



ACCESS TO ANTIRETROVIRAL TREATMENT IN THE COMMUNITY

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A. ROLE OF COMMUNITY PHARMACIES.

1. Lay Providers important resources in ARV refills in rural Uganda. *Dr. Kenneth Mugisha, Assistant Information Manager TASO, Uganda.*



A rural pharmacy

By 2005, an estimated 194,900 living with HIV/AIDS in Uganda were in urgent need of Antiretroviral therapy (ART), yet only 101,500 were accessing ART by September 2007. One of the key constraints of access to care and treatment is a critical shortage of trained health workers, and most available are based in urban areas. The majority of the rural populations are poor peasants with little access to basic health care. There is need to extend HIV/AIDS Care services to the rural communities.

Historically, The Aids Support Organisation (TASO) has used lay persons to offer care and support to People living with HIV/AIDS (PLWHs) after undergoing counselor training. To increase access to HIV/AIDS care for her clients, TASO recruited a new cadre of university graduates to work as field officers. These are not yet incorporated into the national health care system, but arose out of a pilot home-based AIDS care program in Center for Diseases Control - Tororo. Following an intensive 6-weeks tailored course in Comprehensive HIV/AIDS care which covered

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A field officer delivering ARV refills

the principles and practices of antiretroviral therapy, basic clinical skills, home-based HIV counseling and testing, each field officer was deployed to provide holistic care for 100 people living with Aids PLWHAs and their families in a home-based care model.

Over 150 Field Officers have been trained since 2004. So far 20,000 clients are accessing ART from TASO centers countrywide, 78% of them on home-based care. Over 45,000 clients and their household members have received HIV counseling and testing services at home. Adherence is above ninety five percent among the home-based care recipients; Detection of ARV toxicity has improved; delivery of safe water vessels, insecticide-treated mosquito bed nets, cotrimoxazole prophylaxis, condom and contraceptive pills dispensing and HIV prevention messages have improved together with strengthened community awareness about the HIV epidemic.

2. Assessment of adequacy of community pharmacies to refill antiretroviral prescriptions. Mr. Evans Kariuki, Student Department of Pharmacy Makerere University.

Out of 240,000 Ugandans in need of antiretroviral treatment, only 105,000 are receiving the drugs (43.75%). Given the limited number of centers, there is need to find alternative means to scale up supply of ARVs in an effort to meet the demands of the people. Community pharmacies have the potential to handle antiretroviral prescription refill, a service that could relieve the overwhelmed centers hence improve the quality of treatment offered to the AIDS patients.

The main objective of this study was to assess the adequacy of community pharmacies to refill antiretroviral prescriptions.

The study was cross sectional qualitative and quantitative done in community pharmacies in Kampala Uganda and the respondents were community pharmacy staff. Data was collected through questionnaires. The sample size of 50 community pharmacies was determined using Philippe Glaziou's formulae . Only retail community pharmacies were included, excluding those very near to hospitals, those dealing in herbal preparations and veterinary pharmacies. Adequacy of community pharmacies to refill antiretroviral prescriptions was assessed against the implied standards set by the Ministry of Health for a facility to offer such services.

Results show that of the 50 community pharmacies studied 82% were found to have at least three health workers, 51% of whom had knowledge about use of antiretroviral drugs. Safety of drugs in the community pharmacies was found to be of desirable standard, with 82.2% storing drugs on shelves, 84.4% having refrigeration facility and 97.8% having well ventilated stores and adequate limit access of the drug store to authorized personnel. Drug expiry in stores was not found to be a common issue.

All the pharmacies health work-ers in community pharmacies refered their patients to hospitals for proper management in case the condition was beyond their capability.



A well stocked pharmacy

The level of willingness by pharmacies to offer ART service was good (68.8%) despite factors that could affect this such as years of experience, HIV/AIDS and ARV knowledge and presence of a counseling room. However, client records were not available in a majority of these pharmacies (73.3%) and systems for detecting, reporting and monitoring side effects were likewise unfamiliar to a majority of the pharmacies health workers (68.9) most of the pharmacies reported having frequent stocks out. The above results highlight the potential of community pharmacies to refill antiretroviral prescriptions in a periurban setting.

3. Use of community drug distribution points: a basic approach in ART scale up in resource limited setting. Ms. Joyce Babirye, Community ART Support Agent TASO Mbale.



Dispensers or Pharmacists dispensing drugs

The AIDS Support Organization (TASO) in Mbale, Uganda service centre serves a cumulative clientele of 22,000 of whom 2,400 are on ART. TASO has been implementing a community based module of HIV care since 2004 where ARVs have been delivered at client's homes. With the ongoing ART scale up, the module was increasingly becoming cost ineffective. Creation of community drug distribution points (CDDP) was adopted as an attempt in making the approach cost effective. CDDP formulation process involved mobilizing communities to identify meeting points for clients on ART from a common locality, and electing a leader called a CASA

(Community ART Support Agent). TASO trained and certified the CASAs prior to commencing their duties. The roles of a CASA include; mobilization of clients for their drugs, monitoring of drug adherence, home visiting, writing and submitting reports. Some of the activities carried out at a CDDP with support from TASO include: ARV distribution, health education, sharing of experiences, peer support, monitoring adherence and basic counseling.

Overall

- CDDPs allow more meaningful involvement of people living with HIV/AIDS within the community
- They are a more cost effective approach compared to the home-based delivery module.
- Also, clients can easily access drugs with ease hence promoting retention and ART adherence.
- Working with clients in the community promotes disclosure and reduces stigma in the community.
- Serving many clients in groups reduces on the workload per staff, and thus reduce burn out syndrome.

A CDDP is an innovation which serves large number of clients in the community ART delivery module that can be scaled up. ART programs in resource limited settings need to explore and share success stories on cost effective ways of ART delivery.

B. Multiplicity of Plasmodium falciparum infection predicts antimalarial treatment outcome in Ugandan Children. Dr. Daniel J. Kyabayinze Epidemiology, Malaria Consortium

Background

In areas with intense malaria transmission, individuals are often simultaneously infected with multiple parasite strains. This study assessed the effect of multiple infections on treatment response in Ugandan children with uncomplicated malaria.

Methods:

Four hundred and seventy six blood specimens were analysed for parasite genetic diversity. The *P.falciparum* merozoite surface protein-2 (*msp-2*) was analysed to establish



A child suffering from severe malaria.

multiplicity of infection for pre and post treatment speci-mens.

Results:

There were 32 different *msp-2* alleles, 15 /3D7 and

corresponding to the IC/3D7 and 17 to the FC27 allelic family. The majority of the isolates (343, 72 %) were multiple infections resulting into an overall mean multiplicity of infection of 2.15 (SD±1.02). Children infected with multiple strains had nearly a 3-fold increase in treatment failure (Hazard Ratio = 2.8, 95 % CI: 1.5-5.3) compared to their age mates infected with a single strain.

Conclusion:

Multiple-strain infection reduced response to antimalarial therapy. Strategies that reduce multiple-strain infections (intermittent presumptive treatment, indoor residual spraying, insecticide treated nets and efficacious drugs) are likely to improve antimalarial drug efficacy and reduce rate of spread of drug resistance.

C. African Traditional Medicine use in the era of Antiretroviral Therapy.

Dr. Mohammed Lamorde, PhD student

Traditional (herbal) medicine use is common worldwide. In Africa, herbal Medicines are popular because they are often more acceptable, available and often (but not always) more affordable than western medicines. In recognition of the importance of traditional medicine use in Africa, the African Union designated the period 2001 to 2010 as the decade of African traditional medicines. As the decade draws to close, traditional medicines remain a largely undeveloped resource and little is known about the relationship between traditional medicine use and diseases of public health significance like HIV/AIDS.

Before antiretroviral therapy (ART) became widely available, many Africans relied on traditional medicines for HIV treatment. Mortality and morbidity due to HIV however remained unacceptably high. With the introduction of ART good clinical outcomes have been observed for many HIV-infected patients. Patients on ART are advised to avoid herbal medicines

because little is known about the pharmacology of herbal medicines. Since ART is life-long, patients are in essence advised to avoid herbal use for the rest of their lives. The level of adherence to this advice is subject to conjecture. Assessing adherence to this advice is difficult because patient responses may be influenced by the desire to please the health care worker.



Processed Herbal Medicine

Findings from interaction studies support the advice to avoid herbal medicine and ART co-treatment. St John's wort is a herbal medicine that is used as an anti-depressant in western countries. This herb is known to induce drug metabolizing enzymes for non-

nucleoside reverse transcriptase inhibitors and protease inhibitors resulting in sub-optimal drug levels [1]. Results from *in-vitro* studies on two South African herbal products.

These findings may or may not be applicable to Ugandan herbal medicines. Until more is known

about the nature and effects of herbal medicines in Uganda, the current advice to avoid co-treatment is reasonable. There are ongoing studies at Makerere University which aim to identify commonly used herbal medicines in the setting of HIV. Subsequently, pharmacology, toxicology and *in-vitro* studies will be conducted to improve our understanding of the interplay between ART and Ugandan herbal medicines

D. SOCIETY ACTIVITIES

i). Annual Conference

The society held its 9th annual scientific conference held on 24th to 25th July 2008 at Hotel Africana. The theme “Multi disciplinary approach to improved Health care in the era of HIV/AIDS” was appropriate because we now need a number of different interventions which cut across disciplinary to fight the HIV scourge.



Some participants at the 9th annual USHS conference in Kampala, Uganda

Our guest of honour, the Minister of State for Primary Health Care Hon. Dr. Emmanuel Otaala noted that research needs to be translated into policy and dissemination of research findings needs to be emphasized. He encouraged operational research which should be translated into better patient care. Further, he noted participation of the key policy makers and representatives in the districts who can carry on the innovative

research findings. Dr. Otaala appreciated that political will in the role of circumcision is still lacking and therefore research needs to be made simple for policy makers to understand. There is need to integrate basic and operational research in program implementation, he said. He further pledged to move steady fast to ensure the act in parliament for research is passed.

He noted the following as crucial issues:

- Need to streamline the funding policies for research to ensure equity.
- Need for the multipronged approach.
- Need to improve the uptake of HIV testing country wide.
- Need to emphasize the Abstinence, Be faithful and Condom use-Plus approach with the focus on married couples.

Dr. Otaala thanked the key policy makers and commented USHS for inviting the key policy makers and officially opened the 9th annual

conference.

The presentations at the conference were under the following sub themes of health services delivery and access, care and treatment, opportunistic infections and malignancies, antiretroviral treatment outcomes, surgery and HIV/AIDS and HIV and special population. A total of 27 oral papers and seven poster papers were presented during the conference.

(ii). Manuscript writing workshop.

On 24th -26th September 2008, USHS held a manuscript writing skills workshop at the Infectious Diseases Institute. The Chairperson of the Society welcomed participants to the workshop and discussed with the participants the objectives of the workshop.



Participants during the manuscript workshop in Kampala

Participants expectations at the workshop include:

- Knowledge of vetting proposals
- Tips and guidelines on publishing research
- Ability to critique manuscripts appropriately
- Improve skills of writing Manuscripts
- Knowledge on how to summarize a dissertation into a publishable Manuscript
- How to present findings of a paper at meetings for Posters & oral

The workshop attracted a total of 23 participants, 13 females. The majority were medical personnel, who all had a manuscript in preparation or a dissertation book they hoped to work on in the near future to prepare a manuscript. Dr. Achilles Katamba, USHS Vice chairperson and Dr. Andrew Kambugu a board member in the society organized and coordinated the workshop.

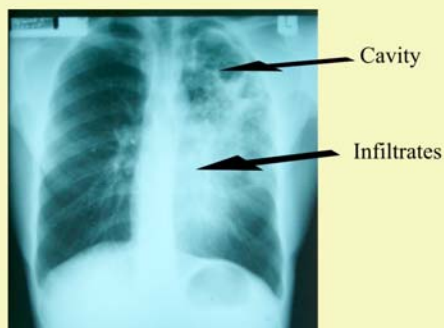
- presentation
- Knowledge of different elements of a manuscript and how to write them.
- To know the different components of a manuscript and how they differ from a concept paper.
- Reasons for rejecting manuscripts

Participants evaluation at the end of the workshop brought out the following highlights.

Activity/Item	Excellent	Very Good	Good	Average	Below Average	No response
Manuscript mapping and language skill	50%	33%	17%			
Overview Title,introduction/background, Objectives, Sentence structure	23%	69%	8%			
Methodology	29%	57%	14%			
Overview of data analysis	30%	50%	10%	10%		
Discussion, Conclusion, recommendations, Acknowledgments	40%	30%	30%			
Overview on abstract, submission, editor correspondence	50%	40%	10%			
End note demonstration	50%	37%	13%			

E. The goals and challenges of Tuberculosis therapy. Dr. Alphonse Okwera, Chest physician, honorary lecturer, Department of Medicine, Makerere University.

Mycobacterium tuberculosis is a highly efficient pathogen in infecting the human host. Its capacity to survive and cause disease is strongly correlated in the ability to escape immune defence mechanism. In particular, M. tuberculosis has the remarkable capacity to survive within the hostile environment of the macrophage. The current anti TB drugs, which were discovered over seven decades ago are not fully effective in curing TB disease especially with the increasing challenge of drug resistance. Improving TB therapy can therefore be conceived as having four primary goals: shortening and simplifying the treatment of active; drug sensitive TB therapy; improving therapy of drug resistance disease; being able to simultaneously treat TB and HIV/AIDS; and shortening therapy of Latent TB infection (LTBI).



25yr old male with sputum smear positive with PTB before treatment



25yr old male with a normal chest X-ray after successful PTB treatment

It is always a challenge for both patients and health workers to achieve this successful treatment outcome.

Challenges of reaching these goals.

1. Elucidate the biological mechanism of mycobacterial persistence and latency.
2. Discover and develop new drugs that have novel mechanisms of action and are effective against persistent bacilli.
3. Develop and validate animal models that reliably predict human treatment duration.
4. Develop and validate bio makers and surrogate endpoints that predict efficacy and thereby shorten clinical trials duration.
5. Develop new preclinical approaches to identifying optimised drug combinations, new clinical and regulatory approaches to testing drug combinations in phase 2 and 3 clinical trials in tuberculosis endemic settings and conducting clinical trials in high burden Countries.

As the TB and global stakeholders take on these challenges, health care workers in the frontline are encouraged to use the available anti TB drugs carefully and well so as to avoid the development of multiple drug resistant TB (MDR-TB) and extensively drug resistant TB (XDR-TB) which are serious threat to global control efforts.



The Tuberculosis treatment centre at Old Mulago Hospital, Kampala - Uganda.



Some conference participants viewing poster presentation at the 9th Annual Conference

Upcoming events

1. Manuscript writing workshop 30th September, - 2nd October, 2009
2. Scientific lectures
 - * An update of Hepatitis B virus in Uganda: Care and treatment Dr. Ponsiano Ocama, 22 Sept. 2009 at Mbarara University.
 - * An update of Microbicides Dr. Kenneth Kintu - October 2009, Davies lecture Theatre Mulago Hospital.
 - * Alcohol & Pregnancy Dr. Imelda Namagembe, November 2009, Davies lecture Theatre, Mulago Hospital.

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