio-economic situations in Morogoro urban area. Interviews were conducted to obtain the primary date. Findings indicate that households were using varying ways, as coping strategies, to obtain cash to pay for the health services. The various ways included seeking loans from friends and relatives, selling of assets, and using alternative sources of health care, apart from the conventional ones. The assets most susceptible to selling were found to be food serves and livestock. The results also pointed out welfare aspects that were affected the most as a result of costs of (expenditures on) health services. The affected welfares included reduction of expenditure on food and education. The results of the study imply that we still need to design an appropriate policy for financing health services. The policy should also be able to address efficiency in health delivery system. To avoid the negative welfare effects resulting from some of the coping strategies that are used by households, some kind of a health insurance arrangement is necessary.

5C106-O **Community-based care and support programmes for AIDS patients and other chronically ill people in Magu District, Tanzania.** ***Nnko SE., Chiduo B., Washija RN et al***

Care and support is a cardinal aspect of HIV/AIDS care that relieves the effects of the epidemic on the affected individuals, families, and communities. The process offers an opportunity for communities to interact constructively with people affected by HIV/AIDS, enhancing

the likelihood of a positive community response to the epidemic. To identify and describe the types of community based programmes for care and support to AIDS patients and other chronically ill people in the study area. The study was basically descriptive in nature involving quantitative in-depth interview with patients and their care providers; group interviews with key informants and health care facilities; focused group discussions with youths and adults and questionnaires with community members. Data from a total of 323 clustered and conveniently selected study subjects were systematically collected to give a clear picture of community based care and support to patients in Kalemela ward, Magu District. Eight community-based programmes for care and support to AIDS and other chronically ill people were reported to be available in the study area. Four types of care and support were reported to be available and given to patients in this community. These were mainly psychosocial and economic in nature. Most care and support providers were non-professionals. Community based care and support programmes for AIDS patients and other chronically ill people are important in the provision of peer support to PLWHAs and HIV prevention. There is need to train even non-professionals the skills of care and support so that the provision of such services can be community based and sustainable.

5C72-O **Socio-economic impact of chronic illnesses including HIV/AIDS in Magu District, Mwanza Region.** ***Chiduo B., Nnko S., Siza J, Washija NR., Lukinda E., Wilson F***

High mortality and morbidity associated with HIV/AIDS epidemic in Sub-Saharan Africa have a socio-economic impact on individual households. In order to assess the impact and develop care and support programme, a study was carried out in Magu District. (i) To determine the socio-economic impact of chronic illnesses (ii) to identify coping mechanisms at household level and (iii) to recommend sustainable interventions to strengthen the current coping mechanisms. A descriptive longitudinal study among households with chronically ill people was conducted in Magu between November 1999 and March 2000. Data were collected through social mapping, focus group discussions, observation and in-depth interviews. Thirty three chronically ill patients were identified from 33 households. Ten of them had HIV/AIDS related symptoms. Cotton was reported as the major cash crop while rice, cassava, maize and sweet potatoes were the dominant food crops. Households reported decreasing labour force as a result of illness and some rearrangement of duties have taken place. Selling of assets and animals to buy food and pay for treatment was commonly reported. Three quarters of the patients sought treatment from traditional healers although costs were higher than in modern facilities. Households with chronically ill people reported difficulties in enrolling and paying school fees. Community support is limited to

funerals rather than during illness. Religious groups, traditional groups and relatives were the main support providers to households with chronic patients. The support is commonly in the form of money, food and labour. Findings of this study indicate a serious socio-economic situation in the households with chronically ill people. The available community support given during funerals should be extended to such households.

5C107-O **The role of religious groups in the provision of care and support to AIDS patients and other chronically ill people in a rural ward, Northwestern Tanzania.** ***Siza J, Nnko S., Chiduo B., et al.***

Religious groups appear to be invariably effective in the provision of psychosocial care and support to HIV/AIDS patients and other chronically ill people particularly in rural settings. The care and support provided by these groups seem to be more permissible to both the patients and their relatives as they encompass spiritual elements. The study aimed to identify and describe the role played by various religions in the provision of care and support to AIDS patients and other chronically ill people in Kalemela ward. This paper presents the findings from 28 in-depth interviews with patients 50% of whom were AIDS patient suspects; 23 care providers; 10 group interviews with key informants (including Religious leaders) and health care facilities; 16 focused group discussions with youths and adults (men and females and 143 questionnaires with community members. Six groups namely African Inland Church (Tanzania), Pentecostal Church, "Fatma"(Roman Catholic), "Dorcas"" (Seventh Day Adventist), New Apostolic Church and Pentecostal Assemblies of God followers were found to be effective in the provision of care and support to patients and relatives of the affected. The services provided were both psychosocial and economic in nature. However the services were directed to followers of the respective denominations rather than the whole community. Apart from material support, many families need moral and practical support in order to provide adequate care for their sick members. Spiritual influence has got a cardinal role in the acceptability and hence effectiveness in provision of care and support to AIDS and other chronically ill people in rural communities. Moreover there is need for the groups to expand their services so that they reach even the non-followers of these religions.

5F118-O **Health disparities in Tanzania: relationship to low quality of health care, high morbidity an mortality.** ***Kimati VP***

This paper has been written with one major aim:- To advocate in allocating more of the little resources available for the health programme, accompanied by special incentives for staff working in the most disadvantaged "hardship areas". The methodology used to obtain and analyse statistical data to show health disparities was to use

the official government of Tanzania and U.N. publications in health and economy. Eight health indicators and one economic indicator were selected, and their values for all the 20 regions of Tanzania were traced from the available publications. Four zones that were arbitrarily suggested by the author in an earlier paper and six zones suggested by Tanzania Demographic Health Surveys (TDHS) have been used in the data analysis and presentation. TDHS zoning shows that Mtwara, Lindi and Ruvuma regions (southern zone) has the worst health and economic indicators. To enable the three regions to be at par with other regions and to avoid abrogating human rights of the people in these regions, the following is suggested. 1) More of the little available health funds be directed to the hardship regions and constant monitoring of their health disparities with the better off regions be pursued. 2) Prevention of theft by public servants be done as vigorously as it is being done for the prevention of bribery. One VIP once said that the burial ground of the parastatal organizations, which have virtually died, are in "Mbezi Beach". This is the area of Dar es Salaam where fabulous mansions have been put up largely by civil and public servants whose earthly salaries are known, and whose additional heavenly incomes come from "theft by public servants". It is suggested that health services cost sharing be augmented considerably in richer zones/regions while the meagre government funds be largely be directed to the disadvantaged rural and hardship areas. The 40 years practice of punitive posting of low quality staff in hardship areas should be stopped. The best staff should be available for such areas. Additional incentives to staff working in hardship and rural areas can be a positive stimulation for narrowing health disparities thus achieving better quality of health care in underdeveloped, disadvantaged rural and hardship locations. Health disparity reduction strategy could be effective way of raising better quality of health care in Tanzania!

Poster presentations

1B20-P: Spatial information applications in health as a tool for HIV/AIDS – policy. *Mgendi MF*

1B52-P: Survey and service on STD/HIV/AIDS in Namungo Mines, Lindi region. *Mhando EG*

1B116-P: Strengthening the teaching and practice of universal precautions on infection control with emphasis on HIV/AIDS in Tanzania. *Ayo E.*

1B134-P: Emerging impacts of health education on HIV/AIDS STDs in Monduli District: *Sungura W*

1D34–P: The trend of tuberculosis in Moshi Urban and Rural Districts: Results of the three months study at Mawenzi General Hospital, Kilimanjaro region. *Masao E*

2B76–P: Human rights and reproductive health service delivery: Experience from Mwanza. *Swalehe Z*

2B108-P: Gender mainstreaming in the government budget. *Nswilla A*

2B129-P: Experience on women and health in Newala District. *Lusana S., Mshana A., Moshi M*

2C139-P: Health benefits of family planning *Mwaijande F*

2D128-P: Advocacy in Youth Reproductive health. *Nyenga M., Mbaga G*

3A30-P: Problems in the management of clients/patients with substance abuse *Rutahiwa P.*

3A55-P: Guardians perceptions on the effect of television on deviant behaviour among adolescents in Kinondoni municipality

3A64-P: Prevention and control of substance abuse in Tanga Municipality; can TPHA play a role? *Mwenda H., Mshana A*

3B85-P: A study on emergency preparedness in handling casualties. *Semiono A., Mangi M*

4B63 –P: Experience of waste collection and disposal through inspection of food premises in Tanga municipal. *Mshana A., Lusana SL.*

4B50 –P: Assessment of household activities and behaviour in urban environmental pollution: A case of Morogoro municipality *Msuya JM., Kikari MS., Nyaruhucha CNM*

4B90 –P: Methods of clinical waste disposal. *Singilimo A*

5A9-P: Public or private curative care: A study of user's preferences in urban Tanzania. *Muna DSRM*

5A22-P: Health management quality of care; Kilombero experiences *Kimaro SA*

5A49-P: Assessment of quality of care in main operating theatre at KCMC. *Mlawa SR*

5A83-P: Designing health intervention logos: whose view matters? *Makemba AM., Kasale H., Kiangi G., Reid GDF*

5A89-P: Quality of care at Aga Khan Hospital – Dar es Salaam *Singilimo A*

5A104-P: Developing electronic packaging of health information. ***Burke M., Pemba SK., Kisimbo D., Groth M., Kahemele J***

5C45-P: The concept of home-based care for terminally/chronically ill patients. *Kanenka L*

5F133-P: Health seeking behaviour prior to death: Evidence from a rural setting in Tanzania *Mwageni EA et al*