NATIONAL HIV AND AIDS RESEARCH AND BEST PRACTICES DISSEMINATION CONFERENCE

MALAWI INSTITUTE OF MANAGEMENT

25-27 JUNE 2008

NATIONAL AIDS COMMISSION
P.O. BOX 30622
LILONGWE 3, MALAWI

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The Conference could not have been successful without the contribution of various researchers, who submitted their abstracts. The Commission is therefore greatly indebted to all researchers and organizations for supporting and conducting research that is targeted to support the fight against HIV/AIDS.

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TRACK A: HIV PREVENTION: COMMUNICATIONS AND BIO-MEDICAL INTERVENTIONS

This Track looks at research into prevention strategies, experiences and questions of the social and bio-medical nature [HIV testing, prevention of mother to child transmission of HIV] and HIV prevention programs that have demonstrated innovation and impact. The Track also highlights research and program designs relating to community advocacy and social mobilization.

A.1 Young People; the window of hope in the fight against HIV and AIDS. Case Study: Monkey Bay, Mangochi, Malawi

A. Likaka

Objective: Explore knowledge, attitude and practices of young people on Voluntary HIV Counseling and Testing (VCT) and identify possible barriers to establishing youth friendly VCT services in Monkey Bay.

Methods: A cross-sectional study was carried out using a health center stratified non-proportionate systematic random sampling technique. Study participants were permanent residents aged 18 years and above. Semi-structured English and Chichewa version questionnaires were used after seeking consent. Data was analyzed using Epi Info 2000 package.

Sample size was 438 and 424 participants were enrolled.

Results: 81.0% of all participants had heard about VCT. 118 young people had heard about VCT through health service providers and over 90% had favorable attitude towards VCT. 77% of them would go for VCT to know their serostatus. 171 (62%) young people knew a VCT site and 196 (72%) had indicated an intention to use VCT services if established in the area. 46% of young people preferred going to government health facilities for VCT services rather than family planning clinics. 71% of young people had gone for the VCT service, more boys than girls. The level of education attained was strongly related to the respondents' knowledge, attitude and practice about VCT. Psychosocial barriers to VCT include long distances, stigma and discrimination, lack of privacy and lack of information on VCT.

Conclusion: Young people in Monkey Bay have high level of knowledge and favorable attitude on VCT. Most of them are ready to go for testing. Focused attention to the young people as regard HIV and AIDS prevention will prove a success. Family planning services should integrate youth friendly HIV activities inorder to suit the needs of young people. Young people are a window of hope in the fight against HIV and AIDS.

Study Period: June 2005 – December 2006

A.2. The importance of involving males in PMTCT services at household and village levels

Mhango KAC, MPH

INSTITUTE: Ekwendeni Mission Hospital, Primary Health Care Department, Ekwendeni.

ISSUE: Fear of divorce, rejection and stigma coupled with cultural barriers limit uptake of PMTCT services among mothers

DESCRIPTION: After three years of introducing PMTCT services at Ekwendeni Hospital, notable decline in the clients was observed that necessitated an immediate action beginning at household and village levels. In an effort to increase uptake of PMTCT services among pregnant women and prophylaxis for babies, males especially husbands were involved in PMTCT services. Absence of males was pinpointed as a major gap for effective delivery of PMTCT services at community levels. Males were incorporated in PMTCT support groups and trained in community mobilization and basic facts of HIV/AIDS. Males in our community are authoritative, highly respected and final decision makers in family related issues. Wives on the other hand just obey and follow decisions by husbands.

RESULTS: Involvement of males in PMTCT services has seen more couples coming forward for counseling and testing for HIV at static and outreach clinics, freedom to discuss about HIV/AIDS issues among men and open disclosure of one's HIV status. Active participation and support among men with live testimonies of those tested HIV+. A total of 20 PMTCT support groups with 558 members have been established and functional, 40% of the members are men. Over 6,000 pregnant women have been tested since 2003 and in 2007 alone 1,753 women were tested coupled with infant diagnosis. Compared to the time PMTCT was introduced at the hospital, more women are coming freely monthly for counseling on infant feeding practices.

RECOMMENDATIONS: Involving males in PMTCT support groups is an excellent approach for breaking down fears that prevent a number of pregnant women from accessing PMTCT services. With this innovative idea in mind, other key community leaders and stakeholders will be involved at wider scale to promote PMTCT services at household and village levels.

A.3. A cross-sectional evaluation of the HIV prevalence and related risk factors of men who have sex with men (MSM) in Malawi.

E. Umar1, G. Trapence2, W. Chibwezo2, D. Nyadani2, H. Doyle3, C. Beyrer4, S. Baral5

Institutes: 1University of Malawi, College of Medicine, Zomba, Malawi, 2Centre for the Development of People, Blantyre, Malawi, 3Open Society Institute, Sexual Health and Rights Project, New York City, United States, 4Johns Hopkins School of Public Health, Center for Public Health and Human Rights, Baltimore, United States, 5Johns Hopkins School of Public Health, Department of Epidemiology, Baltimore, United States

Background: Malawi has a generalized HIV epidemic with an estimated prevalence of 14.1%. The dominant risk factors for HIV in Malawi have been heterosexual and vertical transmission. Recent studies from within Africa have suggested that MSM are also at risk for HIV infection, and that these epidemics may be propagated by a lack of targeted prevention programming and social marginalization.

Objective: To establish HIV prevalence and related risk factors among MSM in Malawi.

Methods: A 2008 cross-sectional anonymous probe of 200 men who report ever having sex with another man in Malawi using a structured survey instrument. HIV-1/2 was assessed with oral fluid samples with the OraQuick© rapid test kit.

Results: HIV prevalence was 21.4 %(43/201), with 95.3% unaware of their HIV status (41/43). MSM were more likely to have received information about preventing HIV transmission with women than men ($p<0.05$), and were less likely to know that HIV was transmitted through anal intercourse than through vaginal intercourse ($p<0.05$). 75%(150/200) had multiple male sexual partners within the last 6 months, with a mean of 14.09 male partners. 56%(112/200) had multiple female partners during this same time frame, with a mean of 12.42 female partners. Univariate predictors of HIV include ever being arrested ($p=0.05$), identifying as homosexual compared to heterosexual ($p<0.05$), not always wearing condoms during anal intercourse ($p<0.01$), and having received money or gifts for casual sex with men ($p=0.09$. In a multivariate model controlling for education, having had a female partner in the last 6 months, and number of male partners, being older than 25($p=0.06$), having used the internet to find a partner ($p=0.07$), and not always wearing condoms with men($p=0.01$) were predictive for being infected with HIV. 39%(78/199) had experienced a human rights abuse related to their sexuality, including violence, blackmail, being denied health or housing, or rape. Univariate predictors of rights abuses included disclosing sexuality to family members ($p<0.05$) or a health care worker ($p=0.01$).

Conclusions: This is the first study to evaluate HIV risk status of MSM in Malawi and it demonstrated that MSM are a high-risk group for HIV infection and human rights abuses. This therefore calls for specialized mitigation measures targeting MSM. Malawi should begin to adopt and appropriately fund evidence-based and targeted HIV prevention programs for MSM.

A.4. Neighbors, social interactions and learning HIV results

Rebecca L. Thornton and Susan Godlonton, University of Michigan Rebecca Thornton

Background: Social networks can have both a positive and negative influence on medical and health care decisions as well as the use of health-promoting services. They may have a positive impact if they provide emotional support, reducing psychological costs or if there are economies of scale of travel costs. Alternatively, they may be negative if one's peers' increase external psychological costs. Understanding the role of social networks is important for programs and policies aimed at increasing testing or providing ARV treatment.

Objectives and scope: This paper examines the effects of neighbors', and other network partners' attendance at mobile VCT centers in Balaka, Rumphi, and Mchinji, on own attendance.

Methodology: This paper utilizes a randomized experiment that encouraged individuals and their neighbors to learn their HIV results. Using GIS data of location of homes and distance to other neighbors as well as group membership, we measure the social network effects (using an instrumental variables technique) of neighbors' VCT attendance on individuals own attendance.

Results: We find positive effects of neighbors attending VCT clinics on those living nearby. The estimated coefficient implies that increasing the proportion of one's neighbors that attend the VCT center by 10 percent increases the respondents' probability of attending by 1.34 percentage points. Women who are active in the communities experience larger positive spillovers. We also find differential effects by religion – we find strong positive spillovers for Muslims among the same-Mosque network and negative spillovers within Christian same-congregation networks.

Conclusions: The estimated social network effects are strongest among closest neighbors living within 200 meters. In addition, there are strong effects of religious affiliation and membership. Social intensity is important for women, although not for men.

Recommendations: Treating some key individuals in communities and allowing those individuals to be catalysts for others may be the most optimal way of increasing health utilization – in particular the probability of learning one's HIV status.

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A.5 Breaking barriers to staff and family participation in HIV and aids workplace interventions`: a care international in Malawi experience.

C. Zileni, P. Nganzi

Background: CARE International in Malawi developed an HIV and AIDS workplace policy in 2004 to respond to the impacts of the pandemic at the workplace. The policy presented directions in the implementation of workplace initiatives to promote prevention, treatment, care and support and also guide in impact mitigation responses towards HIV and AIDS. Reflections in the implementation of the work place program showed that rollout has been slow and staff participation has been a challenge. CARE Malawi experienced challenges for staff going for VCT services, challenge in staff and family participation in HIV and AIDS workplace programs, and staffs weren't talking openly about HIV and AIDS.

Methodology: In implementation of the workplace program, CARE Malawi designed and implemented models aimed at promoting increase in staff and family participation and acceptance of HIV and AIDS as a workplace issue. These include: 1.A staff and family HIV and AIDS retreat. 2. Adaptation of sport as a social change model for staff and families on HIV and AIDS and other wellness issues 3. Psychosocial support systems i.e VCT post test club (support group) was established at the workplace in order to offer support to all staff that have gone for a test regardless of result and to promote VCT at the workplace. 4. The office of the HIV and AIDS workplace coordinator offers counseling services to staff and families. We have also used special event days to reach out to staff and families at the workplace i.e World AIDS Day, International AIDS candle light Memorial Day.

Results: The models have been implemented within a period of six months and less. There has been increase in staff participation in HIV and AIDS workplace activities. About 108 staff and spouses participated in the staff and spouses retreat. 41.4% of staff accessed VCT for the first time during the staff and spouses retreat on world AIDS day. Staff finds sport fun and at least 23% of staff are able to be reached with HIV and AIDS messages through sport. At least 32% of staff have joined the VCT post test support group. Over 50% of spouses have been reached for the first time by the organization through the retreat.

Way forward: The initiatives that CARE Malawi is implementing, show promising results and have demonstrated a degree of effectiveness that would make a difference in workplace programming. We found the lessons as best practices that needs to be strengthened and replicated.

A.6. Pioneering District-wide Door to Door HTC: Early Program Experiences in Zomba District.

Dr. Daniel Byamukama[1], Dr. Maurice Mulenga[2], Prof. Cameron Bowie[3],
Mr. Daniel Nkhwazi[1], Mr. Lyson Tenthani[1]

1. St Luke's Mission Hospital, 2. Zomba DHO, 3. Dept of Community health, College of Medicine.

Objective: To test the feasibility and acceptability of a Door to Door HTC Program in Zomba.

Methodology: The program is implemented by St Luke's mission hospital, the Zomba DHO and other partners. The program implementation involved community mobilization, selection, training and commissioning community resident counselors. The counselors conduct a village mobilization and then move from house to house offering HTC to all adults and exposed children. Those found positive are referred to care providers.

Results: In 3 months of implementation, 9995 people had been reached with HTC and offered pre test counseling with more females reached 59% (5897) relative to males 41% (4098). Of those counseled 99.6% (9952) accepted an HIV test. All 9952 received the results and 846 (8.5%) were HIV + and were all referred to care centers. Statistically significant more women were HIV positive 9.9% relative to males 6.2% ($p<0.001$). The HIV prevalence rates by age were 4.7%, 3.2%, 1.6%, 5.7% and 12.8% in 1-5, 6-10, 11-17, 18-24 and 25and above years respectively. 1728 people were tested as couples with 6.8% being concordant positive, and 6.5% females and 6.6% of males discordant positive.

Conclusions: Home-based HTC is feasible and acceptable with community leaders being central to its acceptance and success, spouses are willing to test as couples when found at home together consequently having flexible working hours, including working on weekends and evenings, greatly increases one's chances of counseling and testing couples and males. This therefore demonstrate that Home Based HTC is acceptable and can indeed encourage couple counseling. However this is possible if a regular supply of HIV test kits is maintained, the number of counselors is adequate, and the district health systems are strengthened for proper handling of referrals.

A.7 HIV/AIDS information and communication among persons with disabilities: Access to HIV/AIDS information a tool for HIV/AIDS prevention among persons with disabilities.

Timeyo Kanyinji and Betty Wisiki

Background information: It was observed that there was insufficient information about HIV/AIDS among people with disabilities (PWD's). In 2003/ 04 the Federation of Disability Organizations in Malawi (FEDOMA) carried out a survey to find out how HIV/AIDS information is disseminated and accessed by (PWD's) especially the visually impaired (VI) and the hearing impaired (HI) among other objectives.

Objectives and scope

- To determine knowledge about HIV/AIDS among PWD's
- To describe perceptions of PWD's about the transmission and prevention of HIV/AIDS.
- To make recommendations on how best information on HIV/AIDS can be communicated to PWD's.

Methodology: This study was conducted in Mzimba, Ntchisi, Ntcheu, Zomba and Chikwawa. The districts were chosen to represent the cultural diversity existing in Malawi. Questionnaires and short interviews were used to solicit information from 341 PWD's.

Results: Research results show that little information if not none reaches PWD's especially the HI and VI because the information is put in disability unfriendly formats. For instance, it was observed that most of the information is disseminated through the use of public campaigns, electronic and print media leaving out Braille and Sign language suitable for VI and HI respectively. Most PWD's had basic knowledge about HIV/AIDS.

Recommendations: The paper argues that information about HIV/AIDS could only be accessed by PWD's if the government, NGO's and individuals give the information in disability friendly formats like in Braille, sign language and large prints. It is believed that information and communication are the major tools to combat the pandemic since they provide scientific knowledge about HIV/AIDS and change people's cultural, social behaviours and beliefs. It is important to reach PWD's with HIV/AIDS information in formats they could understand and comprehend better.There is need to provide more information to PWD's especially in the areas of transmission, prevention and condom use.

A.8 Women's poverty, men's wealth, or both?

M. Poulin and S. Watkins

Background: HIV prevention programs in Malawi as well as other countries of Sub-Saharan Africa have considered women's poverty to be one of the main drivers of the AIDS epidemic.

Objective and Scope: There is little systematic evidence to support an expected relationship between gender, poverty and HIV status in Malawi or elsewhere in the sub-continent. There is reason to believe that selling sex is an important source of financial assistance for poor women; there is also, however, reason to believe that wealthier men are more likely to have multiple partners than are men with fewer resources. Our aim in the research described in this paper is to examine the relationship between gender, relative wealth and HIV serostatus using data from two independent surveys conducted in Malawi.

Methodology: This data for this paper come from the Malawi Diffusion and Ideational Change Project, an ongoing longitudinal study in three districts of rural Malawi (Mchinji, Rumphi, Balaka) and the Malawi Demographic and Health Survey, which provides data for both rural and urban Malawi. Both surveys have large samples and several measures of wealth. Importantly, both surveys tested respondents for HIV (the MDICP in 2004 and 2006, the MDHS in 2004). Thus, our analyses examine risk using HIV serostatus rather than self-reported behavior, which is a less accurate measure. After a careful analysis of the quality of the data, we use probit regression to examine whether measures of wealth—such as asset ownership and housing material—can predict HIV prevalence. The analyses control for potentially confounding factors such as region, which is likely to be related to wealth.

Results: In rural Malawi, analyses of both the MDICP and MDHS rural sample show that there is much stronger statistical association between HIV serostatus and men's wealth than between HIV serostatus and women's poverty. Men who own more assets (measured as a composite index for owning a bicycle, a lamp, a radio, a mattress, and an oxcart), and who own a brick house are significantly more likely to be HIV positive than are men who own fewer assets and live in a mud house. These men are not typical Sugar-Daddies; rather, they simply own more basic assets than men on average. For women in rural areas, however, relative wealth (or poverty) is not significantly related to positive HIV serostatus. In urban areas, however, there is a positive correlation between HIV and wealth for women as well as men.

Conclusions and Recommendations: The results suggest that in Malawi men's wealth is a major driver of the AIDS epidemic, a result that has also been documented in several other countries of Sub-Saharan Africa. These findings have important implications . In particular, more efforts to prevent HIV among wealthier men appear to be required in order to stem the tide of the epidemic. Although programs to improve the economic status of women relative to men are desirable for other reasons, they are unlikely to have an impact on the epidemic.

Study Period: 2001-2006
Contact: Email: Michelle Poulin, poulinmj@pop.upenn.edu; Susan Watkins, swatkins@ccpr.ucla.edu.

A.9 Polygyny and HIVin rural Malawi

G. Reniers and R.Tfaily

Background: there are several plausible reasons for considering polygyny a risk factor for HIV infection: 1) Each partner might introduce HIV in the household; 2) The concurrency of sexual partnerships in polygynous unions might have an independent effect on the spread of the virus; 3) Men in societies where polygyny is practiced tend to marry at a later age and more often have casual sexual partnerships in early adulthood (Caldwell et al. 1993; Philipson and Posner 1995); 4) the institution of polygyny presumably endorses the belief that men require more than one woman for sexual satisfaction (Caldwell et al. 1993); 5) polygynous societies are often also characterized by high rates of marital dissolution and the easy remarriage of widows and divorcees, as in the case of rural Malawi (Reniers 2007). This could lead to an increase in the total number of sexual partners over a woman's lifetime (Halton et al. 2003; Pison 1983; van de Walle 1990).

Objectives and Scope: In this paper, we study the relationship between polygyny and HIV infection in rural Malawi and try to disentangle the process that leads to different infection rates in polygynous and monogamous unions. The data were collected from a randomly selected sample of rural residents of Mchinji, Balaka and Rumphi. The sample characteristics are, however, consistent with those of the rural sample of the MDHS, and thus can be taken as representative of Malawi's national rural population.

Methods: We use data from the Malawi Diffusion and Ideational Change Project, which collected marriage histories for approximately 4000 respondents as well as testing for HIV. These data permit identifying polygamous marriages and which members of the marriage, if any, were infected at the time of the MDICP VCT. We investigate two mechani sms that could lead to higher infection rates in polygynous households: First, partners in polyg ynous unions may have more extra-marital relationships: for this we use the self-reports of extramarital partners as well as the spouse's reported suspicion of his/her infidelity to learn whether spousal infidelity is greater in polygynous than monogamous unions; Second, women who agree to become a 2nd or higher order wife may more likely to be HIV positive than those who are not. To test this hypothesis we need to investigate whether those at higher risk of HIV are also more likely to join polygynous marriages. We thus examine whether women who are widowed or divorced, both associated with higher HIV, more likely to join polygamous marriages.

Results: We find less polygyny in Balaka, where HIV is highest, than elsewhere, thus supporting a view that polygyny protects against HIV. The results are quite different, however, for individual marriages: we find that both men and women in polygynous unions are more likely to be HIV+ than those who are in monogamous unions. This appears to be due to the types of individuals that are in polygynous marriages. Our evidence shows that polygynous men more often engage in extra-marital affairs than monogamous men. The data do not allow us to investigate why polygamous men are more unfaithful than monogamous men, but possible explanations might be that these men have a greater disposition for multiple partners than other men, may be searching for a new spouse, or experience less objection from their current wife/wives. We also find that women who are at higher risk of infection (those who have been married before and widows) are more likely to join polygynous unions. An alternative explanation to the ones investigated here, namely the concurrency of sexual relationships in polygynous unions, remains plausible and cannot be rejected nor confirmed with the available data.

Conclusions and Recommendations: In rural Malawi, the higher HIV prevalence of spouses in polygnous marriages appears to be largely due to the characteristics of the people who choose polygamous marriages. Thus, attempts to reduce the prevalence of polygnous marriages would at best be likely to have only a modest effect on overall prevalence.

A.10 Should couple counseling be promoted as a strategy for HIV prevention?

J. Chintsanya, P.Anglewicz

Background: As the Government of Malawi has expanded access to Voluntary Counseling and Testing, the number of Malawians who know their HIV status has increased. Since divorce may be based on suspicion that a spouse is HIV+, it is considered important that spouses disclose their results to each other. Yet conventional wisdom suggests that both men and women are afraid to disclose their results, leading some to advocate the promotion of couple counseling. We know of no evidence about disclosure for Malawi.

Objectives and Scope: This paper asks to what extent individuals disclose their results to their spouse and whether disclosure is associated with HIV status and with gender. The data were collected from a randomly selected sample of rural residents of Mchinji, Balaka and Rumphi. The sample characteristics are, however, consistent with those of the rural sample of the Malawi Demographic and Health Survey, and thus can be taken as representative of Malawi's national rural population.

Methods: The data were collected by the Malawi Diffusion and Ideational Change Project (MDICP), an ongoing longitudinal study in rural Malawi. All respondents who consented were offered an HIV test: 91% agreed to be tested in 2004 and 91% in 2006. In 2004, respondents were asked if they would tell their spouse their results: this permits assessing the validity of response to an "intention to disclose" question. In 2006, respondents were asked whether they had told anyone their results, and, if they had, to whom they had disclosed. Because respondents may report that they disclosed their results when they had not, husbands were asked if their wife told them her results, and wives were asked if their husband told them his results. Respondents were also asked if they disclosed their results to others, and if others had disclosed their results to the respondent.

Results: The extent of disclosure contradicts the conventional wisdom that rural Malawians are afraid of disclosing their test results: only 4.5% of women and 1% of men reported not disclosing their results to anyone. *Disclosure to spouse*: Almost all respondents reporting disclosing their HIV test result to their spouse (92% of men vs 82% of women). The percentage of respondents who report that they *did* disclose their HIV test result to their spouse is smaller than the percentage of respondents who had stated in 2004 that they *would* disclose their HIV test result to a spouse, suggesting that measuring disclosure by intention to disclose is a poor predictor of actual disclosure. There were statistically significant differences in disclosing HIV test result by actual HIV status for women but not for men. Only 67% of HIV positive women told their test result to their spouse, compared with 86% of HIV negative women. There are no significant differences by HIV status for men- over 90% of both HIV positive and HIV negative men reported disclosing their test result to their spouse. Importantly, almost all the reports of disclosure to a spouse were confirmed by the spouse. *Disclosure to relatives and friends*: Approximately 40% of men and women reported disclosing their HIV status to a relative; 33% of women and 42% of men report telling their HIV status to a friend. Again, there are differences in disclosure by actual HIV status and gender: women who tested HIV+ were significantly less likely to tell others, but HIV status did not matter for men's reported disclosure. These reports, however, cannot be confirmed.

Conclusions and Recommendations: The results show that spouses learn each other's status without couple counseling. This suggests that resources need not be diverted to promoting couple counseling.

A.11 Meanings of condom use in rural Malawi

I. Tavory, University of California, Los Angeles and A. Swidler, Department of Sociology, University of California, Berkeley

Background: HIV prevention messages in Malawi encourage condom use by those who cannot be abstinent or faithful, by spouses in serodiscordant marital unions, and by patrons of commercial sex workers. While condom use in risky, non-regular sexual relationships has increased, condom use remains low in regular partnerships, even though regular partnerships (both marriage and continuing *chibwenzi* relationships) are the major sites of HIV transmission.

Objectives and Scope: This study aims to provide a deeper understanding of objections by rural Malawians to condom use in regular relationships. Condoms are not only physical objects, but they also convey cultural meanings understood by both partners in a sexual encounter. Condom promotion that addresses these meanings might be more successful than messages based on western interpretations of condoms.

Methodology: Formal data collection methods such as surveys, semi-structured interviews and focus group discussions do not permit learning the cultural meanings that rural Malawians give to condoms. We thus use a large set of conversational field journals covering the period 1998 to the present that report what Malawians say to each other when there is no questionnaire, clipboard or tape recorder.

Results: There are three major ways that rural Malawians interpret condom use: 1) While rural Malawians are very aware of the risk of HIV, many also believe that there are serious risks to their health from using condoms, including infertility, sores, and even cancer. Thus using a condom does not send a clear signal to a partner that one is behaving with rational prudence. 2) In rural Malawi, the “sweetness” of sex depends on the mingling of fluids; thus condoms eliminate the essential element of sexual fulfillment. 3) Even in casual *chibwenzi* relationships, partners talk of love that might lead to marriage and then to childbearing. Using a condom sends a message that one does not trust one’s partner, that the relationship is not serious, and that it does not involve love.

Conclusions: Overcoming resistance to condom use in regular partnerships requires attention to the semiotic meanings of condom use.

Recommendations: Government of Malawi and NGO partners should consider the semiotic framing of condoms and other HIV interventions. Messages that associate condom use with risk and non-regular partnerships make people reluctant to use condoms. A better framing might stress that those who use condoms all the time with every partner are signaling that they are responsible, caring, and educated

A.12 Access denied? HIV testing in antenatal clinics in rural Malawi

N. Angotti, K. Dionne, L. Gaydosh

Background: HIV testing is widely touted as an important step toward the prevention and treatment of HIV/AIDS in sub-Saharan Africa. The recent global endorsement of routine HIV testing in antenatal clinics was motivated by international frustration over the low uptake of client-initiated approaches, and demonstrated success with provider-initiated testing. Routine testing allows more aggressive pursuit of the public health goal of promoting widespread testing, whilst maintaining the choice to be tested with the individual.

Objectives and scope: We examine how one social norm of HIV testing – "voluntariness" – is transformed from its Western design when exported to rural Malawi. We use the recent introduction of routine HIV testing of pregnant women in Malawi to study rural Malawians' perceptions of testing, and the ramifications of those perceptions.

Methodology: We utilize two types of data: 1) perceptions and experiences of antenatal clinic HIV testing as expressed in semi-structured interviews with rural Malawians tested for HIV in rural clinics and a smaller sample of their "near neighbors"; and 2) observational field journals that capture local, informal conversations about AIDS. Interviews were conducted in Mchinji, whereas observational field journals were written in Balaka.

Results: We demonstrate the transformation of voluntariness of HIV testing from its Western origins. First, our data show that HIV testing in antenatal clinics is perceived as compulsory, not voluntary. Second, we use our data to describe the consequences of the perception of antenatal HIV testing as compulsory.

Conclusions and Recommendations: Our findings suggest several important implications. HIV testing in Malawi, as stipulated by global policy, is intended to be "voluntary." Our data, however, is evidence that people perceived HIV testing at antenatal clinics as compulsory and necessary to access antenatal care. It may be that health personnel have a different understanding of what it means to have the option to refuse. More likely, however, is that the health personnel themselves see testing as an important public health intervention, with goals that override concerns about the voluntariness of testing.

A.13 Acceptability of condom use in marriage after learning HIV test results among ever-married men and women in rural Malawi

J. Chintsanya, P. Fleming, A. Chimbiri

Background: Among the efforts made to stem the tide of the AIDS epidemic in sub-Saharan Africa has been the promotion of HIV counseling and testing. It is generally assumed that those who are tested, learn their test results—whether positive or negative—and then are counseled and are more likely to change their sexual behavior than those who do not participate in counseling and testing.

Objectives and scope: We concentrate on the acceptability of condom use in marriage, because in rural Malawi the options for protecting oneself against HIV open to married couples are largely limited to divorce and condom use and because of concerns about the validity of reported condom use.

Methodology: We use data from four rounds of a longitudinal survey in rural Malawi between 1998 and 2006 to display trends in the acceptance and use of condoms and apply logistic regression models to data from 2004 and 2006 to examine whether receiving the results of an HIV test in 2004 may matter for HIV prevention strategies in 2006.

Results: We find an increase in acceptability and change in acceptability over time for both husbands and wives, with more of a dramatic increase in acceptability if one spouse suspects the other of being HIV positive. In addition, we find that those who learned in 2004 that they were HIV positive are more likely to approve of condom use within marriage than those who learned that they were negative.

Conclusion: These findings show that both husbands and wives have attitudes to suggest that they would respond to a risky situation by taking measures to protect their health, or their spouse's health, by using condoms.

A.14 HIV prevention: Communications and bio-medical interventions
Male involvement "Bambo wachitsanzo": certifying great guys who engage in HIV prevention

Mkandawire, Josephine, Sakhama, Linly, Masi John, Mkandawire, Glory Triza Kakhobwe
Johns Hopkins Bloomberg School of Public Health and Center for Communication Programs-BRIDGE Project, Save the Children Federation (US)-BRIDGE Project

Objectives and scope: The Malawi 2004 (DHS) indicated that 10% of married men and 15% of unmarried men had multiple sexual partners in the last 12 months. Men fuel the spread of HIV by having many sexual partners and their minimal engagement in HIV prevention. Few question the male norms that underlie their behaviors and seek to change them. With funding from USAID, BRIDGE Project implemented a campaign focusing on 'Bambo Wachitsanzo" – or Great Guy'. A Bambo Wachitsanzo supplementary package was developed to complement the mass media. BW activities are being conducted in 8 districts through trained CBOs and FBOs. Training is done through a cadre of Master Trainers.

Methodology: The BW mass media campaign highlighted positive small do-able actions that any Malawian man can do to demonstrate involvement in HIV prevention. These messages are reinforced at the community through shows, men's clubs meetings and open days. Participatory activities from the BW Hope Kit supplement engage men in addressing HIV/AIDS and gender issues, promote dialogue, and highlight practical ways for protecting themselves and their families. One of the key activities is *"Who is Bambo Wachitsanzo?"* Community members discuss and reach consensus on the qualities of a "Bambo Wachitsanzo"- the one who portrays a positive healthy life style. Men who have these qualities are then identified and recognized by the community. A certificate is issued and signed by their wives, children, chiefs and other local leaders.

Results: BW activities have reached over 8,000 people including men, women and youths. The identified Bambo Wachitsanzo serve as role models to others. The act of certification and recognition inspires other men to strive to be BWs. Reports indicate that men exposed to this intervention take an active role in HIV prevention. There is increased couple communication regarding HIV/AIDS issues in families; men spend more time with their families; reduce beer drinking; and, attend to family needs. The intervention has reached many people because of the diverse partnership and number of groups implementing it.

Conclusion(s)/Recommendations: This approach can easily be replicated and integrated with other community level activities because it is cheap and does not require a lot of training to implement. Further study is needed to see if it is necessary to renew the certificates during annual ceremonies to sustain the behaviours.

A.15 Nditha! Sports: use of sports & traditional games to prevent HIV infection among the youth

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Objectives and scope: Youth, especially young women, are the most vulnerable in becoming infected with HIV; girls are six times at risk of being infected compared to boys (NAC 2002). In 2006, BRIDGE, in collaboration with its partners at the district level developed an approach called "Nditha Sport.' (Nditha means "I can do it' and is the unifying theme for BRIDGE project activities.) Nditha! Sports taps into the excitement of sporting activities and local games to capture the attention of youth in an environment where they feel comfortable exploring serious and sensitive issues. It engages 10-24 year old boys and girls in discussions that promote increased knowledge, attitudes and skills and the development of health-promoting behaviors to prevent HIV infection. It is currently being implemented in four districts and is expanding into more districts through collaborative partnerships with the Peace Corps.

Methodology: BRIDGE uses existing district structures to implement Nditha Sports; a key partner is the Ministry of Education, Sports and Culture. Implementing steps include: 1) Establishment of Nditha sports coordinating committees in selected Educational zones; 2) Introduction of Nditha sports to interested in and out of school youth groups; 3) Training coaches to organize local sporting events that engage youth in life skills and HIV prevention decision making through the use of traditional games; and 4) Organizing Nditha Sports community outreach – with activities from the Hope Kit (a participatory prevention toolkit) motivational speeches by young achievers from the community, drama, music, and debates. Data from testimonies, monthly project reports and field observations are used to monitor project performance.

Results: Since implementation youth are discussing HIV issues more openly and are seeking more information on HIV and sexual reproductive health issues. They are also using the sports skills to overcome challenges in their lives which would predispose them to HIV infection. Implementing Nditha sports through the education zones and use of teachers, and traditional games which are appropriate for all the targeted ages, have been success factors for project implementation.

Conclusion(s)/Recommendation(s): HIV prevention programs for youth should be implemented through activities which they find amusing and in an environment where they feel free to discuss sensitive issues. For effective participation in the activities, it is recommended to start with interested available youths as change agents.

A.16 Elderly women mentor young girls in HIV prevention

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Objectives and scope: According to the 2004 Malawi DHS, HIV related knowledge among young people is still low. Only two in ten young women and four in ten young men have comprehensive knowledge. Young people get much of their information about sexual and reproductive health from peers. This is often misleading and can result in early sexual debut, unwanted pregnancies, HIV and other negative health consequences. Elderly women, known as Agogos, have an important role in educating young girls but usually lack understanding about HIV and dangers of some traditional practices. In Mzimba district, the BRIDGE project trained 60 Agogos to engage young women in HIV prevention.

Methodology: Agogos are trusted counselors for adolescent girls, especially as they come of age. BRIDGE selected sixty respected elders and provided them with factual information about adolescent health issues with a focus on HIV prevention, emphasizing the Agogos' role in guiding young women to adulthood. The training also explored how some traditional practices lead to the spread of HIV and how these can be changed. Using their new understanding of HIV, Agogos educate and mentor young girls through storytelling, traditional games and sharing their own experiences. They work through informal networks like religious institutions, village meetings and schools empowering young girls to make positive reproductive health choices.

Results: The approach has shown that agogos can bring about behavior change for HIV prevention especially among adolescent girls. Monitoring reports indicate that Agogos are receiving recognition in their communities. Young women accredit them for helping them understand themselves and make informed choices. Community AIDS Committees now recognize the important role the elderly women are playing and are including them in their monthly meetings. Formal networks like school committees, religious organizations incorporate the women and or give them special time in their programs.

Conclusion(s)/Recommendation(s): Elderly women given proper information are a great resource for HIV prevention messages targeting adolescent girls since they are already in existing informal networks in the communities. Existing community structures need to recognize elderly women as a resource that can positively influence the behavior of young girls.

A.17 Predictors of HIV counseling and testing uptake and HIV infection in a Malawian STI clinic

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Background: Given the synergism between sexually transmitted infections (STI) and HIV, STI clinics represent important venues for HIV prevention and control. HIV counseling and testing (HCT) enables identification of individuals who could benefit from anti-retroviral therapy and behavioral interventions. We sought to identify predictors of HCT uptake and HIV infection in an urban STI clinic in Lilongwe, Malawi.

Methods: Using an electronic database from the Kamuzu Central Hospital STI Clinic, we identified each patient's first visit between August 2006 and January 2008. For the analysis of HCT uptake, we excluded patients reporting previous HIV-positive results. We conducted cross-tabulations and chi-square tests to examine sex, age, and STI as predictors of HCT uptake and HIV infection.

Results: Among the 7400 patients without a previous HIV-positive test, 3671 (49.6%) received HCT. Uptake was higher among males (51.5% vs. 48.3%, $p=0.006$) and among patients aged ≥28 (52.1% vs. 47.5%, $p<0.001$). The most common reasons for opting out of HCT were negative HIV results within 3 months (17%), insufficient time (15%), need for partner permission (11%), and fear (7%). Including those reporting a previous positive result, overall HIV prevalence was 41%: 43% among females and 38% among males ($p=0.0002$). Those aged ≥28 had a higher HIV prevalence (46% vs 34%, $p<0.0001$). HIV prevalence was sharply elevated among patients with genital ulcer disease (GUD) (63% vs. 37%, $p<0.0001$), among whom HCT uptake was 53%.

Discussion: With ~50% uptake, the HCT program in this Malawian STI clinic has reached thousands of individuals at increased risk of acquiring and transmitting HIV. Our findings suggest that to increase uptake and to target groups at highest risk, counseling messages should emphasize rapid tests' quick turn-around time, promote testing among persons presenting with GUD, and address barriers to HCT among women and younger adults.

A.18 Targeting multiple concurrent partnerships for HIV prevention: the example of Likoma Island.

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[1]University of Pennsylvania , [2] Likoma network study

Background: Multiple concurrent partnerships (MCP) have been described as the “key driver” of generalized HIV epidemics. Interventions addressing MCP have recently been advocated but the validity of self-reported data on MCP has been contested.

Objectives: To compare the characteristics of MCP and the places of MCP formation as elicited by self-reported sexual behavior data to the characteristics of MCP as elicited during a network survey in which both partners were interviewed.

Methods: All inhabitants aged 18-35 living in 7 villages of Likoma Island (Malawi) were asked to identify up to 5 of their most recent sexual partners, and reports of sexual partnerships were subsequently linked across all respondents. We compare the prevalence and correlates of MCP in this population according to these partner-reports, to what we would have observed if we only considered self-reports made by a respondent.

Results: The prevalence of MCP was significantly higher in most population groups according to network data relative to self-reported data, and the largest increases were seen among young women (ages 18–24) and older men (ages 25 and above). There were no gender differences in MCP among the younger age groups. Gender differences were however significantly larger among the older age groups according to network data than according to self-reported data. Condom use was less frequent in partnerships identified as concurrent by network data only. MCP were more likely to have been formed in widely attended events and places such as the trading center, football games or Mganda dances than suggested by self-reported data.

Conclusions: Self-reports of MCP collected during surveys of sexual behaviors underestimate the prevalence of concurrency in this small population. The impact of concurrency on HIV transmission may be larger than initially thought. Interventions addressing MCP may be improperly targeted if they rely solely on self-reported sexual behavior data. In particular such interventions should be extended and target low-risk places and events rather than high-risk places (e.g., beer places) exclusively.

A.19 Can home-based HCT increase access to HIV testing and counseling for the poorest? Results from a home-based HCT campaign conducted on Likoma Island

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[1] Likoma network study, [2] University of Pennsylvania

Background: Despite the roll-out of ARV treatment, the rates of HIV testing remain low in most sub-Saharan settings. Uptake of testing is especially low among the poorest. This may increase socioeconomic inequalities by limiting access to life-extending treatment for the poorest. The effects of home-based HCT on socioeconomic inequalities in access to prevention and treatment services are not known.

Objectives: To compare the characteristics of users of regular testing services vs. users of users of home-based VCT services on Likoma Island.

Methods: All inhabitants aged 18-35 living in 6 villages of Likoma (N = 852) were offered home-based HIV testing and counseling services during a study of HIV transmission. Socioeconomic status and HIV risk factors were assessed during a computer-assisted survey.

Results: 20% of participants had ever been tested for HIV infection. Members of households in the lower income quartile were 33% [OR=0.65, 95% CI: 0.41,1.02] less likely than the rest of the population to have ever been tested. There were no significant gender differences in the use of regular testing services. However, women were twice more likely to report partner-related reasons for not using regular testing services. 73.9% of women and 65.6% of men ($p<0.01$) accepted to be tested during the home-based HCT campaign. Members of households in the lower income quartile were 40% more likely to accept home-based HCT than the rest of the population [OR=1.41, 95% CI: 1.01, 2.17]. Acceptance of home-based HCT was even stronger among poorest residents of Likoma who had completed primary education [OR=2.43, 95% CI: 1.34, 4.41]

Conclusions: The provision of home-based HCT has the potential to significantly increase the uptake of testing among the poorest, and thus reduce inequalities in access to HIV treatment.

Recommendations: Further assessments of the provision of home-based HIV testing and counseling services should be conducted.

A.20 How to make breastfeeding safe for HIV-positive women? The dream program experience of breastfeeding under HAART

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Background: HIV transmission through breast milk is about 50% of the vertical transmission. Breast milk cannot easily be substituted in sub-Saharan African settings due to the increased risk of adverse events affecting formula fed newborns, particularly in the first six months of life. The balance between protecting the newborn from HIV infection as well as from the risk of substitutes of breast milk has not been achieved yet. Aim of this paper is to present the results of breastfeeding under HAART in the DREAM program experience in Malawi.

Methods and population: HAART to prevent HIV vertical transmission has been offered to 1,011 HIV+ pregnant women contacted by the DREAM centers of Dowa – Mthengo wa Ntenga hospital and Blantyre – Mandala. The HAART administration started at 25th of pregnancy until six months of newborns' age. Women are encouraged to breastfeed the babies under HAART. Health education sessions and nutritional supplementation were offered during breastfeeding to prepare and assist the weaning of the baby. Women did not qualified for long-life treatment stopped to take HAART at the weaning of the within the sixth months of age. HIV infection is diagnosed by b-DNA technique performed on newborns blood sample at one and six month of age.

Results: As on 15th of May 2008, 6,212 pregnant women accessed the program of whom 1,011 were HIV positive. The overall abandon/refusal rate was 16.7% (169/1,011). HIV transmission rate was 0.68 (4/583) and 0.64 (2/309) at one and six months of newborns' age respectively. Five cases are uncertain (need to be confirmed by the second viral load) achieving in the worst scenario the percentage of 1.54 at one month. The low birth weight rate was 15.2%. Anaemia was the main adverse event related to treatment in the women while no evidence of drug related toxicity has been reported in the newborns.

Conclusion: HAART is safe and effective in preventing MTCT transmission during breastfeeding. The weaning at six months of age could represent a good compromise to end the exposure to the infection.

A.21 PMTCT Program Progress at University Of North Carolina (UNC) Project, Lilongwe, Malawi

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Kimberly Reynolds

Issues: The UNC Project began implementing a PMTCT program within existing maternal and child health delivery systems in 2001. Over time, the program has evolved to meet the needs of the national PMTCT scale up program, provide improved services, and address shortcoming in the delivery of the program.

Description: The PMTCT program includes: PMTCT education, small group pre-test counseling, opt-out HIV testing with rapid test kits, maternal single dose nevirapine (NVP) and infant NVP, infant feeding counseling, and cotrimoxazole preventive therapy for mother and infant. From July 2006, we added routine CD4 testing for all HIV positive women and ART clinic referrals for those with CD4 counts <250 cells. In May 2007, we adopted the Ministry of Health led early infant diagnosis program in the under-5 clinic. To address a 50% home delivery rate, we conducted research to incorporate traditional birth attendants. We added 24 hour routine counseling and testing on the labour ward based on reports of high numbers of women in labour with unknown HIV status. We also began supervising new PMTCT sites in the Lilongwe district through the Lilongwe District Health Office.

Lessons learned: Outputs include CD4 testing of 100% of HIV positive women with 21% meeting ART eligibility, initiation of 374 women on ART during pregnancy, strategies focused on assisting TBAs with the PMTCT process, testing of 27,846 antenatal women plus 2,334 women on the labour ward in 2007, and the addition of 9 PMTCT sites. Each new activity requires the development of standard operating procedures including practice runs to refine the integration into the existing system.

Next Steps: Regular monitoring and evaluation of a successful PMTCT program allows the evolution of the program to address areas to target for improvement. Programs need flexibility to incorporate the rapidly changing needs and policies in a PMTCT scale-up process involving multiple partners.

A.22 Partner notification for Individuals with acute HIV infection in Lilongwe, Malawi and Johannesburg, South Africa: CHAVI 011

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Background: Currently there is no formal framework to support partner notification for HIV in Malawi or South Africa. A primary objective of CHAVI 011 is to obtain community and CHAVI 001 participant perspectives on different methods of partner notification in order to enhance partner notification strategies for CHAVI 001, a prospective cohort study to biologically study acute HIV infection.

Methods: In-depth interviews (IDI) were conducted with individuals with acute HIV infection (AHI), partners of individuals with established HIV infection, and research staff. Focus group discussions (FGD) were conducted with community leaders and individuals with established HIV infection. This analysis is based on 28 IDIs (n=18 Malawi/n=10 South Africa) and 3 FGDs (Malawi). All IDIs and FGDs were audiotaped, and verbatim transcripts were produced. Qualitative content analysis was used to analyze questions on the advantages, disadvantages, preferences, and perceived partner reactions to partner notification approaches, including provider and patient notification.

Results: Preliminary analysis suggests that participants believed people should be informed of their partner's HIV status. While participants identified advantages and disadvantages of both provider and patient notification, more preferred patient notification. Several stated primary partners are family, and therefore, they should be told by their partner. Participants suggested, however, that provider notification is appropriate when people feel uncomfortable or afraid to disclose to their partner. Participants who preferred provider notification indicated that providers are adequately trained to disclose HIV status and can ease partner's reactions. Some also suggested that notification by partners may not be taken seriously, and that the relationship with partners would determine the notification method. Couple counseling and testing was mentioned as another method to notify partners.

Conclusion: Participants support notifying people when their partners are diagnosed with HIV. Given diverse perspectives and individual situations, a combination of partner notification approaches may be needed.

A.23 Offering HIV counseling and testing at the time of delivery: to what extent does this identify HIV positive women in need of PMTCT services?

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Institutes: [1] UNC Project, Lilongwe, [2] University of North Carolina, Chapel Hill, United States, [3] Kamuzu Central Hospital, Obstetrics and Gynecology, Lilongwe

Background: Bwaila Hospital, serving a catchment area of 1.7 million, conducts 12,000 deliveries and offers PMTCT services to 10,000 women annually. The antenatal department offers HCT using nurse-counselors, rapid tests, and an opt-out strategy. Uptake approaches 100%. Many Lilongwe residents receive PMTCT services using this approach; still, some women arrive during labour with unknown HIV status. Therefore, in July 2007, we began a program offering 24 hour HIV counseling and testing on the labour ward.

Methods: Women presenting to the labour ward without documentation of an HIV tests with the previous 3 months receive HCT from a lay counselor. Women testing positive and their newborns receive nevirapine. To determine whether the addition of 24-hour HCT in the labour ward significantly increased PMTCT services, we used descriptive statistics to compare the proportion of women tested at the antenatal department to those tested at the labour ward during the second half of 2007.

Results: from July to December 2007, 4,971 pregnant women received HCT at the Bwaila hospital antenatal clinic; 17% (834/4,971) tested HIV+. 6,978 women arrived at the Bwaila labour ward for delivery; 4,646 had evidence of recent HIV testing and 2,332 women (33.4 % of all women in labour) did not. The latter group received HIV testing. 143/2,332 (6%) of these women were HIV+. All these mother/infant pairs received nevirapine.

Conclusions: HIV counseling and testing in labour ward identifies a large number of women in need of HIV testing. 1/3 of all women presenting to the labour ward required this service. Identification of HIV positive mothers and their infants increased PMTCT services by 17% over testing in the antenatal clinic only.

A.24 Perspectives of women and providers on factors that influence pregnant HIV-positive women's decision to participate in PMTCT programs in Lilongwe, Malawi

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Background: Programs for preventing mother-to-child transmission (PMTCT) of HIV are increasingly available in low-resource settings, yet challenges impede participation by pregnant HIV-positive women. Facilitators and barriers to participation were studied qualitatively from the perspectives of women and health care providers.

Methods: 30 qualitative interviews with pregnant HIV-positive women, and 13 interviews and 2 focus groups with health care providers (n=25) were conducted from June to July 2006, at three antenatal clinics in Lilongwe, Malawi. Results from women and providers were compared using the construct of social support as an organizing framework.

Results: Women identified facilitators for participation as various types of social support, including: monitoring of their health, provision of information, emotional support, and medical treatment available at the clinic. Women's barriers to participation included: the need to consult their husbands and their initial shock experienced on the day of diagnosis. Providers identified facilitators for participation as: the medical care available to women and their infants, and a high level of understanding of HIV and the PMTCT program. Providers recognized barriers to participation as: low levels of understanding of HIV and the PMTCT program, the cultural need to consult their husbands, fear of consequences of HIV disclosure to their husbands, and misconceptions about specimens needed for tests. Barriers to continued participation included: transportation, long waiting time at the clinic, and child care.

Conclusions: Women highlighted the importance of post-test counseling and education that includes a variety of types of social support to encourage women to participate in PMTCT programs. Providers underestimated the value women placed on them as trusted counselors who provided emotional and appraisal support. However, providers recognized their role in providing information and instrumental support. Findings are applicable to improving recruitment into PMTCT programs following post-test counseling.

A.25 Perceptions of choice regarding HIV testing among pregnant women and nurses in antenatal clinics in Lilongwe, Malawi

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Background: UNC Project Malawi has been collaborating with the government on a prevention of mother-to-child transmission (PMTCT) program in Lilongwe since 2002. In 2005, the program transitioned from “opt-in” HIV testing to “opt-out,” per governmental mandate, resulting in increased HIV testing (73% to 99%). Although the opt-out approach increased identification of HIV-positive women, concerns surrounding counseling and informed consent remain.

Methods: Qualitative in-depth interviews to gather experiences of opt-out testing among 21 pregnant women: 10 HIV-positive, 10 HIV-negative and 1 who opted-out. In-depth interviews with 10 nurses to gauge their understanding of opt-out testing.

Results: The majority of women (16/20) felt that the test was “not compulsory.” HIV testing experiences varied depending on women’s prior knowledge of testing and their decision to test prior to attending the clinic. HIV-positive and HIV-negative women described similar testing experiences. Some women talked about knowing women who were ""running away" to avoid being tested, and a few women felt that testing was compulsory to receive services at the clinic. The one woman opted out of testing for religious reasons. Most nurses felt that women received comprehensive counseling and were able to make an informed choice about testing under the opt-out model. Some nurses reported that women were reluctant to test without consulting their husband.

Conclusions: The majority of women felt they had a choice to be tested for HIV. Counseling should be monitored for quality to ensure that nurses are not pushing women even if they raise concerns. When calculating testing uptake, consideration needs to be given to women who choose not to receive services at the clinic because they do not want to be tested.

A.26 Deploying HIV counseling and testing counselors – a model to maximise HIV testing uptake in an STI clinic in Lilongwe, Malawi

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Background: Despite the availability of a well-articulated HIV policy in Malawi, HIV counseling and testing (HCT) in STI service delivery areas has not registered appreciable success. By comparison, HCT has shown remarkable uptake among antenatal mothers and TB patients. This STI clinic shortfall has been attributed to a lack of capacity to implement HCT and a lack of perceived benefit by STI patients. Regular STI care providers are overburdened and cannot add HCT to their ongoing duties. In an attempt to promote HCT in this setting, Kamuzu Central Hospital STI clinic trained and hired HCT lay-counselors.

Methods: People without a health professional background but a complete secondary school education were trained by the Malawi Ministry of Health in HIV counseling and testing for five weeks. This lay-cadre has been deployed in the clinic to be part of the HCT team. Following each STI clinical visit, and patient consent, the counselor performs HCT using a rapid test algorithm.

Results: From January to December 2005, prior to deployment of the lay-counselors, there were 4414 (55%) new visits. Among the 648 patients (15%) accepting HCT at these visits, HIV prevalence was 37%. When the HCT counselors were deployed, the uptake increased four-fold. From July 2006 to December 2007, 6114/9802 (62%) of the STI patients without previous HIV-positive test results were tested for HIV. HIV prevalence among these patients was 30%.

Conclusion: Non-medical HCT counselors have contributed greatly to increased uptake of HIV testing services and can be utilized successfully in clinical service settings.

A.27 A social change communication approach to dealing with multiple and concurrent sexual partnerships Malawi.

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Background: The HIV and AIDS pandemic continue to exert devastating personal, social and economic impact in the sub-Saharan region. Having concurrent sexual partners is well established in the scientific literature as an important factor underpinning rapid growth of the HIV epidemic particularly in Southern Africa. A SADC and UNAIDS meeting held in Maseru in 2006 made a key priority recommendation to significantly reduce multiple and concurrent partnerships (MCPs) which, in the context of low condom use is a key driver of the HIV/AIDS epidemic.

While knowledge about HIV and AIDS is high in Malawi, there is limited knowledge about the structure and characteristics of sexual networks among the general population. Risk vulnerability within such relationships is not considered seriously as evidenced by the ever increasing practices of multiple and concurrent sexual partnerships in Malawi and the entire sub-Saharan region, coupled with low and inconsistent condom use.

Methodology: To address the issue of MCP, Pakachere IHDC conducted a qualitative formative research with a selected audience to gain insight into people's understanding of sexual relationships and HIV prevention, with specific attention to the issue of concurrent sexual partnerships. A total of 27 Focus group discussions and 27 in-depth interviews were conducted.

Results: The findings show that lack of communication in relationships, sexual dissatisfaction and deprivation in marriages, money and material gains, peer pressure, fatalism and cultural practices are prominent factors contributing to people's involvement in MCPs. Sex was generally reported to be essential to a relationship. However condom use was reported as low in established relationships and marriages.

Recommendation: The study is part of a growing effort and interest to understand the issue of MCP and HIV prevention. Interventions must and will focus on increasing risk perception in multiple and concurrent sexual relationships and improving communication between partners thereby increase long term mutually faithfully relationships with one partner. The intervention will also promote increased condom use.

A.28 use of full time lay HIV testing and counseling service providers in health care setting is an effective model of HIV testing and counseling service provision

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Background: An effective HIV testing and counseling service depends on dedicated and well trained HIV Testing and Counseling Service Providers. HIV testing and counseling service provision is impeded in health care settings when service providers are engaged in other additional responsibilities apart from providing HIV Testing and Counseling services only. Malawi Government with support from Global Fund scaled up HTC services in government health facilities through the training of Health Surveillance Assistants. Apart from HIV Testing and Counseling service provision the HSAs are also engaged in other responsibilities. The approach of scaling up delivery of HIV Testing and Counseling service provision in health facilities by HSAs led to services not being provided on full time basis. MSH, with funding from USAID collaborated with DHMTs in eight districts since October, 2004 to support HIV Testing and Counseling service provision in health facilities using trained lay HIV testing and counseling service providers on full time basis. Basics project with support from USAID adopted the same approach by carrying over the lay HTC service providers from the previous MSH project.

Objectives and scope: Work collaboratively with MOH and DHMTs to strengthen delivery of HIV Testing and Counseling services on full time basis using full time trained lay HIV Testing and Counseling Service Providers in district hospitals.

Method: A structured project approach which incl uded recruiting and training of HTC service providers in line with MOH training HIV Testing and Counseling training Curriculum, guidelines and policies. The lay HIV Testing and Counseling Service Providers were placed in district hospitals to work alongside trained HSA HIV Testing and Counseling service providers. HTC rooms were identified renovated and equipped with furniture and supplies. Surrounding communities were sensitized and mobilized, sign posts on availability of services and opening hours were placed. Test kits were provided by the hospital.

Results: Client turn up increased overwhelmingly as a result of having non interrupted services. Patients from wards and departments accessed HIV Testing and Counseling services on time. HIV testing and counseling in pregnant women attending Antenatal clinic received HTC services. Data from Mangochi district where there are 5 HSAs HIV Testing and counseling service providers , 2 full time lay HTC service providers employed by BASICS and 10 volunteer HTC service providers revealed that out of the 2,336 clients tested and counseled from January to March 2008, 720(30%). In Kasungu where there are 8 HTC service providers 2 of which are Full time lay counselors employed by BASICS 2493 clients were tested and counseled and 2 lay HTC service providers tested and counseled 1136 clients representing 45% of all the clients tested and counseled.

Recommendations: Utilizing well trained and skilled Lay HTC services providers can sustain and improve uptake of HTC services in health facilities.

A.29 Sexual behaviour in rural Malawi: preliminary results from diaries

K. Chavula, H.P. Kohler, N. Phiri, and R. Thornton

Background: Understanding sexual behaviour among rural Malawians is important for designing strategies to mitigate the spread of HIV/AIDS. While qualitative studies enable researchers to have a deeper understanding of sexual relations, quantitative studies have often been limited to asking only a few survey questions about abstinence
or condom use. Having a more in depth understanding of sexual relations is essential for HIV prevention.

Objectives and scope: This paper presents preliminary results from nine-day sexual diaries collected in Balaka, Rumphi, and Mchinji.

Data and Methodology: This paper presents results from nine-day recalls of self-reported sexual behavior collected in 2007 among approximately 1,300 men and women in Balaka, Rumphi, and Mchinji. These respondents were tested in 2006 for HIV; 8.4 percent of the sample we report in this paper were positive. We present descriptive statistics from these diaries. Respondents were asked about each romantic interaction they had with a partner, including kissing, mutual masturbation, and vaginal sex.

Results: Among the respondents, 23 percent of unmarried individuals and 62 percent of married individuals had had any intimate encounter with a partner in the previous 9 days. Almost all of the unmarried respondents who reported having a romantic encounter actually engaged in vaginal sex (21 percent). All of the married respondents who reported any intimate activity, engaged in vaginal sex (62 percent). There were very few other sexual activities among those asked of respondents: only one percent engaged in mutual masturbation. There was very little use of condoms among the married respondents (only 12 percent of those who had vaginal sex), but it was somewhat high, among sexually active unmarried respondents (41 percent of those who had sex reported using a condom). We present other new findings about sexual behavior: as a potential safe sex strategy, seven percent of all respondents reported masturbating in the past 9 days (15 percent
unmarried and 6 percent married).

Conclusions: Individuals in rural Malawi are mainly engaging in vaginal sex, not other forms of intimate and romantic encounters. The majority do so several times per week.

Recommendations: If sexual behaviour is to be protected from HIV, condoms should be more easily accessible and affordable in rural communities.

A.30 Perceptions on HIV/AIDS and VCT access amongst Rural Communities Of Nayuchi (Machinga)

P Woods, E Kapyepye, H Chanza, J Mbewe, S Mnenula

Background: VCT is one of the most important elements in the fight against HIV/AIDS in Malawi. However, a lot of people do not access this essential service due to a number of factors. So, people who could have been diagnosed early and therefore access ART and other HIV/AIDS related services late and have undesirable treatment outcomes. Awareness campaigns have been conducted but do not seem to be making much impact. In trying to understand this, an evaluation of Machinga HIV/AIDS project was conducted in May, 2006.

Objectives of the study:

1. To find out factors that facilitate access to VCT in Nayuchi
2. To find out factors that hinder access to VCT in Nayuchi

Methodology: This was and end of project evaluation of a 3 year project which aimed at bringing about socio-cultural changes to reduce transmission of HIV. Study subjects included in and out of school youths, teachers, commercial sex workers, fishermen, PLHIV and 255 individuals over 14 years of age selected at random from the population. The total sample size for the questionnaire was 577.

Results: The results presented in this paper are from the questionnaire survey in which respondents were asked the following questions: "What were the reasons for going for VCT" and "what were the reasons for not going for VCT?" For those who went for VCT, 55.6% undertook the test because they wanted to know their status for them to plan their future, 16.3% due to constant illnesses and weight loss, 11.2% due to pregnancy and wanted to protect the unborn baby, 6.7% due to their role as youth leaders and wanted to set an example.
For those who did not go for the test, their reasons included fear 24.8%, distance too far 23.7%, confidence that they had not been exposed to HIV 15.7%, not ready 11.5%, lack of knowledge 7.6%, too busy 5.7%
It was interesting to note through this questionnaire VCT coverage in Machinga was 33% which is significantly higher than the national VCT coverage.

Conclusion: Personal perceptions around HIV testing are very important in influencing the decision to seek VCT, alongside physical access to testing facilities. Very few respondents were unaware of the availability of VCT.

Recommendations

1. Programs on HIV/AIDS should include community mobilization and sensitization to deal with issues of stigma and discrimination
2. There is an urgent need to decentralize voluntary counseling and testing and other HIV/AIDS related services to the local health clinics
3. government to seriously look into issues of staffing and capacity building for those health care workers that are currently providing the various services.

A.31 People's Knowledge, Perception and Attitude towards Door To Door HIV Testing in Zomba District

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Background: Currently, serostatus-based approaches aimed at universal voluntary knowledge of serostatus are believed to be effective in HIV prevention and care. In order to achieve universal testing, there is need for simplified HIV testing as well as prevention of discrimination. Door to door testing is one of the means bringing VCT services at household level whereby qualified personnel would conduct the test. Existing evidence suggests that door to door would be one of the best ways to achieve universal testing. However, an understanding of community perceptions regarding door to door HIV testing would be instrumental in designing such programs taking into consideration the context.

Methods: This was a cross-sectional study employing a qualitative methodology. Focus Group Discussions and In-depth Interviews were conducted with participants from both rural and urban communities within Zomba District.

Results: Majority of the respondents welcomed the idea of introducing door to door HIV testing as a program to scale up the uptake of HIV testing. They noted that the program would help people in their communities to access HIV testing in their homes and know their status, hence be able to plan their lives. Respondents' main concern with the program was confidentiality. Majority said that they would not want their communities to know their results. To ensure confidentiality, respondents suggested that testing should be done by people not from their communities to ensure that the counselors do not disclose the results or for the people to feel shy every time they met the counselor. Respondents also said that the program could avoid major setbacks by sensitizing the communities very well before implementing it, otherwise people would be running away from their homes if they were not prepared.

Discussion: Door to door HIV testing is regarded as a good strategy that could make many people comfortable to test for HIV. An important merit for door to door testing is that it would reduce stigma and the fear that people have about HIV testing. Spouses are bound to react differently to discordant test results depending on which gender is reactive and therefore appropriate preparations to deal with this would be necessary. Given the stigma attached to HIV, people's main concern is how the test results would be concealed from the public. It would be necessary to devise good mechanisms for ensuring that HIV results for individuals are kept confidential. People would readily accept the program if they are assured that ARVs would be available in the event of being reactive. Extra effort would be needed to attract men into the program as they are likely to find excuses for not being available to test.

A.32. Why is HIV prevalence higher among migrants than among non-migrants? Evidence from Malawi that contradicts conventional wisdom by

J. Kaphuka, P. Anglewicz

Background: Research typically shows that HIV prevalence is higher among migrants than among non-migrants. Conventional wisdom provides two explanations: 1) since prevalence is higher in urban areas, rural-to-urban migrants are more likely to become infected in an urban area; 2) since migration separates spouses, each is more likely to seek non-marital partners. The evidence upon which this conventional wisdom is based, however, is typically cross sectional, and thus does not permit assessing whether migrants are more likely to be HIV+ *before* they migrate than are non-migrants.

Objectives and Scope: This paper asks whether (1) village residents who are HIV+ are more likely to migrate than village residents who are HIV-, (2) those who move to a city are more likely to be HIV+ than those who move from one rural area to another, and (3) those who move for work-related reasons are more likely to be HIV+ than those who move for other reasons. The data were collected from a randomly selected sample of rural residents of Mchinji, Balaka and Rumphi. The sample characteristics are, however, consistent with those of the rural sample of the Malawi Demographic and Health Survey, and thus can be taken as representative of Malawi's national rural population.

Methodology: We use data collected by the Malawi Diffusion and Ideational Change Project (MDICP), an ongoing longitudinal study in rural Malawi. The original sample was interviewed in 1998, with follow-up interviews conducted in 2001, 2004 and 2006. Shortly after the 2006 survey round, we attempted to trace all members of the original 1998 sample who were not interviewed in 2006. Information about destination and motivation for moving was provided by relatives and neighbors; the most common reasons reported for moving were marriage-related (divorce, widow/widowerhood, new marriage, 30%), work (25%) and farming-related (14%). Of the 718 who moved within Malawi, 66% were traced and offered HIV tests. Women and men were equally likely to move. To analyze explanations for the relationship between migration and HIV status, the correlates of migration, we used multivariate logistic regression to take into account other determinants of HIV status, such as age, wealth, and education. Analyses showed t hat migrants who were not traced did not differ significantly from those who were.

Results: As expected, in 2006 HIV prevalence was much higher (14%) among migrants than among non-migrants (5%). Taking advantage of the longitudinal data, we found that both men and women who tested HIV+ in 2004 were far more likely to have moved by 2006 than those who tested negative in 2004. Those who moved from MDICP villages to urban areas (22% of the migrants) were no more likely to be HIV+ than non-migrants. For these measures, we do not find significant differences between males and females. Multivariate analysis showed that migrants for marriage-related reasons were significantly more likely to be HIV+ than migrants for other reasons (11 times for women, 10 times for men), and these migrants were more likely to have had unstable marriages before they moved.

Conclusions and Recommendations: The evidence presented here contradicts conventional wisdom about the association between migration and HIV status. Those who are migrants likely to be HIV+ *before* they move rather than becoming infected through risky behavior in urban areas. Marital change appears to be the most likely explanation for this pattern for three reasons: 1) it is likely that marriages in which one partner suspects the other to be engaging in risky behavior are more likely to dissolve; 2) such marriages are more likely to have at least one partner who is HIV+; 3) after marital

dissolution at least one of the partners is likely to move. This research suggests the importance of longitudinal data. It also suggests that although prevalence is higher in urban areas, prevention efforts directed to the HIV negative living in rural areas are a priority concern.

A.33. Evaluating coverage, quality of coverage and penetration of condoms in high risk areas (hot zones)

V. Manyonga, P. Mkandawire and L. Nkhoma

Background: PSI/Malawi is engaged in the social marketing of a range of health products that assist in preventing HIV/AIDS, Malaria and Diarrhea disease. One of these products is *Chishango* male condoms. The condoms are distributed to the general population and also targeted at high risk areas known as 'Hot Zones'. PSI/Malawi conducted its first round Project MAP (Measuring Access and Performance) study in 2006 and a follow up study was done in 2007 to evaluate product coverage of Chishango condoms with an aim to improve its accessibility nationwide and in targeted areas, as well as the quality of its coverage.

Objectives and scope: The study was carried out to ensure frequent monitoring of the coverage and quality of coverage of *Chishango* male condoms in the various PSI/Malawi sales zones and market penetration targeted High Risk areas.

Methodology: The study used Lot Quality Assurance Sampling techniques (LQAS) to draw a random sample of 19 rural and 19 urban enumeration areas (EAs) from urban areas and seven PSI sales zones. Chishango condom coverage was determined using a ten-minute walk for urban areas and a twenty-minute walk for rural areas. Good 'quality of coverage' was reached if Chishango condoms were available, clearly visible, within expiry date, promotional material clearly visible and no stock outs in the last month. Chishango condom market penetration and quality of coverage was measured in pre-identified high-risk areas or "Hot Zones".

Results: The 2006 Project MAP study revealed that *Chishango* condoms enjoyed higher coverage in urban areas compared with rural areas. Low rural *Chishango* coverage was mainly attributed to the management of large sales zones and poor road network making it hard for sales teams to penetrate adequately in rural areas. As a result of the MAP findings, the number of PSI/Malawi sales zones was increased from 3 to 7, creating smaller more manageable zones. The 2007 Project Map study demonstrated improved Coverage for *Chishango* condoms in urban, rural areas and targeted "Hot Zones". *Chishango* Coverage increased from 78% to 82 % in urban areas, 43 to 54.2% in rural areas and penetration in Targeted Hot Zones increased from 72 % to 82%. Quality of coverage also improved, with Chishango condom visibility in targeted Hot Zones improving from 48% to 84%.

Conclusion: Project MAP findings proved to be an effective monitoring tool to measure the Coverage and Quality of Coverage of PSI/Malawi's products over time. It also directly informed the decision by programmers to restructure the distribution systems from four regions to seven smaller sales zones. A further study is planned for 2008 to further measure Coverage and Quality of Coverage indicators.

Recommendations: PSI/Malawi should continue to use this MAP Study Methodology as an effective means of monitoring the performance of its distribution and promotional efforts related to its various products. If possible, resources should be added to ensure that MAP Study rounds can be conducted more frequently (at least twice per year). In addition, continued increases in programme focus should be given to the sale of male condoms in targeted high risk areas and outlets, while reinforcing those efforts with a higher level of sustained targeted interpersonal health communications in these areas. This will result in not only higher demand for male condoms among the Most At Risk Populations (MARPs), but will also maximize the efficiency and health impact of condom social marketing efforts. This is also warranted given the large increases in the number of free public sector condoms being distributed targeting the general population.

A.34. Challenges of male involvement in PMTCT

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[1]University of North Carolina Project, [2]University of North Carolina, Chapel Hill, USA, [3]UNICEF, [4]EGPAF

Issues: The Elizabeth Glazer Pediatric AIDS Foundation-University of North Carolina (EGPAF-UNC) Project- Malawi began implementing a PMTCT program in 2001. Though PMTCT is an entry point for many pregnant women and family members into HIV care and treatment services, male partners generally do not participate in PMTCT services. Men make many crucial health decisions within families, so their participation in PMTCT may enhance safe sex, infant feeding, ARV adherence, and maternal nutrition.

Description: The EGPAF-UNC PMTCT program began a male championship initiative in 2006. Activities planned to target men include the following: 1) Community mobilization, 2) Giving women who come to ANC with their spouses priority in seeing a health care provider, 3) Giving letters to women inviting their partners to accompany them to the next ANC visit, 4) Promoting HIV testing in spouses and providing CD4 counts for men found HIV infected 4)Encouraging couples who come to PMTCT services to be peer educators in their communities.
The program has also targeted male work places for intensive ANC/PMTCT education to create awareness.

Lessons Learned:

- Despite these activities, only 1.4% of antenatally tested women brought their partners to the ANC clinic.
- PMTCT Services are rendered during business days only, when many men are working
- Most health care workers lack couples counseling skills to provide a welcoming environment for men
- Maternal and Child Health settings are often not male friendly
- Men are more reluctant than women, and especially pregnant women, to access HIV testing
- Males sometimes accuse and victimize partners if tested HIV positive.

RECOMMENDATIONS: ANC clinics should provide male friendly areas to encourage male participation in PMTCT. Off-hours clinics that ca n accommodate male schedules may facilitate male participation. All ANC staff should be trained in couples training.

TRACK B: TREATMENT, CARE AND SUPPORT

The Track looks at basic clinical research into diagnosis and treatment of HIV-related infections, clinical course of HIV infection, antiretroviral therapy and all aspects medicine, program-linked studies that inform planning and treatment and care models emerging as good practice

B1. Identifying Individuals with Acute HIV Who Present To an STI Clinic in Lilongwe, Malawi

Kimberly Reynolds, Gift Kamanga[1], Duncan Kwaitana[1,] Naomi Nyirenda[1], Happiness Kanyamula[1], Clement Mapanje[1], Kimberly Reynolds[1], Davie Namakhwa[1], Francis Martinson[1], Cindy Gay[2], Marybeth McCauley[3], Irving Hoffman[2], Myron Cohen[2]

Affiliation: [1] UNC Project-Lilongwe, [2] UNC Chapel Hill, [3] Family Health International

Background: CHAVI 001 is an acute HIV study aimed at understanding HIV-1 virus, host response, the genetic factors that determine HIV transmission, and viral set point. UNC Project in Lilongwe, Malawi is a participating site. Routine HIV counseling/testing is not standard care in STI clinics in Malawi, despite the fact that national HIV policy supports this practice. UNC Project operates an STI clinic within and in close collaboration with Kamuzu Central Hospital. To better serve our clients and to recruit participants for CHAVI 001, we instituted routine HTC in this clinic, beginning July 2006.

Methods: In the STI clinic, a clinician/nurse conducts HIV testing using two rapid tests in parallel. All patients with HIV negative or discordant results are offered a third HIV test using RNA to detect acute HIV. We use a screening test to predict patients at high risk of being acutely HIV infected and particularly target these individuals.

Results: We started RNA screening in November 2006. In one year, we had tested 3,995 of 6,430 (62% of) new clients presenting to the STI clinic. 1,131 (28.3%) of the tested clients were HIV+ and 42 (1.1%) had discordant rapid tests. Of the 2,906 negatives or discordants, 1,734 (59.6%) agreed to RNA testing. From this group, we identified 19 (1.1%) with acute HIV infection, including 3/ 42 (7.1%) individuals with discordant rapid results. Genital ulcer disease was also predictive of acute HIV infection: 11/ 19 (57.9%) acutely infected clients presented with GUD.

Conclusion: The acute HIV prevalence of 1.1% is consistent with previous findings of 1.45% from a similar clinic population. Given the urgency of identifying individuals who are in this highly infectious HIV stage, RNA testing can be used concomittently with rapid testing to find those with acute infection. Individuals with discordant rapid results and with GUD should receive particular attention.

B2. An approach for integrating TB and HIV service delivery at community level

Kaseje, M., Gondwe, M., Chatipwa, E.M., Moyo, T.T, Kaonga, E. (FHI Malawi)

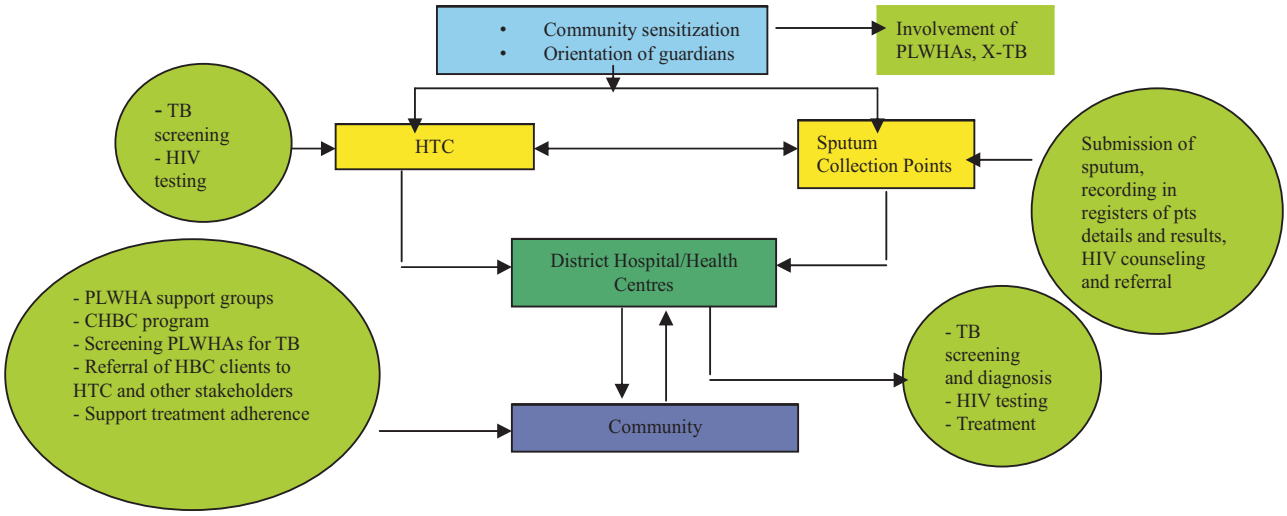
Issues: In Malawi, TB and HIV/AIDS services are provided in isolation, with limited linkages in contrast to HIV and AIDS. Other gaps include misconceptions of TB and HIV, long distances to health facilities, low TB case detection and high TB case default rates.

Description: With USAID funding through Management Sciences for Health, Family Health International (FHI) is implementing a joint TB/HIV project in selected parts of two districts in Malawi. A baseline survey undertaken by FHI found that 60% of community based organizations (CBO) were providing HIV/AIDS care to patients and OVC through volunteers and therefore were well positioned to address TB and HIV/AIDS with stakeholders for a coordinated continuum of care.

FHI's approach (Figure 1) aims to increase TB case detection and improve care for TB patients and PLWHAs. Activities include: community sensitization involving PLWHA and former TB patients to increase awareness, and referral to access HIV Testing and Counseling (HTC) centers or sputum collection points (SCP); active TB case-finding among HBC patients; screening of household contacts of TB patients and PLWHAs; promotion of TB and ARV treatment adherence; and tracing defaulters. Clients at HTC are screened for TB, HIV tested and referred. Clients at SCP are counseled for HTC and referred. Clients that are positive are referred for treatment and to community home based care (CHBC) programs. Negative clients are also referred to CHBC program for HIV prevention support.

Results: Over a period of 5 months of the project, 15 X-TB patients and 94 PLWHAs were involved in TB/HIV community sensitization activities, 460 PLWHA were screened for TB and 23 started on TB treatment. Other PLWHAs (287) were referred to health facilities for clinical staging and further management.

Figure 1: An approach for integrating TB and HIV services at community level



Lessons learned: The community based and client-engaged integrated model of the project increases TB case detection reduces stigma as evidenced by increased involvement and referral of PLWHA and leads to improved care of TB patients care.

B.3.Understanding sexual behavior and childbearing intentions of HIV infected women receiving antiretroviral therapy in Lilongwe, Malawi

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Background: The Malawi government initiated a free antiretroviral therapy (ART) programme in June 2004. By December 2007, 130,000 patients had ever been started on ART of which 61% were females. ART decreases mortality and improves the quality of life of people living with HIV/AIDS (PLHA). It is unclear what effect ART has on people's sexual behavior and future childbearing intentions. The objective of our study was to evaluate the sexual behavior and childbearing intentions of HIV infected women receiving ART in Lilongwe.

Methods: We conducted a cross-sectional study utilizing both quantitative and qualitative research methods on HIV infected women of reproductive potential receiving ART at the Lighthouse clinic. Data were collected using a semi-structured questionnaire and analysis was done using SAS. Qualitative responses were coded and themes identified.

Results: One hundred eighty nine women were enrolled of whom 66% desired more children and 85% remained sexually active. Condom use was low: 5% of the sexually active women reported consistent condom use. Women (58%) do not use condoms because their partners refuse and desire for another child (32%). 37% of women used hormonal contraception. Older women (>34years) were less likely to want more children (OR = 0.88; 95% CI: 0.83, 0.94). Those on ART > 2years were less likely to desire more children (OR = 0.94; 95%CI: 0.89, 0.99). Majority (32%) wanted more children to reach ideal family size and wanting a different sex (24%).

Conclusions: Most women on ART desire more children especially during the first two years of starting ART. Intensified counseling messages on sexual behavior and family planning should be incorporated into ART education and family services should be integrated into ART clinics as one strategy to prevent HIV transmission in the families and beyond.

B.4 Social support provided through counseling and follow-up at Baylor children's foundation–Malawi

M.M. Kabue, R. Zule-Mbewe, C. Chisala, V. Chitsaka, and P.N. Kazembe. Mark Kabue

Background: Provision of comprehensive paediatric HIV care at the Baylor College of Medicine-Abbott Fund Children's Clinical Centre or Excellence – Malawi (COE) presents a unique challenge in that children depend on their guardians for correct administration of medications. A missed appointment is the earliest sign that all is not well with a paediatric patient. The COE has so far enrolled over 3,000 patients, of whom 1,450 have been started on antiretroviral therapy (ART) since the inception of the programme in October, 2004.

Objective: To describe psycho-social support and types of counselling services provided by the social workers.

Methodology: Study design was cross-sectional, that involved a retrospective review of electronic databases kept by social workers of the services they provides and outcomes of patients follow up efforts including home visits during the period October to April 2006.

Results: During the period October 2006 to April 2008, a total of 1609 patients (8% of all patient visits) were referred to social workers. Nearly (48.1%) had missed at least one scheduled appointment. Poor adherence to ART was the second most common reason for counselling. Transport money was provided to the very needy after screening. Other types of counselling provided were: child neglect/abuse, financial issues, marital disputes, and dietary counselling. During the period July to December 2007, a total of 221 patients (26% on ART) were referred for follow up having missed an appointment and 67% were successfully located and brought back to care.

Conclusions: Poor adherence to antiretrovirals and missing appointments are the most common problems counsellors have to deal with at Baylor. Follow up efforts to bring back to care patients who miss appointments has been successful.

Recommendations: A comprehensive approach to providing paediatric HIV care should include providing ongoing psychosocial support.

B.5 Family-centred care and treatment service experience at Baylor College of Medicine children's clinical centre of excellence.

J.K. Midturi, C.M. Cox, M.M. Kabue, P.N. Kazembe

Background: A family-centred care approach to paediatric HIV services has been in place at Baylor College of Medicine-Abbott Fund Children's Clinical Centre of Excellence – Malawi (COE) since February 2007. The rationale for this family clinic is based on the comprehension that the success of the child is dependent on the family. This model of care has been recommended for paediatric HIV care.

Objective: To assess adherence and outcome of paediatric patients enrolled in the family clinic.

Methodology: A retrospective analysis of family clinic data was done on patients enrolled from July 2005 thorough March 2008. Demographic data, adherence (defined as pill count above 95%) and outcome information for the study period was analyzed.

Results: A total of 186 patients were enrolled in the family clinic, 86 children and 100 adults. There were 62 (62%) adult women and 37 (43%) girls enrolled in the family clinic. Fifty-six (65%) children were on Anti-retroviral Therapy (ART) with a median duration of 12.4 months on ART. Mean age for children on ART was 39.6 months. Fifty five (55%) adults were on ART. Average adherence for children was 100% and 99.38% for adults. One (1.2%) child died and two (2.3%) were lost to follow-up. One (1%) adult patient died, and three (3%) were lost to follow up. One child and guardian transferred out to another clinic. The two patients who died were on ART.

Conclusion: The family-centred care clinic is a successful model of care of families infected with HIV. The family clinic ensures good adherence and outcome for both the child and guardians. Lost to follow-up and mortality was lower compared to national averages.

Recommendation: All ART sites should have a family-centred care approach to paediatric HIV services to ensure better adherence and outcomes not only for the child but also the entire family.

B.6 Evaluation of early mortality and reason for initiation in patients receiving antiretroviral treatment (art) at Zomba central hospital

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Background: In 2004 an ART clinic was established at Zomba Central Hospital (ZCH) adopting a public-health approach whereby the decision to start therapy was made primarily upon clinical WHO HIV staging criteria, with MOH guideline-based prioritization of CD4 testing based on available resources. CD4 testing began at ZCH in 2005, with a significant increase in laboratory resource availability and scale-up since Quarter III, 2007.

Methods: Routine program data was collected and analyzed from ART patient master cards and the ART register for patients registered from October 2004 to March 2008 in the ART clinic at ZCH.

Results: Of the 5753 patients enrolled on ART, 1167 patients (20%) were initiated because of low CD4, 3240 (56%) WHO Stage III and 1346 (24%) WHO Stage IV. The corresponding overall mortality rate (3%, 7% and 15%) and early mortality rate within 3 months of ART intiation (1%, 3%, and 10%) was lower in those initiated because of low CD4. In analysis by quarter, the early mortality rate for all patients (17% 2004/Q4, 3% 2008/Q1) and by reason for initiation decreased (Stage IV: 42% 2005/Q4, 19% 2008/Q1; Stage I/II: 6% 2005/Q4, 2% 2008/Q1). Since July 2007 there has also been a significant increase in both the numbers and the proportion of patients initiated due to low CD4 (range of 5-13% 2005 Q2-2007 Q2, to 31-38% 2007 Q3–2008 Q1).

Conclusions: Early mortality has decreased in the ZCH ART program. A contributing variable may be that more patients are being initiated at an early stage of disease due to increased CD4 testing capacity. The WHO recommends using CD4 counts to decide when treatment should be initiated because advanced immunosuppression thus the need for ART is not always associated with symptoms. ART programming sh ould be improved by finding individuals at earlier stages and increasing the feasibility of CD4 testing. Long-t erm follow up and analysis of outcomes will yield insight into the benefits of supporting implementation of a CD4 based initiation strategy.

B.7 An operational audit regarding home based care in Zomba district; shifting the focus to activities that affect health outcomes.

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Background: An operational audit was conducted to gain insight to Dignitas' supported home-based care (HBC) program in Zomba district.

Objectives: This audit aimed to explore: characteristics of HBC beneficiaries; performance of HBC volunteers, and patient satisfaction and expectations of HBC. Results were used to re-define the focus of HBC activities and further research areas.

Methodology: The study population consisted of 50 individuals registered for HBC at a community based organization (CBO) and 50 HBC volunteers associated with these CBO's. Semi-structured questionnaires were used for all 100 interviews. CBOs were purposely selected, interviewees randomly.

Results: 48 out of 50 patients registered for HBC after having been diagnosed with HIV; 44 were on antiretroviral treatment (ART). 1 out of the 50 patients was homebound and acutely ill. On average patients received 3 HBC visits since registration (mean time 17 months). Activities performed during home visits included: provision of medication; household chores; courtesy visits; encouragement, information and advice, and provision of financial and material support. The majority of patients valued the visits as helpful. Common themes around patient expectations included; prompt care when needed, social support and support for basic needs. HBC volunteers responded to be responsible for a mean of 6 patients; performing 6 HBC visits, requiring 8 hours a month.

Conclusions: The majority of individuals registered for HBC were on ART. Registration with a CBO may be a marker for a person's acceptance of his/her HIV status, and stigma may impact uptake. Pre-ART individuals also require support and should be targeted for referral to CBO's. If CBOs primary target remain individuals on ART, HBC could be more beneficial by targeting activities that affect health and treatment outcomes. These activities could include a) active case finding of ill patients in the community, b) treatment adherence and c) defaulter tracing. Further research is required to determine the unmet needs for HBC.

B.8 Decentralization of continuation art services at rural health centres in Zomba district appears safe as shown by mortality and defaulter rates

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[1]Dignitas International, Zomba, Malawi; [2] St. Michael's Hospital, Toronto, Canada; [3] Zomba District Health Office, Malawi.

Background: In Zomba District (population 700,000) over 50% of the population lives in rural areas. Distance from ART services is considered a barrier to uptake. Health care is provided through 1 central hospital and 28 healthcare facilities. In 2004, an HIV clinic was established at Zomba Central Hospital (ZCH). In 2007, the first phase of ART decentralization commenced at 9 sites.

Methods: Mortality and defaulter rates were assessed in patients registered for ART at ZCH between October 2004 and April 2008. First-line ART (FDC lamivudine, stavudine and nevirapine) was prescribed according to national guidelines. All patients initiated ART at ZCH, but those residing near a decentralized site were discharged to be followed up at that site after a minimum of 3 months stable on treatment.

Results: 5424 patients (63% women) were enrolled on ART through ZCH. Of these, 1922 (35%) were decentralized to 9 pilot sites. Of those decentralized, 3.2% died, 5.6 % defaulted and 0.2% stopped. By comparison, of those patients not decentralized to a health facility, 11.2% died, 11.0 % defaulted and 0.8 % stopped. In multivariate logistic analysis adjusting for duration of treatment and follow up, lower mortality was independently associated with being decentralized [adjusted OR 0.19 (95% C.I. 0.12-0.32)]. There was no significant difference in odds of defaulting [adjusted OR 0.72 (0.49-1.05)] or stopping [adjusted OR 1.28 (0.19-8.79)] between the 2 groups.

Conclusions: Data after one year of decentralization show that stable patients who were decentralized were no more likely to default or stop treatment than those followed at the Central Hospital. Lower mortality is most likely explained by the selection of stable patients for follow-up at decentralized sites. Decentralization of continuation ART services appears safe given selection of clinically stable patients. Additional follow up and analysis will yield further insight into the consequences of decentralization.

B.9. HIV testing and *neisseria gonorrhoea* antimicrobial susceptibility among men with urethritis in Lilongwe

Lillian Brown, Robert Krysiak, Gift Kamanga, Clement Mapanje, Happiness Kanyamula, Blessings Banda, Creto Kanyemba, Mariah Hoffman, Chisale Mhango, Marcia Hobbs, Francis Martinson, Irving Hoffman

Background: Previous studies show up to 85% of men in Malawi with the syndrome of urethritis are infected with *N. gonorrhoea. N. gonorrhoeae* infection facilitates HIV transmission, and rapid and effective treatment reduces HIV shedding in the genital tract. Thus, control of gonorrhea and other STDs is critical to prevent and control HIV transmission. Increasing resistance to drugs used in syndromic regimens has been described regionally. We sought to describe the HIV prevalence and testing patterns among patients presenting with urethral discharge and describe the antimicrobial susceptibility of gonococcal strains.

Methods: Between January 1, 2006 and January 14, 2008 men with urethritis attending the STD clinic at Kamuzu Central Hospital in Lilongwe had history and genital exam, and were offered rapid HIV tests. All were treated with gentamicin 240m g IM. Urethral swabs were taken from 126 men between May and August 2007 to determine the antimicrobial susceptibility patterns in gonococcal isolates by disk diffusion, agar dilution minimal inhibitory concentration (MIC), and E-test MIC determination (gentamicin only).

Results: Among 1765 men with urethritis, 175 (9.9%) self-reported to be HIV-positive, 650 (36.8%) HIV-negative, and HIV status was unknown for 940 patients (63.3%) at presentation. 780 (49.1%) of the 1590 patients with unknown or HIV-negative status at presentation accepted HIV testing. Of those tested, 225 (28.9%) were positive. HIV prevalence among those with known test results is 41.9% ((175+225)/(780+175)), however, 810 men (45.9%) remained untested with an unknown HIV status. *N. gonorrhoea* was isolated from 84.1% (106/126) of men. Isolates were uniformly susceptible to gentamicin and ciprofloxacin.

Conclusions: HIV prevalence is high among men with urethritis. Efforts should be made to increase HIV testing uptake among this high risk population. Gonococcal treatment in Malawi continues to be effective; however, given the high HIV prevalence among men with urethritis, monitoring treatment effectiveness is important.

B.10. Impact of acyclovir on ulcer healing and HIV-1 lesional and genital shedding among patients with genital ulcer disease in Malawi: a randomized controlled trial.

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Background: *Herpes simplex* virus type-2 (HSV-2) is the predominant cause of genital ulcer disease (GUD) worldwide, and has synergistic relationships with HIV-1. HSV-2 control strategies for HIV prevention are urgently required.

Methods: A randomised double-blind placebo-controlled trial of acyclovir 800mg BID for five days was conducted at Kamuzu Central Hospital STI clinic in Lilongwe, Malawi. Patients presenting with GUD received syndromic management plus either acyclovir or placebo. At enrolment, we determined serostatus of HIV-1, HSV-2, and syphilis, and HIV-1 plasma viral load and CD4 count in HIV-1 seropositive patients. GUD aetiology was determined from lesional swabs by real-time multiplex PCR. Ulcer characteristics were recorded at days 0, 7, 14 and 28. Ulcer and cervical swabs or semen were collected from HIV-1 positive participants to detect HIV-1 RNA. Regression models were used to assess the impact of acyclovir on genital ulcer healing, the presence and quantity of lesions and plasma HIV-1 RNA. Primary endpoint was Day 14.

Results: 422 GUD consenting patients (74% male) were enrolled. Overall, 60.9%, 71.7% and 5.0% had antibodies to HIV-1, HSV-2 and T. *pallidum* respectively. The median CD4+ count was 233 cells/μL, and mean plasma HIV-1 RNA was 4.80 $\log_{10}$copies/mL. Most ulcers were due to HSV-2 (67.1%). Overall 85% of ulcers were healed at Day 14 and this was similar among those on acyclovir or placebo RR=1.02, 95%CI 0.93-1.15. Among HIV-1/HSV-2 dually seropositive patients, acyclovir was associated with reduced detection of lesional and seminal HIV-1 RNA (lesional: adjusted RR=0.60, 95%CI 0.34-1.03; seminal: RR=0.58, 95%CI 0.39-0.89). There was no impact of acyclovir on detection of cervical HIV-1, nor on plasma HIV-1 RNA at Day 28.

Conclusions: Adding acyclovir to syndromic management had little impact on ulcer healing rates, but reduced detection of lesional and seminal HIV-1 RNA. This suggests that herpes therapy may reduce genital HIV-1 transmission.

B.11. Resistance profile of patients failing first line ART in Malawi when using clinical and immunologic monitoring

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Background: Over 130,000 Malawians have ever started ART, where first line therapy is d4T/3TC/NVP. Those who fail d4T/3TC/NVP are started on ZDV/3TC/Tenofovir/Lopinavir/ritonavir. Failure is based on clinical or immunological grounds as viral load is rarely available. We evaluated the resistance mutations among patients failing first line ART in Lilongwe and Blantyre.

Methods: Patients meeting the definition of ART failure according to Malawi national guidelines (New Stage 4 condition, CD4 decline>50%, CD4<pre-treatment) from December 2005 to July 2007 were evaluated. Among those with HIVRNA >1000 copies/ml prior to starting second line treatment, genotyping was performed.

Results: 101 confirmed ART failure patients were identified. Mean (sd) CD4 count, HIVRNA, and duration on ART were: 121cells/ml (131), 135984 copies/ml (201278), and 38 months (20.4), respectively. Four samples did not amplify and 5 samples had no mutations identified. Seven samples had M184V plus NNRTI mutations only. NNRTI mutations 181C, 103N, 106M, 188L, 190 occurred with similar frequency. The most common mutation pattern was M184V plus NNRTI mutations with one or more TAM (most common = 215F/Y) which occurred in 55% of patients. Surprisingly, 19% of patients acquired NRTI mutations (with or without 184V) plus either the K70E or K65R mutations. 16% of the patients had pan-nucleoside resistance which corresponded to K65R or K70E and additional multi-nucleoside resistance mutations, most commonly the 151 complex and/or rarely 69 insertions.

Conclusions: Upon first line ART failure diagnosis which relied on clinical and CD4 monitoring, extensive resistance was present to NRTI/NNRTI agents, including 16% of patients who acquired pan-NRTI resistant virus and an additional 55% who likely had reduced susceptibility to multiple but not all NRTI. These findings have profound implications for the optimal time to switch treatment and the choice of second line therapy for developing countries.

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B.12. Clinical features associated with lactic acidosis in Malawi

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Objectives: In Malawi, over 100,000 patients have been started on first line ART with d4T/3TC/NVP. Given long term use of d4T, increasing cases of lactic acidosis (LA) can be expected.

Methods: Lighthouse (LH) clinic is a HIV clinic at the Kamuzu Central Hospital (KCH) in Lilongwe and a referral site for central region ART clinics. UNC project provides laboratory support to the LH and KCH. Since 2001, 7,772 patients have been started on d4T/3TC/NVP at LH. We retrospectively reviewed the hospital, clinic, and lab files for demographics, clinical course and laboratory values of patients in whom a LA diagnosis was suspected from October 1 2004 until July 30 2007. Frequencies, means, medians and tests of associations were determined as appropriate. Confirmed lactic acidosis cases had lactate >3.5 mmol/liter.

Results: 236 suspected lactic acidosis cases (73% women) were reviewed. 64% of suspected cases were LH patients and 36% were referrals. In 121cases (51%), hyperlactatemia was confirmed. Confirmed cases were more likely to have higher baseline weight (63kg vs. 54kg, p<.001), higher peak weights (71kg vs 61kg, p<0.001), vomiting (63% vs. 41%, p<0.001), and weight loss (82% vs. 61%, p<0.001). Among confirmed cases, 97% patients had at least one gastrointestinal symptom (nausea, vomiting, anorexia, abdominal distension). 93% had neuropathy, and 82% had weight loss (Median loss 6.4kg, IQR 4-10). The mean lactate level was 6.5 mmol/L (range 3.6-15. Seven patients died. Among survivors continuing care at the Lighthouse (n=69), most were switched to AZT/3TC/NVP (66%) and patients resumed ART after a mean of 79 days (range 0-1141 days). While most patients had no HIV related adverse events during the cessation of drugs (48/69, 69%).Adverse events included new opportunistic infections (4 tuberculosis cases, 3 events of oral/esophageal thrush), 4 malnutrition cases (BMI <17), and 10 with a CD4 decline to below 250 cells.

Conclusions: Clinical Diagnosis of Lactic Acidosis was not specific. Among confirmed cases, gastrointestinal symptoms, weight loss, and high baseline and peak weights were associated with a diagnosis of lactic acidosis. However, given lack of specificity, programs should provide the necessary laboratory equipment for monitoring drug toxicities, at a minimum, in referral settings to avoid unnecessary stops of ART which may lead to serious clinical events and also the need to correctly identify toxicity rates.

B.13. Improving accuracy in monitoring ART adherence using a touch-screen electronic data system in real time

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2: Baobab Health Partnership
3: I-TECH Malawi

BACKGROUND: Poor ART adherence threatens the prognosis for individual patients and poses a public health risk due to the spread of drug resistant virus. Practically, pill counts remain the mainstay for routine adherence monitoring. However, calculating adherence from pill counts is complicated.

OBJECTIVES: To develop a real time electronic data system for ART with a specific module to measure drug adherence based on pill counts.

METHODS: At each clinic visit, remaining pill counts are entered separately for each type of ARVs, including tablets brought to the clinic and tablets left at home. Electronic adherence calculation is based on: interval since last ARV dispensing, regimen and prescribed schedule, number of tablets newly dispensed plus tablets remaining at last visit, number of tablets remaining at present visit. The system shows differences between scheduled and actual visit date and the number and percent of doses missed.

RESULTS: Between January and December 2007, 8,695 pill count observations were recorded for 9,057 patient visits. Information on tablets brought to the clinic was available for 8,685 (99.9%) and information on tablets left at home for 7,717 (88.8%). In 1,382 (17.9%) of cases, patients reported that they had some remaining tablets left at home. The electronic adherence report identified approximately 30% of visits where adherence was <95%. Records from previous manual assessments showed that fewer than 1% of visits had been classified as <95% adherent.

CONCLUSIONS: Clinic staff have recognized that previous manual estimation of adherence was often inadequate. The electronic tool gives staff the necessary confidence to actually counsel and manage patients with adherence problems based on the adherence report. Intelligent appointments for follow-up visits can eliminate the accumulation of ‘hanging pills’, which may lead to patients taking expired drugs.

RECOMMENDATIONS: Electronic systems for ART should be designed as useful tool for clinic staff. Adherence reporting should be based on sites with electronic systems.

B.14. Antiretroviral regimen substitutions and switches due to drug toxicity and treatment failure: A national survey three years after the start of antiretroviral therapy roll-out in Malawi

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Background: From June 2004, Malawi has scaled up ART using a simplified, standardized and rigorously-monitored approach. We have data on cohort outcomes and drug regimens. This is the first program-level analysis of ART regimens and clinical outcomes from anywhere in Africa.

Objectives: To determine the ARV regimens used, the rate of regimen changes and the clinical outcomes of patients.

Methods: We analyzed ART regimens of all patients ever registered in the national program, collecting individual data from patients on regimens other than standard first-line from clinic documents. ART retention was calculated using death, ART stop and clinic default as the 'failure event'. Routine monitoring data from the entire national cohort were used for comparison.

Results: By July 2007, Malawi's 146 ART clinics had registered 114,375 patients; 9,517 (61%) were female and 105,459 (92%) were adults (≥15 years). 79,398 (69.4%) were retained alive on ART. Of these, 76,274 (96.4%) were on first-line, 2,321 (2.9%) on substitution and 216 (0.3%) on second-line regimen. Substitution was more common among females (OR=1.25 [1.15-1.37]) and less common among children (OR=0.49 [0.39-0.61]). Switching was similarly common among females and males (OR=0.85 [0.65-1.13]). Reasons for regimen change were documented in 1,417 (61.0%) of substitutions: 646 (45.6%) had skin reactions; 624 (44.0%) had peripheral neuropathy. Median time from ART initiation to substitution and switch was 5 and 31 months, respectively. Probabilities of retention at 1, 2 and 3 years after ART initiation were: 80%, 73% and 68% (substitution); 91%, 74% and 61% (switch); 77%, 70% and 68% (entire national cohort).

Conclusions: Three years into the national ART roll-out in Malawi, the vast majority of patients retained alive on ART are on standard first-line regimen. Outcomes on substitution and switch regimens are good.

Recommendations: Substitution and switch regimens can be further decentralized.

B.15. Challenges in monitoring community-based programmes: the lighthouse experience

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Background: Community-delivered interventions are an attractive option to supplement formal health services. However, measuring intervention effectiveness is extremely difficult, and Lighthouse has found that even simple process monitoring is not straightforward.

Objectives: To critically evaluate and improve routine monitoring systems for community volunteer programs.

Methods: "Ndife Amodzi" (NA) is a community-led ART support program at Lighthouse, focusing on adherence. Patients select individual community volunteers (CVs) from photos, and are then contacted at home and visited twice monthly. Registration occurs when CVs report contact through a staff Community Care Supporter (CCS). To date, >1,000 clients have been registered. The CCS updates a register monthly with key outcomes reported by volunteers. We conducted a formal validation.

Results: 150 registered NA clients reported as 'Alive and on Treatment' by CVs were interviewed when collecting ARVs. 46 (31%) reported never having been visited.
The program was therefore reviewed and modified as follows: All NA clients received a patient-held "visit diary". One-One client confidentiality was extended to include Lighthouse staff (following an IEC campaign). CCS accompanied CVs on visits to a sample of clients. Registers were re-designed to facilitate CCS follow-up of individual clients. CBO round tables about reporting were held.
In December 2007, the client survey was re-run. Of 72 clients interviewed, 90% reported a CV visit (79% in the last 4 weeks). 69% had diaries and 49% brought their diaries with them to the clinic.

Conclusions: Even the simplest indicators are not easy to collect. Strict confidentiality may not be compatible with monitoring needs. Community awareness of validation contributed to improved data quality.

Recommendations: Reporting of community program activities should be routinely validated. Great caution should be shown in planning to routinely collect detailed information. Program design must take this into consideration from inception, particularly when considering large scale programs with limited supervisory capacity.

B.16. Population-level effect of HIV on adult mortality and early evidence of reversal after introduction of antiretroviral therapy in Malawi

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Objectives: We aimed to investigate mortality in a population before and after the introduction of free antiretroviral therapy, and therefore to assess the effects of such programmes on survival at the population level.

Methods: We used a demographic surveillance system to measure mortality in a population of 32,000 in Karonga District, from August, 2002, when free antiretroviral therapy was not available in the district, until February, 2006, 8 months after the Karonga ARV clinic opened. Causes of death were established through verbal autopsies. Patients from the clinic were identified and linked to the population under surveillance. Mortality trends were analysed by age, sex, cause of death, and zone of residence.

Results: Mortality in adults (aged 15–59 years) before ART was 9.8 deaths for 1000 person-years of observation (95% CI 8.9–10.9). The probability of dying between the ages of 15 and 60 years was 43% (39–49) for men and 43% (38–47) for women; 229 of 352 deaths (65.1%) were attributed to AIDS. 8 months after the ARV clinic opened, 107 adults from the study population had accessed treatment, out of an estimated 334 in need. Overall mortality in adults had decreased by 10%, and by 35% in adults near the main road, where mortality before ART was highest. Mortality in adults aged 60 years or older did not change.

Conclusions: Our findings of a reduction in mortality in adults aged between 15 and 59 years, with no change in those older than 60 years, suggests that deaths from AIDS were averted by the rapid scale-up of free antiretroviral therapy in rural Malawi, which led to a decline in adult mortality that was detectable at the population level.

Recommendations: Roll-out of Malawi's free ART program should continue to further mitigate the population impact of the HIV epidemic.

B.17. Addressing the human resources crisis through 'task shifting' in antiretroviral clinics: a study on the safety and effectiveness of non-medical staff for patient management

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1: Lighthouse Trust

2: I-TECH Malawi

Background: HIV has dramatically increased both patient burden and staff attrition. Rapid ART scale up relied mainly on training of existing nurses to use a standardised, simplified protocol. With a huge deficit of nurses, reaching the 2010 target of 245,000 patients started on ART will require new approaches.

Objectives: To formally evaluate safety and effectiveness of a new staffing model using Health Surveillance Assistants (HSAs) for patient reviews in ART clinics

Methods: HSAs are community health workers with 10-week public health training. Five experienced HSAs were recruited and given intensive training in ART at Lighthouse. Random selections of patients were assessed by the trained HSAs. A standard checklist was designed to identify uncomplicated ART dispensing visits that might in future be managed by the HSA alone. Safety and effectiveness were measured by comparing the HSAs' assessment with the independent assessment of an experienced ART clinician.

Results: The clinician classified only 608 (38%) of 1,609 patients as uncomplicated ARV dispensing visits of clinically stable patients. HSAs correctly identified 944 (94%) of these. HSAs wrongly classified *as stable* 33% of patients classified *as non-stable* by the clinician. HSAs would therefore have failed to refer 101 cases with clinical problems to the clinician. Potentially serious clinical signs were rare but HSAs missed many of these (37/92 cases with cough, 10/12 cases with weight loss, 3/3 cases of jaundice).

Conclusions: Two thirds of patient visits required skilled medical care, limiting the potential efficiency of the HSA model for initial assessment and management. Without professional clinical training it is unlikely that HSAs can be used safely and effectively as the 'first point-of-call' in ART clinics.

Recommendations: HSAs should not be used for clinical assessment of ARV patients without comprehensive theoretical and practical medical training. 'Task shifting' staffing models should be formally evaluated to allow analysis of safety and efficiency.

B.18. Validation of ART initiation among WHO stage 3 and 4 patients in the absence of CD4 cell count

E. Demetria, K. Phiri, M. Massaquoi, E. Kanjunjunju

Background: In resource-poor setting, WHO recommends starting anti-retroviral treatment in the absence of CD4 cell count for patients with conditions belonging to WHO stage 3 and 4. In Malawi, this has been adopted and cumulatively until end of 2007, 86% of those patients intiated for ART belong to this category. Can we rely on the clinical assessment done in health centers in staging these patients? Does WHO stage 3 and 4 accurately correlate with the immunological condition of the patient?

Objective: The main objective is to correlate the WHO stage of patients with the CD4 cell count, thereby, validating the recommendation of starting ART in WHO stage 3 and 4.

Methodology: A prospective study of patients initiated on HAART because of WHO stage 3 and 4 conditions was done in 3 health centers in Thyolo district. From March 2007 to February 2008, blood samples were drawn for CD4 cell count on the same day of initiation.

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Results: There were 669 patients (648 adults and 21 children > 5 years old) included in the study, 585 were in stage 3 and 84 in stage 4. Among those in stage 3, 80% had CD4 <350 and 20% >350. Those in stage 4, 84% had CD4 <350 and 16% >350. Putting all the cases together, 81% had CD4 <350 and 19% >350.

Conclusion: There is good correlation between the WHO stage 3/4 and CD4 cell count making clinical assessment alone an adequate tool in initiating patients to anti-retroviral therapy.

Recommendation: Looking at individual conditions, the number is too small to make a conclusion of which has a good correlation with CD4 cell count; same with the number of children in the cohort. A bigger sample size is needed.

WHO clincal stage	**<50**	**>50 <=200**	**>200 <=350**	**>350 <=500**	**>=500**	**TOTAL N = 669**
stage III	87	253	131	59	55	585
	15%	43%	22%	10%	10%	
stage IV	24	27	20	8	5	84
	29%	32%	24%	10%	6%	

B.19.Retrospective Study of Cryptococcal Meningitis Patients at Thyolo District Hospital: outcome after 2-3 years of secondary fluconazole prophylaxis

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Background: Fluconazole secondary prophylaxis is used in patients with Cryptoccocal meningitis (CM) in a lower dose everyday to prevent relapse. At the present time, it is recommended that fluconazole be continued for life. However, there are some recommendations of stopping secondary prophylaxis in patients with CD4 >350 taken 3 months apart or after 1 year of secondary prophylaxis if with CD4 of >200 taken twice at 6 months apart .

Objective: To monitor the progress of CM patients on fluconazole prophylaxis and ARVs through monitoring CD4 cell count and assessing risk of recurrence.

Design and Setting: A retrospective review of CM patients between January 2004 to December 2005 at Thyolo District Hospital and followed up to December 2007.

Results: There were 200 patients reviewed with the diagnosis of CM by December 2005. All the patients had CD4 done on baseline (range of 3 – 635) with an average count of 105. At 12 months, 47 out of 114 patients had CD4 done with results ranging from 59 to 1144. At 24 months, only 22 out of 101 patients had CD4 done with results ranging from 344 to 557. Forty patients were re-hospitalized, out of these: 30 patients had recurrence of CM, 7 were hospitalized for other infections and 3 for undetermined reason. At the end of 2007: 50% were alive and on ARV, 28% were dead, 20% were lost to follow up, and 2% were transferred out. ARVs and fluconazole prophylaxis reduced the risk of recurrence by only 15%.

Conclusion: From this study it has shown that the outcome of patients with CM is not favorable even when they are put on ART and secondary prophylaxis. They have good immunological response but their overall survival is low.

Recommendation: Patients with CM should be on secondary fluconazole prophylaxis for the rest of their life even if their CD4 count increased to high levels as their overall survival is low. There is a need to review the treatment protocol (Amphotericin B + Fluconazole vs. Fluconazole alone) and compare if there be difference in outcome.

B.20.determining eligibility for antiretroviral therapy: an operational study on the performance of clinical staging and CD4 count

The Lighthouse Group

Objectives: To assess the performance of clinical staging and CD4 cell counts in a routine setting.

Methods: All HIV patients presenting to Martin-Preuss-Centre at Bwaila Hospital undergo WHO clinical staging performed by experienced ART clinicians. Clinicians enter the presence or absence of stage defining conditions in real time using our touch-screen based electronic data system for ART. Simultaneously, a CD4 counts is done using EPICS (previously FACSCount). Accuracy of CD4 counts is routinely assessed by sending separate aliquots of every 6^{th} sample to 2 labs.

Results: Between June 2007 and March 2008, 2,171 patients were examined, 1,854 (85.4%) of whom were found eligible for ART; 1,499 (69.1%) were in WHO clinical stage 3 or 4 and 355 (16.4%) were in stage 1 or 2 with a CD4-count <250 cells/µl. Clinical staging identified most patients with low CD4 (1,095 (75.5%) with CD4 <250) but half of the patients who were **not** clinically eligible had CD4-counts <250 (355/672, 52.8%). 662 (30.5%) patients had severe immunosuppression (CD4-count <100), but 112 (16.9%) of these were in clinical stage 2. 239 (15.9%) of 1,499 clinically eligible patients had CD4 counts >350. The leading clinical conditions determining ART eligibility were: severe weight loss (621; 42.9%), chronic fever (505; 34.9%), active TB (386; 26.7%), wasting syndrome (201; 13.4%), chronic diarrhoea (191; 13.2%), oral candidiasis (175; 12.1%). The positive predictive value for immunological eligibility of each of these conditions was 76%, 72%, 74%, 80%, 72%, 86%.
The correlation coefficient in 165 CD4 quality control samples collected between January and May 2008 was 72%.

Conclusions: Five out of six patients presenting were found eligible for ART and most of these had clinical conditions in stage 3 or 4. Many patients came in advanced stages of immunosuppression. A considerable number of cases showed poor agreement between clinical staging and CD4 count. The most common clinical stage defining conditions predicted a CD4 count <250 in about three quarters of patients. Routine operational quality control suggested unsatisfactory accuracy of CD4 counts.

Recommendations: Clinical staging should remain the mainstay for determining ART eligibility. Patients in clinical stage 2 should be offered to return for a repeat CD4 count in the light of sub-optimal accuracy.

B.21. Improving comprehensive pediatric HIV care through a systematic program of training and on-site clinical mentorship

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Background: More than 125,000 people have been started on antiretroviral treatment (ART) in Malawi, though only 8% these patients are children 14 years old and younger, which falls short of the national goal of 15% (Ministry of Health, 2007). There is a significant gap in comprehensive pediatric HIV care, with no system for registration or protocol for care of exposed infants or infected children not yet eligible for antiretroviral therapy. The Baylor Children's Foundation-Malawi supports the scale-up of pediatric ART treatment through a training and clinical outreach mentorship program that started in November 2007. The program in the Northern Region, based in Mzuzu, currently focuses on 12 facilities, including district hospitals, mission hospitals, and health centers.

Objective: To provide a standardized and replicable approach to on-site clinical mentorship and supervision of pediatric HIV care.

Methodology: A standardized "toolkit" is used for teaching, clinical documentation and decision-making. This "toolkit" was introduced to sites in the Northern Region in February, 2008. Progress reports for each site and district are made quarterly and shared with the districts and the Ministry of Health HIV unit.

Results: In the first quarter of 2008 ART treatment for children increased by a total of 20%, from 369 to 448 children, over 12 mentored sites. Enrollment of exposed infants and infected children not yet on ART increased from zero to 56.

Conclusion: Focused clinical mentorship in pediatric HIV care increases the capacity of health workers and clinics to provide quality pediatric care and results in increased uptake of services. A standardized "toolkit" for the care of children allows for rapid uptake of knowledge, skills, and systems that allow for ongoing provision of quality care. Tools for mentors allow a standardized approach to mentorship, site assessment and supervision that may be replicable on a wide scale.

Recommendation: A combined approach of didactic training and standardized on-site mentorship should be incorporated into national ART training and supervision activities.

TRACK C: IMPACT MITIGATION: SOCIAL, ECONOMIC AND PSYCHO-SOCIAL

This Track highlights areas of scientific investigation into social, economic and cultural dimensions of the epidemic and its impacts and cases of programs and interventions that address these challenges with high impacts and benefits to the target groups.

C.1. The political cost of aids: a case study of Malawi

Alister Munthali, Wiseman Chirwa and Peter Mvula

Background and objectives: The 1990s saw a major shift in African politics as countries embraced mutliparty democray and abandoned single party regimes. While the culture of democracy is being consolidated, AIDS constitutes a major threat to democratic governance and its institutions in Malawi and other new democracies. The objective of this study was to explore the impact of the AIDS epidemic on electoral governance with a special focus on the voters' roll, management of the electoral process, Malawi's electoral system, political parties and the human and financial costs of AIDS.

Methodology: Literature on AIDS and electoral processes in Malawi was reviewed and questionnaires were administered to district election and party officials to find out how AIDS affected their operations including political campaigning. FGDs were also conducted with PLHIVs and their caregivers to explore how HIV/AIDS impacted on their political participation.

Results: The voters' roll is not timely updated to purge deaths which have increased four-fold since the advent of the AIDS epidemic. This contributes to the bloating of the voters' roll which has been the source of controversy during elections. MEC relies heavily on teachers and other civil servants to manage elections. The deaths of these officials impacts negatively on electoral management processes through staff loss, loss of iinstitutional memory and skills hence the cost of intensive retraining. Political parties have also been affected as they have lost officials, candidates and supporters to AIDS and this has affected performance in elections. Over 40 legislators have also died since 1994 and this has resulted into by-elections which are quite costly for Malawi and have affected the quality of debate in parliament. While these deaths may have been due to other causes, there is evidence that some were due to AIDS. Due to stigma, being chronically ill and uncertainities about the future, HIV+ people may not participate in electoral processes including voting.

Conclusion and recommendations: AIDS impacts negatively on the electoral processes hence it is recommended that Malawi's electoral process should be reviewed as by-elections are costly; that a mechanism be designed that will timely purge deaths on the voters' roll; and that a special voting mechanism be created for PLHIVs.

C.2. HIV discordance knowledge and perceptions in Zomba

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Objectives: The study objectives were to assess knowledge, perceived frequency and seriousness of discordance in the community and solicit possible risk reduction strategies to be adopted in case of discordance in order to inform the counseling and IEC messages for the Home based HTC program.

Methodology: A cross sectional study was conducted in which a randomly selected adults were interviewed by a trained interviewer using a structured questionnaire. Enumeration Areas (EAs) were randomly selected using EPI INFO generated random numbers. All households were listed in the selected EA and households were randomly selected using EPI INFO randomly generated numbers. Using a knish grid one adult was selected from each household.

Results: Discordance knowledge was 54% and was associated with marital status with being single and widowed 1.28 and 1.4 times higher relative to being married respectively. Discordance knowledge was reported higher in the more educated people (75.5%) relative to less educated (36.7% p.000). The most frequently given cause of discordance was unfaithful partner (25%), blood difference (24%), 9% infected before (9%) and test is wrong (9%). When asked of action if in a discordant relationship condom use is frequently mentioned as a risk reduction action (66%) followed by continuing living as usual. Slightly over a third thought discordance is very rare with a fifth thinking that discordance is very common.

Conclusions/Recommendations: The discordance knowledge is higher than expected with the mostly perceived cause – unfaithfulness - likely to negatively affect the receipt of results. Condom use as a proposed risk reduction strategy commonly described; however the practicability in stable relationships is questionable. Further research is needed to assess the acceptability and feasibility of condom use and other risk reduction strategies in discordant relationships.

C.3. The perceived risk and risk estimation among the adult population in Zomba.

LN Tenthani [1], Prof. C Bowie[1], Dr D.Byamukama[2] Dr E Kasagila[1]

[1] college of Medicine; [2] St Luke's Hospital Door to Door Program

Objectives: The study objectives were to assess the perceived risk and risk estimation to the acquisition of HIV among the adult population of Zomba in order to inform the counseling and IEC messages for the Home based HTC program.

Methodology: A cross sectional study was conducted in which randomly selected adults were interviewed by a trained interviewer using a structured questionnaire. Enumeration Areas (EAs) were randomly selected using EPI INFO generated random numbers. All households were listed in the selected EA and households were randomly selected using EPI INFO randomly generated numbers. Using a knish grid one adult was selected from each household.

Results: The reported perceived current and future personal risk to HIV was higher among married (55%), relative to separated (40%), divorced (50%),widowed(46.7%), and single (47.7) (p=<0.001). When asked how many times one needs to have unprotected sex with an HIV positive person to be infected most of them stated just once (94%). When asked whether it was obvious or doubtful or not possible that you get infected when you have unprotected sex with an HIV positive person most (80%) of the participants felt it was obvious.

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Conclusions/Recommendations: There is a generally excessive perceived risk which may facilitate the acceptance of Home based HTC. However this can also lead to the assumption that a person is already infected and a refusal to believe the results of discordant tests between stable couples. This overestimation of risk negatively affects the adoption of appropriate risk reduction strategies. Further research is required to come up with messages to address this.

C.4. Investigating impacts of aids on food security and livelihoods of young people in Thyolo district, southern Malawi

E. Robson, N. Ansell, L. van Blerk, F. Hajdu, L Chipeta

It is asserted that the AIDS pandemic in Malawi and southern Africa is negatively affecting food security within rural populations. The research reported investigated impacts of chronic sickness and death of family and household members on young people's livelihoods. Qualitative participatory research with young people (10-24 years) and their households in a village in Thyolo District was undertaken in addition to policy interviews with NGO, donor, and government representatives at district, regional and national levels. Initial findings suggest that it is very difficult to identify specific impacts of AIDS where firstly, stigma, ignorance and lack of testing cloud the causes of illness and death; and secondly, general food insecurity is complexly linked to poverty, shortage of land, insufficient farm inputs, lack of capital, skill shortage and so on. Tentative conclusions suggest that rural young people's livelihood opportunities (mostly subsistence agriculture) are severely limited, coloured by initial unrealistic aspirations associated with an education system heavily promoting formal employment as the means to success, but in the end dominated by the realities of farming and casual labour, early marriage, continued poverty and food insecurity. AIDS is adding to these problems by prematurely placing the burden of ensuring their own livelihoods on young people, and taking away social support and potential sources of capital much needed for creating a livelihood base. As part of best practice in linking research to implementation, recommendations of how AIDS-affected young people's prospects of achieving sustainable rural livelihoods as adults might be enhanced are to be finalised collaboratively during the active dissemination process with young people, their community and policy makers at regional and national levels. Potential recommendations include formal education sensitive to rural poverty, skills training, access to agricultural inputs, fair prices for agricultural commodities, social protection measures, access to capital, decent employment opportunities and conditions.

C.5. Children's living arrangements and gender differences in parental support in rural Malawi

M.J. Grant and S.E. Yeatman Peter Fleming

Background: Little attention is given to the living arrangements of children prior to the HIV/AIDS epidemic or how these existing patterns and practices may facilitate or complicate the ways in which extended families are able to absorb orphaned children.

Objectives and scope: We examine the living arrangements of children in a sample from rural Malawi with considerably lower HIV prevalence than the national average (7 versus 12 percent), which allows us to examine circumstances unrelated to HIV/AIDS, as well as those of children whose parents have recently learned their HIV status or experienced a prolonged illness that may have been interpreted as a signal of infection.

Methodology: We begin our analysis with an overview of changes in fostering and orphanhood nationally using the 1992-2004 Malawi Demographic and Health Surveys. We then use data from the Malawi Diffusion and Ideational Change Project (MDICP) to examine the likelihood that children are co-resident with their living mother or father and focus on the possible relationships between parental co-residence and family stability, parental health, and parental knowledge of their HIV status.

Results: Parental divorce and prolonged maternal illness are significantly associated with the likelihood that children were not co-resident with their living parents. Furthermore, fathers who had taken an HIV test and learned that they were HIV-negative were significantly more likely to be coresident with their children. Child's sex and household poverty were not associated with child co-residence.

Conclusions and Recommendations: The evidence presented here suggests that "crisis-led" fostering associated with the HIV epidemic may be becoming more prevalent. This may limit household strategies for distributing risk and navigating periods of insecurity. Our findings suggest new pockets of vulnerability as opportunities to cope with shocks and improve one’s economic position through fostering become more rare.

C.6. Building the capacity of severely malnourished and HIV and aids affected households to ensure their own food and nutrition security through nutrition gardens

G. Mvula (FAO Malawi), Michelle Remme

Objectives and scope: The objective of this implementation model is to improve the capacity of the most vulnerable HIV and AIDS affected households to sustain their food and nutrition security in the long term and to diversify their livelihoods through crop and diet diversification. The model aims more specifically at institutionalizing demonstration gardens, cookery demonstrations and nutrition education for vulnerable households through Community Home-Based Care providers (CHBCs) and Nutrition Rehabilitation Units (NRUs).

Methodology: The latter two entry points were identified to target affected households, given that an estimated 20-30% of admitted children in NRUs are HIV positive and given that the beneficiaries of CHBCs are typically households with orphans and chronically ill patients. The immediate target beneficiaries were the guardians (all women) of admitted malnourished children in the NRUs and the guardians of orphans and care givers to chronically ill patients in the CHBCs.

Results: Demonstration gardens were established in 25 NRUs and 43 CHBCs, and 10,932 households trained in organic crop and livestock production and management, entrepreneurial skills, nutrition and nutrient-friendly cookery, hygiene, HIV and AIDS. Trainees received start-up kits upon graduation to start their own gardens.
The impact on these households has been improved knowledge, improved food security, income generation (as they sold part of their produce) and improved access to nutritious food. The benefits from these interventions have also accrued to surrounding communities through a trickle down effect with skills and inputs being shared. It has also been observed that NRU beneficiary households were less prone to relapses.

Conclusion(s): NRUs and CHBCs are optimal entry points for reaching HIV and AIDS affected households with impact mitigation measures aimed at empowering them to be food and nutrition secure.

Recommendation(s): HIV and AIDS affected households would benefit greatly from the national scale-up of this model to all 95 NRUs and all CHBCs. This would build the weak capacity of such households to meet their nutritional needs, as well as reduce their burden of care (particularly for women and girls). This represents an aspect of the national response that has tended to be neglected.

C.7. Factors associated with HIV disclosure patterns by pregnant HIV-positive women in Lilongwe, Malawi

Emily A. Bobrow, Charles Chasela, Esmie Kamanga, Linda S. Adair, Margaret E. Bentley, Shelah S. Bloom, Gustavo Angeles, Kathryn E. Moracco, Shrikant I. Bangdiwala, Yusuf Ahmed, Denise Jamieson, Charles van der Horst for the BAN and Call to Action Teams

Background*:* Disclosure of serostatus by pregnant HIV-positive women to their partners is essential for increased support and participation in prevention of mother-to-child transmission (PMTCT) programs. We examined factors influencing likelihood of HIV disclosure to partners, early disclosure to partners (on day of diagnosis), and disclosure to more than one person.

Methods*:* Structured interviews with 300 HIV-positive women with infants 12 months and younger who tested HIV positive in three antenatal clinics in Lilongwe, Malawi who returned between October 2006 and May 2007 for postpartum care. This was a probability sample and all gave consent.

Results: Most women (90.0%) reported disclosing HIV status to their partner, and many (72.7%) did so on day of diagnosis. Of women who disclosed their status, almost half (47.0%) told more than one person. Among women, 49% believed they were infected by their partner and 46.7% reported being sexually coerced by their partner in the past year.

One factor influencing disclosure was negotiation with their partner in the past year. Women who believed they were infected by their partner were more likely to disclose to their partner. Women who believed they had tested for HIV prior to their partner were more likely to disclose early and to more than one person. Women were more likely to disclose to more than one person if they were sexually coerced by their partner in the past year. Women who perceived more HIV stigma were less likely to disclose and to disclose early.

Conclusions: Participants had high rates of HIV disclosure to their partners, particularly on the day of diagnosis. Women's perceptions of the source of their HIV infection and of testing positive before their partners were powerful motivators for disclosure. Post-test counseling should concentrate on facilitators, such as good negotiation between partners, while identifying barriers, such as sexual coercion and HIV stigma.

C.8. Silent cries of HIV+ school-aged children

S. Labana, M. Massaquoi, E. Kanjunjunju, E. Demetria, J. Kollie, P. Gomani

Background: Disclosure is generally welcomed as one of the most appropriate entry point not only for seeking medical assistance but also to help others fight the odds associated with it. However, children living with HIV/AIDS are facing numerous silent challenges above their capacity to disclose. Their inability to properly address this is mistakenly perceived as normal. The challenge is even worst among those in school and on ARVs.

Objectives: To identify the problems encountered by school-age children on ARVs between 10-14 years old in school and in the community, to understand how they cope, and to learn what support they receive.

Method: A recent survey was done among 33 children on ARV between ages of 10-14 years, during an "open day" in Thyolo District Hospital. Interviews using picture code was conducted with a short questionnaires about their difficulties, ARVs, disclosure, and emotional well-being.

Result: Eighteen % of guardians divulged to extended families without consent , 79% do not ask permission from the teacher when they are going to refill ARV, 21% of guardians inform teachers of child's absence (refilling ARV) without child's consent. All children complained that their friends at school and in the community labeled them with bad names. This lead to depression, refusal to go to school, isolation, and even suicidal ideation. Most children only receive support from guardians and health workers.

Conclusion: In view of the study findings, stigma is still very strong especially among children in schools, confidentiality is not respected, children have difficulties coping with their condition, not much emotional and psychological support afforded the children.

Recommendations: More thorough assessment of the level of understanding of the guardian especially on the issue of confidentiality; further assessment of the problems of school-aged children; protection of children's rights; strengthen IEC in the educational sector; more support for children in different age groups; training for health workers on child psychology.

C.9. "Fear of stigma is stronger than fear of death"

A workplace initiative to reduce sickness and death due to HIV/AIDS among health staff in Malawi.

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Issues: Sickness and death due to HIV/AIDS affect the health workforce and weaken health systems in Sub-Saharan Africa. Malawi is facing "crisis-level" shortages of health workers. The most important cause of attrition is death, often linked to HIV/AIDS. Also absenteeism of health staff is frequent, because of illness. Health workers find it particularly difficult to disclose their status and access HIV/AIDS services through existing channels. Improved access to ART-care and support should reduce sickness, death among and improve retention and availability of health staff.

Objective/Methodology: To provide increased access to quality HIV/AIDS treatment and support services for health workers and their families in Thyolo district, 2 initiatives were taken: staff clinic within the hospital accessible for health staff and their primary dependants; support group for HIV+ health workers; Standardized ART outcomes were reviewed during the period July 2006 – February 2008. Feedback was requested from health workers on the staff clinic and the support group.

Results/Conclusions: A total of 2268 consultations and 59 HIV counseling and tests were recorded over 20 months among health staff and dependents. During the same period 53 health staff received ARV treatment. Staff appreciated the possibility to attend services in a separate room, the one-stop concept (consultation & drug dispensing), care provided for all kinds of illness and the early morning opening hours, allowing for swift work resumption. Confidentiality and convenient service organisation, resulted in a short period of time into providing ART to over 50 health workers. In the Hospital Support Group 51 HIV-positive health staff meet bi-weekly providing encouragement and support to each other. They also promote and encourage other colleagues to go for testing and to seek treatment in case tested positive.

TRACK D: ORGANIZATION DEVELOPMENT AND CAPACITY BUILDING

The Track focuses on research-based lessons on effective organizational set up and development support initiatives, organization of responses and issues of capacity to respond effectively at all levels. It also seeks to draw lessons on the best models and designs as well as strategies for capacity development support.

D.1. Model training to accelerate scale up of PMTCT services country-wide

Leonard Nkosi, MSH, Peggy Chibuye, MoH, Michael Eliya, MoH, Elizabeth Zyambo, MSH Leonard Nkosi

Background (Optional): In 2006, the Ministry of Health (MoH) and partners committed themselves to reducing HIV infections in children by increasing access to PMTCT for all pregnant women urgently. A PMTCT Acceleration Action Plan, April – September was developed. The objective was to achieve national coverage by the end of December 2008. Thus, MoH formed a partnership with UNICEF and MSH to train health care workers (HCWs) in PMTCT and pharmaceutical and logistics management.

Overall Objective: Provide administrative, managerial, logistical and technical support to districts in training HCWs

Specific objectives

- Orientation of PMTCT trainers on the new comprehensive curriculum
- Train HCWs in PMTCT
- Train HCWs in pharmaceutical and logistics management

Methodology

- Promoting ownership of the training by DHOs and ZHOs
- Orienting national PMTCT trainers on new comprehensive curriculum
- Careful selection of training venues by MSH, UNICEF and MoH
- Conducting simultaneous PMTCT training sessions at zonal level
- Regular meetings by partners

Results

- 395 sites providing PMTCT services by March 2008
- 30 PMTCT trainers trained
- 832 HCWs trained in PMTCT by April 2008
- 701 PMTCT service providers and pharmacy technicians trained pharmaceutical and logistics management

Conclusions: The model used towards achieving the objective of expanding PMTCT services nationally within a short period is cost-effective. It minimizes/reduces disruption of service delivery when 30 HCWs are trained at the same time in one district. Strategic partnerships maximize utilization of human and financial resources, and foster good working relationships between partners and districts. The model showed that multidisciplinary training is also cost-effective and has the potential to improve working relationships when different cadres train together.

Recommendations: The same training model should be used for refresher training for HCWs who trained under the old PMTCT training package which had no HCT, Clinical Staging, CPT and combination regimen content and new development areas in PMTCT.

D.2. Strengthening Management and Financial Control Systems of NGO Partners in Malawi

William LUKA, Ndasowa Chitule, Bronex Kathyola, Matthew Tiedemann

Challenges to Implementation: International donors and national HIV/AIDS programs increasingly rely on local NGOs to combat the HIV/AIDS pandemic, but NGO capacities are often limited. Pact Malawi implements a PEPFAR granting and technical assistance program, which includes efforts to strengthen management and compliance systems of grantees to ensure effective and transparent use of financial resources.

Intervention or Response: Prospective grantees complete a detailed management/financial checklist prior to site visits by Pact Malawi. Using Pact's Management Control Assessment Tool (MCAT), Pact's finance and grants staff conduct risk assessments. The tool uses a Likert scale to assess prospective grantees' accounting procedures, internal controls, budgeting, reporting, auditing processes and policy environment.

On site Pact Malawi reviews organizational documents, such as grantees' registration certificates, administrative/accounting manuals, audit reports, and board minutes. Documents are scrutinized, authenticated, and triangulated to test for existence, validity, and reliability of the organization's structure, systems, and process flows. Interviews, observations, and independent external verification are used to determine an overall risk-level score.

On the basis of these and other assessment findings, Pact Malawi develops organizational strengthening plans for each grantee. Common and organization-specific capacity needs are addressed through group training, individually tailored sessions, and routine monitoring and supportive supervision.

Results and Lessons Learned: Though grantees are selected through a competitive process and most have received previous HIV/AIDS grants, the assessment revealed that many still lacked essential systems and procedures – e.g., no personnel management system or audit reports, inadequate accounting records and limited documentation. Additionally, many grantees deviated from their written policies and procedures.

Of the prospective grantees assessed (n=16), 81% were rated low or moderately low level of risk, 13% (n=2) as moderately high, and one with high risk was not funded. NGOs with previous USG grant experience on average rated slightly lower risk.

This approach can strengthen management/compliance control systems of local organizations, as evidenced by rapid uptake and improvement in organizations that have received technical assistance from Pact Malawi.

Recommendations: Capacity building for local NGO staff should be an integral part of HIV/AIDS granting programs. Systematic assessments should be conducted for all potential grantees, regardless of recipient's reputation, size, or history. Donors should be willing to invest in organizational development of NGOs to ensure that the NGO sector can efficiently and effectively contribute to the national response to HIV/AIDS.

D.3.Census of individual art outcomes in Malawi

L. Lo, P. Ellis, A.D. Harries, K. Kamoto, E. J. Schouten, R. Weigel

Background: Malawi currently monitors patients on antiretroviral therapy (ART) using patient master cards and registers. The Ministry of Health only collects aggregate data on its quarterly supervision visits; disaggregated data will be very valuable to the Ministry, to researchers and to funders.

Objectives and Scope: The objective of this study is to collect and digitalize individualized data of approximately 150,000 patients ever initiated on ART in Malawi from information recorded in existing ART registers. Once collected, this data can supply figures for donors, help forecast future drug demand, and allow for more sophisticated research. This data set will also help inform which sites can be considered sentinel sites for ART data in Malawi so that this census will not have to be repeatedly conducted.

Methodology: Two photography clerks will visit all public and private ART sites in Malawi and photograph each page of a site's ART register. Six data clerks will enter the data. The database will record each patient's ARV registration number, sex, age, date started on ART, whether the patient transferred in to the site, WHO stage at initiation, whether CD4 count was a reason for ART initiation, outcome, date of death, and regimen. Clerks will perform double data entry to ensure accuracy.

Results: This study is currently ongoing and expected to be completed in August 2008. In the meantime, we have determined that it is possible to photograph registers and use these photographs for data entry; the error rates between data entry from the photograph and data entry from the register are negligible.

Conclusions: Data collection and entry is currently taking place, so a complete database is not yet finished. However, we conclude that this method of data collection and entry is effective. Possible uses of this database include studies the general outcomes of people on ART, the outcome of children on ART, and those lost to follow-up. This database will be handed over to the Ministry of Health and made available to those who wish to conduct more sophisticated research.

D.4. **PMTCT scale-up: experience in technical assistance and mentorship**

Esmie Kamanga[1], Innocent Mofolo[1]
Francis Martinson[1], Gertrude Mwale[1], Jacqueline Murotho[1], Zenabu Mhango[1], Pluxidia Kanduku[1], Nina Pagadala[4], Irving Hoffman[2],Alice Maida[3] and Charles van der Horst[2] for the Call to Action Program. Kimberly Reynolds

[1]University of North Carolina (UNC) Project, [2]University of North Carolina, Chapel Hill, USA, [3]Lilongwe District Health Office, [4]Elizabeth Glazer Pediatric AIDS Foundation (EGPAF)

With funding from the Elizabeth Glazer Pediatric AIDS Foundation (EGPAF) and in collaboration with the Malawi Ministry of Health (MOH) the-University of North Carolina (UNC) Project – Malawi implemented a PMTCT program in 2001. The program is incorporated into existing public maternal and child health delivery systems at sites in Lilongwe district reaching 25,000 pregnant women annually. Since 2004 UNC Project has also provided technical assistance to a rural community hospital. The Malawi national PMTCT service plans to rapidly scale-up PMTCT in all facilities providing ANC/ maternity services. The UNC program was asked to help with scale-up by providing technical support and mentorship, following the model already in place at the community hospital.

Methods: Support starts with a skill exchange program between UNC nurses and the MOH nurses who visit sites where the UNC program is providing antenatal care and PMTCT. Both teams then conduct community sensitization and mobilization. A new site is then launched, with UNC providing weekly supervision until the site is well established, and monthly supervision thereafter. Activities during supervision include mentoring, delivering PMTCT supplies, monitoring, data management, and reporting.

Results: From May to December 2007, the UNC program provided technical assistance and mentorship to 8 new rural PMTCT sites. These sites have provided antenatal and PMTCT services to 5,401 pregnant women. Counseling and testing uptake among all first time antenatal clinic attendees during this period was 91% (4897/5401), with 4% of women (202/4897) testing HIV positive. Collection of data on the rate of hospital deliveries and the uptake of Nevirapine prophylaxis is on-going and will be reported.

Conclusions: Providing technical assistance with a mentorship and supervision approach is ideal in PMTCT scale up. With adequate resources, sites with established PMTCT services can assist establishing new sites. The rate of HIV seropositivity in rural Lilongwe is less than in urban Lilongwe.

D.5. "Received with Kindness": Strategies to Enhance Recruitment and Retention of Study Participants in Extended Observational Research Studies

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Issues: Recruiting and retaining participants for extended longitudinal, observational research can be difficult. CHAVI 001 frequently follows participants for two years. The Lilongwe, Malawi, CHAVI 001 research team faced challenges in recruiting participants. Retaining participants over time is also a concern.

Description: We implemented CHAVI 011, a formative study, to develop ideas to enhance recruitment and retention of CHAVI 001 participants. Researchers conducted 3 focus groups and 12 in-depth interviews with individuals with acute and established HIV and their sexual partners, local research staff, and community leaders. We analyzed data using qualitative content analysis of verbatim transcripts.

Lessons learnt:

Recruitment: There is no one best recruitment method. Rather, preliminary analysis suggests we should use multi-pronged approaches (e.g., print, radio, community forums, and peer leaders) to encourage participation. Health centers are better recruitment sites for women than for men. Male study participants can be recruited by either women or men, but female participants are best recruited by women. In Malawian culture, blood draws can be viewed negatively; interviewees suggested disclosing the study requirement for blood draws in individual counseling sessions rather than in general recruitment information.

Retention: Efficient clinic management is critical for participant retention; with long wait times, retention suffers. Researchers' ability to establish rapport with participants is perceived to increase the likelihood of retention. When participants come to the clinic, they should be "received with kindness;" staff should "show them love." Transport must be reimbursed adequately. For participants crucial to the study (e.g., individuals with acute HIV), researchers should consider providing direct transport. This would also allow researchers to verify participants' addresses for future contacting needs.

Next Steps: We are increasing the number and variety of recruitment sites. To reduce waiting time, we are investigating expansion of clinic space. We provide travel subsidies as well as direct transport when critical.

D.6. Staff training and management improvements lead to greater utilization of comprehensive STI clinical services in Lilongwe, Malawi

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Affiliation: UNC Project, Lilongwe[1]; Kamuzu Central Hospital, Ministry of Health, Lilongwe[2], UNC-Chapel Hill, NC, USA[3]

Background: Because of stigma associated with sexually transmitted infections (STI), many people do not wish to be identified as receiving STI care. There is evidence that 60% of STI patients in Malawi seek alternative care before coming for formal health services. Issues of privacy, infrastructure, and quality of services are stated reasons for this behavior. The STI clinic at Kamuzu Central Hospital in Lilongwe has been operating as a stand-alone clinic since 1993. We wanted the clinic to be well used as both an STI treatment centre and an HIV prevention centre. We therefore developed a plan to improve the overall level of our services.

Methods: Recent improvements have been initiated in physical infrastructure, health education, personnel, data management, drug availability, and HIV counseling and testing (HCT). The clinic staff received training in STI Syndromic Management, HCT, and couples counseling. We added a client suggestion box and implemented changes our clients requested. Beginning in April 2006, demographic, clinical, and laboratory data relevant to the management of patients' STI have been entered into an electronic database on a daily basis. Prior to that, monthly reports were compiled by hand from clinic log books.

Results: From January through December 2005 (prior to service improvement), 8,082 patients visited the STI clinic. 648 of 4,414 new clients (15%) ac cepted HCT during that time. From April 2006 through March 2007 (following service improvement), there were 11,370 patient visits, representing a 41% increase in annual demand for overall STI services. HIV testing was performed on 3,846/7,012 new patients (59%), representing an increase in HCT uptake of 293%.

Conclusions: Improved STI services increased demand in a high-volume clinical setting of high-risk men and women, allowing many clients to benefit from appropriate HIV and STI prevention programmes. Training and ongoing supervision of service providers are key components of high-quality STI services.

D.7. Improving quality and effectiveness of in-service training for health professionals in Malawi: experience from the lighthouse training centre.

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[2] I-TECH

Background: Quality training matters now more than ever. Malawi has a severe shortage of health workers and the need to get the most from the existing staff is critical. Quality in-service training for existing health care staff can help Malawi meet those demands.

Objectives and scope: Lighthouse set out to improve quality and efficiency of in-service trainings; and ensuring that training results in improved service quality of our patients.

Methodology: Lighthouse used several methods to improve the quality and efficiency of trainings

1. ***Improved planning*:** we implemented yearly survey asking about training needs for all Lighthouse staff—this assessment included feedback from staff, supervisors and management to identify performance gaps in a comprehensive way.
2. ***Focused facilitation skills development:*** We began by observing and grading existing facilitators using a standard checklist, continued with monthly lunchtime skills-building sessions and several 2-day trainings.
3. ***Evaluating Overall Course Effectiveness*:** Checklists were used at the end of each training to evaluate the planning and delivery of that session: was there a strong opening and closing; were they appropriate; is there evidence that participants learned?

Results: Trainings were developed specifically to meet the identified performance gaps.
A few courses were cancelled; trainings ran smoothly and within schedule. Performance expectations were clear to facilitators which resulted in positive feedback from participants

Conclusions

- It is only a well planned training and well equipped facilitators that can meet the needs of the trainees.
- Through regular and consistent feedback from their peers, facilitators tend to improve on their skills.
- By using standardised checklists, we were able to make performance expectations clear.
- Course evaluation is a stepping stone to a better training tomorrow.

Recommendations

- Routine observation and feedback with proper incentives to motivate facilitators, can lead them to achieve high quality, resulting in more efficient learning for participants.
- A focus should also be put on measuring training impact.

D.8. The impact of the efficient and effective use of the 7-s Mckinsey framework in CBOs implementing HIV and aids work in Malawi urban areas

Lawrence Khonyongwa

Objectives and scope: The topic of study was to examine the managerial competencies of community based organisations implementing HIV and AIDS programmes using the 7-S framework of strategy, shared values, structure, staff, systems, skills and management style and how these competencies impact on their work.

Methodology: The study sampled and examined 18 community based organisations from 4 selected urban areas in Malawi. The CBOs were examined as to the extent to which they utilize the 7 important management factors in the McKinsey framework, challenges they face and what they suggest for improvement.

Results: Half of the CBOs are operating blindly without a strategy. Two thirds of the CBOs could not manage to accomplish 70% of their own plans despite the availability of funds from donors.. About 67% of the CBOs do not have adequate skills. There are too many layers in CBO structure with unclear roles. 81% of the CBOs in the study do not have adequate and proper systems and procedures to run their organisations. There is limited knowledge and skills across the different levels.

Conclusion(s): Most CBOs performing below the required level needed to create impact. Lack of improvement in the CBO systems and procedures is affecting donor confidence. There has not been enough investment in the capacity building of community organisations in areas of programming. Most CBOs put much emphasis on values that relate to trust and less emphasis on values that concern a call to duty and voluntary work.

Recommendation(s): Capacity building to the CBOs in the formulation of strategic plans and monitoring. CBOs to develop organisational structures that ensure as very little bottle necks as possible. CBOs to introduce general assemblies for checks and balances. Systems to be improved through proper value chain analysis. All shared values to be treated equally.

TRACK E: PARTNERSHIP, NETWORKING AND COORDINATION

In this Track attention is on forms of partnerships, mechanisms for networking and coordination emerging at various levels to guide and facilitate responses and what lessons can be learnt to accomplish mechanisms that ensure inclusiveness and drive a truly coordinated multi-sector response

E.1. Social science research on HIV/AIDS in Malawi and a solution to the network problem

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Background: Researchers studying AIDS have difficulty locating research papers and reports despite the plethora of previous social science research on HIV prevention and AIDS mitigation in Malawi. At its best, research builds on, attempts to replicate, and extends previous research. We address a major barrier to improving research in and on Malawi: the lack of publicly available research done in Malawi and by Malawians. The need for greater access to previous research has been recognized by the National AIDS Commission: in its AIDS research strategy paper for 2005-2007, four of the nine objectives are based on increasing the availability of previous research.

Objectives and scope: Our aim was to develop a web-based bibliographic database for all social science research on HIV/AIDS in Malawi. In addition to cataloging earlier research, we intend for the database to grow as more research is completed.

Methodology: We used interpersonal and web networks to carry out our project. We developed the database for AIDS research in Malawi by (1) meeting with colleagues in Malawi to locate unpublished papers and reports and (2) searching the internet to locate and access published papers and research posted online.

Results: A searchable web-based database was created and free access is available on the internet. Previous research publicly available now includes: published articles (usually via link), reports (PDFs or Word Documents), data (zipped Excel or Stata files), and images (mostly JPEG format).

Conclusions and Recommendations: We believe the database will greatly enhance the ability of Malawian researchers to produce significantly better research results. By increasing their access to previous social science research on AIDS, whether published or unpublished, they will be able to increase the contribution to the research literature on which we all depend. We also believe the creation of this database will strengthen the research interactions between Malawian and non-Malawian scholars. We plan to study the database's effect on inter-author exchange using citation network analysis.

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E.2. Uptake of family planning services among Malawian women participating in HIV related research studies

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Background: Family planning in Malawi is an integral part of the national development policy. Access to family planning services can prevent unintended pregnancies and among HIV positive women, can serve as primary prevention of mother to child transmission of HIV. Due to the large volume of women participating in research studies at the Tidziwe Centre in Lilongwe, the Ministry of Health Reproductive Health Unit established a satellite family planning clinic within the research building. Methods available on site include Depo-Provera, oral contraceptives, and condoms. Norplant, tubal ligation and intrauterine devices are available through referral. We describe the uptake of family planning services at the Tidziwe Centre, the methods chosen, and frequency of switching methods.

Methods: We retrospectively reviewed the family planning records at the Tidziwe Centre from May 1, 2005, until December 31, 2007. Research studies during this time included a vaginal microbicide prevention trial and four HIV treatment trials. All studies provided free condoms and recommended women be on a contraceptive method during trial participation.

Results: 750 women participated in research studies during the review period (600 HIV- and 150 HIV+). Among these women, there were 593 initial visits and 2,793 total visits. At the initial visit, women chose the following methods: Depo-Provera (79%), oral contraceptive pills (17%), Norplant (3%), and condom use (<1%). On subsequent visits, 3% of women were referred for sterilization and 29 women (4.9%) changed from their initial method, primarily from Depo-Provera to oral contraceptives.

Conclusions: Providing on-site family planning services was well accepted with high uptake. Depo-Provera is the most popular family planning method and changing methods is uncommon. Despite using condoms for HIV prevention, most women did not choose condoms ad their only method of contraception. Expanded services to include on-site IUD and Norplant insertion would provide a greater choice for these women

E.3.Exploring the feasibility of engaging traditional birth attendants in a PMTCT program in Lilongwe, Malawi

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Background: In Malawi, where there are 90,000 HIV-infected children, mother-to-child transmission is both significant and preventable. Almost 50% of pregnant women deliver outside the hospital with a traditional birth attendant (TBA). Ensuring that HIV-positive women and their newborn infants receive Nevirapine (NVP) prophylaxis by TBAs is imperative to the success of prevention of mother-to-child HIV transmission (PMTCT) programs.

Methods: We conducted two focus groups in June 2007 with 17 registered, practicing TBAs in Lilongwe, Malawi. By creating a story, the groups discussed TBA practices, willingness and barriers to, and support needed for, participation in a PMTCT program.

Results: The average time in practice was 13 years with the majority learning skills from their mother. Nearly half of the TBAs had no formal education and only one TBA considered herself literate in Chichewa.

TBAs identified structural barriers to delivering NVP including lack of both training in administration of the medication and of supplies. Perceived barriers also focused on interactions with the laboring women, specifically women's fear of the medication for themselves and their newborn. Another important barrier was disclosure of HIV status by the woman to the TBA which was coupled with women's fear of being forced to deliver in the hospital, the current policy for HIV-positive women in labor. TBAs felt that knowledge of PMTCT and their relationship with the women would help improve uptake of NVP.

TBAs requested institutional support, clear identification symbol of HIV status on the health card, program specific training, fulfillment of supply needs perhaps in the form of a birthing kit.

Conclusions: With institutional support, supplies, training on the facilitation, recording and administration of NVP prophylaxis, training on good counseling techniques including a clear method to identify HIV infected women, the involvement of TBAs in the PMTCT program in Lilongwe is feasible.

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E.4. "Medicines without doctors" -

A debate on shortage of health workers and scale-up of ART

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Description: ART scale-up in Malawi has been successful, with currently 89,956 patients on treatment. However with an estimated 290,000 people currently in need of ART, there are still 60% of them not receiving ARV's. In SSA, the HIV/AIDS pandemic and its higher demand on services has put extra strains on the Human Resources for Health (HRH). Malawi's HRH gap is huge, with ten times less doctors than the minimum WHO recommended staffing level. This shortage is seen as a main bottleneck in further scale up of HIV/AIDS care.

'*Medicines without Doctors'* was the title of a conference, organised by MSF in October 2007 which brought together a wide variety of nearly 180 partners in Malawi of MoH, Parliament, professional councils/associations, donors, NAC, UN, universities, NGO's and health workers. The main focus of the debate was '*What can be done to ensure that the critical HRH shortages will not prevent people in need of urgent HIV/AIDS care from receiving this'?*

Discussion points: Serious concerns were raised that the pace of the 'HRH train' driven by its potential in supply is not keeping up with the fast moving 'ART train', rather driven by a continuous fast growing demand of patients in need of treatment/care. Innovative solutions were discussed and an appeal made to all partners to take part in addressing the HRH problem.

Recommendations

- 'Speeding up the slower “HRH train” to catch up to the ART train'; through an emergency response as well as long term planning, identifying staff-needs for the whole health sector, re-costing the EHP by incorporating ART and related HR costs, continued ART scale-up with public health approach.
- 'Utilizing the workers we have'; more evidence on task-shifting, issues around HSAs and better utilisation of PLWHAs.
- 'Retaining health staff'; improved incentive packages for rural areas, paying 'smarter' salaries, review system of DSAs and 'care for the carers', keeping staff healthy and alive.

TRACK F: GRANTS MANAGEMENT

The Track seeks to learn lessons from grants management models and experiences especially as Malawi intensifies grants to expand and decentralize the response to lower levels. Lessons may be leant from the design of the facility, channels for movement of resources and monitoring performance.

F.1. Grants management abstract

VUMU Jonathan Drake, CPAR Malawi, Mzuzu 2. Jonathan Vumu

Donors view it as a great challenge to move grants to implementers, which procedure to use to make sure that grants are not mismanaged has been a hectic question. Since the year 2004, many community based organisations started receiving grants for the first time in Malawi from National AIDS Commission.

The details provided here-under aims to provide the best practice of grants administration to Community Based AIDS Service Organisations from assessing the project proposal to closing the project.

The grants management process has been tasted through CPAR Malawi's subgranting to Community AIDS Service Organisations. Comparatively, groups considered to be fledging were exposed to strict monitoring and mentoring than fully fledged groups. Proposal assessments considered the following issues: no handouts, capacity should be available, participant groups to benefit, community contributions must be made, simple trainings not a priority, income generating activity included. Approved Grant Recipient Organisations went through pre-implementation appraisals and then tranched resources were provided first through open presentations, and then deposited to cheque accounts. Other tranches were provided after getting proper reports. Capacity building initiatives in finance management, project monitoring formed part of the first tranche and then; interim resource utilization, monthly grants liquidations, final resource utilization appraisal, and audits were done using checklists.

Over 95 percent of fledging AIDS Service Organisations performed better than those considered to be fully fledged because of strict monitoring. They performed well during audits and have improved capacity. AIDS Service Organisations with income generating activity and good community participation have sustainable project activities.

New grant recipient organisations should be exposed to strict monitoring and mentoring whether fully fledged or not. Every HIV/AIDS grant should fund an income generating activity for sustainability and that tranching of resources should be adhered to so that major resource loses can be prevented.

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