

**REPORT ON THE 10<sup>TH</sup> ANNUAL SCIENTIFIC CONFERENCE HELD AT GOLF COURSE HOTEL ON 11<sup>TH</sup> AND 12<sup>TH</sup> JUNE 2009**

**THEME:**

- EVIDENCE BASED PRACTICES IN HIV/AIDS CARE AND OTHER INFECTIOUS DISEASES

**SPONSORS:**

- UGANDA SOCIETY FOR HEALTH SCIENTISTS (USHS)
- AIDS INTERNATIONAL TRAINING AND RESEARCH PROGRAM (AITRP)

**MASTERS OF CEREMONY:**

- DR. SABRINA BAKEERA-KITAKA
- DR. TOM MWAMBU

**RAPPORTEUERS:**

- DR. AKISHULE DENISE
- DR. OYELLA JACINTA
- DR. RENJINI LALITHA
- DR. SEMEERE AGGREY

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## **LIST OF ACRONYMS AND ABBREVIATIONS**

**AIDS:** Acquired Immune Deficiency Syndrome

**AITRP:** AIDS International and Training Program

**ART:** Anti-retroviral therapy

**HAART:** Highly Active Anti-retroviral Therapy

**BMJ:** British Medical Journal

**HIV:** Human immunodeficiency virus

**ICT:** Immuno-chromatographic test

**IDI:** Infectious Diseases Institute

**IRIS:** Immune Reconstitution Inflammatory Syndrome

**JCRC:** Joint Clinical Research Center

**MoH:** Ministry of Health

**PHAST:** Participatory Hygiene and Sanitation Transformation

**PMTCT:** Prevention of Mother to Child Transmission

**TAMS:** Thymidine Analogue Mutations

**TASO:** The AIDS Support Organization

**TB:** Tuberculosis

**USHS:** Uganda Society for Health Scientists

**VCT:** Voluntary Counselling and Testing

## **DAY 1: 11<sup>TH</sup> JULY 2009**

The conference was opened at 8.54am by Dr. Bakeera-Kitaka who called upon the chairperson of the USHS executive board, Dr. Byakika-Kibwika, to make a few remarks.

Dr. Byakika, a researcher at the Infectious Diseases Institute (IDI) and a lecturer in the department of Internal Medicine, welcomed participants and gave an overview of the USHS, from inception to-date, noting that the association was celebrating 10 years in existence.

She introduced the theme of the conference and thanked the various organising committees and authors whose abstracts had been selected for presentation at the conference. She also gave an update on the Uganda Fogarty Alumni Association (FAA-Uganda) whose activities were highlighted in the USHS newsletter.

Dr. Byakika-Kibwika then invited Professor Christopher Whalen to say a few words.

Dr. Whalen, the technical advisor for the USHS executive board, applauded the achievements of the USHS, noting that after 10 years in existence, the association was registered as an NGO and had grown to a membership of about 500. He also commended the founders of FAA-Uganda for their commitment to strengthening the role of research in improving the health of Ugandans.

## **SESSION I: INFECTIOUS DISEASES**

### **CHAIRPERSON: DR. FRED NUWAHA**

Dr. Bakeera-Kitaka one of the conference masters of ceremony introduced Dr. Fred Nuwaha, the chair for Session I of the day. Dr. Nuwaha introduced the different speakers for the session and their topics. He reminded the speakers that they had 15 minutes each to present their work and requested the audience to save their questions until the end of the session.

#### **1. A large epidemic of hepatitis E in Uganda: Results of a population-based epidemiological and serological study by Dr. Eyasu Teshale”.**

Two sub-counties in Kitgum district were studied with a total of 19,098 patients: the attack rate was 30.9% and 19.2% while the CFR was 1.5% and 1.3% respectively. Attack rates were highest among pregnant women while mortality rates were highest among both pregnant women and children  $\leq 2$  years. Pregnant women were more likely to have symptomatic disease compared to children  $\leq 2$  years. There was no difference in susceptibility to infection by age. Residents of both sub-counties had high rates of HEV seropositivity: 68.6% and 61.6% respectively. Among these, 65.2% and 68.3% were positive for IgM anti-HEV. The hepatitis E isolate responsible for the epidemic was identified as HEV genotype 1 (Chad isolate). These findings suggested a lack of prior immunity to the HEV in these communities. Dr. Teshale therefore called for the development of a vaccine against HEV.

## **2. Operational accuracy and comparative persistent antigenicity of HRP2 rapid diagnostic tests for Plasmodium falciparum in a hyperendemic region in Uganda by Dr. Daniel Kyabayinze.**

The performance of 2 rapid diagnostic test (RDT) kits for falciparum malaria (ICT and Paracheck) was studied in Soroti Regional Referral Hospital. Of the 357 patients tested at baseline, 139 (40%) had smears positive for *P. falciparum*. ICT had a sensitivity of 98% and a specificity of 72%, NPV was 98% while PPV was 69%. Inter-observer reliability was high for the ICT with kappa of 0.921 ( $p < 0.001$ ). 224 children aged 6 – 59 months were followed up at 7-day intervals after successful anti-malaria treatment. The mean duration of persistent antigenicity was 32 days and depended on the initial parasite density whereby patients with parasite density  $>50,000/uL$  before treatment had longer antigenicity. Dr. Kyabayinze concluded that RDTs were accurate and appropriate as a diagnostic tool where microscopy was unavailable. However, their low specificity and persistent antigenicity limit their application in children  $<5$  years and in patients returning with symptoms 2-4 weeks after anti-malarial treatment. He recommended that good clinical skills were required to interpret test results.

## **3. The evaluation of TB microscopy in peripheral laboratories in Uganda by Dr. Claire Nankoma.**

Between September 2008 and February 2009, 18 laboratories from north, west and central Uganda were evaluated for performance in TB microscopy. Refresher training activities were conducted in September 2008 followed by 3-monthly technical assistance visits and standardized check-list scoring, as well as re-examination of stained slides by the Institute of Human Virology (IHV) laboratory specialists using the on-site microscope and immersion oil, and review of laboratory registers. Two (11.1%) of the 18 labs scored above 85% (“excellent”), 9 (50%) labs scored between 65-85% (“acceptable”) while 7 (38.9%) labs scored less than 65% (“average”). The main areas that led to low scores were records, smear quality and safety in the lab. Staff turn-over was noted to be high, impacting negatively especially on the quality of smears. Record keeping was poor due to lack of consistent supervision. Dr. Nankoma concluded that the check-list was a useful tool for quality control in TB diagnosis and identifying areas for improvement in AIDS Relief supported laboratories in Uganda.

## **4. Usefulness of fine needle lymph node aspirate (FNLA) among patients with suspected tuberculosis adenitis at the ISS clinic, Mulago Hospital by Dr. Isaac Ssinabulya.**

This was a retrospective review of the records between April 2007 and March 2008 of patients suspected to have TB adenitis in whom FNLA had been done. 125 patients were studied, most were female (59.2%) and the mean age was 34 years (SD $\pm$ 8). Mean baseline CD4<sup>+</sup> was 199.62cells/uL (SD  $\pm$  201.95). Cough was the commonest presenting symptom (50.86%) while the commonest site for adenopathy was cervical (69.6%). Sixty-four (51.2%) patients were diagnosed with TB. Of these, 35(28.0%) were diagnosed by FNLA while 29 (23.2%) were diagnosed by other means. A BMI  $<18kg/m^2$ , axillary temperature  $>37.4^{\circ}C$ , CD4<sup>+</sup> count  $<100$  and haemoglobin  $<10g/dl$  were all associated with a positive FNLA. Dr. Ssinabulya concluded that routine FNLA combined with good clinical evaluation can improve

TB diagnosis in a clinic setting and recommended active screening for TB using FNLA where applicable.

**5. HIV infection and survival among patients with non-Hodgkin's Lymphoma (NHL) by Dr. Moses Bateganya.**

This was a retrospective review of the medical records of patients with NHL who presented at the Uganda Cancer Institute between January 1<sup>st</sup> 2004 and August 31<sup>st</sup> 2008. 228 patients were studied of whom 59 (30%) were HIV positive. The median age at time of diagnosis of NHL was 29.5 years. Sixty-seven per cent were male. Overall one-year survival rate was 25% while the median survival time for those who died before 1 year was 34 days. Factors that favoured survival included receipt of at least 1-5 courses of chemotherapy and absence of B symptoms at the time of admission. Survival of patients with NHL was poor regardless of HIV status. Co-morbidities included anaemia, malaria, tuberculosis and BMI<18kg/m<sup>2</sup>. It was recommended that further prospective studies be done to determine the factors associated with late presentation of HIV and NHL and to determine the barriers to initiation and completion of chemotherapy. Dr. Bateganya also called for comprehensive cancer services that focussed on early diagnosis and improved access to health care.

**6. Antimicrobial sensitivity of organisms isolated from the sputum of HIV-infected children at the Baylor-Uganda Children's Center of Excellence by Innocent Kasozi.**

This was a retrospective review of sputum results from the Makerere microbiology laboratory collected from January through December 2007. 338 sputum results were reviewed. ZN and Gram staining were performed in all samples while 279 (82%) were cultured for bacteria and 157 (56%) underwent resistance testing. Micro-organisms detected in the cultured specimens were: normal flora (66%), H. influenzae (21.7%). Others included S. pneumoniae, M. catarrhalis, E. coli and S. pyogenes each of which comprised 3% of cultured isolates. M. tuberculosis was identified in 16 (4.7%) of the specimens. 70% of H. influenzae isolates were from children aged between 5 and 14 years. Eight per cent of specimens had more than one pathogen identified. The most frequent resistance patterns were to ampicillin, penicillin G and co-trimoxazole. E.coli isolates were resistant to augmentin (23%) and chloramphenicol (23%). No organisms were found to be resistant to ceftriaxone. Mr. Kasozi called for vaccination programs targeting H. influenzae among older children and recommended that co-trimoxazole and ampicillin no longer be used for the treating of respiratory tract infections if other alternatives are available.

## **DISCUSSION SESSION I:**

**COMMENT/QUESTION:** Dr. Teshale was asked whether his study focussed only on collecting baseline epidemiological data or if interventions were implemented in addition to survey activities.

**RESPONSE:** While the main focus of their study was the prevalence of hepatitis E as determined by seroprevalence survey, they also performed a case-control study to identify risk factors for hepatitis E. They then forwarded these findings to the MOH and NGOs tasked with developing appropriate interventions. Therefore interventions were left for partners.

**COMMENT/QUESTION:** Dr. Teshale was asked to explain why mortality was highest among pregnant women and children less than 2 years of age.

**RESPONSE:** Mortality in pregnant women has been described as the hallmark of a Hepatitis E epidemic. However, it is not known exactly why women and young children suffer the highest mortality rates. It may be related to their immune status. One study in central Asia showed that young children are less symptomatic but with higher mortality rates. Research on this is on-going.

**COMMENT/QUESTION:** Dr. Whalen cautioned all presenters to be aware of the different biases in their studies when it comes to generalizing their results.

**RESPONSE:** Dr. Teshale acknowledged that in their study there was a responder bias with 600 people being invited to participate and 2/3rds showed up.

**COMMENT/QUESTION:** Dr. Nankoma was asked whether lab support was provided in an integrated manner – that is, was support strictly for TB diagnosis or were other lab services such urine, stool, blood smear analysis e.t.c also targeted?

**RESPONSE:** The technical assistance was provided for a week and included all other lab services provided in individual labs.

**COMMENT/QUESTION:** Dr. Sinabulya was asked why patients paid for their own histologies and which histopathology labs were used.

**RESPONSE:** The ISS clinic does not provide histopathology services routinely due to financial limitations therefore the patients bear this cost themselves. All patients with a negative FNLA were advised to have a LN biopsy done. Three histologies were done and the private histopathology lab used was Multi-system Labs in Wandegeya.

**COMMENT/QUESTION:** Dr. Bateganya was asked whether factors like socio-economic status, lymphoma stage e.t.c were controlled for in their study to conclude that chemotherapy improved survival.

**RESPONSE:** The study design limited some of their analyses, for example, information on patients' socio-economic status was not available in their charts. Therefore only known risk factors such as age, BMI, serum LDH, Hb e.t.c were controlled for in this study.

Dr. Nuwaha thanked the presenters for a session well-presented and thanked the audience for their pertinent questions. He commended everyone for making the session interactive. At 11.50am, the session was closed and participants went for a 20 minute break.

## **SESSION II: PUBLIC POLICY, ADVOCACY AND ETHICS**

### **CHAIRPERSON: PROF. JOSEPH KONDE-LULE**

Dr. Bakeera-Kitaka welcomed the participants back from the tea-break. She noted that the keynote address to be delivered by Dr. Lydia Mungerera had been postponed to the afternoon. She invited Prof. Konde-Lule to chair the next session. Prof. Konde-Lule thanked the participants for keeping time and introduced the presenters for session II and their topics. He advised each speaker to stick to their 15 minutes of allocated time.

### **6. Involvement of community nurses in the provision of HIV/AIDS care services in resource-limited settings – the TASO Mulago experience by Mr.Geoffrey Kinaalwa.**

Eleven competent nurses in the TASO Mulago catchment areas were identified and trained in three healthcare packages: Comprehensive HIV Care and Management, Basic ART Information and Basic Counselling Skills. After training, they offered home-based HIV care to clients in their communities in collaboration with the TASO field officers and support from the TASO home-care team. This approach has led to a HAART adherence rate of >95% among TASO Mulago clients, timely management of opportunistic infections and prompt identification of weak clients who require immediate medical attention and adherence support. The presenter concluded that this approach had led to an excellent relationship between the TASO team and the community. He recommended providing accurate information to the community and directly involving members of the community in TASO activities.

### **7. From operational research to peer-reviewed journal articles, publications – the TASO Uganda experience by Dr.Andrew Kiboneka.**

TASO has prioritized operational research in Goal Four of the TASO strategic plan 2008-2012. To that end, its lead researchers undertook manuscript and data analysis workshop organised by the USHS in 2006, and received mentorship from the Canada Africa Prevention Trials Network. Using the TASO database of over 80,000 active patients, 26,000 of whom are on ART, the lead researchers successfully published three peer-reviewed articles in the AIDS journal and BMJ. Following these publications, the authors were invited to mentor other staffs in different HIV/AIDS organizations to promote low-cost operational research for publication using pre-existing databases. The authors concluded that with technical support in manuscript and data analysis as well as good networking skills, it is possible for healthcare providers in resource-limited settings to take the lead in publishing articles in peer-reviewed journals.

### **8. HIV/AIDS care in private for-profit facilities in Uganda by Mr. Robert Kyeyagalire.**

The study was conducted through retrospective chart review and staff interviews in order to assess the type of services offered, the quality of documentation and adherence of standard of care and patient retention for those on ART and those not yet requiring ART. Thirty PFPs were studied and charts of patients who had initiated care 12 months prior to the assessment reviewed. Seven (23%) of the PFPs offered all the services related to HIV/AIDS care, 57%

had documentation on standard MOH HIV care cards and of the 210 patients who initiated ART, 92% were still in care at 1 month while 76% were in care after 6 months. Adherence to standards was good at initial visit but weakens over time although overall it was better in patients on ART. He recommended specific focus on patient retention using regular quality-of-care measures such as monitoring indicators of retention, adherence with MOH standards and patient outcomes as well as adapting elements of the chronic care model such as use of multidisciplinary teams, information systems for long-term care and links with community.

#### **9. Outcome evaluation of Mildmay training on human resource capacity development for HIV/AIDS palliative care in Uganda by Ms. Esther Kawuma.**

The aim of the study was to establish the relevance, applicability and effectiveness of the various Mildmay training programmes. Three hundred and six randomly selected individuals who had completed training at Mildmay between 1998 and 2006 were identified. Of these, 291 (95%) responded. The approaches were interviewer-administered survey, case studies and focus group discussions. Seventy-six per cent responded as having achieved very relevant skills with ability to train others resulting in improved care. Trainees were also able to counsel clients, conduct out-reaches, write funding proposals for new projects, conduct research, mobilize resources for PMTCT, VCT e.t.c, improve paediatric HIV/AIDS care and advocate and lobby for funds. Participants however expressed frustration due to lack of resources and lack of co-operation from non-trained colleagues to effect change. The speaker recommended shared commitment from training organizations and suppliers of resources to enhance application of acquired knowledge and skills.

#### **10. Improved malaria case management following integrated team-based training and support supervision of healthcare workers in Uganda by Dr. Sekabira Umaru.**

The study evaluated the effectiveness of an integrated team-based training program at 8 government health centers using a surveillance system. Two support supervision visits were made 6 and 12 weeks after the training program. Data on the performance of clinicians and laboratory staff was collected during the support supervision visits and one year after the second visit. The research team found a significant improvement in performance of all staffs at all the sites after the training in terms of improved clinical assessment of patients, increased referrals for blood smears, improved accuracy of reading blood smears and reduced prescriptions for anti-malarial drugs in patients with negative smears. At the 1 year assessment there was persistent improvement in lab performance but reduction in the clinical assessment and treatment skills. The researchers concluded that integrated team-based training led to improvement in malaria case management and reduced the number of unnecessary anti-malarial treatments.

#### **11. Evaluation of the efficiency of clinic operations at two Ugandan HIV clinics by Dr. Rhoda Wanyenze.**

This was a time-and-motion study conducted in the Mulago ISS clinic and Mbarara Municipal Council clinic to assess patient flow by stage of care so as to identify barriers to efficiency of clinic operations and determine areas for intervention. 461 randomly selected

patients were studied. Patient load at both the clinics were high. The median clinic visit duration was 231 minutes. While 45 (10%) patients arrived after noon, their clinic visit duration was one hour less than those who arrived earlier. Waiting times were longest for doctors (87 minutes) and counsellors (85 minutes). There was poor distribution of patient arrival times with some patients coming too early. There was no specialization and only 56% of patients had a condition that warranted a doctor consultation. The investigators proposed a reduction in the frequency of clinic visits (e.g. 3-monthly co-trimoxazole refills for stable non-ART with CD4+ count of 300-500 cells/ul), reducing contact/visits with clinicians (e.g. pharmacy re-fill visit for stable ART and non-ART patients), task shifting and distribution of arrival time to improve efficiency in these clinics.

## **12. Challenges of quality assurance of HIV testing in publicly funded health facilities in Uganda by Ms. Mary Dutki.**

The research team undertook a laboratory and training needs assessment of 50 health workers from 34 publicly funded health facilities in 4 randomly selected districts in Uganda. They found that each facility on average had 2 health workers responsible for HIV testing, performing at least 39 HIV tests per week. Seventy-six per cent of them were non-lab trained workers. Both lab trained and non-lab trained workers expressed a deficiency in aspects of HIV testing that could compromise accuracy of the test results. Registers of patient results were not kept securely and the majority of labs lacked HIV testing protocols. Less than 15% of the labs were linked to an external reference laboratory. She recommended provision of adequate supplies for HIV testing, need for guidelines and protocols and linkage to an external quality assurance lab for the training and re-training of health workers and support supervision.

### **DISCUSSION SESSION II:**

**COMMENT/QUESTION:** Dr. Ssekabira was asked about the efficacy and quality of the co-artem currently on the market in areas of high endemicity such as northern Uganda given that patients frequently return with symptoms of malaria after taking this co-artem. The participant commented that chloroquine seemed to cause more rapid resolution of symptoms compared to co-artem.

**RESPONSE:** Despite areas like northern Uganda having a high prevalence of malaria, there are several other potential causes of fever and yet clinicians are not vigilant in looking for these causes. This can partially explain why co-artem may not work. Patient symptoms improve rapidly with chloroquine because it has an anti-pyretic effect but in terms of parasite clearance, co-artem is superior. However no resistance testing has been carried out on the co-artem currently on the market.

**COMMENT/QUESTION:** Dr. Wanyenze was asked whether they took into consideration patient-specific factors as they developed ideas for the changes they are planning to make at the clinics.

**RESPONSE:** Some of the patient characteristics were looked at such as the availability of time to come to the clinic on appointment days, distance from the clinic e.t.c

**COMMENT/QUESTION:** Ms. Dutki was asked to elaborate on how external quality validation was being done.

**RESPONSE:** There are two algorithms for HIV testing that can be currently used which have been externally validated.

**COMMENT/QUESTION:** Mr. Kinaalwa was asked about how patients' privacy/confidentiality was maintained as the community nurses visited the clients in their homes.

**RESPONSE:** Disclosure was acknowledged as a big problem and all clients were encouraged to disclose their status to their family members. Clients with disclosure issues are identified by a note in their charts. Consent was sought from clients in the clinic before the home visits by the community nurses. Only when consent was provided by the client was a home visit was conducted.

**COMMENT/QUESTION:** Dr. Wanyenze was asked whether erratic drug supplies to clinics, especially with ARVs, were likely to interfere with the scheduling of return visits at longer intervals since clinics may not be able to give a whole 3 months' supply of drugs to one patient yet other patients also need drugs which may not be enough to go around.

**RESPONSE:** Cycles of delivery of drugs might affect the visit days. On the other hand, increasing the cycles of delivery of drugs to the clinic stores may be much cheaper than having frequent appointments with patients.

**COMMENT/QUESTION:** Dr. Wanyenze was asked whether they considered a patient visit by appointment time system since the arrival of these patients could be anticipated and planned for thus reducing time consumed by file retrieval e.t.c

**RESPONSE:** Unscheduled visits indeed make the clinics busy and this has been addressed by giving appointments. Filing systems was an issue and file retrieval was a time-consuming process. Computerized registration and storage has been discussed to reduce waiting time.

**COMMENT/QUESTION:** Mr. Kyeyagalire was asked why they chose private for-profit organisations rather than government facilities for the study.

**RESPONSE:** Forty-seven per cent of health services in Uganda are provided by the private for-profit facilities and there is no information on the nature of HIV services provided by these organisations and no systems in place to monitor the quality of care provided. This study was undertaken to bridge that gap.

**COMMENT/QUESTION:** Mr.Kinaalwa was asked why the community volunteers are called "nurse" and yet they are not trained nurses which may cause problems with the nurses' council.

**RESPONSE:** The community volunteers were actually trained nurses.

**COMMENT/QUESTION:** Mr. Kyeyagalire was asked why patient retention was a big problem noted in the private for-profit organisations.

**RESPONSE:** Failure to retain patients was attributed to forgetting clinic appointments, busy work schedules, transportation difficulties, sickness, travel to another area and transfer out of the clinics.

**COMMENT/QUESTION:** Ms. Kawuma was asked how they determined that the trainees transferred 100% knowledge to the people they subsequently trained.

**RESPONSE:** MCQs were given out to the trainees and from that survey it was found that every responder was able to pass on the information or train others on the knowledge that they had gained.

**COMMENT/QUESTION:** Dr. Ssekabira was asked how they managed to retain staff and also what clinical indicators were used in the study.

**RESPONSE:** Staff turn-over occurred but CMEs were on-going to train the new-comers. Also working with district leaders ensured staff were maintained or replaced if transferred. Absenteeism from work was also dealt with at the district level.

**COMMENT/QUESTION:** Dr. Wanyenze was asked what time the health workers reported for work given that some patients were arriving at 4 am and if patients had were seen on a first-come first-serve basis.

**RESPONSE:** Staff reported to the clinic by 8am in the two clinics study and patients were largely seen on a first-come first-serve basis but were triaged first to identify those who required immediate medical attention.

**COMMENT/QUESTION:** Ms. Dutki was asked why HIV results were supposed to be kept under lock and key yet other results like blood smears, urine were not under the same stringent rules.

**RESPONSE:** Breach of HIV test results would break the confidentiality which would be unethical and may cause stigma.

**COMMENT/QUESTION:** Ms. Dutki was asked why she emphasized that some lab workers were of a non-lab educational back-ground yet some receive on-the-job training.

**RESPONSE:** The majority of lab personnel had training from MoH on HIV testing and counselling but none were confident in performing these activities. So there is a need for re-training of the lab personnel.

Prof. Konde-Lule commended the presenters for a job well done. Session II was then officially closed. A group photo was taken and then the participants broke off for lunch at 1.45pm while the FAA-Uganda met for their annual general meeting.

### **SESSION III: VULNERABLE POPULATIONS AND HIV**

#### **CHAIRPERSON: PROF. FLORENCE MIREMBE**

Dr. Bakeera-Kitaka welcomed the participants from lunch and introduced the chairperson for session III, Prof. Florence Mirembe.

Prof. Mirembe expressed her appreciation to the conference organisers and presenters. She introduced Dr. Lydia Mungerera as a medical doctor, peer-educator and human rights activist for more than 11 years. She highlighted Dr. Mungerera's several achievements in the field of HIV/AIDS, noting she was most qualified to speak on the topic for the keynote address.

She then invited Dr. Mungerera to give the **keynote address**.

**The role of advocacy in enhancing health care in Uganda.**

Dr. Mungerera defined advocacy as the process of influencing change to improve a situation, such as health service delivery. She noted that to improve the quality of health services, it is important to know your target audience, be it the community, healthcare workers, research scientists, policy makers or donors. She emphasized the role of communication and the different ways one can deliver a message, such as through dialogue, on-site visits, documentation, regular meetings and media.

She highlighted specific issues for advocacy in our environment which included:

- Basic primary health care
- Health systems including infrastructure and referral practices
- Integrated services
- Resource mobilization
- Evidence-based research
- Improved documentation
- Gender-sensitive approaches
- Innovative approaches
- Involvement of stakeholders
- Policy review

She then discussed strategies to enhance advocacy in these areas which included performing a situational analysis and engaging the community in discussions. She emphasized the importance of choosing the appropriate target audience and channels of communication. She encouraged the practice of documentation of evidence and underlined the importance of adequate representation on policy bodies, consultation with stakeholders and creating fora for continuous dialogue.

She noted however that there were considerable, but not insurmountable, challenges to advocacy. These included diversity of stakeholders and priorities, lack of resources, lack of fora for in-put and danger of being in a comfort zone. She recommended that partnerships be built and sustained, that science and research be tailored to meet priority needs in our environment, improvement in data collection and documentation, use of innovative methods as well as creating fora for dialogue with communities.

Dr. Mungerera thanked the organisers for inviting her to speak and the audience for listening to her.

Prof. Mirembe thanked Dr. Mungerera for the keynote address, noting that it was highly relevant to the conference theme. She then introduced the panel of presenters for session III and their topics. She reminded everyone to keep time and requested that all questions be answered at the end of the session.

**13. Effects of malnutrition at initiation of anti-retroviral therapy on survival among HIV/AIDS patients in Kampala by Mr. Kenneth Ekoru.**

This was a retrospective study of 1,410 patients who initiated HAART from January 2004 through December 2005 at the Joint Clinical Research Center (JCRC). The primary outcome was all-cause mortality and malnutrition was defined as a BMI <18.5kg/m<sup>2</sup>. The prevalence

of malnutrition at initiation of HAART was 24% (336 patients) and 18% (249 patients) died. The median follow-up period was 1.59 years. Low BMI, low CD4+ counts and anaemia were predictors of poor outcomes. Malnourished patients were four times more likely to die as their better nourished counterparts. Mr. Ekoru therefore recommended the nutritional status of patients be strengthened prior to initiation of HAART in order to improve survival.

**14. Supporting PMTCT services through a peer community network of mother-to-mother (M2M) supporters: the Reach-Out Experience by Ms. Agnes Nakanwagi.**

Six HIV positive women who had utilized PMTCT services in the past were enrolled as M2M outreach members to support 110 pregnant women in their communities to access and utilize PMTCT services. Between 2006 and 2008, there was a notable increase in the number of HIV positive women delivering in hospital and receiving prophylactic ARVs, infants receiving AZT syrup and infants undergoing HIV testing. Mother-to-child transmission declined from 35% in 2005 to 6% in 2008. Challenges faced include high number of abortions, decreased uptake of family planning services, low socio-economic status and the closure of Naguru health center where approximately 99% of the mothers in this community have their deliveries conducted. She concluded that the M2M model improved utilization of the PMTCT and PMTCT-plus packages and should be scaled up in resource limited settings.

**15. Psychosocial support as a critical strategy for improving retention in paediatric care and treatment in Reach-Out Mbuya by Ms. Caroline Otieno.**

Psychosocial support in Reach-Out began in 2006 with 60 children and expanded to 600 children by 2008. Support is provided in form of school fees, scholastic materials, play therapy, family counselling, exposure trips, music, dance and drama activities on the weekends, experiential learning, friends' forum gathering specifically targeting HIV positive children and their care-givers and end of year tokens to reward achievements. As a result of these interventions, there has been increased enrolment of children in psychosocial activities and 92 children have been retained in HIV care for at least 2 years. Other gains include decreased stigma, more accessible funding, parents are more involved and children retained in community households. Challenges include high turn-over of children, rural-urban dynamics, and inadequate staff training. Ms. Otieno recommended the inclusion of a psychosocial component in paediatric HIV care programs in order to facilitate long-term retention of children in care and treatment.

**16. Baseline prevalence of HIV and other STIs among women engaged in high-risk behaviour in Kampala by Dr. Justine Bukunya.**

A prospective cohort of 849 women recruited from the red-light areas and followed up at 3 monthly intervals was studied. Clinic visits involved completing a questionnaire and a gynaecological examination including vaginal and cervical swabs. Routine tests include HIV, HSV-2 and syphilis serology as well PCR for gonorrhoea and Chlamydia. The mean age was 26 years (IQR 22-45). Few women (9.8%) were married while 76.2% of the unmarried women had regular sexual partners. Most (94.2%) reported having had sex-for-money in the past 12 months. Condom use was more consistent with regular paying

customers and casual partners than with husbands. The baseline sero-prevalence of HIV was 36.5%, HSV-2 was 79.2% while syphilis was 10%. Gonorrhoea was more common among HIV positive women. Resistance patterns for *N. gonorrhoeae* isolates were high at 98.2% for penicillin G and 80.7% for ciprofloxacin. Other infections included Chlamydia, bacterial vaginosis, *T. vaginalis* and candidiasis. Given the high prevalence of HIV and STIs in this population, Dr. Bukenya called for interventions targeting improvement in reproductive health.

Prof. Mirembe thanked the presenters and opened the floor for discussion and questions.

### **DISCUSSION SESSION III:**

**COMMENT/QUESTION:** Mr. Ekoru was asked what age-groups were considered for his study.

**RESPONSE:** Only adults aged 18 years and older were enrolled.

**COMMENT/QUESTION:** Mr. Ekoru was asked to elaborate on his recommendations on improving nutrition among patients initiating HAART – whose responsibility was it to improve a patient's nutritional status.

**RESPONSE:** It was acknowledged that this was a problem. Partnership between different care providers, agencies and development partners would be required.

**COMMENT/QUESTION:** Mr. Ekoru was asked if other variables such as adherence were considered since malnutrition can impact negatively on adherence

**RESPONSE:** It was not possible to assess adherence with the current study design since patients were evaluated for malnutrition at initiation of HAART. However, other variables such as CD4+ counts, haemoglobin were controlled for.

**COMMENT/QUESTION:** Dr. Bukenya was asked whether married women used condoms in sexual encounters outside the marriage.

**RESPONSE:** That data had not yet been analysed.

**COMMENT/QUESTION:** Dr. Bukenya was asked to elaborate on challenges and experiences faced while recruiting these women.

**RESPONSE:** It was challenging especially during the mapping exercise. However they consulted with potential clients and local leaders. They introduced services for the women's children at the clinic. They made the police aware of their recruitment activities. For night-time recruitment, they used a pre-existing NGO that was already providing services to the women. The first clinic visit was designed to answer the women's questions about the study and build rapport. The women appreciated the services in the STI clinic. Currently, one of their challenges is training clinic staff to prevent stigmatisation of the women.

**COMMENT/QUESTION:** Dr. Bukenya was asked how they intended to translate their research findings into policy regarding the sensitivity patterns of gonorrhoea.

**RESPONSE:** A similar study outside this high-risk population would be required in order to generalize the results. The *N. gonorrhoeae* isolates in this high-risk population may be different from those in populations that are lower risk.

Prof. Mirembe thanked the speakers for their good presentations and closed session III.

#### **SESSION IV: HIV IN PAEDIATRICS**

##### **CHAIRPERSON: PROF. PHILLIPA MUSOKE**

Prof. Musoke welcomed the presenters for session IV. She introduced the various topics to be presented in this session and reminded the speakers to keep time.

##### **17. The clinical patterns, prevalence and factors associated with Immune Reconstitution Inflammatory syndrome in children in Uganda by Dr. Judy Orikiriza.**

It was a cross-sectional study undertaken from December 2006 through October 2007 in 162 children in Uganda receiving ART for 0.5 to 6 months. The median age was 6 years (IQR 2.4-11y). The prevalence of IRIS was 38% with 77% of these being unmasked events and 23% being paradoxical events. The commonest IRIS was TB (29%). Risk factors for IRIS were male sex, pre-HAART CD4 count <15% and absolute CD8+ count <1000 and cough for greater than 7 days. The authors concluded that IRIS was common in children with severe immunosuppression on ART and IRIS events are more common in the first month after initiation of ART. Reinforcing TB diagnosis before initiation of ART is mandatory.

##### **18. Dramatic reductions in HIV RNA among HIV-infected children with acute measles in Uganda by Dr. Jane Achan.**

This study was about the effects of measles infection on viral and immune status in HIV infected children. Between July 2006 and January 2007, 17 HIV infected children with clinical measles were recruited from a pre-existing cohort. Of these, 9 were ART-naïve while 8 were on ART. She documented that every child with detectable plasma HIV RNA experienced a transient and dramatic decrease in plasma HIV RNA (mean 1.4log decline) while those with undetectable virus at baseline remained so. Absolute CD4+ and total lymphocyte counts declined in most of the ART-naïve children while CD4% remained stable. Plasma HIV RNA levels returned to baseline over time. It was recommended that further research be undertaken to define the mechanisms of viral suppression by measles.

##### **19. Characteristics of people seeking post-exposure prophylaxis (PEP) for HIV at an HIV/AIDS treatment centre in Kampala, Uganda by Mr. Kenneth Mutesasira.**

The study was a retrospective review of all requests for PEP from September 2006 to August 2008 at the Mildmay Treatment Center which described the common indications for PEP. It also assessed the client adherence to medication and outcome of using ARVs in preventing HIV infection. 70 requests were analysed of which 68 received PEP and 8 incomplete requests were excluded. More women sought PEP than men although females took greater time to seek services than males. Sexual assault formed significant proportion of indication for PEP and AZT/3TC/EFV was the common ARV regimens used. There were 21 occupational exposures of which 81% reported the source as being HIV positive. The attrition

rate during follow up was high (62%) and larger drop was noted 3-6months into follow up especially among the non-occupational exposures and rape cases. None of those completing follow-up had sero-converted. The research identified the need to ensure appropriate data system and capture of complete data, link PEP services to legal services and inclusion of emergency contraceptive services in PEP.

#### **20. Mortality and its predictors among HIV positive children on HAART at Baylor Uganda COE in Kampala, Uganda by Dr. Isaac Sebuliba.**

The study determined the age specific mortality rate and factors associated with mortality in children on HAART. Records of 1,979 children initiating HAART between May 2005 and November 2008 were studied. Overall mortality was 0.125 deaths per person year of observation. Mortality was highest in the first 3 months after initiation of HAART and the risk of dying was associated with low haemoglobin levels (Hb <8.5g/dl), low immunity (CD4% <5%, CD4+ <200) and duration on HAART (being < 3 months on HAART).

Prof. Musoke thanked the presenters for a job well done and then opened the session to discussion and questions.

#### **DISCUSSION SESSION IV:**

**COMMENT/QUESTION:** Dr. Orikiriza was asked why there was lack of significant suppression of virus in children with IRIS in the study.

**RESPONSE:** It is not known why despite having a high adherence rate to ART the children with IRIS in this study still had sub-optimal viral suppression.

**COMMENT/QUESTION:** Dr. Achan was asked if her team had any explanations for the paradoxical finding of dramatic reductions in plasma HIV RNA with measles co-infection.

**RESPONSE:** One theory is that as-yet un-identified soluble factors during a measles infection may be responsible for inhibiting HIV replication leading to reduction in plasma HIV RNA. But this is still under study.

**COMMENT/QUESTION:** Dr. Achan was asked why they did not look at HIV-2 as well in their study.

**RESPONSE:** HIV-1 is more prevalent than HIV-2 in our environment.

**COMMENT/QUESTION:** Mr. Mutesasira was asked why emergency contraception was not part of their PEP package for victims of rape.

**RESPONSE:** Emergency contraception services have only recently been included in the PEP package offered by the Mildmay Treatment Center which was not the case at the time of the study. Mildmay is also sensitizing community about the role of PEP.

**COMMENT/QUESTION:** Dr. Sebuliba was asked whether hemoglobin levels, immunity and HIV stage were analysed according to different age categories.

**RESPONSE:** He acknowledged the fact that various factors associated with mortality among children on HAART may have to be looked at by stratifying the different age categories. That analysis was not done in this study.

## **DAY TWO**

### **SESSION V: CARE AND TREATMENT**

#### **CHAIRPERSON: DR. CISSY KITYO**

Dr. Kityo welcomed the participants and introduced the speakers for session V of the conference. She reminded everyone that all questions would be answered at the end of the session.

#### **21. Factors associated with increasing HIV-1 resistance to ART in an urban cohort in Kampala, Uganda by Dr. Hakim Sendagire.**

The study was done between 2004 and 2005 at the IDI to determine rates of virologic resistance and development of TAMs at selected time intervals in HIV positive patients on ART. Seventy-eight samples from 42 patients who had viral loads >2000c/ml were genotyped at 12, 24 and 36 months. By analysis of the first samples, 12 (29%) patients had no resistance, 21 (50%) had low level resistance while 9 (21%) had moderate level resistance. No patient had  $\geq 3$  TAMs. Only 3% had detectable viral load at 36months. Six percent of the cohort had switch of therapy of which 50% did not require the switch as the resistance level did not warrant the switch. Higher baseline viral load and lower CD4 count at ART initiation increased the likelihood of resistance. He concluded that virologic monitoring facilitated detection of early resistance.

#### **22. Community-based case-finding of TB and HIV patients in Kampala - using chronic cough as a screening tool by Dr. Juliet Sekandi.**

This was a serial cross-sectional house-to-house survey done in Rubaga which determined the effectiveness of community-based case-finding for TB and TB/HIV co-infection and compared relative effectiveness of PCF and ACF approaches in TB/HIV positive and TB/HIV negative patients. Of the 4,245 people studied, 4% reported a chronic cough. Among the chronic coughers, there was high prevalence of active TB (26%), high HIV prevalence of 43% but lower rates of TB/HIV co-infection of 10%. The effectiveness of community-based case detection was 1/160 in the general population and 1/5 among chronic coughers. The team concluded that the TB epidemic in Rubaga was mostly driven by HIV negative cases and that ACF was a valuable strategy for increasing case detection for TB in HIV negative patients but its role among TB/HIV co-infection was less important.

#### **23. Predictors of non-adherence to HAART in HIV infected patients attending an urban clinic in Kampala, Uganda by Dr. Violet Gwokyalya.**

This was a retrospective analysis of 500 patients attending the Mulago ISS clinic who had been on HAART for at least 6 months but had an average adherence rate of <95%. She reported that the factors associated with poor adherence among adult clients attending Mulago ISS clinic were lack of formal education, presence of opportunistic infection, failure to disclose and younger age group. They recommended that there was a need for more counseling, closer follow-up and additional support to such clients.

**24. Traditional medicine use in the context of antiretroviral therapy in Uganda by Mr. Kukunda Collins who presented on behalf of Dr. Lamorde.**

The study looked at the commonly used herbal medicine in the context of HIV in 4 districts. Twenty-five traditional medicine practitioners and 44 HIV positive patients were interviewed. The authors reported that 103 plant species were identified. Mixtures of plant species were commonly used except in Gulu where mono-concoctions were common. Priority species included *Aloe spp*, *Erythrina abyssinica* among others. Plant parts commonly used were leaves, stem bark and root bark. About 80% of the preparations were oral and there was no consensus among TMPs on the species to use to cure HIV/AIDS. An efficacy and safety study focussing on opportunistic infection and phyto-chemical studies was recommended.

**25. Severe adverse drug events and associated factors in active TB/HIV infected patients on first line treatment in Kampala by Dr. Peter Mudiope.**

Records of 442 HIV positive patients with active TB who were started on TB treatment between January and December 2006 in IDI and JCRC were reviewed. They found that severe adverse drug events occurred in 1 in 10 HIV positive patients on TB treatment with gastro-intestinal manifestations and hepatitis being the commonest. Severe peripheral neuropathy and skin lesions were less common findings. The risk of developing severe drug events reduced with increasing BMI. The authors recommended strengthening the policy on the treatment of active TB/HIV by pharmaco-vigilance for appropriate prevention of adverse drug events, enhancement in research to cover new TB treatment and further research to study other possible associated factors.

**26. Sexual behaviour and disclosure to partners among newly diagnosed HIV positive patients at Mulago Hospital, Uganda by Dr. Bavewo Steven.**

As part of a provider-initiated HIV testing study, 434 patients were tested from May 2008 to February 2009. Of these, 25.3% tested positive for HIV. Of these 62.4% had late-stage HIV and were eligible for HAART at initial diagnosis. Of the HIV positive group 47.3% were married of whom 80.8% said they would disclose to their spouses. Condom use was poor while most patients did not know the HIV status of their spouses. The authors found that combination of late-stage untreated HIV with high risk behaviour places populations at high priority for risk-reduction counselling. They recommended disclosure counselling, risk-reduction counselling and ART counselling.

**DISCUSSION SESSION V:**

**COMMENT/QUESTION:** Dr. Kityo commented that having a viral load of > 400c/ml in patient on ART does not mean resistance has occurred as such a finding was quite common. She further commented that the utility of ACF for TB was different in a rural versus an urban setting and these differences should be studied further. She then invited questions from the audience.

**COMMENT/QUESTION:** Dr. Sendagire was asked how he would generalize his results to other sites where there are no facilities available to do regular follow-up.

**RESPONSE:** Even though resistance was seen in this cohort which was strictly monitored, IDI had other patients who were not in the cohort but had regular monitoring. The situation would be different in other parts of the country where drug stocking may affect adherence.

**COMMENT/QUESTION:** Dr. Sekandi was asked about any strategies that were implemented in Rubaga after knowing the high prevalence of TB in the HIV negative patients.

**RESPONSE:** Health education was carried out by health educators with active community involvement. She recommended that the same survey should be done in other parishes as well.

**COMMENT/QUESTION:** Mr. Kukunda was asked whether he looked at the dosing of herbal medicines and their toxicities and their effect on the concurrent ART and other drugs.

**RESPONSE:** There was wide variability in dosing practices among the traditional practitioners and most practitioners validated the doses by observation of effect. But the researchers did not look closely into toxicities which would be done in the second phase of the study. A similar study done in South Africa had already shown a negative relationship between herbal medicine and ARV use.

**COMMENT/QUESTION:** Dr. Gwokyalya was asked to clarify on why her abstract was different from what she presented as abstract talked about socioeconomic status as one of the factors associated with poor adherence which did not appear in the presentation.

**RESPONSE:** She responded that analysis was also done on socioeconomic status which was found to be associated with poor adherence. Only few factors were presented in the power-point and the rest highlighted in the abstract in the interest of time.

**COMMENT/QUESTION:** Dr. Sendagire was asked whether it wouldn't be unethical not to switch at 12 months if viral load is still detectable.

**RESPONSE:** He responded that they had higher virologic failure at 12 months than at 36 months and the reason for that was the problem with drugs at that time due to issues with global fund leading to drops in adherence rates. Also the 12 month viral load did not warrant a switch in treatment if resistance levels were low or absent.

**COMMENT/QUESTION:** Dr. Mudiope was asked about the adverse drug event responsible for causing the most deaths in his study.

**RESPONSE:** As the study was retrospective in design, causality could not be established.

**COMMENT/QUESTION:** Dr. Gwokyalya was asked to throw light on how OIs affected adherence and whether she looked at number of household contacts in terms of poor adherence.

**RESPONSE:** Patients with OI tend to be sick and therefore may not come to the clinic. Also OIs may compromise intake due to vomiting and loss of appetite. Psychological factors like loss of hope could also be a contributory factor. She noted that the study did not look at the number of household contacts impacting adherence.

**COMMENT/QUESTION:** Mr. Kukunda was asked whether he went back to the traditional practitioner who was treating TB.

**RESPONSE:** He noted that most TMPs were not treating TB except for one in Gulu who was removed for analysis.

**COMMENT/QUESTION:** Dr. Baveewo was asked what his results meant in terms of prevention strategies since 20% of the HIV patients didn't have the intention of disclosing their status to their spouses.

**RESPONSE:** He said that the actual disclosure was lower than that from the study and probably there was disclosure bias in the study. Most disclose to others for social support than to their sexual partners. That was a challenge in terms of prevention strategies.

**COMMENT/QUESTION:** Dr. Sekandi was asked whether administration of questionnaire and counselling done in the same visit.

**RESPONSE:** She responded that the home visitors were trained counsellors who after filling in the questionnaire, which would take about 7 minutes, were doing pre-test counselling, HIV testing and post-test counselling on the same day.

**COMMENT/QUESTION:** Dr. Sekandi was asked to comment on why her results on HIV testing of 62% different from the national sero-prevalence survey of 23% and to elaborate on the characteristics of Rubaga that made the difference.

**RESPONSE:** She acknowledged that fact that there was a difference and attributed it to selection bias. She commented that the results of her study could not be generalized to the general population since the survey included more women who were more likely to accept an HIV test, making the prevalence higher.

**COMMENT/QUESTION:** Mr. Kukunda was asked highlight how the TMPs made the diagnosis of HIV and OIs.

**RESPONSE:** He mentioned that most of the TMPs referred the patients to modern doctors for HIV testing and OIs were assessed by the physician in the team.

**COMMENT/QUESTION:** Dr. Gwokyalya was asked whether she looked at social factors that affected adherence and to clarify how education level affect adherence.

**RESPONSE:** She responded that social constraints interfered with adherence especially financial constraints in about 21% of the patients which resulted in defaulting treatment. Higher educational levels led to better the understanding of the need to take drugs and also with higher educational level one would have a source of income to come and pick drugs.

**COMMENT/QUESTION:** Dr. Mudioppe was asked how they were able to distinguish IRIS from adverse drug reactions since the two could present the same way.

**RESPONSE:** He commented that being a retrospective study that question could not be answered. He noted that some of the patients were already on TB treatment before the initiation of ART and so that wouldn't be IRIS in those patients.

## **SESSION VI: NEGLECTED DISEASES**

### **CHAIRPERSON: DR. JACKSON OREM**

Dr. Orem welcomed participants back from the tea-break and introduced the panel of presenters for the next session and their topics.

**27. Filariasis in Butuntumula sub-county Luweero district – need for intervention by Dr. Alfred Okiria.**

This was a retrospective chart review of blood film results in the laboratory register of the health unit serving Butuntumula. Of the 104 blood films reviewed, 54% were positive for filariasis. The majority of patients were female and the mean age was 37 years (range 3-85 years). Ngogolo parish had the highest prevalence of filariasis (42%). The authors concluded that filariasis was common in Butuntumula sub-county, easily diagnosed by a simple blood smear and all ages were at risk. They recommended a bigger survey and mass treatment for the affected population.

**28. Community-based intervention to control intestinal helminth infections: PHAST approach by Dr. Robinah Dumba.**

The study was conducted in 19 villages in three phases: baseline survey, PHAST health education and follow-up. The baseline prevalence of intestinal helminths in children <5 years was 27.6% which declined to 16.5% by phase 3 after the PHAST interventions. The commonest helminths were *Ankylostoma* species. PHAST approach reduced the likelihood of new infections in children. Significant improvement was noted in hand-washing after handling children's faeces, keeping of pigs and maintenance of latrines. The authors recommended use of the PHAST approach to sensitize communities on how to reduce helminth infections.

**29. Effects of treatment of helminths with albendazole and praziquantel in pregnancy on the incidence of allergy in the first year of life by Dr. Harriet Mpairwe.**

This is an on-going double-blinded placebo-controlled randomized clinical trial in Entebbe. Between 2003 and 2005, 2507 pregnant women were de-wormed and their children followed up for one year. There were 228 eczema events, 21 wheeze events and 33 urticaria events in the 152 infants analyzed. Infants whose mothers received albendazole treatment were more likely to develop eczema in infancy. The same effect was not seen with praziquantel overall but when analyzed according to the mother's *Schistosoma mansoni* stool status, praziquantel was associated with an increased risk of eczema in infancy. The study suggests that in-utero exposures to helminthic antigens protects against infant allergy. We need to understand better the detrimental role of albendazole treatment in pregnancy and the mechanisms of the beneficial effects of helminthic infections. The study is on-going and persistence of these allergies into childhood will be studied.

**30. Kaposi sarcoma-associated immune reconstitution inflammatory syndrome in Africa: initial findings from a prospective evaluation by Dr. Miriam Laker.**

Patients with AIDS-related KS attending IDI and on HAART were evaluated for KS-IRIS at 4 week intervals. Fifty-five patients were analyzed; the mean baseline CD4+ was 116cells/ul and viral load was 5.4log<sub>10</sub>. The commonest IRIS manifestation was inflammation involving pre-existing KS lesions. Other IRIS manifestations included peripheral oedema (22%), facial oedema (2.5%), genital oedema (3.8%) and pulmonary findings (19%). Spontaneous

resolution was common except for cases with pulmonary findings and oedema where chemotherapy was required. KS-IRIS contributed to decreased adherence and morbidity.

Dr. Orem thanked the presenters for their good quality presentations and invited questions from the participants.

## **DISCUSSION SESSION VI:**

**COMMENT/QUESTION:** Dr. Laker was asked to elaborate on the incidence of KS-IRIS according to the different arms of HAART.

**RESPONSE:** The different arms of the HAART study have not been un-blinded yet. Some studies however recommend a PI-based regimen for KS patients who require HAART.

**COMMENT/QUESTION:** Dr. Okiria was asked whether they studied the interaction of filariasis with HIV.

**RESPONSE:** Only lab data on blood smears was analyzed. However, studying HIV and filariasis is planned for the future in this community.

**COMMENT/QUESTION:** Dr. Dumba was asked if schools were involved during the implementation of PHAST in the community.

**RESPONSE:** One school in Luweero was involved. Greater involvement of schools is important because children are important change agents in the community. This will require planning and funding.

**COMMENT/QUESTION:** Dr. Dumba was asked to give recommendations to promote hygiene especially after defaecation in children.

**RESPONSE:** Some cultures promote the use of “bikokoma” an easy-to-grow plant with soft leaves that can be used in place of toilet paper. But its efficacy needs to be formally studied.

**COMMENT/QUESTION:** Dr. Dumba was asked if religion impacted on hygiene practices such as cleaning after defaecation in the communities studied.

**RESPONSE:** Religion was not found to be significant, most likely due to small numbers of Muslims in the cohort.

**COMMENT/QUESTION:** Dr. Mpairwe was asked to clarify whether praziquantel was toxic in pregnancy.

**RESPONSE:** In 2002, the WHO declared praziquantel safe for use in pregnancy. The study however collects data on the side effects experienced by the mothers, the commonest being gastro-intestinal symptoms.

**COMMENT/QUESTION:** Dr. Mpairwe was asked whether we should continue to give albendazole in pregnancy given that it was associated with an increased incidence of infant allergy.

**RESPONSE:** This is still being investigated. Whether this effect is intrinsic to albendazole or due to elimination of worms is not clear. More intensive study is planned with 5 rather than one stool sample analyzed at delivery. Also these findings need to be replicated before any policy changes are made.

**COMMENT/QUESTION:** Dr. Mpairwe was asked to elaborate on how inter-observer variability was handled when diagnosing clinical conditions like eczema.

**RESPONSE:** Strategies used included refresher training in the Mulago dermatology clinic, clinician consensus and use of a check-list of symptoms and signs. Where there was disagreement, the rash was classified as non-specific although evaluation of the rash continued as the children grew.

**COMMENT/QUESTION:** Dr. Mpairwe was asked if worms should be administered to children to prevent allergy.

**RESPONSE:** Worms have been used in phase I trials in the U.K to treat auto-immune disease and severe asthma in adults. However whether they should be used to prevent allergy in children is still a topic for debate.

## **SESSION VII: HIV TREATMENT**

### **CHAIRPERSON: PROF. MOSES KAMYA**

#### **31. Electrocardiographic changes following a single dose of Artemether/Lumefantrine in HIV positive patients receiving Lopinavir/Ritonavir by Dr. Pauline Byakika.**

This was a longitudinal intensive pharmacokinetic study involving 32 patients with normal ECGs at baseline. Of these, 16 were ART-naive and 16 were on L/r-based ART regimen. All patients received a single dose of artemether/lumefantrine after a high-fat meal. Thereafter they had ECG monitoring for 72h and a pharmacokinetic assessment. The authors found no evidence of significant cardiac conduction abnormalities. The study however can only be generalized to those on a single dose of artemether/lumefantrine and so it is possible that the results may be different with full course of the drug. The team recommended for a future study on pharmacokinetic profiles in patients on both L/r and full dose of artemether/lumefantrine.

#### **32. HIV-related mortality in pre and post-HAART eras in a rural Ugandan HIV cohort by Dr. Ben Masiira .**

This study looked at the overall and cause-specific mortality rates in a rural HIV clinical cohort before and after the introduction of ART in 2004. HIV-infected and non-infected individuals as well as ART and non-ART patients were analysed. Data on deaths were compiled from case notes, hospital records and verbal autopsy. They found that HIV-infected patients died at a much younger age and mortality rates were high in pre-ART era (91 per 1000py). Mortality substantially decreased in post-ART era with overall mortality of 48/1000py. Pre-ART, the commonest causes of death were cryptococcal meningitis, HIV wasting syndrome and cryptosporidiosis. These declined after the introduction of ART. Among ART patients, common causes of death were anaemia, HIV wasting syndrome, PCP, TB, KS and toxoplasmosis. Early diagnosis, early ART initiation and by providing quality care for HIV through prophylaxis and OI management was recommended to decrease mortality.

**33. Low incidence of liver enzyme elevation in HIV infected patients attending a large urban treatment center in Kampala by Dr. Ponsiano Ocama.**

This was a retrospective analysis of the liver enzyme profiles of 559 patients on ART attending the IDI over a period of 36 months. Patients were also screened for HepBsAg. Most (69%) patients were female and median CD4+ was 98cells/ul. At baseline, 8.5% were positive for HepBsAg while 0.01% had grade 3-4 liver enzyme elevation. There were few cases of liver enzyme elevation during the course of ART and these were more common among the men. The authors concluded that there was a low incidence of liver enzyme elevation among patients on ART, and this was not affected by ART regimen or hepatitis B status. It was recommended that routine screening for liver enzyme abnormalities in patients on ART may not be necessary.

**34. Cause-specific mortality and the contribution of IRIS in the first three years after anti-retroviral therapy in an urban African cohort by Dr. Barbara Castelnovo.**

This was a cohort of 559 patients attending the IDI who initiated ART between 2004 and 2005. Mortality in the first 36 months was 17% while 14% died in the first 2 months. Once the patient passed through the initial ART period mortality was insignificant thereafter. Eighty percent of the deaths were associated with HIV-related infections and 7% of mortality was due to IRIS. The observation supported the view that IRIS was self-limiting in most cases. Risk factors for all-cause mortality included anaemia, CD4+ counts <25 cells/ul and low BMI. She recommended for mass HIV testing strategies to target healthy HIV infected individuals to avoid late presentation, provision of infrastructure for OI screening and ensuring optimal treatment of OIs.

**DISCUSSION SESSION VII:**

**COMMENT/QUESTION:** Dr. Masiira was asked to elaborate on his results that showed higher mortality among HIV positive patients on ART compared to HIV positive patients not on ART. He was also asked how HIV wasting can be a cause of death.

**RESPONSE:** HIV positive patients not on ART were more immune-competent than the HIV positive patients on ART. However this difference in mortality wasn't statistically significant. The causes of HIV wasting are multi-factorial: an autopsy study done in Ivory Coast on patients with the HIV wasting syndrome found a high prevalence of TB.

**COMMENT/QUESTION:** Dr. Byakika-Kibwika was asked to elaborate what a clinician should do if a patient on co-artem was found to have an abnormal ECG.

**RESPONSE:** It is not possible to answer that question based on the results of this study.

**COMMENT/QUESTION:** Dr. Ocama was asked why, given that AST is less specific to the liver, this enzyme was analysed over the more liver-specific ALT.

**RESPONSE:** At the time the study samples were being collected and analyzed, the IDI lab could only analyze for AST.

**COMMENT/QUESTION:** Dr. Castelnovo was asked to comment on why haemoglobin levels and BMI impacted on mortality.

**RESPONSE:** BMI and haemoglobin were baseline characteristics and had nothing to do with ART. Both could be markers of underlying OI and initiating ART in such patients could actually worsen their clinical status.

**COMMENT/QUESTION:** Dr. Masiira was asked about the reliability of cause of death in this study given that most diagnoses in the study were clinical and diseases with similar clinical presentations like cryptococcal meningitis and TBM could be misdiagnosed.

**RESPONSE:** Some of the diagnosis was clinical such as cryptosporidiosis, toxoplasmosis. But for diseases like meningitis, a specific diagnosis was made on the basis of CSF analysis and not on purely clinical grounds.

**COMMENT/QUESTION:** Dr. Castelnovo was asked about verbal autopsy and how she established the causality.

**RESPONSE:** Verbal autopsy did have some limitations. Patients were followed up very closely and most diagnoses were made in IDI by competent clinicians. However where verbal autopsy was used it was a limitation in that one couldn't say for sure the causes of death were the ones specified.

Prof. Kamyia thanked the presenters for the excellent work presented and high-lighted the good quality of the studies done by the presenters in this session.

Following session VII, there was a brief interlude during which participants were entertained by Young Generation Alive – MUJHU, an association of children and adolescents living with HIV. This was followed by the USHS annual general meeting and later the inauguration ceremony.

### **THE INAUGURATION CEREMONY:**

**CHAIRPERSON: PROF. MOSES KAMYIA**

**GUEST OF HONOUR: HON. DR. KAJURA REPRESENTING H.E THE VICE-PRESIDENT OF UGANDA, PROF. GILBERT BUKENYA**

At 4.00pm, the inauguration ceremony was kicked off by Dr. Mwambu who invited the newly re-elected USHS chairperson 2009/10 Dr. Byakika-Kibwika to say a few words.

Dr. Byakika-Kibwika welcomed the guest of honour to the 10<sup>th</sup> annual USHS conference. She gave a brief overview of USHS activities and spoke about the theme of the conference and why it was selected for this year. She looked forward to the continued growth of the USHS over the next year.

Prof. Kamyia followed with a brief speech in which he welcomed the guest of honour to the 10<sup>th</sup> annual USHS conference. Speaking on behalf of the founder members of the USHS, he gave a summary of the USHS from inception to-date. He applauded the role of the USHS in facilitating the growth of other organizations like TASO and improving research capacity. He thanked AITRP for 10 years of funding and emphasized the importance of supporting the growth of young scientists through mentorship. He encouraged the sharing of ideas among young scientists with support from the USHS.

Next was a testimonial on the challenges of disclosure of HIV status by Nabukenya Josephine, the 15-year-old chairlady of the Young Generation Alive – MUJHU.

Prof. Chris Whalen, USHS technical adviser was invited to make a speech by the M.C Dr. Mwambu. He welcomed the guest of honour to the proceedings and thanked the USHS organizing committee for making the conference possible. He spoke about the first USHS meeting that had 25 – 30 members and commended the growth of the USHS membership at a rate of 10% per year. He high-lighted the accomplishments of the USHS including annual conferences and work-shops, special lectures, journal clubs and acquiring a resource office with internet and access to electronic journal articles. He concurred with Prof. Kamyia on mentorship, noting that it was critical to creating the next generation of scientists.

He also commended the 38 oral presentations at this conference for their marked improvement in the quality of their scientific presentations. He noted that the poster presentations were also of good quality. He encouraged the USHS to look forward, network with other research groups both inside and outside Uganda, diversify their sources of funding and promote interaction between junior and senior scientists.

Prof. Whalen called for transformative thinking and bold ideas. He encouraged scientists to think ahead and develop new and creative ways to manage patients. He ended by saying he looked forward to the next 10 years with USHS and a healthy Uganda.

Prof. Nelson Sewankambo was invited to give a keynote speech entitled “*Research at the College of health Sciences: Its impact of improving health care in Uganda*”. He recognized the presence of the guest of honour and welcomed him to the conference. He introduced the newly formed College of Health Sciences of which he is the first head. He outlined the history of research in the medical school, highlighting the stages of growth of research in Uganda in the fields of cancer, mental health, natural products and the safety of traditional medicines, tuberculosis and HIV and malaria. He emphasized the importance of observation, meticulous work and low-cost activities in research. He congratulated MUJHU on the official opening of the MUJHU Zayed Family Center. He spoke about translating break-through research into policy and noted there were challenges; he cited the Rakai circumcision trial in 2007 which TIME magazine named the number one medical break-through of the decade, noting that despite this, circumcision had not yet become part of national guidelines.

He commended AITRP for promoting advanced education and strengthening the capacity for health research in Uganda. As he concluded, Prof. Sewankambo reflected on the importance of building leaderships and mentorships, moving research into policy, building stronger partnerships with stakeholders and linking science innovations to industry and technology.

The guest of honour, Hon. Dr. Kajura was invited to make a speech. Dr. Kajura thanked USHS for their initiatives and noted that sciences were the future of Uganda. He assured the participants that all that Prof. Sewankambo had presented was in-line with current government policy. He then went on to read a message from H.E the vice-president, Prof. Gilbert Bukonya.

On behalf of H.E the president and the government of Uganda, the vice-president congratulated all scientists on existence of USHS for 10 years. He decried the increasing incidence of HIV among married couples and the young generation and called for extra effort from the scientist community to find lasting solutions to the HIV pandemic and to avert practices that place the population at high risk of contracting HIV. The vice-president

commended the USHS for promoting research in Uganda and the government of Uganda for creating a conducive environment for the promotion of science and scientific research. He ended by thanking the organizers, facilitators and presenters for making the conference a success. He extended special thanks to Dr. Chris Whalen for his continued support of the USHS.

At 5.20pm, Dr. Mwambu invited the participants for a group photo followed by a cocktail later. The conference was closed thereafter.

## EVALUATIONS

<b>Presentation</b>	<b>Below Average</b>	<b>Average</b>	<b>Good</b>	<b>Very Good</b>	<b>Excellent</b>
A large epidemic of hepatitis E in Uganda: Results of a population based epidemiological and serological study		6%	34%	49%	11%
Operational accuracy and comparative persistent antigenicity of HRP2 rapid diagnostic tests for Plasmodium falciparum malaria in a hyper endemic region of Uganda			29%	58%	13%
Evaluation of TB microscopy in peripheral laboratories in Uganda: Tools and their challenges.		2.5%	40%	47.5%	10%
Usefulness of Fine Needle Lymph node Aspirate (FNLA) among patients with suspected Tuberculosis adenitis the ISS clinic, Mulago Hospital.			30%	54%	16%
HIV infection and survival among patients with non Hodgkin's Lymphoma.		2%	34%	57%	7%
Antimicrobial Sensitivity of Organisms isolated from Sputum of HIV-infected children at the Baylor-Uganda Children's Center of Excellence, Kampala, Uganda.			53%	33%	14%
Involvement of Community Nurses in Provision of HIV/AIDS Care Services in Resource Limited Settings-TASO Mulago Experience.		2%	36%	52%	10%
From Operational research, to Peer Reviewed journal articles Publications, TASO Uganda Experience.		4%	47%	37%	12%
HIV/AIDS Care in Private Profit Facilities in Uganda			16%	39%	45%
Outcome Evaluation of Mild may train on Human Resource Capacity Development for HIV/AIDS Palliative Care in Uganda.	3.7%	5.6%	51.9%	33.4%	5.6%
Improved malaria case management following integrated team-based training and support supervision of Health care workers in Uganda.			15%	51%	34%

Evaluation of the efficiency of clinic operations at two Ugandan HIV clinics.			5.5%	45.5%	49%
Challenges of Quality Assurance of HIV Testing in Publicly Funded Health Facilities in Uganda.		3.7%	31.5%	46.3	18.6%
Effect of malnutrition at initiation of antiretroviral therapy on survival among HIV/AIDS patients in Kampala, Uganda.		4.4%	41.3%	43.5%	10.9%
Supporting PMTCT Services through a Peer Community Network of Mother-to-Mother (M2M) Supporters: The Reach-Out Experience.			14.9%	44.7%	40.5%
Psychosocial Support as a Critical Strategy for Improving Retention in Pediatric Care and Treatment in Reach Out Mbuya			14%	51%	35%
Baseline prevalence of HIV and other STI among women engaged in high risk behavior in Kampala.		4%	12%	55%	29%
Characteristics of people seeking post exposure prophylaxis for HIV at an HIV/AIDS treatment center in Kampala		5%	42%	34%	19%
The Clinical Pattern, Prevalence and Factors Associated with Immune Reconstitution Inflammatory Syndrome in Children in Uganda.		2.6%	33.4%	43.6%	20.6%
Dramatic reductions in HIV RNA among HIV-infected children with acute measles in Uganda	2.7%		10.6%	39.5%	47.4%
Mortality and its predictors among HIV positive children on HAART at the Baylor-Uganda COE in Kampala, Uganda.		9%	21%	40%	30%
Factors associated with increasing HIV-1 resistance to antiretroviral therapy in an urban cohort in Kampala, Uganda.			35%	42%	23%
Community-Based Case Finding of TB and HIV Patients in Kampala; Using Chronic Cough as a Screening Tool.			14%	38%	48%
Predictors of non Adherence to Highly Active Antiretroviral Therapy (HAART) in HIV Infected Patients Attending an Urban Clinic in Kampala, Uganda		13%	32%	48%	7%
Traditional medicine use in the context of antiretroviral therapy in Uganda.		3%	42%	48%	7%
Severe adverse drug events and associated factors in active TB/HIV infected patients on first line TB treatment in Kampala.			55%	42%	3%

Sexual behavior and disclosure to partners among newly diagnosed HIV positive patients at Mulago Hospital, Kampala, Uganda.			41.4%	48.3%	10.4%
Community-based intervention to control intestinal helminth infections: phast approach.			23%	50%	27%
Filariasis in Butuntumula Sub county Luwero district-Need for intervention		6.9%	34.5%	38%	20.7%
Kaposi's sarcoma-associated immune reconstitution inflammatory syndrome (ks-iris) in Africa: initial findings from a prospective evaluation.			21%	31%	48%
Electrocardiographic Changes Following a Single Dose of Artemether / lumefantrine in HIV- positive Patients Receiving Lopinavir/ritonavir			25%	37.5%	37.5%
HIV-related mortality in the pre- and post-ART eras in a rural Ugandan HIV cohort.		9%	52%	33%	6%
Low incidence of liver enzyme elevation in HIV infected patients attending a large Urban treatment Center in Kampala, Uganda.			47%	31%	22%
Cause-specific mortality and the contribution of immune reconstitution inflammatory syndrome in the first three years after antiretroviral therapy in an urban African cohort.		6%	30%	55%	9%
Venue				27%	73%
Food Meals		3%	13%	26%	58%
Administrative Support			3.3%	50%	46.7%
General Conference Organization			11%	41%	48%
Poster Presentations		11%	24%	48%	17%

**General Comments from the 10<sup>th</sup> USHS Conference Participants;**

**Points for consideration.**

- Time between the sessions was too short for people to view the posters.
- Need to organize conferences up country e.g. Gulu & Kitgum
- USHS needs to embark on upcountry mobilization programme in order to recruit more membership subscription.
- Other Health workers should be encouraged to participate or present their findings.
- Would be great if the conference theme included other work/studies apart from HIV.

- Environmental Health issues should also be looked at as being part of Public Health issues like hygiene & sanitation. I recommend that USHS should get in touch with MUK environmental Health Science Students Association at MUSPH

### **Appreciation comments**

- You gave adequate time to each speaker 15 Minutes was great.
- Public address and room organization was very good.
- Most papers presented were very interesting.
- Well organized conference thanks to all organizers.
- Best organized so far, I have attended since 2007 please keep it up
- Good effort towards improvement of evidence based medical practice, this must be commended and encouraged.
- This is a very good idea that was started here in Uganda I applaud the founders.
- I strongly support the cause of this organization and strongly embrace your mission, am sure this time the organization will grow.
- Well done organizers for the meticulous organization of the conference.
- Great organization, I got my money's worth.
- Great ambience, great efforts
- Very interesting and educative.
- This has been the most organized conference.
- The organization was so perfect and the whole conference was a success.

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Report on the 10<sup>th</sup> Annual Scientific Conference Held at Golf Course Hotel on the 11<sup>th</sup> and 12<sup>th</sup> June 2009

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159	Mr. Anthony Bugembe	The New Vision	Journalist	
160	Mr. Job Mwesigwa	Observer	Journalist	
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