Annotated Review of Studies on HIV, AIDS, STIs and TB
Zambia
2001-2007
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FOREWORD

The Development of this volume of the Annotated Review of HIV/AIDS/STI/TB studies is part of the National HIV/AIDS/STI/TB Council’s mandate in developing a research strategy with a clear research agenda. The National HIV/AIDS/STI/TB Council also has a mandate in its role as coordinator of the multi-Sectoral response to the epidemic and aims to play its part in making research an active part of National Health Service system development. This is important because improved quality of life among the people of Zambia is the underlying goal of health reforms.

The main objective of producing this review of studies is to help paint the HIV/AIDS/STI/TB research picture and create a basis for developing a national HIV/AIDS/STI/TB research agenda that is multi-disciplinary, multi-sectoral, collaborative with both national and international partners, credible and relevant to national priorities. The document assists in highlighting past and current research trends and gaps as well as characteristics of HIV/AIDS/STI/TB research in Zambia so as to give the nation an understanding of where we are in terms of research history and accomplishments, including limitations. An assessment of how past research has been utilized is essential for prioritisation of the national HIV/AIDS/STI/TB research agenda.

The Government of the Republic of Zambia and its cooperating partners that support this effort share the belief that using scientific research assists in the understanding of the social and biomedical issues causing ill health and affecting the delivery of services in order to design better programs.

I believe this will help strengthen the dissemination of scientific and evidence based health information, which will assist in fostering regular interactions among the research actors, program implementers, policy makers and the community who are the ultimate beneficiaries of research.

Further, I am glad that this update has been carried out and that research dissemination strategies now form the core task of a continuous process in improving the quality and effectiveness of research being conducted.

Lastly but not the least, I urge the technical team behind this work to establish a sustainable system to review progress in the updating of our research priorities.

May I conclude by conveying my sincere gratitude to all the research actors, collaborating research institutions and agencies and the community for participating selflessly.

Dr. B. U. Chirwa
Director General
National AIDS Council
ACKNOWLEDGEMENTS

The Annotated Review of Studies on HIV, AIDS, STIs and TB in Zambia 2001-2007 was developed through a process of submission of study reports from research institutions, individual researchers and a search on various research databases.

We wish to express our sincere gratitude to our consultant, Dr. Mubiana Macwan’gi and her associate Mr. Bernard Phiri, for their tireless effort in collecting, screening and compiling these abstracts into a book on Annotated Review Studies on HIV, AIDS, STIs and TB in Zambia 2001-2007.

We also thank the reviewers of the draft documents:

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Dr. Michael Gboun – The Joint United Nations programme on HIV and AIDS
Dr. Carolyn Bolton - Moore – Centre for Infectious Disease Research in Zambia
Dr. Benjamin Chi - Centre for Infectious Disease Research in Zambia and
All participants to both the Preliminary Research Agenda Meeting, the National Consultative Meeting (Appendix IV & V) and members of staff of the National AIDS Council

Lastly but not least, we express our sincere gratitude to Ms. Celestine A. Buyu of NASTAD/NAC for ably providing guidance and support to the whole process of developing this volume.

Mr. Osward Mulenga
Director, M&E and Research
National AIDS Council
DISCLAIMER

The abstracts presented in this volume were authored by different individuals and organisations at different times between 2001 and 2007 and were also funded by different organisations. The contents of the abstracts reflect the views of the individual authors.

The National AIDS Council through a consultancy was responsible for collecting, compiling and disseminating these abstracts with the overall goal of understanding HIV, AIDS, STIs and TB research being undertaken in the country and identifying research gaps in order to develop a national research strategy with an evidence-based research agenda.
ABBREVIATIONS

ADP  Area Development Programs
AIDS  Acquired Immune Deficiency Syndrome
ANC  Antenatal Care
ART  Antiretroviral Therapy
ASO  AIDS Service Organizations
BDC  Bus Drivers and Conductors
BMI  Body Mass Index
CBO  Community Based Organisation
CBoH  Central Board of Heath
CCF  Christian Children’s Fund
CCT  Confidential Counselling and Testing
CD4  Cluster of Differentiation Type 4
CDC  Centers for Disease Control and Prevention
CDE  Classified Daily Employee
CI  Confidence Interval
CIDRZ  Centre for Infectious Disease Research in Zambia
CMMB  Catholic Medical Mission Board
CVCT  Couples’ Voluntary Counselling and Testing
DA  Data Analysis
DAO  Dunking AIDS Out
DBS  Dried Blood Spots
DC  Data Collection
DFID  Department for International Development
DNA  Deoxyribonucleic Acid
EFA  Education for All
ELISA  Enzyme Linked Immunosorbent Assay
ESS  Epidemiological Sentinel Surveillance
FAWEZA  Forum for African Women Educationist-Zambian Chapter
FBO  Faith Based Organisation
FGD  Focus Group Discussion
GEMSA  Gender and Media in Southern Africa
GRZ  Government of the Republic of Zambia
HAART  Highly Active Antiretroviral Therapy
Hb  Haemoglobin
HBC  Home Based Care
HIV  Human Immunodeficiency Virus
HMF  Homogenise Moral Sway and Future Sanctuary
HPV  Human Papiloma Virus
ICT  Information, Communication Technology
IMCI  Integrated Management of Childhood Illness
MSM  Men who have Sex with Men
INA  Influential Network Agent
INESOR  Institute of Economic and Social Research
IUD  Intrauterine Device
JHPIEGO  Johns Hopkins Program for International Education in Gynecology and Obstetrics
LDHMT  Lusaka District Health Management Board
LINCS  Linking Children to Sponsors
M&E  Monitoring and Evaluation
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<td>MCH</td>
<td>Maternal and Child Health</td>
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<tr>
<td>MDG</td>
<td>Millennium Development Goals</td>
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<td>MoE</td>
<td>Ministry of Education</td>
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<td>Nab</td>
<td>Neutralizing Antibody</td>
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<td>NAC</td>
<td>National HIV, AIDS, STIs and TB Council</td>
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<td>NASTAD</td>
<td>National Alliance of State and Territorial AIDS Directors</td>
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<td>NCSR</td>
<td>National Council for Scientific Research</td>
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<td>NGO</td>
<td>Non-Government Organisation</td>
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<td>NHGs</td>
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<td>NISIR</td>
<td>National Institute for Scientific and Industrial Research</td>
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<td>NSTC</td>
<td>National Science and Technology Council</td>
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<tr>
<td>NVF</td>
<td>New Variant Famine</td>
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<td>NVP</td>
<td>Nevirapine</td>
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<td>OI</td>
<td>Opportunistic Infection</td>
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<td>OVC</td>
<td>Orphans and Vulnerable Children</td>
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<td>PCAZ</td>
<td>Palliative Care Association of Zambia</td>
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<td>PCP</td>
<td><em>Pneumocystis Carinii</em> Pneumonia</td>
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<td>PCR</td>
<td>Polymerase Chain Reaction</td>
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<td>PEP</td>
<td>Post-Exposure Prophylaxis</td>
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<td>PEPFAR</td>
<td>President's Emergency Plan for AIDS Relief</td>
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<td>PID</td>
<td>Pelvic Inflammatory Disease</td>
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<td>PLWHA</td>
<td>People Living with HIV and AIDS</td>
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<td>PMTCT</td>
<td>Prevention of Mother to Child Transmission</td>
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<td>PQI</td>
<td>Performance and Quality Improvement</td>
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<td>PRP</td>
<td>Pre-Research Planning</td>
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<td>R&amp;D</td>
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<td>RDC</td>
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<td>RHA</td>
<td>Religious Health Asset</td>
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<td>SADC</td>
<td>Southern Africa Development Community</td>
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<td>SD</td>
<td>Single Dose</td>
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<td>SIDA</td>
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<td>SIL</td>
<td>Squamous intraepithelial lesions</td>
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<td>SME</td>
<td>Small and Medium Enterprises</td>
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<td>SRH</td>
<td>Sexual and reproductive health</td>
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<td>STI</td>
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<td>TB</td>
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<td>TBA</td>
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<td>TDRCA</td>
<td>Tropical Disease Research Center</td>
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<td>THPAZ</td>
<td>Traditional Healers and Practitioners Association of Zambia</td>
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<td>TPHA</td>
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<td>UNAIDS</td>
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<td>UNESCO</td>
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<td>UNFPA</td>
<td>United Nations Fund for Population Activities</td>
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<td>UNICEF</td>
<td>United Nations International Children’s Fund</td>
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<td>UNZA</td>
<td>University of Zambia</td>
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<td>UP</td>
<td>Universal Precaution</td>
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<td>USAID</td>
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<td>UTH</td>
<td>University Teaching Hospital</td>
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<td>VCT</td>
<td>Voluntary Counselling and Treatment</td>
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<td>Wildlife Police Officer</td>
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<td>WVI</td>
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<td>YWCA</td>
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<td>YAO</td>
<td>Youth Activists Organisation</td>
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<td>YAZ</td>
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<td>Zambia Wildlife Authority</td>
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<td>ZDF</td>
<td>Zambian Defence Force</td>
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<td>Zambia Demographic and Health Survey</td>
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<td>ZEHRP</td>
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<td>ZNAN</td>
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1.0 INTRODUCTION

As reflected in its First National Development Plan in 1969, the Government of the Republic of Zambia recognized the importance of integrating science and technology into national development. This was corroborated by the establishment of the National Council for Scientific Research (NCSR) along with a whole range of Research and Development (R&D) Institutions. At the time of conception, NCSR functioned as an R&D institution as well as a coordinating body on all matters relating to scientific research and technological development.

Owing to weak statutory linkages with other research institutions in the country, the dual functions of the NCSR were challenged. In 1994 recommendations were made to separate the two functions of NCSR in order to give rise to two separate institutions. This led to the formulation of the National Policy on Science and Technology in 1996. In 1997 the Science and Technology Act was enacted. Through this Act the National Science and Technology Council (NSTC) was created to function as a research co-coordinating body and the National Institute for Scientific and Industrial Research (NISIR) was formed to continue with scientific and industrial research.

Therefore, at national level, all scientific research and technological development is coordinated by NSTC through the annual registration of R&D institutions and consequently monitoring them.

The Directorate of Public Health and Research at the Ministry of Health (MOH) oversees all health research in the Country. To facilitate better coordination of research in the country, the MOH has appointed a National Health Research Advisory Committee (NHRAC) whose main mandate is to provide advice to the MOH on all health issues of national importance and coordination of health research in order to link health research to policy and programming. The committee reports directly to the Director of Public Health and Research.

Further, within the MOH, the directorate of Policy is responsible for formulation and implementation of health policies. Through this directorate, the MOH has developed a draft National Health Research Policy (NHRP). This will provide a framework for guiding and implementing all research involving human subjects including research on HIV/AIDS/STI/TB.

Research on HIV/AIDS/STI/TB is coordinated by the National HIV/AIDS/STI/TB Council (NAC) which was established in 2002 by an Act of Parliament to coordinate and support the development of national multisectoral response for the prevention and combating HIV and AIDS and other related diseases, and to reduce the personal, social and economic impacts of HIV and AIDS

NAC has four directorates which include the Monitoring and Evaluation Directorate (M&E). One of the strategic objectives of this directorate is to strengthen operational and behavioural research and access to information on best practices and cost effective interventions with the following twelve core strategies;

- Develop a national HIV and AIDS research strategy that will contain a clear research agenda
• Establish links with research institutions and will promote cooperation between research agencies to maximize utilization of research findings
• Implement appropriate ethical review prior to research being undertaken, approve research
• Encourage, support and strengthen research related to HIV/AIDS/STI/TB by both local and international researchers
• Support identified priority health research and application of research findings
• Promote research in traditional/alternative remedies
• Provide appropriate infrastructure and findings for HIV/AIDS/STI/TB research programmes
• Encourage collaboration and coordination between and among local and international researchers
• Ensure Zambia’s participation in vaccine development in partnership with international health research institutions
• Invest in appropriate infrastructure and human resources that are requisite for vaccine development and clinical trials
• Negotiate for preferential access to outcomes of vaccine research
• Organize HIV and AIDS research dissemination seminars where all new biomedical and social research relating to HIV and AIDS will be disseminated

These strategies govern all other activities that relate to strengthening operational and behavioural research and access to information on best practices and cost effective interventions.

In an effort to link health and HIV and AIDS, STIs and TB research in particular, to policy and programmes, in 1998, the MOH and its partners initiated a process of setting up a National Health Research Agenda which outlines health research priorities (MoH/CBoH 1999). This process involved several steps including development of an Annotated Bibliography which should be updated regularly.

To date, two comprehensive Annotated Bibliography Volumes have been produced consisting of abstracts of studies on priority public health identified areas in Zambia. The first and second volumes were produced in 1998 and 2000 respectively by MoH/CBoH. Each of these volumes contains abstracts of studies conducted on HIV and AIDS, Sexually Transmitted Diseases, Tuberculosis, Reproductive Health, Orphans, Child Health, Malaria, Nutrition Health Systems, Water and Sanitation and other health related studies.

In addition to the two volumes, UNICEF in 1996 produced an HIV and AIDS specific Annotated Bibliography. This particular volume is the second in the series and builds on the earlier works by MoH (1998 and 200) and UNICEF (1996). It gives a rich overview of HIV and AIDS, STIs and TB research conducted in Zambia between 2001 and 2007. It also identifies past and current trends and characteristics of research in the country. This information enables us to understand where we are in terms of HIV and AIDS, STIs and TB research in Zambia in order to determine research agenda and priorities.
2.0 METHODOLOGY

The National AIDS Council through a consultancy undertook the task of collecting, reviewing and documenting existing HIV and AIDS, STIs and TB research studies including vaccine trials that have been conducted in Zambia between the periods 2001 to 2007. The basic methodological concept was developed around the fact that both local and international institutions as well as individual researchers have generated a wealth of information through research on HIV, AIDS, STIs and TB in Zambia.

Sources of data for abstracts included in this book included:

- University of Zambia (UNZA) Library and Institute of Economic and Social Research (INESOR) Library
- Institutions undertaking studies on HIV/AIDS/STI and TB
- Personal research networks to the authors
- Various websites on the internet including the last three International Conferences on AIDS in Africa
- Implementers meetings for PEPFAR
- Abstract Books for various conferences in Zambia
- Local and International Journals
- Research Ethics Committee and Graduate Student Research

Further to that, there were a number of challenges faced in the course of compiling this book. Predominantly among them were a lack of an effective system of collecting and retrieving research information.

Identification of materials in this report largely depended on the authors’ knowledge about various sources of research information on HIV and AIDS, STIs and TB. Another challenge was that the assignment was conducted during the Christmas and New Year festive period, making it difficult to effectively engage research focal persons in various prospective institutions.

Most research institutions including NAC lack functional resource centre and or data bank containing research information done in the period 2001-2007.

Based on these challenges, it is highly recommended that NAC, MOH and key research institutions build functional resource centres and research data banks with relevant interlinkages. To facilitate this process a network of researchers should be established to develop mechanisms for harnessing and disseminating their institutional and individual work.
3.0 ABSTRACTS

There are 232 abstracts of study reports on HIV/AIDS/STI/TB in this book and have been categorised as much as possible according to the six thematic areas that represent priority action areas in the National HIV and AIDS Strategic Framework 2006-2010. The Themes in themselves are multi-dimensional and multi-sectoral in nature and are as follows:

I. Intensifying prevention of HIV
II. Expanding treatment, care and support for people affected by HIV and AIDS
III. Mitigating the socio-economic impact of HIV and AIDS
IV. Strengthening and decentralised response by mainstreaming HIV and AIDS
V. Improving the capacity for monitoring by all partners
VI. Integrating advocacy and coordination of the multi-sectoral response

Under each one of these Themes, are strategic objectives that address specific areas of action. Abstracts have further been sub-categorised into strategic objectives they best address. It is acknowledged that some abstracts are cross-cutting.

3.1. THEME I. INTENSIFYING PREVENTION OF HIV

The overall objective under the theme of Intensifying Prevention of HIV and AIDS is to strengthen communication and promotive activities in order prevent and control HIV and STIs. The following are the strategic objectives under this theme:

i. Prevent sexual transmission of HIV with a special emphasis on youth, women and high risk behaviours.
ii. Prevent mother to child transmission
iii. Prevent HIV transmission through blood and blood products
iv. Prevent HIV transmission in health care and other care settings and promote access to post exposure prophylaxis treatment
v. Improve access to and use of confidential counseling and testing
vi. Mitigate stigma and discrimination against HIV
vii. Prevent HIV transmission through intravenous drug use
viii. Support development and participation in HIV vaccine clinical trials

This section consists of abstracts that address the foregoing strategic objectives.

**Strategic objective 1:** Prevent sexual transmission of HIV with a special emphasis on youth, women and high risk behaviours

1. **TITLE:** KNOWLEDGE, ATTITUDE AND PRACTICES OF GRADE 12 PUPILS ON HIV/AIDS IN CHINGOLA DISTRICT, ZAMBIA
   
   **Authors:** Chikafuna J. B\(^1\), Andy B\(^2\) and Zeleke W\(^2\)
   
   **Year:** 1997 and 2004
   
   **Org/Inst:** \(^1\)Chingola Health Board, Zambia and \(^2\)University of Pretoria, South Africa
Objective: To identify factors that strongly affect HIV/AIDS awareness and influence sexual behaviour among Grade 12 High School pupils.
Methodology: A total of 262 pupils completed a self-administered structured questionnaire. Ethical approval was done and permission from institutions was granted. Logistic regression analysis of outcome variables was conducted on independent variables on HIV/AIDS prevention and transmission.
Results: The respondents composed of 54.96% (144) females and 45.04% (118) males. Forty one (15.65%) were not aware that HIV/AIDS has no cure. The proportion of sexually active pupils was 26.72% compared to similar studies done in Zambia in 1997 and 2004 which was 60% and 67% respectively. Respondents with a perception that people with HIV/AIDS have been bewitched are 3.88 times more likely to lack HIV/AIDS awareness (HIV/AIDS has no cure) compared to respondents who perceive otherwise (p=0.019). Males are 3.86 times more likely to be sexually active than females (p=0.000). Respondents from low to medium cost residences are 3.70 times more likely to be sexually active compared with respondents from high cost residences (p=0.006). Respondents whose parents or guardians were not employed were 3.12 times more likely to be sexually active compared with respondents whose parents or guardians were employed (p=0.044). Respondents with a perception that healthy young people do not get HIV/AIDS are 2.45 times more likely to be sexually active compared with respondents who perceive otherwise (p=0.026). Males were 13.49 times more likely to approve sex before marriage compared with females (p=0.043).
Conclusion: Pupils’ knowledge levels were adequately high. Lack of awareness (HIV/AIDS has no cure) was strongly associated with the belief that people with HIV/AIDS have been bewitched. Attitudes and practices were strongly associated with; type of residence, employment status of parents or guardians and the sex of the respondent.

2. TITLE: THE USE OF MICROBIOCIDES IN THE PREVENTION OF TRANSMISSION OF HIV/AIDS IN ZAMBIA.
Authors: Mukuka R.
Year: 2007
Org/Inst: Gender and Media in Southern Africa (GEMSA – ZAMCOM)
Status: Published in and Abstract Book, 4th National Health Research Conference
Study Site(s): Mazabuka

Objectives: To undertake research on the effectiveness in the use of microbes for female prevention of the contraction of HIV/AIDS in the first month of the project; to formulate training and educational programmes for media personnel on the effectiveness of microbiocides.
Beneficiary: The General Public, Journalists and the Community Media.
Methodology: The project will entail a research trip to Mazabuka where there are clinical trails of the use of microbiocides in the female prevention of HIV/AIDS here in Zambia.
This will include Pre-Research Planning (PRP), Data Collection (DC), Data Analysis (DA) and Formulation Advocacy & Training.

**Results:** The second phase of the project will formulate (a) Training and (b) Advocacy for the journalist and community media. Based on the research findings training for media personnel will be formulated and implemented for journalists from mainstream and community media.

Training: This training will sensitise journalist on the advantage and opportunities for women use of microbiocides in the prevention of transmission of HIV/AIDS. The objective will be to sensitise trainees and stimulate them to propaganda using the media in the promotion of the use of microbiocides.

Advocacy: The trainees will then produce 5 feature articles or documentaries, promoting the use of microbiocides, and then will be publicized using the media.

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3. **TITLE:** SHORT-TERM SAFETY AND ACCEPTABILITY OF INTRAUTERINE CONTRACEPTIVE DEVICE IN HIV-INFECTED POSTPARTUM WOMEN: A RANDOMIZED TRIAL

**Authors:** Kaseba C¹, Sinkala M² and Stringer E³ *et al*

**Year:** 2002-2003

**Org/Inst:** ¹University Teaching Hospital, Department of Obstetrics and Gynaecology, ²Lusaka District Health Management Board and ³Center for Infectious Disease Research in Zambia

**Status:** Published in an Abstract Book, 3rd National Health Research Conference

**Study Site(s):** Lusaka Urban Clinics

**Source:** Abstract Book, 3rd National Health Research Conference, Zambia

**Methodology:** Between Jun 2002 and Oct 2003, we randomised 599 HIV-infected women in Lusaka, Zambia to receive either the IUD (Para Guard TCu 380A, n=297) or “user’s choice” hormonal contraception (oral or injectable, n=302) Standardized follow-up, including detailed assessment for PID, occurs at 1, 6, 12, 18, & 24 months, and is ongoing. All women have reached the 1 mo visit.

**Background:** The copper intrauterine device (IUD) is among the most effective contraceptives known, but the WHO and others have recommended against its use in HIV-infected women due to a theoretical risk of Pelvic Inflammatory Disease (PID). Most IUD-attributable PID occurs within one month of insertion.

**Results:** At enrolment (4-8 wks postpartum), there were no statistically significant differences between randomisation groups in age, parity, income, marital status, education, tribe, BMI, CD4 count, or hematocrit. Mean CD4 for the entire cohort was 505 cells/mm³ (standard dev = 258). 58 (9.8%) women had CD4 < 200. At 1 month, 1 woman in the IUD arm met criteria for PID compared to 0 in the hormonal arm (p = NS). The woman with PID presented with abdominal pain and discharge prompting IUD removal. Cultures were positive for Chlamydia. The patient received oral antibiotics and did not develop fever. Other reported minor side effects at 1 month were rare and did not differ by randomisation arm (IUD vs. hormonal): abdominal pain (3.8% vs. 2.5%), pelvic pain (0.4% vs. 0%), discharge (2.1% vs. 0.4%), nausea or vomiting (0.7% vs. 0%), irregular bleeding (2.4% vs. 2.5%) or headache (1.7% vs. 2.5%). Two patients (1 IUD, 1 hormonal) discontinued contraception after their newborns died. Two patients randomised to the hormonal arm switched to the IUD arm, and one patient randomised to IUD switched to oral contraceptives. There were no IUD expulsions.
**Interpretation:** The rate of IUD-attributable PID in HIV-infected women through 1 month of placement was 0.3%. The IUD appears to be a safe and acceptable method of contraception for HIV infected women.

4. **TITLE:** DETERMINANTS OF UNSAFE SEX BEHAVIOUR AMONG THE YOUTH IN RELATION TO HIV/AIDS PREVENTION IN LUSAKA URBAN BASIC SCHOOLS
- **Authors:** Sakuwaha A. C.
- **Year:** 2004
- **Org/Inst:** The University of Zambia, School of Medicine
- **Status:** Published
- **Study Site(s):** Lusaka Urban
- **Source:** The University of Zambia, School of Medicine

**Study Design:** A cross section and comparative study design was carried out in 22 basic schools in Lusaka Urban among the youth attending grades 7, 8 and 9. Setting: The study was carried out in Lusaka Urban, which has the highest HIV/AIDS prevalence rate of 22% in Zambia.

**Objective:** To determine the factors associated with unsafe sexual behaviour among the youth aged 13 to 19 years, in the prevention of HIV/AIDS in Lusaka Urban.

**Subjects:** The study focused on the youth who are the future leaders and yet affected by the great HIV/AIDS epidemic. A total sample size of 319 youth (160 males and 159 females) aged 13 to 19 years in Grades 7, 8 and 9 selected from a line list of 25093 youth by using EPI 6 statistical calculator the study sample was selected. The subject from different schools were proportionately and conveniently selected and involved in the study.

**Perceived risk:** The youth who were at higher risk of contracting HIV/AIDS were found to be more involved in premarital sex than the youth who did not know that they were at risk of contracting HIV/AIDS (P=0.005).

**Results:** Knowledge about HIV/AIDS: More condom users than non-users knew about HIV/AIDS could be cured (P=0.034).

Safer sex: More males preferred masturbation than females (P=<0.001). Most male youths did not like condoms because they were big and described them as “eating a banana with its peel”. Cultural factors: Significantly more condom users than non-condom users were exposed to traditional initiation ceremonies (P=0.032).

Source of information: The majority of the youth got information about safer sex from media as compared to health institutions.

**Conclusion:** Most factors under social demographic knowledge and culture were significantly associated with unsafe sex behaviour among the youth.

**Recommendations:** In accordance with the findings it is therefore recommended that Ministries of Education and Health should collaborate effectively and utilize the identified factors to mitigate the HIV/AIDS epidemic among the youth through education and material support. Lastly a countrywide study should be conducted to determine the sexual behaviour of the youth in schools and develop strategies to reduce HIV/AIDS epidemic in Zambia.

5. **TITLE:** THE AFRICAN CHILD IN PERSPECTIVE; TOO YOUNG TO BE DEFiled IN AN ERA OF HIV/AIDS
- **Authors:** Chishimba S and Zulu F
- **Year:** 2005
**Issues:** Zambia has an estimated adult HIV prevalence rate of 20%. In order to protect the future generation, Prevention of Mother-to-Child Transmission of HIV (PMTCT) has been an important component of the national HIV/AIDS/STI/TB strategic framework. The increase in child defilement cases, which have dominated front pages of the media, are of concern. These acts are attributed to traditional beliefs perpetuated by traditional healers, that if an HIV positive adult has sex with a baby or young kid, sero-conversion takes place. These cases are off setting the gains being made in PMTCT. Lack of adequate legislation on child defilers, has resulted in many culprits being convicted to mockery one-day sentences.

**Description:** Commonwealth ACT (CACT) has been coordinating five community schools with a population of 2,000 OVCs. In addition to this, CACT has been sensitising communities to absorb OVCs in the extended family structure to reduce streetism. To motivate extended families that have integrated OVCs in their structures, food is distributed to them every month with support from PCI. Unfortunately, some foster parents are sexually abusing children, infecting some with STIs and/or HIV. Worse enough, child defilement cases in Zambia, even in stable homes are on the rise. Advocacy against lighter convictions has been mounted.

**Lessons learned:** Lack of legislation on child defilement would exacerbate the situation. In addition, if traditional healers are not sensitised, the scourge would continue.

**Recommendations:** Stiffer punishment of up to life imprisonment will deter perpetrators from defiling children and wilfully infecting them with HIV and other STIs. The current call by the Republican President for parliament to introduce laws to give stiffer punishment to child defilers should be the focus of advocacy work to parliamentarians.

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6. **TITLE:** CULTURAL, ECONOMIC, ENVIRONMENTAL AND PERSONAL FACTORS AFFECTING ADOLESCENT SEXUAL ATTITUDES AND BEHAVIOR IN ZAMBIA  
**Authors:** Slonim-Nevo V¹ and Mukuka L²  
**Year:** 2004  
**Org/Inst:** ¹Ben-Gurion University of the Negev, Beer Sheva, Israel; ²University of Zambia, Lusaka, Zambia  
**Status:** Published in the XIV International AIDS Conference: Abstract no. E11589  
**Study Site(s):** National  
**Source:** The XIV International AIDS Conference: Abstract no. E11589

**Background:** The AIDS epidemic in Zambia has reached major proportions relative to other nations. The tendency to engage in sexual activities at a young age, the social, economic and environmental conditions in Zambia which restrict safe sexual behaviour and the lack of easy access to condoms imply that adolescents in Zambia are at a great risk of contracting AIDS.

**Objective:** In response to this situation, a team of social scientists carried out a five-year research project to study the level of AIDS-related knowledge, attitudes, and behaviour of female and male adolescents in urban and rural Zambia. This study examines the impact of
cultural, economic, familial and personal factors on adolescent AIDS-related knowledge, attitudes and sexual behaviour in Zambia. The sample (N=3,360) includes in-school and out-of-school adolescents, rural and urban adolescents, and married and unmarried adolescents.

Results: The results of the multi-variate analyses indicate that street adolescents, adolescents who are older, who reside in rural areas, who are married, and who were abused by a family member tend to engage in more high-risk behaviours. Moreover, although AIDS-related knowledge, attitude, and self-efficacy had a significant effect on the engagement in high-risk behaviour (less knowledge about AIDS, negative attitudes towards AIDS prevention, and lower self-efficacy regarding AIDS prevention predict a high level of engagement in high-risk behaviours), the results indicate that these AIDS-related variables add only 2.2% of explained variance beyond the socio-demographic variables, which explains 20.6% of the variance.

Conclusions: Thus, these results suggest that AIDS prevention for adolescents in Zambia should focus on specific programs for identifying groups at risk (out-of-school, married, and rural adolescents) rather than focusing on providing knowledge about AIDS to the general population.

7. **TITLE:** IS SEXUAL HARASSMENT A REALITY IN ACADEMIC? A PILOT STUDY OF THE UNIVERSITY OF ZAMBIA.
   **Authors:** Shilika, Menon and Ngoma et al.
   **Year:** 2007
   **Status:** Completed and yet to be polished
   **Study Site(s):** University of Zambia
   **Inst/ Org:** University of Zambia
   **Source:** University of Zambia

Main Objective: To explore the perspective of staff and students on the occurrence of sexual harassment at the University of Zambia.

Key findings: The results of the study indicated that sexual harassment does occur among the different categories of UNZA community. 37% of the participants reported having been sexually harassed. All categories of participants perceived ‘sane’ but not ‘a lot’ of sexual harassment occurring at UNZA. 42.7% of the female students perceived ‘a lot’ of sexual harassment occurring at UNZA.

Recommendations: The problem of sexual harassment at UNZA should not be underestimated. It is also important that a policy on sexual harassment should be followed by students and the staff who are victims of sexual harassment be established.

8. **TITLE:** INCREASING YOUNG MEN'S PARTICIPATION IN RH THROUGH SOCCER CAMPS
   **Authors:** Bwalya C. M¹ and Hachonda H. M²
   **Year:** 2004
   **Org/Inst:** ¹Youth Activists Organisation, Lusaka, Zambia; ²Zambia Integrated Health Programme, Lusaka, Zambia
   **Status:** Published in The XV International AIDS Conference: Abstract no. TuPeD4965
   **Study Site(s):** Rural Zambia
   **Source:** The XV International AIDS Conference: Abstract no. TuPeD4965
Issue: Among those Zambians now over the age of 15, nearly one out of every 5 is HIV positive. Young men are more likely to infect their partners with STI/HIV/AIDS than women. Many young men lack information not only on SRH but also on critical life skills such as negotiation, decision making, and condom usage.

Description: The Youth Activists Organisation (YAO), an NGO managed by youth, runs the RH Camps Targeting 50 boys aged 14 - 24 years both in and out of school. It aims to increase men's participation in sexual and reproductive health, HIV/AIDS prevention, family planning and child health issues in the family. Also targeting the participants' parents, CBOs, NHCs, men and women within and around the community. The Camp reaches out to young women to change their attitudes and behaviour, foster communication and share responsibility to bring about sustainable improvements in gender relations. Awareness and educational messages are integrated, such as enhanced football (soccer) training and SRH education. Other activities include mobile video shows and discussions in the community.

Lessons learned: YAO reaches an average of 7,000 people in a particular community within a week, with consistent messages on RH. Awareness of reproductive health knowledge and contraceptive methods increased in campaign areas. Greater youth participation in community affairs, as well as an increase in traditional leaders getting involved in community health issues. Awareness on transmission and prevention of HIV increased, whilst engaged couples reported for VCT.

Recommendations: Youth involvement in the fight against HIV/AIDS increases the reach and impact of reproductive health interventions directed to young men in the rural areas where there is the least reproductive health information.

9. **TITLE:** ZAMBIAN ADOLESCENTS KNOWLEDGE SOURCES FOR HIV/AIDS AND THEIR SEXUAL RISK
   **Authors:** Mwanayanda L.¹, Clark L.F², Campo D.¹ et al
   **Year:** 2005
   **Org/Inst:** -
   **Status:** Published in the AIDS 2006 - XVI International AIDS Conference:
   Abstract no. CDC0714
   **Study Site(s):** Kitwe
   **Source:** AIDS 2006 - XVI International AIDS Conference: Abstract no. CDC0714

**Background:** HIV prevalence in Sub-Saharan Africa remains high, despite widespread knowledge of HIV/AIDS. The practice of multiple sex partners is common, especially among young individuals. Less than one third of non-married women and 42% of non-married men report condom use at last intercourse. This study examines sexual onset among Zambian youth as a function of sources of HIV/AIDS knowledge.

**Methodology:** 392 high school students (ages 12-19) from high schools in urban Kitwe and peri-urban Copperbelt completed self-administered questionnaires on HIV/AIDS knowledge and their sexual activity. Sources of knowledge included media (HIV programs on radio or TV), knowing someone who died of AIDS, and discussing AIDS with a) parents, b) teachers, and c) friends.

**Results:** Most adolescents had heard of HIV (97%) and 74% had known someone who died of AIDS. While 92% had spoken to a friend, and 84% had talked with a teacher, fewer had spoken with their parents (47% of males; 58% of females). A multiple linear regression analysis, controlling for age, gender and other predictors found that accurate knowledge about HIV transmission was predicted by knowing someone who died of AIDS (p < .04).
logistic regression examining sexual initiation using these same predictors found that younger age (p < .0001 odds ratio = 1.48, CI = 1.22, 1.62) and discussing AIDS with parents (p < .05 odds ratio = .59, CI = .35, .99) were predictive of being a virgin (58% of virgins had discussions vs. 47% of non-virgins; p < .03). Being a virgin was associated with gender (65% of males; 77% of females).

**Conclusions:** The Copperbelt of Zambia, a high prevalence and low resource area, needs HIV prevention efforts for adolescents. Parental discussions of AIDS was associated with less sexually active youth. Parent-based interventions, effective in the U.S., may also delay sexual onset in Zambian youth.

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10. **TITLE:** BOYS THINK YOU ARE HIV POSITIVE IF YOU ASK THEM TO USE A CONDOM. ADDRESSING THE REPRODUCTIVE HEALTH NEEDS OF ORPHANS AND VULNERABLE ADOLESCENTS IN ZAMBIA

**Authors:** Reed K

**Year:** 2003

**Org/Inst:** Rollins School of Public Health, Emory University, Atlanta, GA, United States

**Status:** Published in the abstract book for the XIV International AIDS Conference: Abstract no. WePeE6509

**Study Site(s):** Selected sites in Zambia

**Source:** The XIV International AIDS Conference: Abstract no. WePeE6509

**Issues:** Unless current trends reverse, one of every two Zambian children born today will contract HIV and die of AIDS. The purpose of this research is to describe the reproductive health needs of orphans and other vulnerable adolescents in Zambia and to define effective strategies to address these needs.

**Description:** The central questions explored in this study are: (1) Why are orphans and vulnerable adolescents in Zambia susceptible to HIV infection and other diseases?; (2) How do behavioural, cultural, and economic variables influence knowledge, attitudes and sexual behaviour among young people in Zambia and in turn, affect the spread of HIV/AIDS?; and (3) How can one effectively address the reproductive health needs of orphans and vulnerable children in Zambia at the individual, community, and structural/environmental level of intervention? Sources used in this study include informal discussions with orphaned adolescents girls, participatory learning action appraisals and a review of the effectiveness of HIV behavioural interventions.

**Lessons learned:** Findings illustrate that contraceptive use among adolescents is low in Zambia. Young people affected by AIDS are vulnerable to many misperceptions regarding pills and condoms. Exchange sex creates a favourable environment for orphans and vulnerable girls to increase sexual activity with multiple partners. A limited access to family planning and STI medications at clinics drive many young people to purchase drugs from peddlers and seek treatment from traditional healers.

**Recommendations:** There are direct links between community-level care for children affected by AIDS, and prevention of the spread of HIV. Programmes that support and care for orphans and vulnerable children may be extremely effective in reducing their vulnerability to exchange sex, sexual abuse and sex work, and in protecting them from HIV infection. Activities are suggested to integrate HIV/AIDS prevention with orphan care.
11. **TITLE:** UNDERSTANDING HIV RISK BEHAVIOR AMONG MEN WHO HAVE SEX WITH MEN IN ZAMBIA  
**Authors:** Zulu K¹, Bulawo N.D², Zulu W³  
**Year:** 2004  
**Org/Inst:** Zambia Association for the Prevention of HIV and Tuberculosis,  
**Status:** Published in an Abstract Book for the AIDS 2006 - XVI International AIDS Conference: Abstract no. WEPE0719  
**Study Sites:** Lusaka, Livingstone, Mansa, Nchelenge, Ndola and Kitwe  
**Source:** AIDS 2006 - XVI International AIDS Conference: Abstract no. WEPE0719  

**Background:** Unprotected anal sex is several times risky than unprotected vaginal intercourse with an HIV-infected man (UNAIDS). Study objectives were to examine the prevalence of high risk behaviour, assess predictability of bisexual HIV transmission. Assess access to sexual health information, HIV prevention and care programs in a sample of 18-40 old MSM in Zambia.  
**Methodology:** 641 MSM completed questionnaires in which some answers were given orally and others in writing: Variables include HIV/AIDS knowledge, sexual behaviour, perceived risk, risk reduction intentions, peer norms and partner risk levels.  
**Results:** Sex between men is at the core of HIV transmission in many Zambian contexts with consequences for infections, subsequently transmitted heterosexually. 51% reported high-risk male and female partners; 18% reported risk behaviour reduction intentions; 33% do not believe peer norms support condom use; 68% had unprotected anal sex with men and women. 45% are sexually active bisexuals, 19% reported having had an STI, but blamed women for it. 33% are HIV positive. 73% thought anal sex is safer than vaginal sex. 89% don’t know condoms are used in anal sex.  
**Conclusions:** Non existence of HIV prevention programs for MSM is an impediment to condom use and risk behaviour reduction making some assume that anal sex is safe. AIDS service organizations have ignored to mount HIV prevention programs for MSM. Sex between men and commercial sex work is illegal in Zambia, but a number of HIV prevention and care programs target female sex workers, which are making a difference in reducing STIs and HIV among female sex workers and their clients. On the flip side of these programs are MSM who enter the sex industry to survive. Multi-sectoral interventions targeted at MSM are needed to understand and decrease risk behaviour and consequently reduce HIV incidence in many Zambian context.

**Authors:** Monde I. N  
**Year:** 2004  
**Org/Inst:** Peer Educators Association of Zambia (PEAZ)  
**Status:** Published in and Abstract Book, 4th National Health Research Conference  
**Study Sites:** Kafue, Lusaka and Chongwe  
Objectives: The overall goal of the study is to reduce proportionally the levels of HIV/AIDS related stigma and discrimination by sharing the Peer Educators Association of Zambia (PEAZ)'s experiences.

Study setting and design: The research study was done in Kafue, Lusaka and Chongwe districts of Lusaka province from January 2003 to July 2004. The following methodologies were used: Focus group discussions and feedback reports from resident development committees (RDCs) home based care groups (HBCs) and Anti-AIDS clubs; Structured and in-depth interviews with the infected and affected; Verbal/oral interviews with youth between 13-30 years; Questionnaires with professional medical practitioners; Story telling, in case of orphans and vulnerable children between the ages of 3-12 years and Discourse analysis.

Results: Stigma has impacted negatively in the prevention of HIV/AIDS. Building a HIV/AIDS support group in a place where stigma and discrimination are rife is far from an easy task.

When one’s status is a secret, it is hard to answer the persistent questions by family members about frequent hospital visits, consuming so many medications and the cause for sudden loss of weight. When the orphans fall sick, people automatically assume that they have AIDS and medical help is either not sought or not given. People who were once in formal employment and contributed to society are now subjected to living in inadequate conditions due to health and inability to work when diagnosed with this life threatening disease. An HIV-positive man of faith once said, “How we speak has a great impact on who is included and excluded from communities”.

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13. **TITLE:** CULTURAL AND RELIGIOUS FACTORS INFLUENCING HIV VULNERABILITY AND PREVENTION  
**Authors:** Ngona M  
**Year:** 2002  
**Org/Inst:** Network of Zambian People Living With HIV/AIDS, Lusaka, Zambia  
**Status:** Published in an Abstract Book of the XV International AIDS Conference: Abstract no. D12976  
**Study Site(s):** Selected urban and rural areas of Zambia  
**Source:** The XV International AIDS Conference: Abstract no. D12976

**Background:** Network of Zambian people living with HIV/AIDS (NZP+) Life support Group is embarking on providing/review information on facts about HIV/AIDS and develops understanding of the socio-cultural and religious implications of the HIV/AIDS pandemic. Although Faith based organisation are saying HIV/AIDS is punishment from God. Life support group has experienced that in this churches nearly everyday people die from HIV/AIDS.

**Methodology:** To utilize theatre and it’s forms of drama for communities call of action for information, education, entertainment and communication into the community. We make trips in both urban and rural areas, door to door; motivate them the techniques and basic facts on HIV/AIDS and the importance of Voluntary Counselling Test (VCT) why it considered condoms.

**Results:** Use of dramas performances creates an impact through entry points formed after a theatre performance. To reduce stigma and discrimination by influencing positive living through the community action groups and trained theatre groups.

**Conclusion:** The use of theatre is culturally appreciated and is a widely recommendable intervention for broader disseminations. And even in faith-based organisations.
**14.**  
**TITLE:** USING BROADCAST MEDIA TO SHINE A SPOTLIGHT ON THE REALITIES OF ZAMBIA HIV/AIDS EPIDEMIC  
**Authors:** Himanje I¹, Malindima M²  
**Year:** 2005  
**Org/Inst:** ¹American International Health Alliance and ²ZAMCOM  
**Status:** Published in the AIDS 2006 - XVI International AIDS Conference: Abstract no.TUPE0951  
**Study Site(s):** National  
**Source:** AIDS 2006 - XVI International AIDS Conference: Abstract no.TUPE0951

**Issues:** With 16 percent of the adult population infected with HIV, Zambia is in the midst of a widespread AIDS epidemic. Current media coverage neither reflects the far-reaching societal impacts of AIDS nor provides accurate information that can prevent its further spread or improve quality of life for PLWHA. Journalists generally report dry statistics without providing context or a call to action.

**Description:** After attending a workshop designed to arm journalists with skills on issue-based reporting about HIV/AIDS that was organized by the American International Health Alliance and ZAMCOM with funding from the US government, a ZNBC producer began giving AIDS a face by telling stories of individuals living with the virus rather than simply regurgitating government statements. One of these faces is a mother of six whose husband deserted her three years ago. Despite the government’s pronouncement that free ARVs were to be given to vulnerable people, clinic staff never received written authorization to administer the medications. As the woman waited, her health quickly deteriorated. This story illustrated how government policies don’t trickle down those they are intended to benefit.

**Lessons learned:** Media can shine a spotlight on problems like the widespread confusion at healthcare centres throughout the country that resulted from ineffective communication of government policies about AIDS treatment. On an individual level, the woman was immediately enrolled in an ART program and local stakeholders pledged support for her and her family. The story also had a national impact, spurring the government to formally instruct all health institutions through a white paper issued by the Cabinet Office to provide free ARVs to patients in need.

**Recommendations:** Issue-based stories have the power to bring about quick reaction from stakeholders. When stories are given a human face, they can bring issues to the forefront and influence policymakers far more effectively than numbers and medical jargon.

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**15.**  
**TITLE:** CHILD ABUSE AND HIV/AIDS-RELATED KNOWLEDGE, ATTITUDES AND BEHAVIOR AMONG ADOLESCENTS IN ZAMBIA  
**Authors:** Slonim-Nevo V, Mukuka L.  
**Year:** 2005  
**Org/Inst:** ¹Ben-Gurion University of the Negev, Beer Sheva, Israel; ²University of Zambia, Lusaka, Zambia  
**Status:** Published in the Abstract Book AIDS 2006 - XVI International AIDS Conference Abstract no. WEPE0688  
**Study Site(s):** Selected rural and urban areas of Zambia
Background: The purpose of this study is to understand intra-familial child and adolescent physical abuse among adolescents in Zambia, while taking into consideration extra-familial factors such as economic condition, school attendance, and urban or rural residence. In addition, we examine the impact that child abuse might have on the participants, a level of knowledge about HIV/AIDS, their attitudes towards prevention, and their engagement in high-risk activities. Such knowledge will contribute to the development of programs that address the issue of child abuse in Zambia as well as programs addressing HIV/AIDS prevention among Zambian children and adolescents.

Methodology: The sample comprises 3,360 adolescents aged 10-19 years from urban and rural Zambia; 2,160 of them attended school while 1,200 of them did not. Standardized scales were utilized to assess HIV/AIDS-related knowledge, attitudes, and self-efficacy. In addition, the adolescents reported the extent of their engagement in various high-risk behaviours and their lifetime experience of being sexually or physically abused.

Results: As the level of abuse experienced by the adolescents increased their level of knowledge about HIV/AIDS, tendency to hold positive attitudes toward prevention, and level of self-efficacy regarding HIV/AIDS prevention decreased. Most importantly, when controlling for socio-demographic variables, findings indicate that experiencing abuse in the past was a key factor predicting participation in high-risk behaviours associated with HIV/AIDS infection.

Conclusions: Physical and sexual abuse of adolescents in Zambia is significantly related to HIV/AIDS risk behaviours. In a country where HIV/AIDS epidemic is rampant, it is important to raise the awareness to the problem of child sexual and physical abuse and its connection with HIV/AIDS infection. Programs that prevent child abuse should be developed, implemented, and evaluated for their effectiveness in reducing the rate of child abuse as well as the rate of HIV/AIDS infection. Special attention should be given to out-of-school adolescents and those from poorer families.

16. TITLE: LINKING RESPONSES TO HIV/AIDS AT COMMUNITY, PROVINCIAL, REGIONAL AND NATIONAL LEVEL
Authors: Mutale B. M. M.
Year: 2004
Org/Inst: University of Zambia Dept of Community Medicine
Status: Published in The XV International AIDS Conference: Abstract no. TuOrE1132
Study Site(s): Lusaka
Source: The XV International AIDS Conference: Abstract no. TuOrE1132

Issues: Behaviour change and enforcement of Life skills are the most effective method of HIV/AIDS prevention among the youth. Many existing HIV/AIDS and Life skills programs at community level do not address the sexual cultures, concerns, desires, experiences and are not based on true actual needs of the youth as most programs focus on moralistic approaches e.g. Educating youth on the dangers of sex or HIV/AIDS. This approach does not always culminate into sustainable behaviour change.

Description: This presentation focuses on behaviour change initiatives and Life skills that have been used in the prevention of HIV/AIDS among youth in Zambia at community and national level by Youth Alive Zambia [YAZ]. The group-counselling model of a four-day behaviour change program and two-day Life skills program empowers young people to
make informed and independent decisions on their psycho-sexual behaviour. Peer-to-Peer approach and various communication strategies. The presentation is based on first hand use of Life skills as most boys and girls desire for open communication about sexuality. In an event where they cannot get the communication they need from elsewhere, these program fill the gap.

**Lessons learnt:** Young people at community and national level is better informed through peer-to-peer approach. Their concerns, experiences, identities and desires relating to sexuality are better dealt with through behaviour change programs and Life skills as self-reflection comes to play after going through the model.

**Recommendations:** Linked self reflective behaviour change and Life skill programs are the best approach in mitigating the spread of HIV/AIDS among young people and the same programs are fluid enough to be used on adults.

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17. **TITLE:** WATER, WINE AND WOMEN - A BASELINE ASSESSMENT OF RISK FACTORS IN A FISHING COMMUNITY IN SOUTHERN ZAMBIA  
**Authors:** Simbaya J. Ndubani P.  
**Year:** 2005  
**Org/Inst:** Institute for Economic and Social Research  
**Status:** Published in an Abstract Book for AIDS 2006- XVI International AIDS Conference: Abstract no. CDC0771  
**Study Site(s):** Southern Province  
**Source:** AIDS 2006 - XVI International AIDS Conference: Abstract no. CDC0771

**Background:** In order to inform interventions, a qualitative baseline assessment of risk factors, perceptions about HIV/AIDS and ART was conducted in a fishing community in the Southern Province of Zambia.

**Methodology:** Only qualitative methods were used. Sixteen men and seven women representing different wealth and livelihood categories in the community participated in the study through FGDs, In-depth and Key informant interviews.

**Results:** Fishing is a relatively lucrative livelihood activity. Whilst money is invested back into fishing and in children education, it is also spent on entertainment wine and women. The mobility of fishermen and urban fishmongers promotes engaging in risky sexual behaviours. There are many single women in the camp who buy fish and who, to ensure a constant supply, exchange sex for fish. Whilst knowledge around HIV/AIDS is high, condom use appears to be negligible. Although most of the respondents knew that AIDS had no cure, they had heard about ART and were quite optimistic about its benefits. Financial and logistical barriers seem to be a big problem in accessing ART. Even VCT services are not available on the locality. The community suffers from high morbidity as all the respondents reported deaths resulting from chronic illnesses in their families over the last five years. Six of the respondents reported having current symptoms of illness that included TB, chronic cough, malaria, body rash and various forms of lymphadenitis. Those suspected of HIV/AIDS and found with TB were stigmatised. Ideas of AIDS being ones due in return for bad behaviour were held by some members of the community.

**Conclusions:** HIV/AIDS will continue to be a health problem in Kabala owing to a number of risky factors including living away from spouse, concentration of single men in the fish camps and alcohol consumption. Interventions need to be comprehensive and adaptive and involve all actors.
The objectives of this study were: (i) to establish effects of communication and their impact on the dissemination of HIV/AIDS information to the youth in the Christian Children’s Fund, (CCF) Zambia affiliated projects and (ii) to establish how the youth perceive the HIV/AIDS messages they receive and factors that influence their preference to accessing different types of communications.

Youth from the two Kafue based CCF Zambia projects aged between 15 and 24 years were targeted for the study. The units of the study were randomly selected based on the computer generated Linking Children to Sponsors (LINCS) project listings. Both quantitative (survey) and qualitative (Focus Group Discussion) methods were used for collecting data. A statistical package for the social sciences (SPSS) was used to analyse the quantitative data while qualitative data was organized in categories and analysed thematically as per research questions.

The study established the fact that most of the youth depended on interpersonal communication comprising parents, friends, teachers and the church as a major source of information on various issues including HIV/AIDS. In terms of the mass media, radio was the most accessed and the medium considered effective for disseminating HIV/AIDS information. Additionally, results revealed that most of the youth would like to be involved in the development of HIV/AIDS messages/materials.

From the findings of the study, it is clear that for one to reach the youth, interpersonal communication channels should be considered as vital. As for the mass media, radio is perceived by most of the youth as the most effective for disseminating various types of information including HIV/AIDS messages. It is also widely accessed by the youth especially those in the rural areas.
Objective: The main aim of this study was to accelerate behavioural change in HIV prevention by making interventions more reflective of local socio-cultural/economic conditions.

Methodology: This was a qualitative study. A multi-step process was used: Literature review and identification of research sites, community focal persons, and problems; Development of research tools, three week training and establishment of community research groups in the research sites; Rapid SCR study using especially designed interview guides; Dissemination of results to project staff; and Introduction of project staff to community leaders and dissemination of results to communities.

Results: Some strong relationship exists between initiation and sexual behaviour. During initiation, young boys and girls are taught to start practicing sexual intercourse as a way of preparing them for adulthood. However, HIV prevention is not part of the teaching. Even though the school going children learn about condoms from Anti-AIDS clubs, access to condoms in this area is limited because the local health centre, which is under the Catholic Church, does not provide condoms.

The initiates are introduced to various herbs used for dry sex and enlarging penis. Girls are also taught to submit to men, making men feel superior. This has implications for gender-based violence and consequently HIV prevention.

TBAs administer herbs to women to quicken delivery. In some cases, infants are burnt by toxic herbs inserted into the birth canal of their mother, thereby increasing their chances of contracting HIV if the mother is infected.

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20. TITLE: CULTURAL FACTORS FOR PERSONS WITH DISABILITIES IN ZAMBIA MAY INCREASE RISK OF HIV/AIDS
Authors: Herlihy J.\(^1\), Thibeault R.\(^2\), Meyers S.\(^3\) \textit{et al}
Year: 2005
Org/Inst: Published in the Abstract Book for \textit{AIDS 2006 - XVI International AIDS Conference Abstract no. WEPE0752

Study Site(s): Lusaka peri-urban

Issues: We hypothesize that the marginalization of persons with disabilities and the endemic risk of HIV/AIDS in Zambia may be synergistic, creating a disparate vulnerability in this population. Reports of disability prevalence in Zambia vary widely. WHO reports 10% of the world population suffers from a physical, sensory or intellectual disability affecting their daily lives. Persons living with disabilities in Zambia are disempowered, facing a lifetime of social stigma and associated risks. To date, no published data is available evaluating HIV/AIDS risk in disabled Zambians.

Description: In a pilot study conducted prior to program development in peri-urban Lusaka, Zambia, we interviewed 45 families containing at least one member with mobility, sensory or cognitive impairment (disabled age range 3-70 years). This population reported evolving marginalization throughout their lifespan. Disabled children face intense social isolation, are a low educational priority, and have limited access to appropriate services. Adults with disabilities are perceived as burdens, are largely unemployable, and yet become childcare dumping grounds in this orphan-laden society. Young adults with disabilities, while frequent victims of family abandonment, are perceived as asexual and unfit for marriage. Additional risks are incurred by disabled females whose presumed virginal status
makes them vulnerable to rape by HIV-positive men who believe that sexual intercourse with a virgin can cure AIDS.

Lessons learned: Current HIV/AIDS intervention strategies employed in Lusaka are often inappropriate and inaccessible to persons with disabilities. Cultural assumptions of low HIV risk for disabled persons result in a lack of targeted educational materials and accessible outreach services. Few disabled members of this community know their HIV status despite their high risk of infection within an endemic area.

Recommendations: Cultural attitudes of Zambians toward persons with disabilities contribute toward increasing their risk of HIV/AIDS. Targeted interventions are essential if prevention and treatment services are to reach this vulnerable population.

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21. TITLE: HIV INFECTION AS AN OCCUPATIONAL HEALTH PROBLEM AMONG MINIBUS AND TAXI DRIVERS (MBTDS) IN LUSAKA: PREVALENCE AND RISK FACTORS ASSOCIATED WITH HIV INFECTION.
Authors: Siulapwa Y. K, Siziya S, Grove-Akpey M et al
Org/Inst: Evelyn Hone College, University of Zambia School of Medicine
Year: 2005
Status: Published in an Abstract Book, 4th National Health Research Conference
Study Site(s): Lusaka

Objective: To determine the extent of HIV prevalence and risk factors associated with HIV infection among MBTDS in Lusaka.

Methodology: A cross-sectional study administered to MBTDS in Lusaka (estimated 5000). Data was collected from April to June 2004. A total of 360 male MBTDS were interviewed. No female drivers were identified. The study was conducted at all four bus stations located at town centre.

Results: Some of the highlights of the study were as follows: HIV prevalence rate was 33.4% and a massive 45% among 25 to 29 years olds. Those who had lived in Lusaka for more than 10 years tended to be HIV positive (p = 0.001). Respondents who reported “not using a condom” during last sexual act tended to be “HIV positive” (p = 0.01). After adjusting for marital status, respondents who were born again were 2.24 (95% CI 1.21, 4.13) times more likely to have been HIV positive compared to non-born again. Participants who drank alcohol were found to be 3.59 (95% CI 1.61, 8.00) times more likely to have been HIV positive compared to respondents who did not. General perception of the risk of HIV infection was found to be very poor. Respondents who reported to have had STI during the last 12 months tended to be HIV positive (p = 0.001. Those who sought treatment/advice from a doctor/clinic were found to be 3.53 (95% CI 1.90, 6.57) times more likely to have been HIV positive compared to respondents who sought treatment/advice from a traditional healer.

Conclusion: In conclusion the results suggest that unsafe sexual behaviour was primarily responsible for the high HIV infection among MBTDS and can therefore be prevented by changes in those same behaviours. Religiosity contributed to high risk of HIV infection because of their churches dismissal of condoms. Majority of respondents did not know the critical issues by which HIV/AIDS is transmitted. Finally, prompt treatment of STI may
reduce the transmission of HIV infection. FUNDING: Zambia-US Research Partnership in HIV Prevalence and Care, UNZA School of Medicine.

22. **TITLE:** HIV/AIDS INFORMATION AMONG SECONDARY SCHOOL ADOLESCENTS AND ITS EFFECTS ON THEIR ATTITUDES AND SEXUAL BEHAVIOUR  
**Authors:** Namukwai R. S  
**Year:** 2006  
**Org/Inst:** The University of Zambia  
**Status:** Published  
**Study Site(s):** Lusaka  
**Sources:** The University of Zambia

This study was designed to establish what HIV/AIDS and STD information adolescents in secondary schools are exposed to and the effects of this information on their attitudes and sexual practices. The specific objectives of the study were thus:
- To identify the major sources of HIV/AIDS and STDs information for boys and girls in secondary schools
- To find out the gender equity in accessing HIV/AIDS information between boys and girls in secondary schools.
- To find out if boys and girls in secondary schools are using this information to adopt better attitudes and sexual practices

The main and specific objectives of the study were achieved by obtaining key indicators on HIV/AIDS related information and knowledge, attitudes and sexual behaviours of young people in secondary schools.

**Findings Summary,** Respondents’ Background and Living Arrangements: The study reveals that the majority of the adolescents in secondary schools are kept by their own parents while the others are looked after by their guardians who ranged from uncles, aunts, grand or single parents. Only a very minimal percentage of respondents reported that they are looking after themselves.

Regarding the level of parents or guardians education, a large majority of respondents were looked after by parents and guardians with college education followed by those whose keepers had gone up to secondary level. More parents and keepers are likely to talk to the female respondents about sex than to the male respondents. Generally, there didn’t seem to be a co-relation between parents’ level of education and parents’ or keepers’ attitudes towards respondents as most of them reported that parents/keepers are generally strict on them regardless of the level of education.

Knowledge of HIV/AIDS and STDs: The awareness about HIV/AIDS was almost universal with almost 100% of the respondents having fundamental knowledge on how AIDS is transmitted from one person to another and how they can protect themselves from infection. On STDs, male respondents had comparatively better knowledge on the names and symptoms of various STDs. Despite this however, many of them did not seem to recognize the relationship.

23. **TITLE:** PEER COACHES / LEADERS AS ETHNOGRAPHERS USING SPORT FOR HIV PREVENTION AND TREATMENT  
**Authors:** Banda D.¹, Mwaanga O.²  
**Year:** 2005
Context: This paper focuses on the use of peer coaches/leaders as cultural intermediaries in HIV/AIDS affected communities using basketball drills. Dunking AIDS out (DAO) Approach as a research context to engage with other youths. Innovation is critical in trying to address social problems such as HIV/AIDS. Clifford and Marcus (1986), state that Cultures do not hold still for their portraits. Culture is contested, temporal, and emergent; there is great need to be innovative in the design of HIV intervention programs. This presentation will focus on the piloting of HIV prevention interventions in Zambia among Edu Sport Foundation peer coaches.

Methodology: The program has adopted an ethnographic approach, qualitative research that uses observations, interviews and documentary sources. DAO movement games as a research context have a follow up activity to every drill that engages the participants in group discussions. Peer coaches handling these sessions are trained as ethnographers and cultural intermediaries between the researchers (program designers) and the social world of youths. The approach uses basketball drills and relates the drills to real life scenarios in order to operate as an information service for prevention as well as gather data for program modifications and means of making interventions culturally appropriate.

Results and discussion: Our findings in running pilot DAO HIV interventions reveal the following as being achieved through these basketball movement games:

Attraction: DAO movement games are an attraction to the target group that the games try to engage the youths.
Enjoyment: The drills have a competition element that draws the participants into the game, satisfying the FUN based approach as advocated by the authors.
Local Identity: The games have room for modification to suit the needs of a locality, making the intervention strategy culturally appropriate.

Objective: JHPIEGO is partnering with Population Services International (PSI) to further develop a package of services around male circumcision (MC), and to test the feasibility of providing MC services in different service delivery settings, including private clinics. This PSI-funded project is a follow-on to work done in 2003 to 2004 under the U.S. Agency for International Development (USAID)-funded Training in Reproductive Health and AIDSMark projects, through which JHPIEGO and PSI worked together to improve the quality and accessibility of comprehensive MC and male RH services in Zambia, and developed a global learning package on MC.
**Activities:** In the current project, JHPIEGO is supporting PSI in designing a training package that integrates clinical and counselling components of MC services to ensure that MC clients receive appropriate messages about the limitations of MC as an HIV risk-reduction measure (i.e., the ongoing need to use other methods of protection) and other essential information. JHPIEGO is also taking the lead in the clinical component of the trainings, which are geared to clinical officers/doctors and nurses/counsellors.

To ensure that providers trained in MC services will be able to use their new skills in an enabling environment, JHPIEGO is assisting PSI in conducting site assessments, as well as initiating specific facility improvements to be made at Lusaka’s University Teaching Hospital and New Start Centre.

To a similar end, JHPIEGO is providing technical support to service providers using JHPIEGO’s Standards-Based Management and Recognition (SBM-R) approach for improving performance and quality of services provision. About JHPIEGO: JHPIEGO (pronounced "JA-PIE-GO"); an international health organization affiliated with The Johns Hopkins University in Baltimore, Maryland, builds global and local partnerships to enhance the quality of health care services for women and families. JHPIEGO’s focus is on training and support for health care providers including doctors, nurses, midwives and health educator working in limited-resource settings throughout Africa, Asia, the Middle East, Latin America and the Caribbean. JHPIEGO has Center of Excellence in Maternal and Child Health, HIV/AIDS, and Family Planning and Reproductive Health to strengthen services to women and families in 50 countries around the world.

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**TITLE:** LOCAL PERCEPTIONS OF RESISTANCE IN SOUTHERN ZAMBIA AND THEIR IMPLICATIONS FOR POLICY AND PROGRAMS

**Authors:** Byron E\(^1\), Gillespie S\(^1\), Hamazakaza P\(^2\) et al

**Year:** 2005-2006

**Org/Inst:** \(^5\)International Food Policy Research Institute, \(^6\)Regional Network on HIV/AIDS Rural Livelihood and Food Security Programmes

**Status:** Published in and Abstract Book, 4\(^{th}\) National Health Research Conference

**Study Site(s):** Southern Province


The objective of this study is to identify individual and community responses to the AIDS epidemic in southern Zambia, in terms of strategies for bolstering resistance, in order to better understand how to strengthen those responses. We examine whether individuals and communities recognize risk factors and modify behaviour to avoid infection.

**Methodology:** Research was conducted in four communities in Zambia’s Southern Province between April 2005 and February 2006. A sample of 4 Standard Enumeration Areas with divergent community resilience and resistance were sampled. Case studies of 60 households with a sample of 179 households were surveyed for in-depth interviews. Key actors from institutions operating within and outside each community were interviewed about the roles their organizations play in preventing the spread and mitigating the impacts of HIV.

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\(^1\) International Food Policy Research Institute

\(^2\) Regional Network on HIV/AIDS Rural Livelihood and Food Security Programmes
Results: Movements of people for economic livelihoods, economically linked push and pull factors behind participation in transactional sex and alcohol use all figure prominently into local perceptions of individual susceptibility to HIV infection. Gender differences, household wealth status cross-cut perceptions of risk of infection and application of prevention strategies. We found ample evidence from the field that although individuals and communities perceive risk and understand modes of transmission, there was little indication of preventive action.

Conclusions: Decisions about behaviours and risk are not always rationale choices, but embedded in social norms and economic constraints. Women, youth, and other vulnerable groups face environmental and structural barriers to implementing individual behaviour-change based prevention strategies. Greater community engagement in prevention efforts is needed, reinforcing the role it can play in promoting resistance. More evidence on community responses is necessary to understand what positively or negatively influences a community’s capacity to respond to the epidemic.

Funding Source: International Food Policy Research Institute

26. TITLE: DEFILEMENT AS A THREAT TO HIV/AIDS PREVENTION IN ZAMBIA.
Authors: Katuta C, Kamwengo M, Lubbungu J et al
Year: 2004
Org/Inst: The University of Zambia, Lusaka, Zambia
Status: Published in an Abstract Book for the XV International AIDS Conference: Abstract no. TuPeC4839
Study Site(s): Lusaka
Source: The XV International AIDS Conference: Abstract no. TuPeC4839

Issues: The paper intends to discuss the case of defilement or child sexual abuse as a threat to HIV/AIDS prevention in Zambia. In Africa, Zambia included, there is a wrong perception that having unprotected sex with minor or child who is a virgin cure one who has the HIV/AIDS. Hardly a day passes without a defilement case being reported. This has prompted the political leaders, civil society and groups of people ring the alarm bells against this threat.

Description: In Zambia, the cases of HIV/AIDS transmission have reduced in the last two years. This has been due to campaign for condom use and abstinence. However, this campaign is currently threatened by the increasing sexual abuse (defilement) cases. It is posing serious threat since the abusers infect the minors with STIs that greatly facilitates the transmission of HIV/AIDS.

Lessons learned: A large percentage of defilers are those entrusted to look after the children who have been orphaned. It has been discovered that sexually abused (defiled) children do not come out in the open, because of the most of their defilers are their guardians. There is lack of adequate programmes that seek to increases access to information that help the young to break the chains of silence against sexual abuse (defilement).

Recommendations: Putting in place effective law that addresses sexual abuse (defilement) cases. There is also great need to scale up campaign programmes that seek to increase access to information on the rights of children so as increase the self-esteem of young girls.
27. **TITLE:** EFFECTIVENESS OF MESSAGES ON T-SHIRTS IN THE FIGHT HIV/AIDS

**Authors:** Lungu J.¹, Konayuma A.²

**Year:** 2005

**Org/Inst:**

**Status:** Published in the AIDS 2006 - XVI International AIDS Conference: Abstract no. WEPE0965

**Study Site(s):** Lusaka

**Source:** AIDS 2006 - XVI International AIDS Conference: Abstract no. WEPE0965

**Background:** The HIV/AIDS prevalence rate in Zambia now stands at about 16%. The HIV/AIDS pandemic has been ravaging humankind indiscriminately. And it has not spared anyone. Its devastating effect has also been felt heavily by the productive workforce not only in private institution but in public institutions as well.

**Methodology:** Direct interviews where conducted. The governments of the republic of Zambia and some non governmental organizations have introduced a policy of wearing T-shirts carrying HIV/AIDS messages in the public service as a way of creating awareness in the public service and the public in general. A study was carried out to assess the effectiveness of the program by finding out whether people who wear the T-shirts understood the messages themselves.

**Results:** A total number of about 15 civil servants where interviewed on different dates and in different ministries. The question posed was basic and it says what is written on the back of the T-shirt? 1 person out of the fifteen new all the wordings on the back of the t-shirt and was able to explain the meaning behind the T-shirt.

1 person was able to recite the wording but using his own wording in some instances.

13 people could not recite or remember what was inscribed on the back of the T-shirts apart from saying the message is HIV related.

**Conclusion:** From this study, we may conclude that people who wear T-shirts do not even know and understand messages on T-shirts. The effectiveness of the messages on the t-shirts as a tool to fight HIV/AIDS is questionable unless the people wearing the T-shirts can understand the messages first, only then will they have the ability to sensitise other people effectively.

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28. **TITLE:** REDUCE HIV/AIDS IN ZAMBIAN PRISONS WITHIN THE CHRISTIAN FRAMEWORK. (MEN TO MEN TRANSMISSION)

**Authors:** Kawilila S

**Org/Inst:** Prison Fellowship Zambia, Chingola Care-group

**Year:** 2004

**Status:** Published in the Abstract Book for the XV International AIDS Conference: Abstract no. C10342

**Study Site(s):** Chingola

**Source:** The XV International AIDS Conference: Abstract no. C10342

**Issue:** There is evidence of homosexual practise, low knowledge of HIV/AIDS and sharing of blood contaminated instruments such as razor blades by tattooing and hair clippers which are not properly cleaned and high risk behaviour among prison inmates. Although principle 9 of the United Nations basic principle for the treatment of prisoners
provides for access to health care services available in the country without discrimination, inmates in prisons continue to receive an inferior health service compared with that obtained outside.

**Description:** Prison Fellowship Zambia, Chingola Care-group has mobilized volunteers to respond to the epidemic of HIV/AIDS. Health volunteers on this project to be equipped with skills, knowledge and confidence to talk to prisoners about HIV/AIDS to enable them carry on the work. We are working with the church and the community to do this. We offer counselling to prisoners and initiate a change of behaviour. Lessons learnt: It is an uphill battle due to: Prison culture: Security consideration tend to conflict with genuine public health concerns. Despite the alarming situation there is still no defined response to the public health situation in Zambian prisons. Behaviour already in place: Men having sex with other men; homosexuality activity is regarded as an offence therefore condoms are not provided to prisoners. Issues surrounding sexuality are not openly talked about due to traditions and Ignorance is high because they claim AIDS is caused by witchcraft. **Recommendations:** To discourage tattooing by teaching prisoners through workshops and seminars. Inmates who becoming symptomatically sick should be released upon recommendations by a doctor. More to be done in the area of prevention and prisoners to access clean razor blades and hair clippers. More awareness and knowledge of both prisoners and staff in the fight against HIV/AIDS. Counsellors and HIV/AIDS prisoner committee to be established through workshops with inmates.

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**29.**

**TITLE:** UNDERSTANDING THE DYNAMICS OF HIV/AIDS AND FAMILY PLANNING AT THE COMMUNITY LEVEL IN ZAMBIA

**Authors:** Underwood C.¹, Kapungwe A.², Chabwela P.³ et al

**Year:** 2005

**Org/Inst:** Health Communication Partnership

**Status:** Published in the AIDS 2006 - XVI International AIDS Conference: Abstract no. CDD1071

**Study Site(s):** -

**Source:** AIDS 2006 - XVI International AIDS Conference: Abstract no. CDD1071

**Background:** In the midst of an HIV and AIDS epidemic that is characterized predominantly by heterosexual transmission in Zambia, it is vital to understand how HIV-positive status and high prevalence regardless of one’s status influence fertility-related decisions so as to more fully address the public’s reproductive health concerns.

**Methodology:** Twelve focus groups of men and women, 16 semi-structured interviews with people living with HIV/AIDS, and interviews with 6 key informants in three study sites were used in data collection.

**Results:** The findings show that HIV/AIDS and family planning are, to a large degree, integrated in the minds of many Zambians. Many study participants spontaneously mentioned the influence of HIV/AIDS in reducing their desired family size. Concerns about leaving an undue burden on others if their children were orphaned and worries about transmission to a newborn were cited as reasons for smaller desired family size. The availability of PMTCT and ARVs seems to have had a slightly moderating effect on this downward trend among PLWHAs; the general public is less critical of PLWHAs who continue childbearing than in previous studies. Importantly, respondents in this study recognize the right of HIV-positive individuals to continue childbearing even as they point to their moral responsibility to protect sexual partners from potential infection.
Conclusions: The findings reported herein clearly support the wisdom of integrating HIV/AIDS and family planning. Increasingly, the public tends to think of the two in tandem, most people want to know how to protect themselves, their partners, and their children from HIV transmission, recognizing that it may well include contraceptive use and smaller families. Access to counselling and testing linked to voluntary contraceptive counselling should be available at health clinics, where men and women alike can obtain services, as well as at antenatal clinics.

30. **TITLE:** HIV/AIDS INFORMATION AMONG SECONDARY SCHOOL ADOLESCENTS AND ITS EFFECTS ON THEIR ATTITUDES AND SEXUAL BEHAVIOUR  
**Authors:** Namukwai R. S.  
**Year:** 2006  
**Org/Inst:** The University of Zambia  
**Status:** Published  
**Study Site(s):** -  
**Sources:** -The University of Zambia

This study was designed to establish what HIV/AIDS and STD information adolescents in secondary schools are exposed to and the effects of this information on their attitudes and sexual practices. The specific objectives of the study were thus:

- To identify the major sources of HIV/AIDS and STDs information for boys and girls in secondary schools
- To find out the gender equity in accessing HIV/AIDS information between boys and girls in secondary schools.
- To find out if boys and girls in secondary schools are using this information to adopt better attitudes and sexual practices

The main and specific objectives of the study were achieved by obtaining key indicators on HIV/AIDS related information and knowledge, attitudes and sexual behaviours of young people in secondary schools.

**Findings Summary,** Respondents’ Background and Living Arrangements: The study reveals that the majority of the adolescents in secondary schools are kept by their own parents while the others are looked after by their guardians who ranged from uncles, aunts, grand or single parents. Only a very minimal percentage of respondents reported that they are looking after themselves.

Regarding the level of parents or guardians education, a large majority of respondents were looked after by parents and guardians with college education followed by those whose keepers had gone up to secondary level. More parents and keepers are likely to talk to the female respondents about sex than to the male respondents. Generally, there didn’t seem to be a co-relation between parents’ level of education and parents’ or keepers’ attitudes towards respondents as most of them reported that parents/keepers are generally strict on them regardless of the level of education.

Knowledge of HIV/AIDS and STDs: The awareness about HIV/AIDS was almost universal with almost 100% of the respondents having fundamental knowledge on how AIDS is transmitted from one person to another and how they can protect themselves from infection. On STDs, male respondents had comparatively better knowledge on the names and symptoms of various STDs. Despite this however, many of them did not seem to recognize the relationship.
Zambia has one of the highest rates of HIV infection in the world, mostly affecting the 15 to 24-year-old age group. In response to the pandemic FAWEZA (Forum for African Women Educationalists of Zambia), with support from UNESCO, has set up a prevention education programme to mitigate the impact of the disease. Through this programme, almost 1,800 students have already been trained to provide HIV/AIDS prevention information either working in youth centres or more informally as peer educators. Almost 200 primary and secondary teachers have been trained to oversee school-based SAFE Clubs, which disseminate HIV/AIDS prevention information and act as a safe environment for students to discuss issues associated with the disease. Since the programme has been implemented in Zambia, changes in at-risk behaviour among secondary students have been noted. The number of unwanted pregnancies is decreasing and sexual abuse is being reported more often. There are plans to extend the project to other regions.

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**Study Objectives:** The main objective of the study was to critically analyse the impact of the sale of the sports and recreation facilities on adolescent youths and to develop a comprehensive integrated Edusports and recreation strategy that will ensure effective and sustainable management of sports and recreation at the community level.

**Methodology:** Two districts were randomly selected on the Copperbelt province namely Kitwe and Kalulushi. In Kitwe Mogadishu, power sports complex, Nkana gymnasium, Melody, Redo sports complex and in Kalulushi, Chibuluma mine club and Kalulushi stadium were selected. This was a Qualitative study.

- Interviews were conducted with active stakeholders in sports & recreation and
Consultative meetings with adolescent youths to capture their views on the management of sports and recreation including and on HIV, STIs TB and teenage pregnancies in their communities

**Results:** It has been established that the life line of the youth adolescent has drastically changed in terms of daily activities. Before the sale of the sports and recreation facilities on average youths spent six (6) hours at school and four (4) hours in the sports and recreation activities while after the sale of the sports and recreation facilities the adolescent youths now spent on average five (5) hours at school and seven (7) hours indulging in boy/girl relationships, premarital sex, alcohol uptake, excessive drug uptake and for some youths theft has become their career.

The interviews with stakeholders has shown that in Kitwe out of the eight (8) major sports and recreation facilities 50% have been sold and 25% have been neglected and the other 25% have been given to local community management structures and in Kalulushi all the sports and recreation facilities under the study are under the community management structures. Out of an average total of twenty (20) sports activities which was managed by ZCCM only 25% are active and the other 75% are dormant.

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33. **TITLE:** THE ROLE OF HIV/AIDS HOME BASED CARE IN PROMOTING POSITIVE SEXUAL BEHAVIOURS AMONG ADOLESCENTS IN KABWE URBAN

**Authors:** Mukubesa S

**Year:** 2005

**Org/Inst:** The University of Zambia, School of Medicine

**Status:** Published

**Study Site(s):** Kabwe

**Source:** The University of Zambia, School of Medicine

The study was a cross sectional one. It was conducted in Kabwe urban among adolescents, males and females aged from 13 to 23 years. One hundred and three adolescents drawn from 2,496 households having an AIDS patient and being visited by home based care providers were compared with an equivalent number of 103 adolescents living in homes not being visited by home based care providers. These adolescents were drawn from 11 residential areas of Kabwe urban. The adolescents answered questions based on two structure questionnaires.

**The questionnaires were meant to examine** adolescents’ attitudes, beliefs and sexual behaviours vis-à-vis HIV/AIDS. Five home based care teams (providers) were also interviewed on their activities with AIDS patients and their families.

**Results** showed that the impact of the home based care programme in promoting positive attitudes and sexual behaviours vis-à-vis HIV/AIDS were not significant. Reasons for this were that home based care teams involved family members particularly adolescents more in caring for their AIDS patients than in family counselling. This was despite the fact that family counselling is an essential component for promoting positive sexual behaviours and attitudes for all family members.

**The study established** that family counselling was not conducted in depth. It only covered one topic of what HIV/AIDS was all about and its primary mode of transmission namely through sexual intercourse. Other modes of transmission such as contaminated blood or sharp instruments were never discussed. The study also established that important topics like HIV risk behaviours, HIV preventive measures and living with HIV/AIDS were not covered.
The study recommended among other things: that home based care teams should devote more time to family counselling and that family counselling ought to be more detailed covering topics such as modes of HIV transmission, HIV risk behaviours and HIV preventive measures. Further home based care teams ought to increase the number of their home care providers so that they could spend more time with each family.

34. TITLE: CATALYTIC PROJECTS THROUGH ZAMBIAN YOUTH IN THE HIV/AIDS RESPONSE.
Authors: Serlemitos E. A and Hachonda H. M.
Year: 2004
Org/Inst: Youth Media (YM) and Youth Activists Organisation (YAO)
Study Site(s): -

Issues: Sexual activity is high and risk perception is very low among Zambian youth. 64% of 15-19 year old girls and 70% of boys think they are at no risk of contracting HIV/AIDS. Although government and NGOs have been implementing awareness campaigns specifically for young people, it has become apparent that there is still not sufficient behaviour change among youth.

Description: In the mid 1990s Zambian youth realized that the only way to solve this problem was to do something for themselves and their peers. Two NGOs emerged: Youth Media (YM) and Youth Activists Organisation (YAO). Both were formed by high school students; young people with a concern for the future. YM proposed the production of a monthly sexual and reproductive health (SRH) newspaper called Trendsetters. Now, five years and 600,000 copies later, YM is an established institution. YAO demonstrates similar success. Their SRH activities focus on school, church and communities. YAO and YM have created opportunities for other youth groups through their example and have catalysed institutional and individual change. Additionally, several youth centres and two new youth NGOs are now well functioning as a result.

Lessons learned: Youth understand best what their needs are and how they should be addressed. They can encourage their peers most effectively. By knowing what will have optimal impact, youth-led NGOs can catalyse young people in all areas, personally and programmatically. They also serve to advocate for youth-centered programs in government and other institutions.

Recommendations: In order to make youth programs even more successful, youth need to strengthen their skills in management, budgeting, finance, and report writing. This should be easy as youth are generally eager to learn. Youth also need financial resources and sustained emotional support to be successful. Youth-led efforts can translate into better youth-focused programming in both NGOs and government and must be promote

35. TITLE: A DECADE OF LESSONS LEARNED IN PREVENTING HIV/AIDS AMONG MOBILE POPULATIONS
Authors: Amayun M B
Year: 2004
Org/Inst: World Vision International (WVI)
Issues: Transport and migration connect people with each other, open up markets and economic opportunities - often for a better life for many. They also facilitate HIV transmission into virgin territory and among populations at risk.

Description: Over the last decade, World Vision International (WVI) has implemented HIV/AIDS prevention and awareness projects among mobile populations of many countries: migrant farm workers in Marondera, Zimbabwe; seasonal fishermen from Myanmar in Ranong, Thailand; truck drivers and commercial sex workers along Cambodia's Highway 5; Mozambican returnees from Malawi refugee camps; and long-distance truck drivers in Zambia and India. To highlight the trans-national character of the epidemic, WVI has also sponsored a bicycle relay from Mombasa, Kenya to Durban, So. Africa for five years. Most of these projects started as awareness and prevention campaigns, but as the epidemic evolved, activities also became holistic, comprehensive and developmental. Many of the projects now include care for orphans and vulnerable children (OVC), PLWHA home-based care, food security, health, and shelter initiatives. Others have been integrated into long-term Area Development Programs (ADP), WVI's development strategy.

Lessons learned: Intense STI and HIV transmission is concentrated at border crossings, transit points and temporary housing for migrant workers, where populations at greatest risk pursue anonymous liaisons away from their regular partners. WVI's most effective programs initially focused on a limited set of clinical services for STIs (diagnosis and treatment) but eventually evolved to include OVC care and income-generation for PLWHAs and their families.

Recommendations: HIV/AIDS prevention, care and advocacy efforts are important add-ons to activities that involve mobility: transport, highway and bridge construction, seasonal workers, refugees and returnees, and workers seeking better economic opportunities. Intense HIV/AIDS prevention efforts along major transport routes must occur at starting, transit, cross-border and end points.

36. TITLE: COMMUNITY PARTICIPATION IN HIV/AIDS AND GIRLS' EDUCATION INITIATIVES IN SOUTHERN PROVINCE, ZAMBIA
Authors: Sikwibele A. L
Year: 2004
Org/Inst: Ministry of Education, Livingstone, Zambia
Status: Published in The XV International AIDS Conference: Abstract no. ThPeD7880
Study Site(s): Southern Province
Source: The XV International AIDS Conference: Abstract no. ThPeD7880

Issues: Community participation in HIV/AIDS initiatives is seen as a major strategy in HIV/AIDS prevention and in support and care aspects. Communities are seen more as
being on the frontline supported by NGO and government efforts. Moreover, there is need to share sustainable ways of reaching out to communities.

**Description:** The paper will present a model on Community Sensitisation and Mobilisation Campaign that has been piloted in Southern Province of Zambia. It is based on the use of a multi-sectoral approach to the reduction of HIV/AIDS in communities through which three government line ministries, Ministry of Education, Ministry of Health and Ministry of Community Development and Social Services work together at different levels towards the reduction of HIV/AIDS and improved education of girls. The model also includes research, training, sensitisation, mobilisation, advocacy and small grants mechanism to facilitate implementation of initiative which requires external resources.

There are several lessons learnt, success stories and challenges which need to be shared with others for possible replication of the model.

**Lessons learned:** This is a very innovative model whose lessons need to be shared with others working on similar programmes. There is need to share challenges encountered such as those of ownership in the implementation of a multi-sectoral programme, incentives, commitment effective transfers of information, financial accountability, monitoring and documentation of the programme.

**Recommendations:** The paper recommends that the implementation of such a model should give enough time to the sensitisation and mobilisation of communities, training and other aspects of community empowerment and ensure that the financial aspects do not overshadow community efforts.

**37.**

**TITLE:** HIV/AIDS/STIS/TB PREVALENCE & ACCESS TO TREATMENT/CARE AMONG HIGH RISK POPULATIONS- IN ZAMBIAN PRISONS.

**Authors:** Kawilila S & Sakala D.

**Year:** 2005

**Org/Inst:** Prison Fellowship Zambia

**Status:** Published in an Abstract Book, 4th National Health Research Conference

**Study Site(s):** Chingola


**Objectives:** Reduce HIV/AIDS transmission among 500 prisoners as well as address situations providing risk for HIV/AIDS transmission and compile data by 31st July 2005; Promote, strengthen and support the implementation of prison based AIDS education and counselling training of 100 health volunteers, 40 prisoner peer educators by 31st July, 2005; Assess the HIV/AIDS/STIs/TB prevalence rate & provide care/facilitate treatment for the infected by 31st July, 2005.

**Methodology:** To raise awareness about HIV/AIDS/ STIs and an understanding of the problems among high-risk groups like prisoners, ex-prisoners, wardens (officers) and their families, through: On going development and dissemination on Information, Education and Communication (IEC) materials; Peer Education, Behaviour Change Process and Life Skills Training workshops for inmates; Conducted drama, sketches, focus group discussions and formed support groups; To promote positive attitudes and build community capacity to manage and care for those affected and infected. We carry out intervention program through the use of peer educators; The Peer Educators are trained on HIV/AIDS/STIs to identify the symptoms of STIs and refer them to doctors, interpersonal
communication, qualities of a good peer educator and care and support for the infected prisoners.

**Results:** 500 prisoners were counselled, trained in peer education and behavioural change program; 300 inmates undertook HIV/AIDS VCT; 108 volunteered for HIV/AIDS tests, 34 found positive, i.e. 31% prevalence rate and an average age of 30 years; Facilitated 12 to start taking ARVs; 35 STIs cases treated

**Conclusion:** There is no policy to facilitate the establishment of health institution set up to carry out the sensitisation, prevention and care through VCT of the HIV/AIDS patients in prisons; Prison service lack facilities to administer to inmates with terminal AIDS; Prison clinics lack investigation capacities for HIV/AIDS/STIs and TB; Health personnel who are seconded to man the clinics are not trained in management of HIV/AIDS/STIs; Drugs are often inconsistent and irregular.

Funding Source: GENEVA GLOBAL

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38. **TITLE:** PERCEPTIONS, KNOWLEDGE AND ATTITUDES OF ZAMBIAN PEOPLE TOWARDS HIV/AIDS AND MALARIA

**Authors:** Mudenda O. S.
**Year:** 2004
**Org/Inst:** Regional Psychosocial support Initiative (REPSSI)
**Status:** Published in Meeting Abstracts *Int Conf AIDS*. 2004 Jul 11-16; 15: abstract no. ThPeE8176
**Study Site(s):** National
**Source:** Abstracts *Int Conf AIDS*. 2004 Jul 11-16; 15: abstract no. ThPeE8176

**Background:** In order to succeed in our mission of translating results from HIV/AIDS research into life saving programs, it is important to assess the perceptions, knowledge and attitude of the people towards HIV/AIDS and any other common illness like Malaria.

**Methodology:** Focus group discussions and feedback reports, structured and in depth interviews, systematic random sampling, questionnaires, verbal/oral interviews and discourse analysis. To have a balanced assessment the study had multi-sectoral approach by involving professional medical practitioners, people living with HIV/AIDS and those infected with Malaria, all above the age of eighteen (18) years.

**Results:** HIV/AIDS and Malaria are two of the widest spread killers in Zambia today resulting in 80% combined death. Both weaken the people and the economy, therefore eradicating or preventing both can improve the economy. HIV/AIDS is associated with stigma and discrimination. From a pool of 500 individuals, gender unbalanced, 74% of those HIV/AIDS infected respondents preferred calling their illness "Malaria" even when indicators/symptoms point otherwise. This stigma and discrimination is due to the fact that HIV/AIDS in Zambia is still associated with indiscriminate heterosexual vaginal intercourse. Shame and fear of HIV/AIDS related stigma is a common reason for declining voluntary testing, thus preventing many infected people from receiving the much needed care and support services. Meanwhile it is evident that patients with lower CD4 cell count tends to have more Malaria attacks and higher parasite density. Conclusion more than 76% of the people in Zambia are very knowledgeable about HIV/AIDS and Malaria. HIV/AIDS is perceived as for the sexually immoral because of the initial AIDS awareness campaigns which underplayed the other modes of transmission. The results support the hypothesis of HIV/AIDS increasing the Malaria risk.
Background: Objectives were to examine the sexual relationships between in-school girls and Bus Drivers and Conductors (BDCs) and the frequency with which they engage in unprotected sex. Analyse factors propelling HIV/STI transmission and assess vulnerability of girls and BDCs to HIV/AIDS in Zambia.

Methodology: The study instrument was a questionnaire in which some answers were given orally and others in writing. The sample consisted of 1200 in-school girls aged 14-18 and 840 BDCs aged 15-35 in six cities of Zambia. (Lusaka, Ndola, Kitwe, Mufulira, Kabwe and Luanshya)

Results: 61% of BDCs reported having unprotected sex with in-school girls and their wives in the last twelve months, 38% reported having had an STI, but blamed sex workers for it. 18% reported having sex with in-school girls only. 73% thought in-school girls are a safe sex zone. 34% did not use a condom at last sex. In contrast, in-school girls reported having multiple BDCs sex partners in classes of lunch, free transport and for pleasure. 12% reported having an STI. 37% reported having unprotected sex with fellow in-school peers. 78% reported initiation through peers and 17% by choice. 41% did not use a condom at last sex. Below 1% attempted to seek VCT services.

Conclusions: The analysis of data suggests that the transport sector is at the core of the vicious circle of STIs and HIV transmission from adults to children below the age of 17. Data further suggest unreported child defilement and molestation which constitute a moral and child health crisis in Zambia if not in Africa. Social conspiracy of silence is undoing achievements in children’s rights, health and welfare in the past decade. On the flip side of child defilement and molestation is the local transport industry and its staff who have been left unattended to by HIV prevention programs.
Introduction: Since the appearance of HIV/AIDS on the globe more women are being affected other than just their biological make up. Cultural norms in the African setting like Zambia have also played their role in exposing women to HIV infection. 

Methodology: A community meeting was held with 24 rural women in Kabwe Liteta district to know the problem facing women in this era of HIV. The women were of mixed marital status with a majority being the married (12); 6 either divorced or separated 6 were single.

Results: Sexual obligations: All the women said it was taboo culturally to deny the man sex especially under the marriage setting even if risky sexual behaviour was noted in the husband. Condom use: All the women had heard about condoms and some of them were even given condoms by nurse at one time but they said as a woman you can introduce them to your husband as he was the head of the house. VCT services: Going for VCT posed as a risk of losing a partner if you were found to be positive leading to shunning this service or never disclosing your test results to anyone. The caring burden: As a woman you are expected to take care of your partner in times of sickness exposing yourself to infections while if it’s a woman who is sick your mother is expected to nurse you. MTCT services: They wondered why it is more interested in the welfare of the child not both because that baby will need the mother to grow well.

Conclusions: Revisit cultural norms which are binding and risky to HIV. Involve the chiefs in educating the men-folk because when a chief speaks our men can listen to him more than women. Government, donors and health authorities to protect the woman as well.

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41. **TITLE:** FEMALE AND CULTURAL PRACTICES IN DEVELOPING COUNTRIES  
**Authors:** Chilobwa S K  
**Year:** 2003  
**Org/Inst:** Young Women’s Christian Association, Lusaka, Zambia  
**Status:** Published in The XV International AIDS Conference: Abstract no. WePeD6465  
**Study Site(s):** Zambia and Kenya  
**Source:** The XV International AIDS Conference: Abstract no. WePeD6465

**Issue:** Most cultural practices relating to sexuality and sex increase women’s/girl’s vulnerability to HIV/AIDS infection and transmission. Prominent in Africa, these practices are culturally sanctioned and hinder efforts aimed at eliminating them. Lack of knowledge and misinformation about HIV/AIDS may actually lead to an increase in these harmful practices.

**Description:** This paper will highlight some of these harmful practices e.g. early marriages, female genital mutilation, Levirate, Initiation rites, dry sex and cleansing of a widow after death of spouse. These elements will involve an analysis of how they influence HIV vulnerability and prevention among women/girls. This paper will also involve an analysis of the community need for sensitisation and educational activities for traditional leaders, promotion of the role of media in sensitising and educating the public on the link between HIV/AIDS and harmful cultural practices. This paper is based on personal experiences as a reproductive Health specialist with Y.W.C.A, UNFPA, Youth Advisory Group (YAG/ZIHP) and as a Radio presenter (Dj) with Choice fm in Zambia.

**Lesson Learned:** The proliferation of promoting the role media in sensitising and educating the public is an effective way to: access, educate, and support people and agencies engaged in advocacy work at the community level especially at rural level.
**Recommendation:** Promote the role of the media, positive aspects of cultural values, alternative rite of passage as in Kenya so as to move forward in the fight against HIV/AIDS.

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**42. TITLE:** PREVENTING HIV WITH YOUNG PEOPLE: A CASE STUDY FROM ZAMBIA  
**Authors:** Gill G and Mwale V  
**Year:** 2005-2006  
**Status:** Published  
**Study Site(s):** Eastern Province  
**Org/Inst:** President's Emergency Plan for AIDS Relief (PEPFAR)  
**Source:** Kigali Conference on PEPFAR Implementers

The US President's Emergency Plan for AIDS Relief (PEPFAR) is funding thousands of community-based organisations, international NGOs and government services in high HIV prevalence countries to persuade young people to abstain from sex until marriage (Abstinence, Behaviour Change, and Youth – ABY). This paper describes how this strategy is being implemented in Zambia, and community responses to it. It is derived from published information and observations and discussions in the Eastern Province in 2005–2006. A few NGOs have challenged the strategy, but many took the funds and are paying large numbers of peer educators to promote abstinence only. Messages are rife that condoms have holes or don't work sufficiently well to make them worth using. Condom promotion materials have been replaced. Service providers refuse to give condoms to young people. Young people who had attended sexuality and life skills programmes that gave them accurate information are rejecting inaccurate messages and demanding condoms. Without this education, however, inaccurate messages will spread quickly. It is not possible to promote condoms only for high risk people without stigmatising both the people and condoms, and it also jeopardises promoting condom use for contraception. Everything possible must be done to reduce negative messages about condoms. Everyone involved in HIV/AIDS needs to reflect on their own work in relation to this new climate and ensure that all prevention options are widely available, correct information is given and condoms are available for everyone who needs them.

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**43. TITLE:** GENDER DIFFERENCES IN HIV/AIDS KNOWLEDGE AND RISKY SEXUAL BEHAVIOURS AMONG THE UNIVERSITY OF ZAMBIA STUDENTS IN LUSAKA  
**Authors:** Himoonga U  
**Year:** 2006  
**Org/Inst:** University of Zambia  
**Status:** Published  
**Study Site(s):** Lusaka  
**Source:** The University of Zambia

The objective of this study was to establish HIV/AIDS knowledge levels, risk sexual behaviours and presence of gender disparities among the students at the campus. The assumptions were that these students were more enlightened and therefore would understand issues better and have a more accepting attitude towards change of behaviour regarding HIV/AIDS related risks.
An analytical and comparative study design was utilized for this study and the study site was UNZA, Great East Road campus. A stratified random sampling technique was used to select the study sample. A total sample of 236 (118 from each sex) was randomly selected from resident undergraduate students who were below 30 years of age. 

**The findings** revealed that most respondents (76.8%) were aged 21-25 years, 95.7% were single, 133 (56.1%) were sexually experienced, with 16 years as the sexual debut and 91% of those with partners had an age difference of 0-5 years with their partners. 

**Bivariate analyses** yielded the following results; respondents had very high knowledge levels of HIV/AIDS and its palliative treatment although females had slightly lower knowledge levels than males, thus, 80% and 95% for females and males respectively. Although respondents exhibited high knowledge levels, this did not match their behaviour, (p<0.4530). Statistically, gender and behaviour showed significant results with p=0.0000. About 11.2% of the respondents engaged in highly risky sexual behaviour; 53.8% of these were females while 46.2% were males. From this study, the conclusions are that the knowledge levels were high, but there was no association between knowledge and behaviour.

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44. **TITLE:** CIRCUMCISION RAZOR A PREVENTIVE TOOL OR A STRATEGIC VECTOR IN THE TRANSMISSION OF HIV? - A CASE OF ZAMBIA  
**Authors:** Zulu K¹, Bulawo N.D¹ and Zulu W²  
**Year:** 2005  
**Org/Inst:** Zambia Association for Prevention of HIV and Tuberculosis  
**Status:** Published in an Abstract Book for the AIDS 2006 - XVI International AIDS Conference: Abstract no. MOPE0344  
**Study Site(s):** North-Western Province  
**Source:** AIDS 2006 - XVI International AIDS Conference: Abstract no. MOPE0344

**Methodology:** 300 initiators working in the cultural site, in and around North-Western Province were interviewed with a structured questionnaire. Information on the instruments used to cut the foreskin, knowledge about HIV/AIDS and its transmission, exposure to infection and precautions was collected.  

**Results:** 91% reported using a cultural recommended razor - copper-alum. 62% of initiators have very little understanding about occupational risk. An average of 432 children are attended to annually, 76% of children are brought in from the cities that have high HIV prevalence rates. 87% know about sexual transmission of HIV/AIDS, 13% know about transmission through blood transfusion. 6.5% know about the risk of HIV transmission by using the same razor. 67% reported using one razor repeatedly. Only 7.5% used surgical blades. 46% thought children may not have HIV. 61% cited copper-alum as a precaution itself and claimed that copper-alum is a killer of any germ.  

**Background:** Ethnic groups in the north-western part of Zambia practice universal initiation culture of male circumcision. 10-14 old male children are taken to a cultural place called Mukanda, where they are confined for three months for circumcision. Objectives of this cross-sectional study were to assess safety precautions, identify initiation instruments and the knowledge of initiators regarding HIV/AIDS and occupational risk of transmission through infected blood.  

**Conclusions:** Preventing new HIV infections in young people is the only way to stop and control the epidemic and the misery it brings. Awareness about occupational risk of HIV is very poor. Repeated use of un-sterile razors in circumcision is likely to undo the successes

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that circumcision may play in stopping HIV and may contribute seriously to HIV/AIDS epidemic in Zambia. It emphasizes the need for oriented education to create awareness among initiators and conveying information in this concern, focused on motivation, modern practice and safe circumcision procedures.

45. **TITLE:** RAPID ASSESSMENT ON HIV/AIDS/STIs  
**Authors:** Sakala R, Bwalya A and Wamuyi B  
**Year:** 2003  
**Org/Inst:** Cross Border Initiative  
**Status:** Published in and Abstract Book, 4th National Health Research Conference  
**Study Site(s):** Chipata  

**Objectives:** The main objective of the study is to create a better understanding of successful approaches in alleviating problems faced by young people in Zambia.  
**Methodology:** The study collected two types of data, namely Primary and Secondary. The approach entailed reviewing existing literature in the area of young people and HIV/AIDS.  
**Results:** Young people from poverty hit families were not likely to practice preventing sexual behaviours than those from the less poverty hit families. Night club based young people especially young girls did not want to be identified, they were motivated by the desire to meet a man who would marry them and change their lives. As a consequence, night club based girls could not publicly acknowledge their risks of STIs/HIV infections. Hence many went against their better judgment by not using condoms.  
**Conclusions:** These findings illustrate how social context can interact with personal identity to strongly influence young people to take precautions during high risk sexual encounters. A thorough understanding of issues of personal identity and social context can help improve the design of HIV/AIDS/STIs prevention interventions aimed at young people.  
**Funding Sources:** Zambia National Aids Network (ZANAN)

46. **TITLE:** MICROBICIDES AND FEMALE CONDOMS THE ANSWER FOR FEMALE UNIVERSITY OF ZAMBIA STUDENTS IN ZAMBIA  
**Authors:** Katuta C and Sichuundu W  
**Year:** 2003  
**Org/Inst:** University of Zambia, Lusaka, Zambia  
**Status:** Published in an Abstract Book for the XV International AIDS Conference: Abstract no. C10626  
**Study Site(s):** University of Zambia  
**Source:** The XV International AIDS Conference: Abstract no. C10626

**Issue:** It has been observed that female students at the University of Zambia (UNZA) find it difficult to negotiate for safe sex with their partners. This failure for the female students to negotiate for safer sex has led them to have unexpected pregnancies, contracting Sexually Transmitted Infections (STIs) and HIV/AIDS. The major objective of the study was to find out why the female students fail to negotiate for safer sex.
Methodology: 100 individual interviews of the female students were conducted at the Lusaka Campus. Respondents were asked about safe sex, HIV/AIDS and others problems. The students also finished a self administered written questionnaire about their safe methods, sexual activity and drug use (e.g. alcohol and illicit drug use)

Results: 80% of the female recognise that they face problems in negotiating for safe sex. 85% of the female student who took part in the study stated that the power imbalance between them and their male counter parts makes feel weak to ask for safe sex. 65% stated that having safe sex would send a wrong signal to their partners who may think that they are not faithful. 50% of the female students state that they have had least one unsafe sexual act by the time they reached their second year of study at the University. 70% state that there male partners have threaten them with violence least once because the male partner wanted to have unprotected sex. 70% of the female students support the introduction of female condoms and microbicides at the University as a means of empowering them in making safe sex decisions just like their male counterparts are able to do so.

Conclusion: There is need to introduce microbicides and awareness about female condoms at the University of Zambia. HIV/AIDS prevention and control messages must be strengthened particularly for students and the population in general.

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47. TITLE: THE USE OF ANTIRETROVIRAL DRUGS FOR HIV POST-EXPOSURE PROPHYLAXIS (HIV-PEP) AFTER CHILD SEXUAL ABUSE, WHAT DO PEOPLE IN THE COMMUNITY IN LUSAKA KNOW ABOUT IT?
Authors: Simwenda M1, Silwamba G2
Year: 2004-2005
Org/Inst: 1Ministry of Health and 2Central Board of Health
Status: Published in the AIDS 2006 - XVI International AIDS Conference: Abstract no. THPE0549
Study Site(s): Lusaka

Issues: anti-retroviral drugs are available at no cost for HIV Post-Exposure Prophylaxis (HIV-PEP) after child sexual abuse. In 2004, 363 children under 16 years of age were reported to have been sexually abused in Lusaka, Zambia and only 1.7% (6) of these children were put on HIV-PEP to reduce the risk of acquiring HIV infection after sexual abuse.

Description: This study was done to find out if people in Lusaka actually know about HIV-PEP and also to compare reported child sexual abuse cases of 2004 and 2005.

Lessons learned: 455 people were randomly sampled and interviewed (questionnaire-based). 97% (441) of these people did not know and have never heard of HIV-PEP. Only 3% (14) of the participants have heard about HIV-PEP, but do not know what it’s all about. And their knowledge is not influenced by age, gender, occupation or educational level. In 2005, 954 children less than 16 years of age were reported to have been sexually abused in Lusaka, and of these children, only 7.1% (68) were put on HIV-PEP to prevent them from acquiring HIV infection after sexual abuse. It is clear that people in the community of Lusaka do not know about HIV-PEP and also that child sexual abuse cases are increasing, and still just a few children are put on HIV-PEP to reduce the risk of acquiring HIV after sexual abuse.

Recommendations: People in the community have to be educated about HIV-PEP after child sexual abuse and also about its importance in the prevention of the spread of HIV/AIDS. This way, the number of children put on HIV-PEP after sexual abuse can be
increased, and therefore will be able to prevent more children from acquiring HIV after sexual abuse. And also, it should be emphasized that child sexual abuse is an important aspect that needs critical attention in the prevention of HIV/AIDS.

48. **TITLE:** AWARENESS OF HIGH RISK BEHAVIOURS OF HUMAN IMMUNE VIRUS (HIV) TRANSMISSION BY YOUNG RURAL PEOPLE IN KATETE DISTRICT, ZAMBIA.

**Authors:** Kinkese D. M.

**Year:** 2001

**Org/Inst:** Leeds Metropolitan University

**Status:** Published in an Abstract Book, 4th National Health Research Conference

**Study Site(s):** Katete


**Objectives:** The objectives of this research study were used to identify the degree of awareness by young rural people (12-16 years of age) of high-risk behaviours related to catching and transmitting HIV; to use the information to identify the strategic control measures for the prevention and the control of HIV targeted to young people to be included in the national intervention HIV/AIDS policy; to relate the conclusion to the level of sex education in schools and to discuss the most effective HIV/AIDS interventions which would have maximum impact in young people.

**Main Findings:** The results showed that all of the children were at some risk of HIV infection, but that the level and cause of this risk differed between the groups. Among girls, the focus group of school drop out girls was particularly at risk. The majority of school drop out girls did not know what caused the HIV and that children could catch HIV/AIDS. However the focus group of dropped out of schoolboys was also particularly at more risk, the group believed that witchcraft transmitted HIV/AIDS. The proportion of boys and girls without information on HIV/AIDS was about 33.5 % of the girls and 23.5 % of the boys. In addition most of the girls did not know what caused HIV/AIDS and only three boys did (16.5 %) that meant 5 % of interviewed young people had known the cause of HIV. While some girls could have some sex education most of the boys did not have sex education, they learnt from the street. Condoms were not used most of the times. The level of understanding of high-risk behaviours among young people was generally very low.

**Conclusions:** This study has identified low awareness of high-risk behaviours of HIV transmission among young people, by establishing inadequate awareness on HIV infection in young people interviewed in Katete. Some misconception has also been revealed coupled with differences between attitudes towards high-risk behaviours and practice.

**Funding Sources:** The World Health Organisation and the Zambian Government made this study possible through a study grant.

49. **TITLE:** WHY IS SATANISM LINKED TO HIV TESTING AND HIV PREVENTION PROGRAMMES AND ACTIVITIES IN ZAMBIA?

**Authors:** Bond V1,2, Colson E3 and Kafuma T1 V et al

**Year:** 2003
**Org/Inst:** 1Zambart Project, School of Medicine, Zambia; 2 London School of Hygiene and Tropical Medicine, U.K.; 3University of Berkeley,  
**Status:** Published in an Abstract Book, 3rd National Health Research Conference  
**Study Site(s):** Gwembe, Luapula, Copperbelt, Lusaka (Misisi, Kamwala, and Chipata compounds), Choma (Mbabala)  
**Source:** Abstract Book, 3rd National Health Research Conference, Zambia

**Objectives:** To understand/unravel the association between Satanism and HIV in Zambia; To assess the scale and harm of this association on HIV programmes and activities; To give examples of how to challenge this association; To gather from conference participants their experiences and interpretations of the association.

**Design:** Analysing material from a variety of research studies conducted from the 1990s onwards in Zambia by the authors. In addition, for the purpose of this presentation, one focus group discussion will be conducted with a group of health workers, researchers and PLWHA.

**Study Settings and Populations:** Diverse number of communities and ethnicities interviewed within different research studies– namely: Gwembe Tonga, Luapula, Copperbelt, Lusaka (Misisi, Kamwala, and Chipata compounds), Choma (Mbabala).

**Results:** There is a widespread belief in the existence of Satanists in Zambia; namely people who feed off and exploit human blood and/or body parts. Documented by the various research studies, it is evident that for a minority of people, this belief prevents them either accessing (or participating in) a variety of HIV programmes and related research projects (VCT, PMTCT, skills building, ARVs) or prevents them accepting incentives (drinks, snacks, home visits, money, free drugs, free health care). The blood taking involved in some of the programmes instigates fears about the use and exploitation (selling) of blood and any linked incentives or drugs evokes fears of entering into an obligation with potential Satanists or indeed of being poisoned. In health care settings, it is mostly health workers and outsiders (‘whites’) who are accused of being Satanists. Historically, the discourse about Satanism can be traced to Pentecostal churches in the United States in the 1980s. This discourse has apparently filtered through to Zambia, carried on the wave of Christianity experienced by Zambia from the late 1980’s onwards. Satanic rumours are becoming more frequent and have assimilated with fears about kamunyama (abductors of victims killed for blood and body parts). These fears combine with high HIV prevalence (and untimely death), mistrust of health workers and researchers, moral church discourse and other HIV conspiracy theories.

**Funding Sources:** DFID, SIDA, USAID, Welcome Trust, WHO

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<th>50.</th>
<th>TITLE:</th>
<th>POLYGAMY, A CULTURAL INFLUENCE OF HIV/AIDS TRANSMISSION FOR THE TONGA OF SOUTHERN PROVINCE ZAMBIA</th>
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<td>Authors:</td>
<td>Nkunika M and Kalipenta J</td>
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<td>Status:</td>
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<td>Study Site(s):</td>
<td>Southern Province</td>
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Background: The study objective is to assess the strength of cultural practices in predisposing people to behaviour leading to HIV infection. Among the Tonga, virility, well-being, wealth and prosperity are traditionally measured through, inter alia, polygamy, many children, dowries, many cattle, sexual exploits outside marriage by men. These practices exist in gender insensitive environments where women have little say in men’s behaviour. Women and girls are exposed to HIV/AIDS in situations where they are powerless and vulnerable sexually.

Methodology: Qualitative and quantitative information was collected from consensus building workshops with Village Headpersons and their secretaries (170), 200 Smallholder farmers, 78 Widows and 155 Youths; focus group discussions with 30 peer educators, interviews with 2 chiefs, community field reports and individual testimonies.

Results: While many chiefs have implemented measures abolishing ritual cleansing by sexual intercourse, there are pockets where this is still practiced and demanded. Widow inheritance is becoming less frequent. Communities are aware of the mode of HIV transmission, risky behaviours, preventive strategies and indicators of behaviour change from anti-AIDS campaigns over the past two decades. Low literacy levels in rural areas still perpetuate superstitious beliefs.

On the positive side, communities are now playing a more active role in prevention of the further spread of HIV transmission. Many of the most rigid and deeply entrenched negative cultural practices have been substituted or abolished. There are still difficulties in accepting condoms particularly in marriage situations in both rural and urban areas, sometimes due to church influences. The biggest challenge is that polygamy can leave 5 to 6 women or more and up to 30 to 60 or more children orphaned by the demise of one man.

Conclusion/Recommendations: Urgency is needed to persuade polygamous people to accept safer sex practices such as condom use (since the AB does not apply to them), strengthen positive cultural and traditional support systems and deal with poverty as a contributory factor to polygamy.
prevention of HIV among MSM, ZAPHIT consequently developed an HIV program targeted at MSM. But this initiative cannot take root as funders with interest to fund the initiative are threatened with expulsion from the country. Local AIDS Service Organizations (ASOs) who share ZAPHIT stance risk losing legitimacy through deregistration by government. Decision-makers resist evidence and knowledge of how HIV infection is spread among and from MSM to heterosexuals.

**Lessons learned:** Unprotected anal sex is at the core of HIV transmission in many Zambian contexts with consequences for infections, subsequently transmitted heterosexualy. Non-existence of HIV prevention programs for MSM is an impediment to condom use and risk behavior reduction. Punitive approaches have driven MSM who need prevention and care services underground. ASOs have abandoned to bridge the gap in HIV prevention for fear of losing legitimacy.

**Recommendations:** Authorities must recognize that preventing the transmission of HIV is complex. Discriminatory laws on MSM must be repealed to create an environment where people are free to acknowledge their sexual identity, to seek information, experience the support of peers and role models, to receive services that fit, rather than exclude their experiences.

**Strategic objective 2: Prevent mother to child transmission**

52. **TITLE:** CHALLENGES OF PMTCT PROGRAM IMPLEMENTATION IN RURAL ZAMBIA.  
**Authors:** Ng’uni C, Lubasi T and McFarlane Y et al  
**Year:** 2001  
**Org/Inst:** Mongu District Health Management Team  
**Status:** Published in an Abstract Book, 3rd National Health Research Conference  
**Study Site(s):** Mongu  
**Source:** Abstract Book, 3rd National Health Research Conference, Zambia

**Description:** Our team established PMTCT services in Mongu District, Western Province of Zambia. Mongu is a remote provincial capital of just under 200,000 people, with an estimated 8,000 deliveries per year and an HIV prevalence rate among pregnant women of 30%. Only 1 in 3 births occur in a health facility, and the antenatal care attendance rate is the lowest in Zambia. Knowledge about HIV/AIDS and its prevention is also low: only half of women are aware that HIV can be transmitted from mother to child. Sparsely populated, the distance between clinics and town center is vast – as much as 5 hours by 4-wheel drive vehicle. Some clinics are inaccessible for months each year due to flooding of the Zambezi river plains. These conditions increase transport costs, complicate supply management and data reporting, and impede the project’s ability to upgrade physical infrastructure. Over half of the 28 clinics have only one trained staff member. District clinical staffing is at 50%, with 100% shortfall at the highest level of medical staff and 35% shortfall of nurses. Seven lab techs are budgeted but the district has only one. Lack of physical infrastructure and resources is of critical concern; only 9 clinics have electricity and 22 of the 28 need delivery beds.

**Conclusions:** PMTCT in rural areas requires more fundamental infrastructural, administrative, and training support than similar programs in urban clinics. PMTCT can serve as a foundation for HIV prevention and treatment programs. In addition to standard training and supplies, exceptional transport, infrastructure support, and staff retention incentives are essential for rural PMTCT implementation. Non-traditional staff such as
traditional birth attendants, Certified Daily Employees (CDEs), and community lay counsellors must be considered if widespread availability of services is to be assured.

53. TITLE: NO BENEFIT OF EARLY CESSATION OF BREASTFEEDING AT 4 MONTHS ON HIV-FREE SURVIVAL OF INFANTS BORN TO HIV-INFECTED MOTHERS IN ZAMBIA: THE ZAMBIA EXCLUSIVE BREASTFEEDING STUDY
Authors: Walter J¹, Mwiya M² and Kuhn L¹ et al
Year: 2005
Org/Inst: University of Zambia Dept of Community Medicine Center for HIV Information, University of California
Status: Published in an Abstract Book, 4th National Health Research Conference
Study Site(s): Lusaka

The Zambia Exclusive Breastfeeding Study (ZEBS) aimed to test whether or not there is net benefit of stopping breastfeeding abruptly at 4 months.

**Methodology:** At two clinics in Lusaka, Zambia, 958 HIV-infected women and their infants were recruited prenatally, given single-dose nevirapine, and randomised postnatally into 1 of 2 groups: Group A – abrupt cessation of breastfeeding at 4 months and Group B – continued breastfeeding for the duration of the mothers’ informed choice. Exclusive breastfeeding (EBF) was promoted in both groups. Pairs were followed for 24 months and HIV infection was diagnosed by PCR. The primary outcome was HIV-free survival.

**Results:** Overall follow-up to HIV infection, death or 24 months (85%) and EBF compliance through 4 months were high (> 90%) There was no significant difference in HIV-free survival between the two randomised groups. Restricting the analysis to infants surviving HIV-uninfected at 4 months, 17% of 329 infants in Group A and 19% of 331 infants in Group B had HIV infection or had died by 24 months of age (p=0.21). Among 153 HIV-infected infants diagnosed by 4 months, there was a significant benefit for continued breastfeeding: mortality was higher by 12 months in group A (57%) than in group B (29%, p=0.01). Weaning compliance in Group A was modest: 65% reported stopping all breastfeeding by 6 months. The median duration of breastfeeding in Group B was 16 months. In an as practiced analysis, there was no significant difference in HIV-free survival overall between infants breastfed for < or > 6 months. For asymptomatic mothers with higher CD4 counts (>350), there was a trend towards better outcomes for infants if they were breastfed longer than 6 months (p=0.057).

**Conclusions:** Our results caution against early cessation of breastfeeding for HIV-infected women living in low resource settings. In our study, stopping breastfeeding at 4 months resulted in a less than anticipated reduction of HIV transmission; a benefit that was offset by increased mortality among uninfected infants. There was also a substantial mortality risk associated with stopping breastfeeding early among already HIV-infected infants. Programs providing HIV diagnosis services should strongly encourage continued breastfeeding for infants found to be HIV-infected.

54. TITLE: CHALLENGES OF PMTCT PROGRAM
Authors: O'Meara T¹, Lubasi T², Kolsky R². et al
Year: 2004  
Org/Inst: 1Center for Infectious Disease Research in Zambia, Lusaka, Zambia; 2Mongu District Health Management Team, Mongu, Zambia; 
Status: Published in The XV International AIDS Conference: Abstract no. WePeE6778 
Study Site(s): Mongu 
Source: The XV International AIDS Conference: Abstract no. WePeE6778 

**Issues:** PMTCT has proven feasible and cost-effective in urban Zambia. Systematic and programmatic challenges arise as services expand to remote or rural areas. 

**Description:** Our team established PMTCT services in Mongu District, Western Province of Zambia. Mongu is a remote provincial capital of just under 200,000 people, with an estimated 8,000 deliveries per year and an HIV prevalence rate among pregnant women of 30%. Only 1 in 3 births occur in a health facility, and the antenatal care attendance rate is the lowest in Zambia. Knowledge about HIV/AIDS and its prevention is also low: only half of women are aware that HIV can be transmitted from mother to child. Sparsely populated, the distance between clinics and town centre is vast - as much as 5 hours by 4-wheel drive vehicle. Some clinics are inaccessible for months each year due to flooding of the Zambezi river plains. These conditions increase transport costs, complicate supply management and data reporting, and impede the project's ability to upgrade physical infrastructure. Over half of the 28 clinics have only 1 trained staff member. District clinical staffing is at 50%, with 100% shortfall at the highest level of medical staff and 35% shortfall of nurses. 7 lab techs are budgeted but the district has only 1. Lack of physical infrastructure and resources is of critical concern; only 9 clinics have electricity and 22 of the 28 need delivery beds. 

**Lessons learned:** PMTCT in rural areas requires more fundamental infrastructural, administrative, and training support than similar programs in urban clinics. PMTCT can serve as a foundation for HIV prevention and treatment programs. 

**Recommendations:** In addition to standard training and supplies, exceptional transport, infrastructure support, and staff retention incentives are essential for rural PMTCT implementation. Non-traditional staff such as traditional birth attendants must be utilized to ensure widespread availability of services.

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**55.**  
**TITLE:** DETERMINANTS OF KNOWLEDGE ON PMTCT OF HIV AMONG PREGNANT WOMEN ATTENDING ANTENATAL CLINIC IN NDOLA URBAN DISTRICT  
**Authors:** Ng’ambi H  
**Year:** 2004  
**Status:** Published  
**Study Site(s):** Ndola Urban  
**Organization:** The University of Zambia, School of Medicine  
**Source:** The University of Zambia, School of Medicine  

**Objective:** The main objective of the study was to establish the determinants of knowledge on MTCT of HIV among pregnant women attending ANC in Ndola Urban District  

**Design:** This was a cross sectional study, which took an analytical approach. Using a Likert scale, two groups of women were generated, one group was knowledgeable and the other was not knowledgeable. A structured interview schedule was used to establish the determinants of their knowledge. Settings: The study covered six health centres, two from
each of the three zones in Ndola Urban District in the Copperbelt province of Zambia. Subjects: The subjects consisted of 300 consenting pregnant women who were randomly selected from antenatal clinics.

Main Outcome Measures: Pregnant women’s knowledge levels on MTCT of HIV measured as knowledgeable or not knowledgeable and factors that influenced the knowledge on MTCT of HIV among the pregnant women were seen as the main outcome measures.

Conclusion and Recommendations: The study concluded that there was an association between education level; listening to the radio everyday; healthcare providers’ reception; accessibility to VCT centres; going to VCT centres and knowledge on MTCT. The study also concluded that younger women aged between 15 and 24 were not knowledgeable on MTCT of HIV. The report concluded with recommendations that there was an urgent need for target specific interventions in disseminating of information; improving the utilization of VCT centres; intensifying IEC in healthcare settings; ensuring women aged 15-24 have access to the right information, education and services; and that both electronic media and print media should continue to be used in disseminating information on MTCT of HIV infection using local languages.

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56. TITLE: INFANT FEEDING PRACTICE FALLS SHORT OF RECOMMENDATIONS IN PILOT PMTCT SITES IN ZAMBIA AND KENYA
Authors: Kiragu K, Eerens P and Rutenberg N. et al
Year: 2000-2002
Org/Inst: HORIZONS
Status: Published in the abstract book for the XV International AIDS Conference: Abstract no. WePeE6837
Study Site(s): Chipata Compound, Lusaka
Source: The XV International AIDS Conference: Abstract no. WePeE6837

Methodology: Researchers compared the infant feeding practices, based on a 24-hour recall, of mother and infant pairs before the introduction of PMTCT and among women who received PMTCT services in 2000-2002 at Chipata Clinic in Lusaka, Zambia (n=264 and 374; mothers of 3 month old infants), and district hospitals in Karatina (n=328 and 412; mothers of 6 week old infants) and Homa Bay (n=329 and 313; mothers of 6 week old infants) in Kenya. Midwife/counsellors administered questionnaires to HIV-positive and HIV-negative women.

Results: A slightly larger proportion of women who were exposed to PMTCT services reported using replacement feeding (9.8% vs. 2.4% in Lusaka; 4.4% vs. 0.3% in Karatina; 4.0% vs. 1.9% in Homa Bay). There was no significant change from the undesirable practice of mixed feeding to the safer practice of exclusive breastfeeding; 37%, 69% and 70% of women in Lusaka, Karatina and Homa Bay, respectively, continue to practice mixed feeding. Exclusive breastfeeding declined significantly in Karatina (34% vs. 27%, p<.05).

Conclusions: Promoting good infant feeding practices is challenging and PMTCT activities at pilot sites have failed to have an impact to date. PMTCT providers should extend infant feeding counselling beyond antenatal care visits, following-up in the postpartum period when women are making decisions about how to feed their infants and grappling with the implementation of their choices.
57. **TITLE:** IN AN URBAN AFRICAN SETTING, THE COST – EFFECTIVENESS OF PMTCT SERVICES IMPROVES AS SERVICES EXPAND  
**Authors:** McFarlane Y, Sinkala M and Ng’uni *et al*  
**Year:** 2001-2004  
**Org/Inst:** Central Board of Health, Zambian Ministry of Health  
**Status:** Published in an Abstract Book, 3rd National Health Research Conference  
**Study Site(s):** Lusaka  
**Source:** Abstract Book, 3rd National Health Research Conference, Zambia  

**Methodology:** We analysed expenditures and process indicators to estimate cost-effectiveness.  
**Background:** In Oct 2001, we initiated a NVP-based program for prevention of mother-to-child HIV transmission (PMTCT) at two clinics in Lusaka, Zambia. We sought to deploy services quickly and efficiently and relied heavily upon existing staff in the Lusaka District to provide counselling and other aspects of service provision. Within two years of operation, we expanded services to 24 clinics and the University Teaching Hospital.  
**Results:** Between October 2001 and August 2004, we had 109,599 new antenatal attendees, of whom 86,725 (79%) were tested for HIV. 20,443 (24%) were seropositive. 16,399 (80%) mothers were given NVP, and 7,034 (42%) infants were given NVP. We spent US $789,903 over this 35-month period: $171,792 on dedicated PMTCT personnel, $115,289 on over-time shifts for the existing district staff, $135,349 on back-up supplies for the clinics (e.g. RPR test kits, confirmatory HIV test kits), $25,837 on equipment (e.g. 2 vehicles, computers, refrigerators), $15,933 on transportation, $211,731 on administrative costs, and $113,972 on training. Determine test kits and nevirapine were donated. If we subtract the start-up costs, which include purchase of equipment and training, the total cost of administering the program for 35 months was $504,754. In the initial 6 months of operation, the cost of administering the entire program was US$13 per patient counselled, US$88 per seropositive woman identified, US$146 per dose of maternal NVP dispensed, or US$890 per infection averted (assuming only those receiving full mother-infant course of NVP benefited). These costs have decreased to US$3.55 per patient counselled, US$23 per seropositive woman identified, US$24 per dose of maternal NVP dispensed, or US$149 per infant infection averted during the last 6 months of operation.  
**Conclusion:** As programs grow and become increasingly integrated into routine services, their cost-effectiveness increases dramatically. Systems planning PMTCT service expansion should separate up-front training and capital expenditures from program maintenance costs.

58. **TITLE:** [ALPHA]-DEFENSINS IN THE PREVENTION OF HIV TRANSMISSION AMONG BREASTFED INFANTS  
**Authors:** Kuhn L*; Trabattoni D +; Kankasa C *et al*  
**Year:** 2004  
**Org/Inst:** University Teaching Hospital  
**Status:** Published in the JAIDS Journal of Acquired Immune Deficiency Syndromes. 39(2):138-142, June 1, 2005  
**Study Site(s):** Lusaka
[alpha]-Defensins have been observed to have anti-HIV activity but have not been investigated in relation to mother-to-child HIV transmission. We measured the concentration of [alpha]-defensins in breast milk of HIV-positive mothers and tested whether the concentrations were associated with HIV transmission. A nested case-control study of 32 HIV-positive women who transmitted HIV to their infants and 52 randomly selected HIV-positive women who did not transmit HIV to their infants was conducted in Lusaka, Zambia. [alpha]-Defensins were detected in most (79%) of the milk samples tested. Concentrations of [alpha]-defensins increased as breast milk HIV RNA quantity increased, and breast milk HIV RNA quantity was, in turn, a strong and significant predictor of HIV transmission. After adjustment for milk HIV RNA quantity, however, [alpha]-defensin concentration was significantly associated with a decreased risk of intrapartum and postnatal HIV transmission (odds ratio = 0.3, 95% confidence interval: 0.09-0.93). Our data suggest that there may be a role for [alpha]-defensins in prevention of HIV transmission to breastfed infants.

59. TITLE: BARRIERS TO UPTAKE OF PREVENTION OF MOTHER-TO-CHILD TRANSMISSION OF HIV SERVICES IN LUSAKA, ZAMBIA: A QUALITATIVE STUDY
Authors: Washington S¹, Bond G²
Year: 2003
Org/Inst: ¹Harvard Medical School, Boston, United States; ²London School of Hygiene and Tropical Medicine
Status: Published; The XV International AIDS Conference: Abstract no. TuPeD5036
Study Site(s): Lusaka Health District Clinics
Source: The XV International AIDS Conference: Abstract no. TuPeD5036

Methodology: 20 in-depth interviews were conducted with patients at three clinics in the Lusaka Health District, and nine interviews were conducted with key informants. Data was collected on the nature of women's marital relationships, family support systems, community attitudes, and on their experience of PMTCT services. Thematic analysis was done using the framework approach.

Results: The main barriers to uptake of PMTCT were: (1) Fear of husband's anger, blame, or beating. (2) Fear of abandonment or eviction. (3) Rumours that HIV blood testing was for satanic purposes. (4) Fear that finding out one's status would lead to premature death due to wasting, depression, or suicide. (5) Lack of emphasis on Nevirapine during counselling. (6) Distrust of the medicine and health care providers. (7) Lack of maternal benefits.

Conclusions: For many women, the perceived risks of blame, domestic violence, abandonment, or divorce, in the context of financial dependence and systematic gender inequality, outweighed the perceived benefits of confirming one's HIV status. As a result many women refused testing. This research describes in detail how women's subordinate relationship with their husbands and unequal position in society constitute a fundamental barrier to women's access to services and shape their experience of PMTCT. It reveals the importance of taking into account gender analysis and community attitudes when implementing HIV prevention and treatment programs.
Background: New HIV infections in children through MTCT continue to rise because of our failure to scale up known high impact interventions. Specific challenges include limited geographical coverage, weak health systems, inadequate community engagement and lack of effective coordination to oversee implementation. UNICEF and the IATT reviewed progress and country experiences to draw lessons for accelerating scale up.

Methodology: A questionnaire was administered through UNICEF offices to collect program coverage data for 2004 from governments. Of the 63 countries surveyed, data from 59 with 86% of HIV-infected women was included in the final analysis. Further validation of information was conducted through extensive literature reviews, key informant interviews and consultation with UNAIDS.

Results: Overall ART prophylaxis coverage has increased from 2% in 2003 to 9% in 2004. In 8 initial pilot countries (Botswana, Burundi, Kenya, Rwanda, Tanzania, Uganda, Zambia and Zimbabwe), there was more than a 10-fold increase in pregnant women HIV testing and receiving ARV prophylaxis between 2002-2004. 9 of the surveyed countries provided ARV prophylaxis to over 45% of HIV-infected women. However, most countries are still lagging behind the 2010 UNGASS operational target of 80% access. Despite the poor program coverage, countries are beginning to address some of the key bottlenecks: Using a decentralised approach to scale up, Cameroon and Zambia increased the number of sites from 64 to 420 in three years and 80 to 254 in one year respectively; Botswana increased HIV testing uptake from 75% to 90% within three months after introduction of routine offer of HIV testing, the mothers program in South Africa and the male championship in Malawi have contributed to greater community involvement.

Conclusions: Numerous evidence-based bottleneck-solving strategies now exist. These experiences need to be rapidly documented and disseminated to guide global programming if the universal access goal and 2010 PMTCT UNGASS target are to be achieved.
Background: Intrapartum and neonatal single-dose nevirapine are essential components of perinatal HIV prevention in resource-constrained settings, but can induce resistance to other non-nucleoside reverse transcriptase inhibitor drugs. We aimed to investigate whether this complication would be reduced with a single peripartum intervention of tenofovir and emtricitabine.

Methods: We randomly assigned 400 HIV-infected pregnant women who sought care at two public-sector primary health facilities in Lusaka, Zambia. One was excluded, 200 were assigned to receive a single oral dose of 300 mg tenofovir disoproxil fumarate with 200 mg emtricitabine under direct observation, and 199 to receive no study drug. Short-course zidovudine and intrapartum nevirapine were offered to all HIV-infected women, according to the local standard of care. Women who met national criteria for antiretroviral therapy were referred for care and not enrolled. Our primary study outcome was resistance to non-nucleoside reverse transcriptase inhibitors at 6 weeks after delivery. We used standard population sequencing to determine HIV genotypes. Analysis was per protocol. This study is registered with ClinicalTrials.gov, number NCT00204308.

Findings: Of the 200 women who were randomly assigned to the intervention, 14 were lost to follow-up or withdrew from the study, two did not take study drug according to protocol, and one specimen was lost; 23 of 199 controls were lost to follow-up or withdrew from the study, and three specimens were lost. Women given the intervention were 53% less likely than controls to have a mutation that conferred resistance to non-nucleoside reverse transcriptase inhibitors at 6 weeks after delivery (20/173 [12%] vs. 41/166 [25%]; risk ratio [RR] 0.47, 95% CI 0.29–0.76). We noted postpartum anaemia, the most common serious adverse event in mothers, in four women in each group. 20 of 198 (10%) infants in the intervention group and 23 of 199 (12%) controls had a serious adverse event, mostly due to sepsicaemia (n=22) or pneumonia (n=8); these events did not differ between groups, and none were judged to be caused by the study intervention.

Interpretation: A single dose of tenofovir and emtricitabine at delivery reduced resistance to non-nucleoside reverse transcriptase inhibitors at 6 weeks after delivery by half; therefore this treatment should be considered as an adjuvant to intrapartum nevirapine.

Strategic objective 3: Prevent HIV transmission through blood and blood products

No appropriate abstracts were submitted

Strategic objective 4: Prevent HIV transmission in health care and other care settings and promote access to post exposure prophylaxis treatment

62. TITLE: CHARACTERISTICS OF PATIENTS ENROLLED IN A COMMUNITY BASED HIV TREATMENT PROGRAM IN LUSAKA

Authors: Zulu I. et al
**Background:** In May 2004, the Lusaka District HIV Care and Treatment Program started in four district health centres, with support from the Zambian government, the Center for Disease Control and Prevention, and the Elizabeth Glaser Paediatric AIDS Foundation.

**Description:** In the first four months of operation, a total of 2978 individuals have been enrolled into long-term HIV care, 40% male and 60% female. The median CD4 count of patients at their first visit was 134 cells/mm$^3$, with 53% at 200 cells/mm$^3$ or lower. On initial history and physical exam, 17% were found to be WHO stage I, 22% at stage II, 50% at stage III, and 11% stage IV. The large proportion of patients in the stage III category is believed to be a result of the high TB prevalence regionally.

One thousand six hundred and fourteen enrolled patients (54%) were started on antiretroviral therapy (ART), in accordance with WHO guidelines. The proportions of males (42%) and females (58%) did not differ from the general clinic population. As expected, the median CD4 count for individuals starting ART was substantially lower when compared to the general clinic population (median = 103 cells/mm$^3$; 79% under CD4 count 200 cells/mm$^3$). Higher proportions of individuals also had clinical evidence of advanced disease (56% WHO stage 3; 14% WHO stage 4). One hundred and twenty-eight deaths (4% of all patients) were reported among program enrols at the end of four months of operation. The majority had already started ART (61%) and had a high baseline WHO stage (III or IV, 68%). The median CD4 count was also low (83 cells/mm$^3$; 93% under 200 cells/mm$^3$).

**Conclusions:** The early success of the Lusaka District HIV Care and Treatment Program demonstrates that rapid scale-up of ART services is possible in the primary care setting. The numbers of individuals seeking care is only expected to increase, as services expand to all 24 district health centres by 2005. The large proportion of individuals starting HIV treatment early on is a reflection of the severe immunosuppression and advanced clinical disease prevalent within the HIV-infected population in the region.

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**63.**  
**Title:** COLLEAGUES WITH HIV/AIDS: PERSPECTIVES FROM HEALTH WORKERS IN ZAMBIA  
**Authors:** Kiragu K$^1$, Ngulube T. J$^2$ and Nyumbu M$^3$ et al  
**Year:** 2003  
**Org/Inst:**  
$^1$Zambia Integrated Health Program, Lusaka, Zambia;  
$^2$Population Council/Horizons, Nairobi, Kenya;  
$^3$INESOR/University of Zambia, Lusaka, Zambia  
**Status:** Published  
**Study Site(s):** -  
**Source:** Zambia Integrated Health Program, Lusaka, Zambia  

**Background:** While little is known about the prevalence of HIV/AIDS among health workers, it is clear they are not immune from the disease. This means that many health workers have colleagues who are HIV+, and have to deal with the human challenges of working not only with HIV+ patients but also with HIV+ colleagues. This qualitative study explores how health workers in Zambia are dealing with workmates who have HIV/AIDS,
and is part of an operations research study to develop a provider-centered HIV/AIDS initiative.

**Methodology:** 30 FGDs were conducted in December 2003 among over 150 staff working in 5 large hospitals in Zambia. Interviews were conducted separately for men and women. The interviews involved all cadres of hospital workers including medical, paramedical, administration and support staff. This paper confines itself to the findings for the medical staff.

**Results:** Many health workers were familiar with colleagues who were HIV+, usually revealed privately between confidants, or from suspicious signs and symptoms. Respondents had mixed feelings regarding whether hospital management would be supportive of them if they were HIV+ themselves. Individual health workers said they were comfortable working with HIV+ colleagues, though they felt their co-workers were not always comfortable. Health workers also reported conflict regarding how to treat HIV+ colleagues, and feared being paternalistic. They also were uncertain on what to do with an HIV+ colleague who was self-stigmatising, as well as how to address colleagues who were unfair to their HIV+ counterparts.

**Conclusions:** These FGDs indicate that health workers need the same support systems employees in other sectors get. They could benefit from a workplace program to help them address the emotional issues associated with HIV/AIDS. In particular, they need programs to help them cope with stigma in the workplace, and how to relate with their HIV+ colleagues.

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**64.**

**TITLE:** PREVENTING THE MEDICAL TRANSMISSION OF HIV IN ZAMBIA  
**Authors:** Chemonics International Inc, JHPIEGO, Manoff Group  
**Year:** 2004  
**Org/Inst:** Chemonics International Inc. JHPIEGO Manoff Group  
**Status:** Published  
**Study Site(s):** Ndola and Chipata  
**Source:** Chemonics International Inc. JHPIEGO Manoff Group

**Methodology:** The Central Board of Health (CBOH) and the Prevention of Medical Transmission of HIV Program conducted a rapid assessment of injection safety practices in two districts in Zambia in late March 2004. The districts selected were Ndola, the provincial capitol for Copperbelt Province, and Chipata, the provincial capital for Eastern Province. Evaluation teams conducted provider observations and interviews, facility audits, and client interviews and community focus groups.

**This assessment focused on three main areas:** hospital and health centre incineration and waste disposal; necessary supplies and equipment (e.g., syringes, sharp boxes etc.); community and patient knowledge, attitudes and practices relevant to injection safety.

**Results:** Overall, the results from the injection provider observations (45), interviews with providers (48) and prescribers (28), facility audits (27), client exit interviews (30) and community focus groups (11) were consistent and the information gained from each of these different sources reinforced the overall findings of the assessment.

**Positive findings** included that only new, sterile injection equipment was used for injections in all the observations (100%), and this consisted primarily of single-use disposable syringes and needles with a few auto-disable syringes. Provider and prescriber interviews corroborated this evidence and reported that, in general, they did not rely on patients to bring their own syringes and had not experienced recent stock-outs. Sharps boxes were available and used for immediate disposal in the vast majority of cases (89%
and 73%, respectively). Sharps boxes were burnt in 85% of cases, according to the facility audit, either in an incinerator (54%), a burning pit (19%), or an open burning area (12%).

**On the negative** side, injections were frequently not prepared properly, and in one district in particular there was a high rate of two-handed recapping of needles observed (this district also showed a higher percentage of providers reporting needle stick injuries). Sharp boxes were often made locally from available materials (cardboard boxes) and were frequently filled beyond ¾ full. Where pre-fabricated sharps boxes existed, they were reportedly leftover stock from the last round of measles immunization campaign.

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**65.**

**TITLE:** ADHERENCE TO UNIVERSAL PRECAUTIONS WITH REFERENCE TO HIV INFECTION AMONG MIDWIVES AND TRAINED TRADITIONAL BIRTH ATTENDANTS DURING HOME AND HEALTH CENTRE DELIVERIES IN SIAVONGA AND MAZABUKA DISTRICTS

**Authors:** Hamomba L

**Year:** 2005

**Org/Inst:** The University of Zambia, School of Medicine

**Status:** Published

**Study Site(s):** Siavonga and Mazabuka

**Source:** The University of Zambia, School of Medicine

The general objective of the study was to determine if Universal Precautions were adhered to and the reason for non-adherence among midwives, nurses who perform deliveries in the health centres and trained traditional birth attendants who perform deliveries in homes. It was hypothesised that trained traditional birth attendants (TBAs) and midwives adhere to Universal Precautions (UPS) during deliveries performed at home and health centres. The study findings revealed that the proportion of midwives and nurses adhering to Universal Precautions was 63.5%, while that of the trained traditional birth attendants was 67.2%. The most significant factors related to adherence for the midwives and nurses were the availability of medical supplies and the inclusion of UPS in their training. Respondents who were trained in UPS were 24.89 (95% CI 1.63, 380.59) times more likely to have adhered to UPS. Respondents who received weekly medical supplies were 11.86 (95% CI 2.10, 67.03) times more likely to adhere to UPS compared to respondents who received monthly supplies. Trained traditional birth attendants who had heard of Universal Precautions were 5.61 (95% CI 1.90, 16.55) times more likely to have adhered to Universal Precautions.

Focus Group Discussions conducted among midwives and nurses revealed that they had knowledge of the standard Universal Precautions (UPS) through their training, but could not apply that knowledge because of the unavailability of medical supplies. Focus Group Discussions conducted among trained birth attendants revealed that they have heard of Universal Precautions through their training, but they needed more knowledge through workshops, and, refresher courses. Adequate medical supplies and refresher courses would enhance adherence to Universal Precautions.

Observations of routine deliveries for the midwives and nurses showed that 63.9% adhered to Universal Precautions. This confirms the responses made through the use of the questionnaire.

**Strategic objective 5:** Improve access to and use of confidential counseling and testing
Voluntary Counselling and Testing (VCT), has been recognised as an effective method in the prevention and care of HIV/AIDS. In many prisons AIDS inflectional rates are higher than in the outside community. But few prisons provide adequate AIDS services.

**Objective:** Our project was designed to assess the feasibility and desirability of VCT in prisons. The project was conducted at Kamfinsa State Prison in Zambia and is part of an ongoing prisons project called IN BUT FREE (Simooya et al., Barcelona 2002). The project is approved by the National AIDS Council and Ministry of Home Affairs and participation in the project was voluntary. The Kamfinsa Prison has about 1000 inmates (male and female). The project began in June 2003, with all the inmates having a chance to attend the general AIDS education sessions conducted to a class of 50 inmates at a time.

**Results:** Those interested in VCT where able to access it right there in the prisons. Pre and post-test counselling where conducted before and after every test respectively. All those who tested positive have been referred to the District Health Management Team for medication. Lastly 35 peer counsellors where trained to give support counselling to their fellow inmates at times when the professional counsellors where not available. It suffices to say that VCT continued way after the education and counsellor training ended. The education sessions where attended 100% by the prison population and out of the 200 inmates tested 25% were found to be HIV positive. From these results we have found it very feasible and that it is desirable to the inmates to have VCT in prisons. Our recommendation is that it is time society realised that prison inmates are taken out of society and will very soon be poured back into society.

**Conclusion:** That being the case, there is a need to ensure that they are equally well equipped with issues concerning the HIV pandemic, justifying the need for VCT clinics to be set up in all prisons possible.

**Issue:** VCT is the only sure way of knowing the actual HIV infection rate in any given area. However, VCT uptake has been constrained by both stigma and lack of facilities in
Zambia’s rural areas, North-western Province inclusive. The latest Zambia Demographic & Health Survey indicates that North-western has the lowest HIV rate in the country but minimal VCT services make it difficult to assess the situation as well as provide needed services. Solwezi Diocese Home Based Care (HBC) has added VCT to its programme to better ascertain infection levels and to enhance its care and support services.

**Description:** This paper will discuss the Solwezi Diocese HBC counselling component for PLWHA. It reaches the majority, and most rural areas of North-western Province of Zambia, through its structural network of diocese and parish coordinators, nurse care supporters, and community volunteer caregivers. Care and services include providing care and support through psychosocial counselling to HBC clients and their families during home visits. Programme staff undergo various levels of counselling training, appropriate to the caregiver level. Being a community programme, there are one to two trained counsellors in each operational site who are affiliated to the Psycho-social Council of Counsellors of Zambia. After HBC staff undertook further in-depth training for VCT counselling, there was notable uptake of VCT among HBC programme clients under symptomatic treatment who had never been tested.

**Lessons Learnt:** Established HBC clients in the Solwezi programme felt more comfortable undergoing VCT with familiar caregivers than going to a public facility.

- Undergoing VCT gave clients the further opportunity to join Positive Living Clubs.
- Contributing to knowing the local infection level will assist in planning for care and support services.

**Recommendation:** Where possible, augment HBC programmes with VCT.

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**68.**

**TITLE:** SEXUAL BEHAVIOR OF HIV DISCORDANT COUPLES AFTER HIV COUNSELING AND TESTING.

**Authors:** Allen S, Meinzen-Derr J and Kautzman M et al

**Year:** 2001

**Org/Inst:** -

**Status:** Published in the Abstract Book for AIDS 2003 Mar 28;17(5):733-740.

**Study Site(s):** Lusaka

**Source:** Abstract Book for AIDS, 2003 Mar 28;17(5):733-740.

**Background and Objectives:** Sexual behaviour following voluntary HIV counselling and testing (VCT) is described in 963 cohabiting heterosexual couples with one HIV positive and one HIV negative partner (‘discordant couples’). Biological markers were used to assess the validity of self-report.

**Methodology:** Couples were recruited from a same-day VCT centre in Lusaka, Zambia. Sexual exposures with and without condoms were recorded at 3-monthly intervals. Sperm detected on vaginal smears, pregnancy, and sexually transmitted diseases (STD) including HIV, gonorrhoea, syphilis, and Trichomonas vaginalis were assessed.

**Results:** Less than 3% of couples reported current condom use prior to VCT. In the year after VCT, > 80% of reported acts of intercourse in discordant couples included condom use. Reporting 100% condom use was associated with 39–70% reductions in biological markers; however most intervals with reported unprotected sex were negative for all biological markers. Under-reporting was common: 50% of sperm and 32% of pregnancies and HIV transmissions were detected when couples had reported always using condoms. Positive laboratory tests for STD and reported extramarital sex were relatively infrequent. DNA sequencing confirmed that 87% of new HIV infections were acquired from the spouse.
Conclusions: Joint VCT prompted sustained but imperfect condom use in HIV discordant couples. Biological markers were insensitive but provided evidence for a significant under-reporting of unprotected sex. Strategies that encourage truthful reporting of sexual behaviour and sensitive biological markers of exposure are urgently needed. The impact of prevention programs should be assessed with both behavioural and biological measures.

69. TITLE: VOLUNTARY HIV COUNSELING AND TESTING (VCT): IS IT FEASIBLE IN SCHOOLS?
Authors: Banda S, Sakala S, Banda E et al
Year: 2005
Org/Inst: Centre for Infectious Disease Research in Zambia, Ukani Support Group and Lusaka Health Management Team.
Status: Published in the abstract book of the XVI International AIDS Conference, Toronto, Canada, August 13-18, 2006
Study Site(s):
Source: XVI International AIDS Conference, Toronto, Canada, August 13-18, 2006; Abstract WEPE0448.

Issues: Despite expanding services for the prevention of mother-to-child HIV transmission, many children and adolescents in Zambia continue to be HIV-infected, often through horizontal transmission.
Description: An initiative to educate and offer VCT through community-based basic schools (grades 1-9) was created by Ukani Support Group, Centre for Infectious Disease Research in Zambia, and Lusaka Health Management Team. An intensive, 4-week curriculum was developed, with group sensitisation talks given weekly; each lasted approximately 2 hours. To increase student involvement, talks were scheduled during regular school hours. Messages covered general HIV education about the effect of HIV/AIDS on homes, challenges and risks faced by young people, stigma and discrimination, and VCT. To ensure that age-appropriate messages were offered, pupils were grouped according to age (10-13, 14-16, 17-18); parents were encouraged to attend, but were grouped separately in counselling sessions. All community educators were trained in paediatric and adolescent counselling. In the fourth week, VCT was offered to students. Those who were at least 16 years old were able to give their own consent; for children under age 16, parents were asked for permission to test for the child’s HIV status. From Sept-2005 to Dec-2005, 2127 children from 19 community schools participated in this program. 1773 (83%) agreed to HIV testing. Overall, 86 (5%) tested HIV-positive and were immediately referred to long-term HIV care. Those who tested HIV-negative were given detailed post-test counselling, which focused on risk reduction, HIV transmission and behavioural preventive measures.
Lessons learned: Despite the legal and ethical considerations surrounding VCT for children and adolescents, when given the opportunity, uptake remains high.
Recommendations: Schools can provide valuable access to health programs, promote awareness on HIV/AIDS, and encourage testing. Policy makers need to ensure that school curriculums are revised in order to adequately address HIV/AIDS issues.

70. TITLE: KEEP IT "A QUIET STORY" OR "EXPOSE THE TRUTH"?: UNDERSTANDING THE QUANDARIES FACING ZAMBIAN WOMEN WHEN DECIDING TO HAVE A HIV TEST AND/OR DISCLOSE THEIR STATUS TO OTHERS
Background: Despite the promotion of VCT and the increasingly availability of some other interventions for PLWHA, HIV infection in Zambia remains powerfully stigmatised and associated with social and physical death. In the face of this, people often opt for ignoring and/or hiding HIV and "safety" in secrecy. Even once the disease becomes explicit, many people continue to repress their HIV status. What are the particular dilemmas that face Zambian women when deciding to have a HIV test and/or disclose a HIV-positive test result?

Methodology: Qualitative research, using a range of methods, conducted within two rural and three urban research studies between 1999 and 2001 in Zambia, looked - in part - at both women's concerns about and perceptions of HIV testing, and, in three of the studies, women's actual experiences of having a HIV test and disclosing a HIV-positive result.

Results: Findings demonstrate that it is harder for women to decide to have a HIV test than men and reveal what the main incentives and disincentives are for women to undergo a HIV test. If found HIV-positive, women fear all kinds of recrimination from slander to violent acts. Keeping a HIV-positive result as "a quiet story" keeps stigma and discrimination at bay. However, for women, there are often advantages to disclosing their status within a limited network, especially as they fall sick, and increasingly they are choosing to do so.

Conclusions: Disclosure is at odds with the community norm to hide or ignore HIV, and the consequences of disclosure for women are, overall, more damaging than for men. HIV-positive women need to be provided with special, tangible and continued support to cope with particular problems they face. If this is available, the incentives for disclosing are greater. Counselling responsibilities need to be shared amongst health services, CBOs, families and churches. More longitudinal studies are needed on the actual consequences of disclosure for women.

71. **TITLE:** VOLUNTARY HIV COUNSELING AND TESTING (VCT): IS IT FEASIBLE IN SCHOOLS?  
**Authors:** Banda S¹, Sakala S² and Banda E¹ et al  
**Year:** 2005  
**Org/Inst:** Ukani Support Group, Centre for Infectious Disease Research in Zambia, and Lusaka Health Management Team  
**Status:** Published in the Abstract Book of the AIDS 2006 - XVI International AIDS Conference: Abstract no. WEPE0448  
**Study Site(s):** Lusaka  
**Source:** AIDS 2006 - XVI International AIDS Conference: Abstract no. WEPE0448
**Issues:** Despite expanding services for the prevention of mother-to-child HIV transmission, many children and adolescents in Zambia continue to be HIV-infected, often through horizontal transmission.

**Description:** An initiative to educate and offer VCT through community-based basic schools (grades 1-9) was created by Ukani Support Group, Centre for Infectious Disease Research in Zambia, and Lusaka Health Management Team. An intensive, 4-week curriculum was developed, with group sensitisation talks given weekly; each lasted approximately 2 hours. To increase student involvement, talks were scheduled during regular school hours. Messages covered general HIV education about the effect of HIV/AIDS on homes, challenges and risks faced by young people, stigma and discrimination, and VCT. To ensure that age-appropriate messages were offered, pupils were grouped according to age (10-13, 14-16, 17-18); parents were encouraged to attend, but were grouped separately in counselling sessions. All community educators were trained in paediatric and adolescent counselling. In the fourth week, VCT was offered to students. Those who were at least 16 years old were able to give their own consent; for children under age 16, parents were asked for permission to test for the child HIV status. From Sept-2005 to Dec-2005, 2127 children from 19 community schools participated in this program. 1773 (83%) agreed to HIV testing. Overall, 86 (5%) tested HIV-positive and were immediately referred to long-term HIV care. Those who tested HIV-negative were given detailed post-test counselling, which focused on risk reduction, HIV transmission and behavioural preventive measures.

**Lessons learned:** Despite the legal and ethical considerations surrounding VCT for children and adolescents, when given the opportunity, uptake remains high.

**Recommendations:** Schools can provide valuable access to health programs, promote awareness on HIV/AIDS, and encourage testing. Policy makers need to ensure that school curriculums are revised in order to adequately address HIV/AIDS issues.

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**72.**

**TITLE:** IMPLEMENTING A COMMUNITY-BASED MODEL FOR THE PROMOTION OF COUPLES' VOLUNTARY COUNSELING & TESTING IN TWO AFRICAN CAPITAL CITIES: SIMILARITIES, DIFFERENCES & LESSONS LEARNED

**Authors:** Beyer A, the Rwanda/Zambia HIV Research Group

**Year:** -

**Org/Inst:** Emory University, Rwanda Zambia HIV Research Group, Lusaka, Zambia

**Status:** Published in The XV International AIDS Conference: Abstract no. MoPeD3927

**Study Site(s):** Lusaka, Zambia and Kigali, Rwanda

**Source:** The XV International AIDS Conference: Abstract no. MoPeD3927

**Background:** Greater than 60% of new HIV infections in Africa are acquired from a spouse or cohabiting partner. Yet, <1% of African couples utilize Couples' Voluntary HIV Counselling & Testing (CVCT) services. This study investigates the success of a CVCT promotion program in Lusaka, Zambia and Kigali, Rwanda- two African capitals with a high prevalence of HIV and different socio-cultural contexts.

**Methodology:** "Influence Network Agents" (INAs) were trained to invite couples for CVCT services during two 4-month pilots. In each city, training and recruitment of INAs was analogous. INAs were comparably remunerated according to the number of invitations
distributed for CVCT services and the number of couples who attended as a result of invitations.

**Results:** Over 16,500 invitations have been distributed (4,887 in Rwanda, 11,625 in Zambia). INAs in Rwanda have achieved two to three-fold higher response rates from invitations than INAs in Lusaka. Where the invitation was delivered, the nature of the relationship between INAs and the invitees, and the number of contacts between INAs and invitees differed between cities. During Phase II, 38% of invitations were given to neighbours or work colleagues in Kigali compared with 15% in Lusaka, while 14% of invitations in Lusaka were given to fellow church members, compared with <2% in Kigali.

**Conclusions:** Results suggest that differential outside effects such as the nature of social networks, demographic trends, and cultural perceptions of CVCT impact the effectiveness of promotional strategies. The high response rate in Kigali may indicate a greater general acceptance of and familiarity with VCT services as compared to Lusaka. In Lusaka, INAs cited stigma, cultural barriers and traditional beliefs as impediments to CVCT. Kigali is a smaller, less transient city than Lusaka, with one indigenous language compared to five in Lusaka. Sustainable CVCT promotional activities are dependent on the cohesion and make-up of social capital, both horizontal and vertical social networks, in particular country contexts.
Lessons learnt: Women came for various reasons common were: Death of spouse 56%; Poverty thus wanting to access free medication and support 35%; Ill health of self or spouse 12%; Death of babies 6%; Getting married 4%.

**Recommendations:** Government to adopt this system at national policy level - currently being considered, women empowerment programmes and sex education to be intensified. Involve more women from the grass route level in national planning and development of programmes.

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### 74. **TITLE:** COMMUNITY BASED PROMOTION OF COUPLES' VCT: COST EFFECTIVENESS OF PEER VS INFLUENCE AGENT MODELS

**Authors:** Dunham S\(^1\), the Rwanda/Zambia HIV Research Group\(^{1-2-3}\)

**Year:** -

**Org/Inst:** \(^1\)Zambia-UAB HIV Research Project (ZUHRP), Lusaka, Zambia, \(^2\)University of Alabama in Birmingham (UAB), AL, USA, \(^3\)Project San Francisco (PSF), Kigali, Rwanda

**Status:** Published in the 2nd IAS Conference on HIV Pathogenesis and Treatment: Abstract no. 1196

**Study Site(s):** Rwanda and Zambia

**Source:** The 2nd IAS Conference on HIV Pathogenesis and Treatment: Abstract no. 1196

**Background:** Over 60% of new HIV infections in Sub-Saharan Africa are acquired from a spouse. Previous studies conducted by PSF (Rwanda) and ZUHRP (Zambia) demonstrate that HIV/STD transmission rates among couples decreases by more than 50% when husbands and wives are HIV tested and counselled together. Cost effective promotion strategies for couples’ voluntary counselling and testing (CVCT) have the potential to play a significant role in HIV/AIDS intervention programs.

**Methodology:** ZURHP is investigating two CVCT promotion strategies in Lusaka, Zambia and Kigali, Rwanda. One uses a peer model with full time salaried community workers (CWs) who promote CVCT door to door. The other involves the use of influential network agents (INAs)—select individuals who are leaders in their respective communities. The latter are remunerated according to the number of invitations they distribute for the couples’ VCT service, and the number of couples who attend based on the invitation. Both CW and INA require training and ongoing monitoring and evaluation, with equivalent costs in both groups.

**Results:** Initial results indicate that the CWs cost between 1.5 and 2 times as much as INAs, depending on the number of couples that is set as the goal. The number of invitations distributed, and the proportion of invitations that result in couples attending the CVCT service, is similar for CW and INAs. The main difference is that INAs are employed in full time work and can distribute invitations in the course of their day-to-day contacts with married adults.

**Conclusions:** The use of INAs in CVCT promotion is a more cost effective recruiting strategy that the peer CW model. Additional research is needed to determine what INA characteristics, including the nature of the environment in which they invite, are more conducive to effective CVCT promotion.

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### 75. **TITLE:** STUDY TO DETERMINE WHY PEOPLE IN LUSAKA DISTRICT SHUN SERVICES OF HIV/AIDS VOLUNTARY
COUNSELLING AND TESTING IN GOVERNMENT HEALTH INSTITUTIONS

Authors: Mwape K
Year: 2007
Org/Inst: University of Zambia School of Medicine
Status: Published in an Abstract Book, 4th National Health Research Conference
Study Site(s): Lusaka

Objectives: To identify factors that contributing to the community shunning Voluntary Counselling and Testing in Lusaka Urban district in government health institutions, to identify factors that influence counsellors failure in the execution of the VCT programme, to determine knowledge and attitude of community on VCT and to establish adequacy of supervision on the performance of VCT

Methodology: The study was an exploratory, describing in depth the performance of VCT at each health centre in order to identify factors, which determine the poor and non-performance of VCT. Thus it was a multiple case study

Results: All the respondents have been trained as counsellors in HIV/AIDS; 50% of the respondents have the physical structure at their locality and can carry out full counselling that is counselling, testing and treatment; the counsellor respondents gave the figure of 83.3% has carrying out community program for VCT, but the community respondents attained 75% as not knowing or heard of community program in VCT in their locality; the community respondents of 76.6% said they have no knowledge that such services are offered at the local health centre. But when asked about what VCT is and HIV/AIDS, 100% know what VCT does and what HIV/AIDS is; the most outstanding is that of counselling during screening and followed by maternal and child health (MCH) screening; the distance, according to 56.6% does not affect their not visiting the centre despite hearing of it on the electronic media.

Conclusion: The project and its results offer favourable findings that support the integration of HIV prevention through VCT. The counsellors who responded are not only receptive to the idea but also recognise the importance of incorporating some community program to focus into their work with clients. To be effective in this effort, however, the counsellors need initial ongoing training that provides tools and skills necessary to pursue a client-centriced approach to prevention. It is also important to note that successful prevention often requires the integration of additional services (e.g., drug treatment, testing, and counselling), so appropriate referral services must be available. Lastly, it is important that counsellors view their role in prevention screening as a support to on VCT to client rather than an enforcer of reduced risk behaviours. As long as the case managers adopt a client-centriced approach in their work with clients and continue to help client’s access services, the integration of HIV prevention screening into case management can be appropriate and successful.

Sponsors: Ministry of Health

Strategic objective 6: Mitigate stigma and discrimination against HIV

76. TITLE: IF A PREGNANT WOMAN IS SICK AND HAS A SICK, PREMATURE BABY WHICH DIES BEFORE THREE MONTHS, THEN WE KNOW SHE IS AFFECTED AND TURN AWAY FROM HER. THIS IS OUR TEST: MOTHER-
TO-CHILD TRANSMISSION AS THE CORE NARRATIVE OF HIV/AIDS IN RURAL ZAMBIA

Authors: Bond V. A¹, Ndubani E²
Year: 2000-2001
Org/Inst: ¹London School of Hygiene and Tropical Medicine, Lusaka, Zambia; ²University of Zambia, Lusaka, Zambia
Status: Published in 2002 XIV International AIDS Conference Abstract no. F11964
Study Site(s): Selected rural areas of Zambia
Source: Abstract Book for the 2002 XIV International AIDS Conference Abstract no. F11964

Description: During fieldwork in September 2001, respondents talked repeatedly about how visible HIV/AIDS had become in their community because of pregnant women falling sick and their babies dying. There was little sympathy or respect expressed for pregnant women suspected to be HIV-positive who were open to blame, ridicule and rejection. Traditional Birth Attendants related stories of assisting deliveries, often without gloves, of "girls" whose "birth canals were eaten up and open", and harshly treated by the community and health workers. This new focus on pregnant women with HIV arises from: the existence of pilot MTCT interventions in Zambia including one at the nearest mission hospital which started in October 2000; observations are based on reality witnessing the deaths of many young local women who had previously worked on the large commercial farm or at the border post; and, this apocalyptic image, reflects how HIV/AIDS is severing the reproductive cycle and the nuclear family unit.

Issues: The core narrative of HIV infection in a rural area in Zambia, where the first author has done anthropological fieldwork intermittently since 1991, has within the last year become an image of a sick, pregnant woman, with a past history of sex work and/or trading centres, whose baby dies soon after birth, followed by the death of its mother and father.

Lessons learnt: As HIV/AIDS deaths soar in Zambia, the community needs up-to-date information, continued support and access to tangible care options to manage this stage of the epidemic. Without the latter, blame is easily assigned to vulnerable groups such as pregnant women.

Recommendations: Education about MTCT should be extended beyond pilot sites in Zambia. The negative impact of such HIV/AIDS-related stigma needs to be openly discussed and tackled within the community concerned by a broad group of opinion leaders. TBAs need to be provided with protective gloves, information and support.

77.

TITLE: THE EXTENT OF DISCRIMINATION AND STIGMATIZATION OF PEOPLE LIVING WITH HIV/AIDS IN RURAL SOCIETY.

Authors: Chirwa M, Kapungu K. and Mwinsa G.
Year: 2006
Org/Inst: The University of Zambia
Study Site(s): Sinazongwe
Objectives: The General objective was to establish the extent of the problem of stigma and discrimination of people living with HIV/AIDS, especially in rural areas.

Methodology: The population from which the sample was drawn consisted of people of Mailima in Sinazongwe District. The sampling frame consisted of 15,083 people. The sample was made up of 100 people. This was to facilitate generalization of the results after analysing them. Stratified Random Sampling was used because it ensures representation of both females and males from the sampled population. Self administered questionnaires were used. This method was preferred because it is economical in terms of time, and the data collected was quantitative. Since the data collected was in quantitative form, it was analysed using a computer package known as Statistical Package for Social Sciences (SPSS).

Results: The research discovered that people living with HIV/AIDS were often seen as shameful. The infection is also associated with the minority groups or behaviours. The infection was also linked to perversion and that those infected will be punished. It was also seen as a personal irresponsibility.

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78. TITLE: HIV/AIDS-RELATED STIGMA AND DISCRIMINATION: IMPLICATIONS FOR THE DESIGN AND IMPLEMENTATION OF COMMUNITY-BASED PREVENTION, CARE AND SUPPORT PROGRAMMES

Authors: Murray L^1^, Chege J.N.^2^, Greyling C.^3^
Year: 2002
Org/Inst: World Vision
Status: Published
Study Site(s): Zambia and Uganda
Source: World Vision

Background: Despite a growing recognition of HIV and AIDS-related stigma as an impediment to efforts to reduce impact of AIDS, there is little data to inform HIV and AIDS programming. World Vision is implementing a study to assess the impact of the three HIV and AIDS programming models the agency has piloted in Africa and to inform programme implementation.

Methodology: This operations research study, implemented in two programmes in Zambia and Uganda, is based on a cluster randomised control group design. Both qualitative and quantitative data are collected from eligible household members and community stakeholders. This paper is based on bivariate and multivariate analysis of baseline survey data on HIV and AIDS stigma and discrimination.

Results: The study identified social and religious values and norms that drive the high HIV and AIDS stigma and OVC discrimination observed in the Program areas. Out of the 8 questions used to assess stigma, less than 3% of the respondents did not express any stigma attitude. Children (10-17 years) had significantly higher scores in mean stigma attitudes, misconceptions and lower HIV and AIDS knowledge scores than the adult household members and the FBO/NGO/CBO leaders. There were significant gender and education level differences in HIV and AIDS knowledge, misconceptions and stigma but no significant difference between orphan and non-orphan children. Multivariate analysis indicates that respondents with higher HIV and AIDS knowledge and those with above primary levels of education were significantly more likely to express lower levels of HIV and AIDS related stigma.
**Conclusions:** Programmes designed to address HIV and AIDS stigma and OVC discrimination will require not only individual focused strategies to increase HIV and AIDS knowledge and reduce misconceptions, but also community-based collective action strategies to address societal and religious values and norms that contribute to HIV and AIDS stigma and discrimination.

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**79.**

**TITLE:** USE OF DRAMA GROUPS FOR HIV/AIDS COMMUNITY SENSITIZATION  
**Authors:** Chirwa S, Spadoni S, Makuka I, et al  
**Year:** 2005  
**Org/Inst:**  
**Status:** Published in the AIDS 2006 - XVI International AIDS Conference: Abstract no. CDD1119  
**Study Site(s):** Densely populated areas of Lusaka  
**Source:** AIDS 2006 - XVI International AIDS Conference: Abstract no. CDD1119

**Background:** Despite recent efforts, the adult prevalence of HIV in Zambia continues to be unacceptably high (16%). Drama appears to be an effective tool for community sensitisation and education in this low literacy population. By carefully choosing time, venue and content of performances, population segments can be targeted and specific messages conveyed effectively.

**Description:** In 2001, we began using drama sensitisation to raise HIV/AIDS awareness in densely populated areas. The program began with one drama group (comprising 8 members) performing 5 times weekly to various communities. Based on the success of these skits, we recently expanded to 3 groups. 60 performances are scheduled each month in the communities surrounding health clinics. Performances cover various HIV-related topics including: stigma and discrimination, adherence to medication, myths and misconceptions, voluntary HIV counselling and testing, and availability of free antiretroviral therapy. Skits are written by a central coordinating team and the drama groups. The only equipment needed is drums. Some performances are scheduled in high-traffic areas such as marketplaces and bus stations; others target specific community groups gathered at churches, schools, funerals, or near bars. Loud drums and vibrant dancers lead into the educational skit, which typically lasts 30 minutes. Afterwards, peer educators and community outreach workers help facilitate post-performance group discussions and answer audience questions regarding HIV/AIDS. On average, 7,000 people view performances each month. Continued challenges include: attracting and retaining audiences, combating myths and misconceptions, and encouraging viewers to spread the messages to others.

**Lessons learned:** Drama sensitisation clearly helps disseminate important HIV/AIDS education messages to a low-literacy population.

**Recommendations:** To increase the effectiveness of drama skits for community sensitisation, appropriate venues should be explored to better reach target audiences. Themes must also be regularly updated to address relevant public health issues.

**Strategic objective 7:** Prevent HIV transmission through intravenous drug use
Beliefs regarding HIV/AIDS research participation in Lusaka, Zambia

Zachary D, Mweemba A. and Helova A. et al

2004

Published in the 3rd IAS Conference on HIV Pathogenesis and Treatment: Abstract no. TuPe11.9C07

Kanyama, Mtendere and Matero Townships

The 3rd IAS Conference on HIV Pathogenesis and Treatment: Abstract no. TuPe11.9C07

Methodology: One on one in-depth interview conducted with thirty three adults in three clinics (Kanyama, Mtendere and Matero Ref) in December 2004. Interviewees are active members in their respective communities as community health workers, nutritionists, advocates, teachers, healers and leaders.

Objective: To investigate cultural beliefs and decision-making for research participation in HIV/AIDS clinical trials.

Results: Mistrust of doctors and research scientist is cited consistently as a barrier for research participation by community members. Many participants described community fears about the drawing of blood for medical purposes. Many people in the community interpret this act and the person drawing the blood as satanic. Another barrier cited for people seeking clinical care from the Kanyama clinic is that the clinic is understaffed and physically too small. They cited standing in long cues and waiting for over 4 hours to see a clinical officer as examples. Despite these concerns all participants agreed that HIV/AIDS research is important and more education in the community was necessary in order to inform the community of the benefits of research in the community.

Conclusions: Community members in this study described a widespread belief of Satanism as a prominent barrier to participation in clinical research. Interviewees cited lack of knowledge and education in the community as obstacles to clinical care. Understanding cultural beliefs within the community may prove to be a significant factor in improving participation in community clinics and HIV/AIDS clinical trials in Lusaka, Zambia.
3.2 THEME II. EXPANDING TREATMENT, CARE AND SUPPORT FOR PEOPLE AFFECTED BY HIV AND AIDS

The overall objective under the theme of Expanding Treatment, Care and Support for People affected by HIV and AIDS is to expand access to appropriate care, support and treatment for people living with HIV and AIDS, their caregivers and their families including services for TB, STIs and other opportunistic infections. The following are the strategic objectives under this theme:

i. Provide universal access to ART including access to CCT at all treatment centers
ii. Expand treatment for tuberculosis sexually transmitted infections (STIs) and other opportunistic infections (OIs)
iii. Strengthen home or community based care and support including access to comprehensive palliative care and pain management
iv. Support the utilization of alternative and/or traditional medicine which have scientifically demonstrated efficacy
v. Promote appropriate nutrition and positive living for PLHAs

This section consists of abstracts that address the foregoing strategic objectives.

**Strategic objective 9: Provide universal access to ART including access to CCT at all treatment centers**

81. **TITLE:** COUNTRY EXPERIENCES OF INTEGRATION OF PAEDIATRIC HIV CARE WITHIN CHILD HEALTH PROGRAMMES

**Authors:** Muhe L¹, Mason E², Martines J² et al

**Year:** 2006

**Org/Inst:** -

**Status:** Published; AIDS 2006 - XVI International AIDS Conference: Abstract no. WEPE0949

**Study Site(s):** Ethiopia and Zambia

**Source:** AIDS 2006 - XVI International AIDS Conference: Abstract no. WEPE0949

**Issues:** Paediatric HIV infection is a preventable disease. However, it still contributes to 17 percent of total HIV/AIDS deaths (UNAIDS, 2005). To date few children living with HIV/AIDS have access to antiretroviral therapy (ART). More than 50% of children with HIV/AIDS die before the age of 2 years as a result of opportunistic infections and inter-
current common diseases such as pneumonia, diarrhoea, and malnutrition. This work integrates care and treatment of HIV-infected children into child health programmes such as the Integrated Management of Childhood Illness (IMCI).

**Description:** The IMCI guidelines have been adopted in more than 100 countries. IMCI has been demonstrated to improve health worker skills, and increase utilization of health services. As the HIV-infected child usually presents with inter current illnesses, Integration of HIV care into IMCI is appropriate. WHO thus developed guidelines and training materials on HIV/AIDS integrated to IMCI for first level health workers and referral care at district level. The materials enable health workers to identify children with HIV early and provide prevention of opportunistic infections and care and treatment of symptomatic children. The materials have been field-tested in Ethiopia and Zambia. An early experience of their use in several African countries will be presented.

**Lessons learned:** The experience shows that it is feasible to fully integrate paediatric HIV care into child health programmes. Health workers were able to use the materials to identify and manage children with HIV. Adopting a policy of task shift to empower lower level health care workers to provide prevention, care and treatment is an important step to rapidly scale up paediatric HIV care.

**Recommendations:** Simplified guidelines and training materials should be made available to health workers at peripheral facilities to contribute to universal access to ART.

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**82. TITLE:** RAPID SCALE-UP OF HIV CARE AND TREATMENT WITHIN THE LUSAKA PUBLIC HEALTH SECTOR.

**Authors:** Sinkala M1,2,3, Kankasa C4, DeGroot A2 et al

**Year:** 2001

**Org/Inst:** 1Lusaka Urban District Health Management Team, 2 Centre for Infectious Disease Research in Zambia, 3 University of Alabama at Birmingham, 4 University Teaching Hospital, Department of Paediatrics

**Status:** Published in an Abstract Book, 3rd National Health Research Conference

**Study Site(s):** Lusaka

**Source:** Abstract Book, 3rd National Health Research Conference, Zambia

**Background:** Lusaka is home to a large nevirapine (NVP)-based program for prevention of mother-to-child HIV transmission (PMTCT). Surveillance of infant cord blood at delivery can assess program effectiveness by determining the proportion of HIV-infected pregnant women and HIV-exposed infants in the population that ingest NVP.

**Methods:** We collected anonymous cord blood specimens from public sector deliveries in Lusaka. Specimens were tested for HIV antibodies and, if positive, for NVP. Results were linked to maternal HIV testing history in antenatal care (ANC) and whether the infant received NVP.

**Findings:** From 10,384 women who gave birth to live infants during the surveillance period, we obtained 10,194 (98%) specimens, of which 8787 (86%) belonged to mothers who had received ANC at a facility that offered PMTCT services. 2257 (26%) women were HIV seropositive on cord blood testing. Of the 8787 women in the surveillance population, 7204 (82%) had been offered HIV testing in ANC, of which 5149 (71%) had accepted, and of which 5129 (99%) had received a result. There were 1246 cord blood seropositive women who received a test result in ANC. Of these 1112 (89%) received a positive result (the other 134 comprise mostly seroconverters and ANC clerical errors).
Only 751 of 1112 (68%) women who were given a positive test result in antenatal care and a NVP tablet to take home for ingestion at labour onset had NVP detected in the cord blood (i.e., maternal non-adherence was 32%). 675 infants of the 751 adherent mothers (90%) received NVP prior to discharge from the delivery centre. Overall, only 675 of 2257 (30%) HIV-seropositive mother-infant pairs in the surveillance population received both a maternal and infant dose of NVP.

**Interpretation:** Successful PMTCT requires each mother-infant pair to negotiate a specific sequence of events that begins with offering HIV testing and continues through adherence to the prescribed regimen. This novel surveillance demonstrates that failures at each step can and do occur, resulting in reduced coverage and diminished program effectiveness.

**83. TITLE:** THE ROLE OF HIV/AIDS SUPPORT GROUPS IN FIGHTING STIGMA AND PROMOTING ACCESS TO TREATMENT

**Authors:** Muchindu W.
**Year:** 2004
**Org/Inst:** The University of Zambia
**Status:** Published in the AIDS 2006 - XVI International AIDS Conference: Abstract no. CDD0926
**Study Site(s):** Lusaka
**Source:** AIDS 2006 - XVI International AIDS Conference: Abstract no. CDD0926

**Issues:** Although the provision of Anti Retroviral Therapy (ART) is increasingly becoming available to people living with HIV/AIDS in developing countries through the Global Fund and PEPFAR, most people are not accessing the therapy as a result of HIV/AIDS related stigma and fear of social exclusion and discrimination. For some patients who access treatment, adherence is affected for fear of stigma and discrimination.

**Description:** In one health centre in Zambia where free ART is provided, a support group of 10 people living with HIV/AIDS who have success stories to share on treatment was formed in 1994 to sensitize patients frequenting the Voluntary Counselling and Testing (VCT) clinic on the importance of ART and adherence. Using themselves as role models, the support group members do not only restrict their sensitisation campaigns at the health centre but they extend their support to communities. The health centre refers patients showing history of poor adherence for fear of stigma and discrimination to the support group. The support group members in turn counsel the patients and they visit patients who are willing to be visited at their homes to provide solidarity and treatment support and to break stigma.

**Lessons learned:** From every 10 patients who visit the VCT clinic daily and are exposed to the sensitisation campaigns by the support group, at least half elect to enrol in the HIV clinic for ART and over 1,000 patients who have been referred from the clinic to the support group for adherence support have gone back to good adherence of over 95%.

**Recommendations:** The support group has planned to sensitize and mobilize people living with HIV/AIDS in other clinics offering free ART to form support groups and provide similar services. The support group has also planned to integrate counselling trainings for members in their program.

**84. TITLE:** COMMUNITY-BASED FOLLOW-UP FOR LATE PATIENTS ENROLLED IN A DISTRICT-WIDE PROGRAM
Timely adherence to clinical and pharmacy appointments is well correlated with favourable patient outcomes among HIV-infected individuals on antiretroviral therapy. To date, however, there is little work exploring reasons behind missed visits or evaluating programmatic strategies to recall patients.

**Objective:** For this study, we implemented community-based follow-up of late patients as part of a large-scale programme for HIV care and treatment in Lusaka, Zambia. Through a network of local home-based care organizations, we attempted home visits to recall patients using locator information provided at time of enrolment. Between May and September 2005, home-based caregivers were dispatched to trace 1,343 patients with missed appointments.

**Results:** Of these, 554 (41%) were untraceable because the provided address was invalid, the patient had moved or no one was at the home. Of the remaining 789, 359 (46%) were reported to have died. Only 430 (54% of those traced, 32% overall) were contacted directly and encouraged to return for care. The likelihood of patient return was higher among traced patients in crude analysis (relative risk [RR] = 2.5; 95%CI = 1.9-3.2) and in multivariable analysis controlling for baseline body mass index, sex and CD4 + count <= 50/microL (adjusted RR = 2.3; 95%CI = 1.7-3.2). However, the process was inefficient: one late patient returned for every 18 home visits that were made. Reasons for missed visits were provided in 271 of 430 (63%) of the patient’s who were successfully traced. Common reasons included feeling too sick to come to the clinic, travelling away from home and being too busy.

**Conclusion:** Despite the availability of free ART in Lusaka, patients face significant barriers to attending scheduled clinical visits. Cost-effective and feasible strategies are urgently needed to improve timely patient follow-up.
Context The Zambian Ministry of Health provides paediatric antiretroviral therapy (ART) at primary care clinics in Lusaka, where, despite scale-up of perinatal prevention efforts, many children are already infected with the human immunodeficiency virus (HIV).

Objective To report early clinical and immunological outcomes of children enrolled in the paediatric treatment program.

Design, Setting, and Patients Open cohort assessment using routinely collected clinical and outcome data from an electronic medical record system in use at 18 government primary health facilities in Lusaka, Zambia. Care was provided primarily by nurses and clinical officers ("physician extenders" akin to physician assistants in the United States). Patients were children (<16 years of age) presenting for HIV care between May 1, 2004, and June 29, 2007.

Intervention Three-drug ART (zidovudine or stavudine plus lamivudine plus nevirapine or efavirenz) for children who met national treatment criteria.

Main Outcome Measures: Survival, weight gain, CD4 cell count, and haemoglobin response.

Results: After enrolment of 4975 children into HIV care, 2938 (59.1%) started ART. Of those initiating ART, the median age was 81 months (interquartile range, 36-125), 1531 (52.1%) were female, and 2087 (72.4%) with World Health Organization stage information were in stage III or IV. At the time of analysis, 158 children (5.4%) had withdrawn from care and 382 (13.0%) were at least 30 days late for follow-up. Of the remaining 2398 children receiving ART, 198 (8.3%) died over 3018 child-years of follow-up (mortality rate, 6.6 deaths per 100 child-years; 95% confidence interval [CI], 5.7-7.5); of these deaths, 112 (56.6%) occurred within 90 days of therapy initiation (early mortality rate, 17.4/100 child-years; post–90-day mortality rate, 2.9/100 child-years). Mortality was associated with CD4 cell depletion, lower weight-for-age, younger age, and anaemia in multivariate analysis. The mean CD4 cell percentage at ART initiation among the 1561 children who had at least 1 repeat measurement was 12.9% (95% CI, 12.5%-13.3%) and increased to 23.7% (95% CI, 23.1%-24.3%) at 6 months, 27.0% (95% CI, 26.3%-27.6%) at 12 months, 28.0% (95% CI, 27.2%-28.8%) at 18 months, and 28.4% (95% CI, 27.4%-29.4%) at 24 months.

Conclusions Care provided by clinicians such as nurses and clinical officers can result in good outcomes for HIV-infected children in primary health care settings in sub-Saharan Africa. Mortality during the first 90 days of therapy is high, pointing to a need for earlier intervention.

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86. TITLE: IMPROVING ADHERENCE TO ART IN RESOURCE CONSTRAINED SETTING: THE ROLE OF ADHERENCE SUPPORT WORKERS

Authors: K. Torpey¹, C. Thompson¹ and L. Stuart² et al

Year: 2005

Org/Inst: Zambia Prevention Care and Treatment Partnership (ZPCT)

Status: Published in the AIDS 2006 - XVI International AIDS Conference: Abstract no. TUPE0133

Study Site(s): National


Issues: antiretroviral drugs are increasingly available in resource poor settings as a result of the U.S. President’s Emergency Plan for AIDS Relief and WHO’s 3x5 Initiative. Excellent adherence is the cornerstone of successful therapy. However with rapid scale up of ART
programs, provision of quality adherence counselling remains a challenge due to acute shortages of staff in the health sector. To ensure success of therapy and prevent development of resistance, interventions improving adherence are critical. **Description:** The Zambia Prevention Care and Treatment Partnership (ZPCT) funded by USAID through the U.S. President’s Emergency Plan is working with the Government of Zambia to increase access to HIV counselling and testing, PMTCT, clinical care and ART in five provinces. A baseline assessment of current and planned ART sites showed an acute shortage of health care workers to deliver adherence counselling, with the situation more severe in rural areas. To address this issue, a ten day curriculum was developed to train ART Adherence Support Workers. The support workers are PLWHAs, community volunteers and TB treatment supporters. The role of the support workers is to provide adherence counselling services in the health facilities, thereby freeing clinical staff for other duties, and provide adherence follow-up including home visit. The adherence support workers are deployed at facilities providing ART under the supervision of health care workers trained in adherence counselling. The adherence workers are given a modest stipend for lunch and transport reimbursement. **Lessons learned:** Adherence Support Workers are making a significant contribution in addressing inadequate staffing and providing adherence counselling to PLWHAs leading to improved adherence to therapy. **Recommendations:** There is the need to expand the deployment of adequately trained non-health workers to assist the understaffed health facilities to offer adherence counselling, CT and PMTCT to complement efforts of health care workers.

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**87.**

**TITLE:** SPECIMEN REFERRAL SYSTEM: QUALITY LABORATORY SERVICES FOR ART DELIVERY AT ALL LEVELS OF CARE  
**Authors:** K. Torpey¹, F. Mwale² and L. Stuart³ et al  
**Year:** 2005  
**Org/Inst:** Zambia Prevention Care and Treatment Partnership (ZPCT)  
**Status:** Published in the AIDS 2006 - XVI International AIDS Conference: Abstract no. THPE0203  
**Study Site(s):** ZPCT supported sites in Zambia  
**Source:** AIDS 2006 - XVI International AIDS Conference: Abstract no. THPE0203

**Issues:** Laboratory investigations are requisite for high quality ART services. However the high cost of lab equipment, lack of trained personnel and inadequate infrastructure in some district hospitals and health centres in Zambia has led to use of clinical parameters and cheaper but less accurate surrogate laboratory markers for ART initiation and monitoring. This adversely impacts the quality of care for ART patients.  
**Description:** In existing and planned ART sites supported by the Zambia Prevention Care and Treatment Partnership (ZPCT) with funding from USAID through the U.S. President’s Emergency Plan for AIDS Relief, and in collaboration with the Government of Zambia, a laboratory capacity assessment was conducted covering space, equipment and reagent availability, human resource capacity, transport availability and road networks. Based on assessment findings, laboratory refurbishment, staff training and mapping of equipment were completed. A specimen referral strategy was designed, and haematology, chemistry and CD4 machines were procured and placed strategically throughout the districts to allow for access to all ART sites. Motorcycles were also procured to transport specimens between facilities. Outlying facilities providing ART and PMTCT services have specific clinic days
to draw blood for essential laboratory tests, and specimens are transported via motorcycles to hospitals with the laboratory equipment. The test results are sent back to the centres for patient management.

**Lessons learned:** Essential laboratory results, including CD4 enumeration, can be available without requisite laboratory equipment and personnel through a referral system. This optimises the use of expensive laboratory equipment like CD4 machines. The specimen referral system can assist with other needs for laboratory tests such as TB investigations.

**Recommendations:** To optimise resources in the purchase and use of laboratory equipment, especially CD4 machines, a specimen referral system can be employed to provide quality laboratory service at all ART sites.

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88. **TITLE:** HIV/AIDS CARE AND SUPPORT IN ZAMBIA: AN ASSESSMENT OF HEALTH FACILITIES IN FOUR DISTRICTS.

**Authors:** Allen W.J, Bhatt G.J, and Mwinga A, *et al*

**Year:** 2002

**Org/Inst:** University Teaching Hospital, Lusaka

**Status:** Published

**Study Site(s):** Lusaka, Mongu, Ndola, and Lundazi

**Source:** University Teaching Hospital, Lusaka

This paper presents the findings of an assessment of HIV/AIDS care and support in Zambia conducted between January and March 2002. The study was carried out in Lusaka, Mongu, Ndola, and Lundazi.

**The objectives** of the assessment were to identify district-level opportunities and challenges in HIV comprehensive care and support; review care and support standards; and design a district-based HIV comprehensive care and support package that would improve the quality of life of people living with HIV/AIDS.

**Methodology:** The study applied quantitative and qualitative methods. Data was collected through a survey of 545 health care workers in 58 health care facilities. Eight types of health facilities were included in the assessment. These included: 1) referral hospitals, 2) general/district hospitals, 3) mission hospitals, 4) urban hospitals, 5) rural health centres, 6) private clinics, 7) hospices, and 8) voluntary counselling and testing facilities. Focus group discussions and in-depth interviews were also conducted with PLHA; and members of district health management teams. Each district had sites with facilities that provided one or more HIV/AIDS care and support services. A sample of these sites were selected and included in the assessment.

**Results:** The results of the assessment suggest critical gaps in the provision of care and support across all facilities. For example, the proportion (10%) of respondents who provided PMTCT in the facilities included in the survey was quite low. Also only 6% of respondents were ART management. One in five health care workers reported offering counselling services to patients with HIV/AIDS, with the majority providing counselling after their regular working hours.

**Conclusion:** The results of the survey suggest the need for expanding care and support in the facilities. The low proportion of respondents providing care in key areas such as PMTCT, and ART suggests that there is a major gap at the facility level that needs to be addressed with appropriate strategies.

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89. **TITLE:** RAPID SCALE-UP OF ANTIRETROVIRAL THERAPY AT PRIMARY CARE SITES IN ZAMBIA
Context: The Zambian Ministry of Health has scaled-up human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS) care and treatment services at primary care clinics in Lusaka, using predominately non-physician clinicians.

Objective: To report on the feasibility and early outcomes of the program.

Design, Setting, and Patients: Open cohort evaluation of antiretroviral-naive adults treated at 18 primary care facilities between April 26, 2004, and November 5, 2005. Data were entered in real time into an electronic patient tracking system. Intervention: Those meeting criteria for antiretroviral therapy (ART) received drugs according to Zambian national guidelines.

Main Outcome Measures Survival, regimen failure rates, and CD4 cell response.

Results: We enrolled 21,755 adults into HIV care, and 16,198 (75%) started ART. Among those starting ART, 9,864 (61%) were women. Of 15,866 patients with documented World Health Organization (WHO) staging, 11,573 (73%) were stage III or IV, and the mean (SD) entry CD4 cell count among the 15,336 patients with a baseline result was 143/µL (123/µL). Of 11,42 patients receiving ART who died, 1,120 had a reliable date of death. Of these patients, 792 (71%) died within 90 days of starting therapy (early mortality rate: 26 per 100 patient-years), and 328 (29%) died after 90 days (post-90-day mortality rate: 5.0 per 100 patient-years). In multivariable analysis, mortality was strongly associated with CD4 cell count between 50/µL and 199/µL (adjusted hazard ratio [AHR], 1.4; 95% confidence interval [CI], 1.0-2.0), CD4 cell count less than 50/µL (AHR, 2.2; 95% CI, 1.5-3.1), WHO stage III disease (AHR, 1.8; 95% CI, 1.3-2.4), WHO stage IV disease (AHR, 2.9; 95% CI, 2.0-4.3), low body mass index (<16; AHR, 2.4; 95% CI, 1.8-3.2), severe anaemia (<8.0 g/dL; AHR, 3.1; 95% CI, 2.3-4.0), and poor adherence to therapy (AHR, 2.9; 95% CI, 2.2-3.9). Of 11,714 patients at risk, 861 failed therapy by clinical criteria (rate, 13 per 100 patient-years). The mean (SD) CD4 cell count increase was 175/µL (174/µL) in 1,361 of 1,519 patients (90%) receiving treatment long enough to have a 12-month repeat.

Conclusion: Massive scale-up of HIV and AIDS treatment services with good clinical outcomes is feasible in primary care settings in sub-Saharan Africa. Most mortality occurs early, suggesting that earlier diagnosis and treatment may improve outcomes.

90.

TITLE: THE 3 X 5 HIV/AIDS TREATMENT PLAN; CHALLENGES FOR DEVELOPING COUNTRIES FROM THE ZAMBIAN PERSPECTIVE

Authors: Chishimba S and Zulu F

Year: 2004

Org/Inst: Commonwealth ACT-Zambia

Status: Published in the The XV International AIDSConference: Abstract no. B11132

Study Site(s): Lusaka

Source: The XV International AIDSConference: Abstract no. B11132
**Issues:** The World Health Organisation and UNAIDS have launched an ambitious 3 X 5 HIV/AIDS treatment plan. Taking cognisance of the multifaceted dimensions of the pandemic, major challenges, which include policy and operational issues, remain haunting Africa. The feasibility of Zambia’s target, 100, 000 PWAs to be on ARVs by 2005 is discussed as a sample.

**Description:** Commonwealth ACT conducted a survey in Lusaka urban and rural settings to: 1) Assess the applicability of the treatment plan in Zambia. 2) Identify barriers to the implementation of a national HIV/AIDS treatment plan. 3) Identify strategic solutions to challenges associated with implementation of the treatment plan. Informants included Community-based Action Teams, beneficiaries and local authorities. FGDs were conducted and literature review on the plans of government was done.

**Lessons learned:** The following were identified as barriers; limited information on ARVs and their erratic supply, lack of a standardised ARV administration guideline, stigma, inaccessibility of quality counselling and testing, eligibility for ARVs may not be transparent (politicking), women may not have equal access to ARVs in rural settings, lack of PWAs and community involvement, insufficient nutrition, HAART may not be affordable to government, lack of wide spread quality viral load monitoring tests, ill equipped health care infrastructures, lack of a legal framework for quality control of ARVs, poor conditions of service for health workers, lack of coordination with traditional healers and the private sector.

**Recommendations:** A simple, affordable, accessible, feasible and sustainable treatment plan is critical to Zambia. Treatment of OIs, Community Capacity Development and involvement of PWAs, Infrastructure, Social support/poverty reduction, Capacity development for health personnel, and Monitoring and Evaluation are key parameters for the ARV plan. For effective quality control in ARVs distribution, a National Regulatory Agency should be formed.

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91. **TITLE:** SOCIAL AND CULTURAL BARRIERS TO LONG-TERM HIV CARE: A CASE REPORT.

**Authors:** Mukuka I¹, Sinkala M¹,²,³ and Wamulume C¹ et al

**Year:** 2002

**Org/Inst:** ¹Centre for Infectious Disease Research in Zambia, ²Lusaka Urban District Health Management Team, ³

**Status:** Published in an Abstract Book, 3rd National Health Research Conference

**Study Site(s):** Lusaka

**Source:** Abstract Book, 3rd National Health Research Conference, Zambia

**Background:** Though long-term HIV care has started in sub-Saharan Africa, many barriers still exist. The following is a case report from Lusaka, Zambia highlighting these obstacles.

**Description:** FM was pregnant at 23 weeks when she tested HIV-positive and enrolled in our HIV/AIDS treatment program. Though her husband was 30 years older and had lost 3 wives to chronic illnesses, he blamed FM for infecting him. FM was chased from the house upon disclosure of her HIV and only came back to the house after her husband fell sick. He eventually agreed to HIV testing after being visited by counsellors, but secretly threatened to beat his wife for disclosing her HIV status. FM’s husband was found to be HIV-positive, severely immunosuppressed, and was started on antiretroviral therapy (ART). Meanwhile, still pregnant, FM fought off two bouts of severe illness. The first was a case of malaria requiring in-patient admission. During the second, counsellors found her at the home of a
traditional healer with tattoos all over her body. The traditional healer would only release her at night, when traditional medicines are believed most potent. FM was finally allowed to leave with the help of counsellors. Though we subsequently educated FM’s mother on the potential for drug interactions between ART and traditional medicines, within 3 weeks she insisted FM return to the traditional healer to take the baby for treatment. Unfortunately the baby died after being tattooed on her forehead. FM’s mother could not believe her daughter had HIV; she was convinced FM had become bewitched. Finally FM was taken to the village to continue with traditional medicines and also mourn her daughter. Her husband stayed in Lusaka to work and, without FM, his compliance to ART was now a concern. FM’s mother blocked all contact attempts to the village, but eventually FM returned to Lusaka, found employment, and continued on the program. She will likely soon require ART.

**Conclusions:** Despite the comprehensive nature of programs like MTCT+, multiple barriers still exist to long-term care, including strong spousal, familial, and cultural influences. As ART programs expand, resources need to be dedicated to community sensitisation, community education, and close patient follow-up.

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**92.**

**TITLE:** HIVCORPS: USING VOLUNTEERS TO RAPIDLY EXPAND HIV HEALTH SERVICES ACROSS ZAMBIA

**Authors:** Chi B, Fusco H, Goma F et al

**Year:** 2004

**Org/Inst:** HIVCorps

**Status:** Published in Am. J. Trop. Med. Hyg., 74(5), 2006, pp. 918-921

**Study Site(s):** Lusaka


In 2004, we created HIVCorps, an international volunteer program to involve pre-medical, medical, and public health students in the scale-up of HIV care and prevention services in Zambia. In our first year, we used 27 American and Zambian volunteers to assist with the administrative and logistical aspects of program implementation. Ten volunteers were based in the capital Lusaka; the remaining 17 were stationed across five rural districts. Supervision was provided by local health care providers, district officials, and hospital administrators. In our setting, the use of volunteers has proven feasible and effective for program support. Depending on a program’s immediate needs, use of many basic field personnel may be more beneficial than employment of one to two trained clinicians. Formal volunteer programs like HIVCorps should be developed alongside initiatives focused on deploying more specialized, experienced healthcare workers aboard.

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**93.**

**TITLE:** DISTRIBUTION OF ANTIRETROVIRAL DRUGS IN ZAMBIA: AN ETHICAL INVESTIGATION

**Authors:** Chomba C

**Year:** 2006

**Org/Inst:** The University of Zambia

**Status:** Published

**Study Site(s):** National

**Source:** The University of Zambia
The main objectives of this study are firstly to assess the current government distribution policy of antiretroviral drugs in Zambia from an ethical point of view and secondly to suggest ways in which this distribution mechanism could be improved. In order to achieve these aims the dissertation is designed as follows: chapter one highlights the current HIV and AIDS situation in Zambia in relation to antiretroviral treatment and shows that even though there are many people who are infected and need antiretroviral treatment, only a small number of these patients are put on treatment. The second chapter explains how ARVs are currently distributed in Zambia.

Its main finding is that there is no written policy on distribution of antiretroviral drugs in Zambia. However, a mechanism of distributing these drugs exists. In chapter three an attempt is made to critically evaluate the Zambian mechanism of distributing ARVs. Its strength and weaknesses are explained in a detailed way. The main strengths with Zambian mechanism of distributing antiretroviral drugs are that currently these drugs are distributed to patients free of charge. The distribution of ARVs is demand driven and thus prevents wastage of these drugs. The other strength is that each patient is given equal rights in receiving ARVs. The major weakness with the system is the lack of a specific policy of distributing these drugs. The other weakness is the use of first-come-first-served principle in distributing ARVs to patients. It has also been established through the study findings that the Zambian ART distribution system has largely used the clinical and lacks ethical considerations in administering these drugs. In the last chapter, a number of recommendations are made on how the current system of distributing antiretroviral drugs could be improved. These suggestions are based on analysis of various distribution principles.

94. TITLE: FAITH-BASED LEADERSHIP IN EFFECTIVE HIV/AIDS PROGRAM DELIVERY: IMPROVING ACCESS TO TREATMENT THROUGH CHURCH HEALTH INSTITUTIONS AND PARISH NETWORKS IN AFRICA, INDIA AND THE CARIBBEAN
Authors: Galbraith J and Mathai R
Year: 2003
Org/Inst: Catholic Medical Mission Board (CMMB)
Status: Published in The XV International AIDS Conference: Abstract no. MoPeE4292
Study Site(s): South Africa, Botswana, Namibia, Swaziland, Lesotho

Background: Catholic Medical Mission Board (CMMB) has been helping to deliver quality healthcare worldwide for 75 years. The organization has been a catalyst in bringing quality healthcare to the most vulnerable worldwide, through health, parish, and educational networks of in-country umbrella FBO's, Ministries of Health, international, non-governmental, & CBO's. CMMB's successful HIV/AIDS programs are: HIV / AIDS Prevention, Care and Support -Choose to Care (South Africa, Botswana, Namibia, Swaziland, Lesotho). HIV/AIDS Prevention and Treatment – Born to Live-PMTCT/PMTCT Plus (Global). Concerted faith-based action for scaling up HIV/AIDS care, prevention and treatment (India). TB-DOTS and AIDS related TB treatment (Zambia)Back to Haiti ( Haiti, Caribbean)

Lessons learned: FBO's provide 40 to 50 percent of health care in most developing countries. The comparative advantage of faith-based organizations is having trust of
communities in addressing the issues of the HIV/AIDS pandemic: including stigma, discrimination, care and support, especially care of the dying. FBO's, as the largest non-governmental organizations in the world, have enormous unexploited capacity for delivering primary health care through their networks of health facilities, parish communities and formal and informal educational structures. Mobilization of community home-based care volunteers through the social networks of the parishes has demonstrated the vast potential for leveraging the delivery of improved health care services in developing countries even with very poor infrastructures. International FBO's like CMMB are ideally positioned to be the catalysts for such leverage through the already existing health, educational and community systems of their in-country faith-based partners. The International FBO leveraged health programs are much more likely to be sustained as they are grafted onto the social systems of the local church. Such local ownership enhances success rates.

95. TITLE: HIV AND AIDS TREATMENT ACCESS ADVOCACY IN ZAMBIA
Authors: Sichalwe P.
Year: 2005
Org/Inst: Zambia AIDS Law Research and Advocacy Network
Status: Published; AIDS 2006 - XVI International AIDS Conference: Abstract no. CDE0537
Study Site(s): Selected rural Zambia

Issues: Advocacy for access to and availability of anti-retroviral therapy, nutrition, home based care and support and quality health care provision in rural Zambia.
Description: The Zambia AIDS Law Research and Advocacy Network developed a video titled “Right to Life” that showcased the difficulty of accessing HIV/AIDS treatment in rural Zambia. The video was designed to be an advocacy tool to mobilize rural communities in demanding for equitable, effective and sustainable delivery of ARVs to rural Zambia. An advocacy training brochure has been developed to go with the video in the rural areas.
Lessons learned: Partly, the message and purpose of the video made it possible for the government of the Republic of Zambia to announce on the 13th of June 2005 that access to anti-retroviral treatment will be free to all who need them. Though treatment is free, evidence shows that still most people in rural Zambia are experiencing difficulties in accessing treatment. People have to walk long distances, spend more, to get to the nearest ART administering centre. Other issues of concern include inadequate nutrition for those on treatment, limited capacity of health care workers to administer treatment and stigma and discrimination.
Recommendations: It was envisaged that for these concerns to be addressed, the rural communities have to be empowered to speak out on issues affecting them. The Right to Life video led to the carrying out of advocacy training workshops for rural communities. This was with the view to mobilize communities for advocacy. This year, plans are underway to set up advocacy hubs in all the nine provinces of Zambia, to play the role of coordinating advocacy initiatives in rural areas through working with support groups so as to ensure equitable, accessible, sustainable and available treatment and all the accompaniments.
96. **TITLE:** COST-BENEFIT OF HAART AND ITS POTENTIAL FISCAL SAVINGS WITHIN THE PUBLIC SECTOR  
**Authors:** Fieno J.  
**Year:** 2002  
**Org/Inst:** -  
**Status:** Published; the 3rd IAS Conference on HIV Pathogenesis and Treatment: abstract no. WePe11.5C04  
**Study Site(s):** National  
**Source:** The 3rd IAS Conference on HIV Pathogenesis and Treatment: Abstract no. WePe11.5C04  

**Introduction:** The introduction of highly active antiretroviral therapy (HAART) in high HIV-prevalence countries has given hope to thousands who have not had access to treatment. As high HIV-prevalence countries scale up care, the fiscal cost and sustainability of a universal HAART regime from the public health system have become critical issues. The scaling up of HAART, however, might produce substantial fiscal savings in the form of lower costs in sick pay, training of replacements, and funeral expenses for public employees. This poster describes a cost-benefit model for the introduction of HAART within the public sector that incorporates these savings.  

**Methodology:** A simulation model is used for Zambia, one of the first countries to start a HAART program, over ten years. The cost to treat one patient with HAART in Zambia is roughly US$500 per year. The overall cost to the public sector is determined by two variables: the number of HIV-positive employees and the employee share of the cost of care. Measures of fiscal sustainability will also be added to the model.  

**Results:** Initial findings suggest that the fiscal savings in public administration due to HAART might be large. It was estimated that for the education sector in Zambia, the total per patient cost of HAART could be reduced by 40 to 46 percent (Kombe, Fieno et. al., 2004). More data are being collected to model the entire public sector.  

**Conclusions:** The cost of the AIDS epidemic for the state is already high without treatment. The cost-benefit analysis demonstrates that the total cost of HAART is lower than originally thought, which offers a ray of hope. The Millennium Development Goals will never be achieved if the AIDS epidemic exhausts the medical and teaching corps of high HIV-prevalence countries as expected. The introduction of HAART can reverse this process and make these development goals attainable.

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97. **TITLE:** THE FEASIBILITY OF INITIATING AN HIV TREATMENT PROGRAM IN A PRIVATELY FUNDED HOME FOR THE DESTITUTE AND THE SICK  
**Authors:** Bolton C1, Hill R Y2 and Zulu I1,2,3 et al  
**Year:** 2004  
**Org/Inst:** 1Centre for Infectious Disease Research in Zambia, 2University of Alabama at Birmingham, 3University of Teaching Hospital,  
**Status:** Published in an Abstract Book, 3rd National Health Research Conference  
**Study Site(s):** Lusaka  
**Source:** Abstract Book, 3rd National Health Research Conference, Zambia
**Introduction:** In May 2004, we began a HIV treatment program in a charity-run home, caring for very ill, impoverished, and destitute individuals in Lusaka, Zambia. We describe the feasibility of establishing VCT and HIV care services in this type of setting and examine the baseline characteristics of those that enrolled.

**Description:** As part of program implementation, two full-time nurse-counsellors were hired to help identify new clients, educate and counsel patients on HIV, perform rapid on-site HIV-1 testing, and complete post test counselling. A full-time clinical officer was brought in to provide medical evaluations and clinical care. All patients who tested HIV-positive were informed about the HIV treatment program and offered enrolment. A full physical exam (which included WHO staging for HIV) and CD4 testing were performed at the enrolment visit. Eligibility for antiretroviral therapy (ART) was determined according to recent WHO guidelines: adults with an absolute CD4 count less than 200; adults in WHO stage 3 with and absolute CD4 <350; adults in WHO Stage 4. Those receiving ART were given their tablets daily by medical staff under direct observation. In May – July 2004, 140 of the 160 residents (80%) of the home accepted VCT. Of this group, 115 (82%) were found to be HIV-positive. A total of 56 enrollees were placed on ART: 41 (73%) were newly started and 15 (27%) were continued on previously initiated regimens. The median CD4 count for individuals on ART was between 50 and 100 cells/cm³ and a high proportion had advanced clinical disease (88% were either WHO stage III or IV). Ten of the 56 (18%) on ART died, all within 5 weeks of treatment initiation.

**Conclusion:** Implementation of HIV treatment programs in community care facilities is feasible. As demonstrated by this program, a majority of residents at these sites are infected with HIV and are eligible for relatively urgent ART. Though a proportion of individuals will die despite the initiation of HIV treatment, most deaths occur in patients with advanced disease. Due to the very small sample size and the early stage of this program, it is not yet possible to evaluate the effect it has on mortality and morbidity in this population.

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**98.**

**TITLE:** EXPERIENCE WITH HAART AT NCHANGA SOUTH HOSPITAL

**Authors:** Trivedi M. K.

**Year:** 2002

**Org/Inst:** Nchanga South Hospital, Chingola, Zambia

**Status:** Published in an Abstract Book, 3rd National Health Research Conference

**Study Site(s):** Chingola

**Source:** Abstract Book, 3rd National Health Research Conference, Zambia

**Study settings:** Hospital records of patients on HAART were studied and later specifically designed forms were used to keep the information population easily accessible and handy. The parameters were entered in these forms on each clinic visit.

**Problem statement:** Before introduction of HAART diagnosis of AIDS in a person has had very severe implications on his or her life. Benefits of HAART are well known since its introduction in Western World in 1996. Cost of these drugs in past have been prohibitive, since 2002 prices have been affordable by some of our patients and later the National programme for ARV helped them to continue treatment.

**Objectives:** See efficacy and benefits of HAART in our environment.

Design: Retrospective observational study, on going.

**Outcome Measures:** Clinical improvement, mortality, hospitalization, side effects of antiretroviral drugs and CD4 cell count were studied before and after starting the treatment.
Conclusions: Significant clinical improvement is observed, more than 50% patient were asymptomatic and gained weight. Only 22% patient were hospitalized once started treatment, very few side effects were observed. CD4 cell rose to over 100 irrespective of initial CD4 cell count, probability of remaining on treatment is about 80%. Funding sources: None.

Introduction: ART is a life long commitment and success depends heavily on patients’ adherence and a supportive environment. For married women, HIV serodisclosure to partners is critical. Objectives of the study were to assess HIV serodisclosure and ART success among married women in Zambia.

Methodology: Married women on ART completed standardized questionnaire including in-depth oral interviews. Among questions included were on HIV serodisclosure to a partner and cultural observance, ART adherence, partner sexual behaviour and legal protection. The study area was across five (5) districts. (Lusaka, Ndola, Kitwe, Livingstone and Mansa)

Results: Out of 560 women, who participated, 66% did not disclose the status to a partner due to fear of blame, abandonment and losing the economic support of their partner. Data cite courts of law in Zambia to be driving fear of disclosure in women, as divorce is granted to men on the grounds that a wife went for VCT and is on ART without approval. Men’s cultural control of sex and matrimonial decisions suggests women’s exposure to possible re-infection. More than 21% had their regimen shared in half with a non-tested husband. The results further suggest that 76% did not adhere to ART regimen as prescribed because they are trying to hide their pills. 94% had no access to legal protection.

Conclusions: Although more men in Zambia access ART, data analysis suggests that women have superior clinical outcomes once on ART when supported. But gender-based violence, denial and fear of HIV serodisclosure to partners, and the customary law, which has disadvantaged women for decades, undo would-be success. ART success in women depends on the legal rights and freedoms, supportive cultural behaviour and an enabling health care system. Thus, legal and health-care system is a major entry point to ending this conspiracy of customary law, culture and violence against women.

100. TITLE: PREPARING COMMUNITIES FOR ART IN ZAMBIA; COMMUNITY EDUCATION AND REFERRAL- BASELINE SURVEY
Authors: Simbaya J, Ndubani P.
Org/Inst: Institute for Economic and Social Research
Year: -
Background: Community Education and Referral; Supporting Adherence to ART and Prevention for People with HIV in Zambia (ACER Project) is aimed at improving health seeking behaviour, equity of access, adherence to ARV treatment, and HIV/AIDS prevention.

Methodology: A 32-month quasi-experimental study with data collection points are at baseline and end line. A total random sample of 1200 was recruited for the study and interviewed using a semi-structured questionnaire.

Results: The community baseline survey reaffirms the existing information that people knowledge on basic facts about HIV/AIDS is quite high (87%). Equally, whilst ARVs are new on the scene, there is growing awareness about HIV/AIDS treatment. On the question whether ARVs can prolong life, 64% answered in affirmative, with disparities between Lusaka (85%) and Ndola (42%). The significance of this finding is that the more people realize that ART can prolong life the more they may want to access treatment. Thirty percent of the respondents reported having taken an HIV test whilst 49% were planning to take an HIV test. The study revealed a relatively high level (84%) of western health care utilization and positive attitude towards adherence to HIV/AIDS treatment among community members. When asked whether they could care for and support a family member with HIV, the majority (84%) said they could, suggesting an existence of a strong family support needed to promote adherence to ART. Stigma is still high (67% said they would not buy meat from a HIV positive butcher and 60% said they could not eat food prepared by an HIV-infected person).

Conclusions: The findings suggest scaling up of community activities to increase VCT uptake if people have to benefit from ART. Increased community education is likely to positively influence health-seeking behaviour, increase access, strengthen support networks and decrease stigma.
study population comprised of all nurses working at Ndola District and those working at Ndola Central Hospital. The study sample was selected using stratified random sampling. The sample size for this study was 50 nurses. A structured questionnaire was the tool used to collect data from the study subjects. The researcher got permission from the Directors of Ndola Central hospital and Ndola District Health Management Team, to collect data from the nurses. The data was analysed manually using a data master sheet as soon as the respondents returned the first questionnaires. The data were presented in tables and figures.

**Results:** Only slightly more than a quarter of the respondents correctly defined HIV as Human Immunodeficiency Virus, while less than half of the respondents correctly defined AIDS as Acquired Immunodeficiency Syndrome. Half (51%) of the respondents were able to identify the three ARV drug groups. Most (94%) of the respondents were able to give examples of ARV drugs, and mention some side effects of ARVs. Most (76.1%) of the respondents had not received training in ART management, yet most of them had a high level of knowledge on ART. About half (52%) of the respondents said that treatment protocols for ART were available in their departments. Most (62%) of the respondents said there was literature on ARVs available in their departments. More than half (62%) of the respondents had read ARV and HIV/AIDS literature a week before the time of data collection, and as many also agreed that they held clinical meetings or nursing conferences at their institutions.

**Conclusions:** The study was carried out to assess the levels of knowledge about ART among the nursing fraternity in Ndola. Its purpose was to highlight the prevailing situation and some of the factors that affect the knowledge that nurses have, in order that solutions may be found that will ensure that they provide care and support to people on ART that ensures treatment compliance and prevents resistance. The healthcare delivery system depends mostly on nurses for service provision hence the need to provide continuing education and support with respect to HIV/AIDS/ART. This will maximise the utilisation of staff especially in the peri-urban areas in the management of ART and enable patients to be managed effectively and efficiently right where they are even in the absence of a doctor.

**Funding Sources:** Ministry of Health

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**102.**

**TITLE:** EXPERIENCES FROM AN ART CLINIC IN RURAL ZAMBIA

**Authors:** Kraak R³, Thuma P¹, J. H. van Dijk¹,²,³ et al

**Year:** 2006

**Org/Inst:** Malaria Institute at Macha, Choma, Zambia¹ Macha Mission Hospital, Choma, Zambia² ERASMUS MC - University Medical Center Rotterdam, the Netherlands³

**Status:** Published in an Abstract Book, 4th National Health Research Conference

**Study Site(s):** Choma


**Objectives:** The study was designed to evaluate baseline characteristics and outcomes among HIV-1 infected patients receiving HAART in Macha, Zambia. This information will assist the health care providers at Macha Hospital in future planning and improvement of the HIV care service being offered.

**Methodology:** Data from HIV patients seen at the Macha ART clinic were confidentially obtained from the CareWare® database and were used to characterize the HIV population in Macha and the surrounding area. Information obtained includes sociodemographic data,
clinical data, and pharmacy and laboratory data. The selection of patients and extraction of data was done at the Malaria / Medical Institute at Macha, a research institute that has primarily been involved in malaria research and is now branching out to other diseases like HIV and TB.

**Results:** The government ART program in Macha, which is being supplemented by AIDSRelief Zambia, provided data for 494 treatment-naive patients starting HAART in the period from March 2005 till May 2006. Data will be presented showing socio-demographics of the ART clinic population, criteria for initiation of therapy, and drug regimens used. **Conclusions:** The ART program at Macha Hospital is a busy clinic, which is rapidly expanding. Supplementary funding in addition to the government program has made it possible to have a consistent program. There are many challenges encountered and evaluation of the program is necessary to be able to address these. Especially in resource limited and understaffed settings it is important to identify, evaluate, quantify, and prioritise the areas that need practical action.

Funding Sources (of the research); The Malaria Institute at Macha, Choma, Zambia

103. **TITLE:** FORMALIZING REFERRAL NETWORKS: INCREASING ACCESS TO AND INTEGRATION OF HIV PREVENTION, CARE, TREATMENT AND SUPPORT SERVICES

**Authors:** Stuart L.

**Year:** 2005

**Org/Inst:** Zambia Prevention Care and Treatment Partnership

**Status:** Published in an Abstract Book of the AIDS 2006 - XVI International AIDS Conference: Abstract no. MOPE0644

**Study Site(s):** National

**Source:** AIDS 2006 - XVI International AIDS Conference: Abstract no. MOPE0644

**Issues:** As HIV prevention, care and treatment are expanded in resource constrained settings, more services become available to meet the essential needs of PLHA. Accessing services, however, requires knowing what services are available, where they are located and how they can be reached. While informal referral systems exist in some areas, they rarely provide systematic coordination to optimize access and strengthen integrated service delivery.

**Description:** The Zambia Prevention Care and Treatment Partnership funded by USAID through the U.S. President Emergency Plan for AIDS Relief is collaborating with the Government of Zambia to scale-up CT, PMTCT, clinical care and ART in five provinces. Linkages with local PLHA groups and organizations providing HBC, nutrition, income generation, spiritual support and other services are crucial for the comprehensive care and support of PLHAs and their families. In the absence of referral systems that effectively coordinate service providers and facilitate access to services, ZPCT operationalized a referral network model including: seconding a referral coordinator in each province to work closely with provincial and district health authorities and local services; mapping district HIV-related services; conducting stakeholders meetings to mobilize broad sectors of communities; developing operational procedures including service-based referral focal persons, monthly meetings of service providers to enhance coordination, standardizing tools (referral form, register) and feedback to confirm access and patient satisfaction.

**Lessons learned:** Formalizing referral networks standardizes mechanisms for enhancing coordination between service providers, resulting in increased access to and integration of
services. However, the extensive requirements to rapidly expand HIV prevention, care and treatment can consume funding needed for creating functional referral networks.

**Recommendations:** Local ownership by service providers and stakeholders, and standardizing procedures and tools, are key to sustaining a well-functioning referral system. Committing resources to referral networks as a programmatic priority is recommended as an effective strategy to increase access to HIV-related services.

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**Title:** FAITH-BASED ORGANIZATIONS PLAY A MAJOR ROLE IN HIV/AIDS CARE AND TREATMENT IN SUB-SAHARAN AFRICA: ARHAP-WHO RESEARCH PROJECT: ZAMBIA AND LESOTHO

**Authors:** Ted K and Iqbal N

**Year:** 2007

**Org/Inst:** African Religious Health Assets Programme (ARHAP)

**Status:** Ongoing

**Study Site(s):** Zambia and Lesotho

**Source:** African Religious Health Assets Programme (ARHAP)

The study, "Appreciating Assets," documents the contribution made by religion and religious entities to the struggle for health and well-being in Zambia and Lesotho, in a context dominated by poverty, stressed public health systems and the HIV/AIDS pandemic.

**Objective:** By mapping and understanding these Religious Health Assets (RHAs), the study calls for a greater appreciation of the potential they have for the struggle against HIV/AIDS and for universal access and offers recommendations for action by both public health and religious leaders at all levels. Through respectful engagement these assets have the potential to increase in strength and value and become more effective in the long-term sustainability, recovery and resilience of individuals, families and communities.

The year 2006 marks the 25th anniversary of the first published description of HIV/AIDS and a pivotal year for the pandemic. Over the past quarter century, an estimated 60 million people worldwide have become infected with the virus, 20-25 million have died and millions more have been affected by the loss, pain and suffering that accompany the disease. Zambia and Lesotho, in southern Africa, the two study sites for this research, are among the countries hardest hit, with estimated adult HIV/AIDS prevalence rates of 17.0% and 23.2% at the end of 2005, respectively.

**Results:** This study, which presents research findings comprehensively, is the first attempt to assess and map both the tangible and intangible assets of religious entities through a blending of Participatory Engagement Workshops and GIS Mapping. A suite of research tools, PIRHANA, (Participatory Inquiry into Religious Health Assets, Networks and Agency) was developed for this purpose. Over the course of nine months, November 2005 - July 2006, ARHAP research teams engaged more than 350 citizens and religious and health leaders, identified through purposive sampling, from the remote mountains of Mohlanapeng in Lesotho to the urban centre of Lusaka in Zambia, in a participatory and appreciative inquiry into the nature and potential contributions of religious entities to the struggle against HIV/AIDS, to universal access to treatment, care and prevention, and to health and well-being more broadly. Our findings reflect the collective knowledge and deep wisdom of the participants who work in a daily struggle for survival and at the heart of the pandemic.
Issues: Nurses in southern Africa carry the primary responsibility for AIDS care, treatment and support. The gender bias of the profession, the traditional hierarchy within health institutions and the challenge of addressing the health needs at work, in the community and at home contributes to a weaken health care system. Addressing the needs of the health workers / caregivers leads to stronger health care systems and better care of those living with HIV.

Description: The Zambia Nurses Association undertook a study in 4 provinces with 246 participants to identify the needs of health workers / caregivers. Data was collected using interviews, questionnaires, observation, focus groups and a literature review. The study found that health workers faced severe challenges addressing the impact of HIV, yet no programs were directed at providing them support. It identified a dire need for such services especially if control of transmission of HIV in the workplace was to be realized. Zambian and South African nurses associations, based on the findings, developed programs that enabled their members affected and infected by AIDS, to be mentally and emotional prepared and supported to meet the needs of those affected and/or living with HIV/AIDS.

Lessons learned: Peer support programs in both countries led to increased use of voluntary counselling and testing. Workshops led to reduced stigma and discrimination both within the profession and towards patients. There was increased knowledge about HIV and HIV support services were accessed by nurses.

Recommendations: That health care provider organizations undertake programs to provide support to its members to address the impact of HIV in order to facilitate implementation of the global response required by the pandemic.

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106. TITLE: A COMMUNITY-BASED CONTACT TRACING PROGRAM FOR PATIENTS ENROLLED IN A DISTRICT-WIDE PROGRAM FOR ANTIRETROVIRAL THERAPY (ART)

Authors: Krebs D, Chi B, Mulenga Y et al

Year: 2005

Org/Inst: Centre for Infectious Disease Research in Zambia, Project Concern International, University of Alabama at Birmingham.

Status: Published in the abstract book of the XVI International AIDS Conference, Toronto, Canada, August 13-18, 2006

Study Site(s): Lusaka

Background: Follow-up of patients after missed clinic visits is an important adjunct to long-term HIV care. In African settings, there are little data describing the reasons behind missed visits and the rate of return visits following community-based contact tracing.

Methods: We implemented community outreach at 11 ART sites in Lusaka, Zambia. Local home-based care organizations were selected to trace patients who missed their visits using patient locator information collected at enrolment. Individual-level patient information was derived from a large, programmatic database.

Results: From May-05 to Sept-05, community health workers were dispatched to contact 1366 patients with missed clinic visits. Of these, 565 (41%) were not traceable because the address provided was not valid (n=280), the patient had moved (n=233), or the patient was not at home (n=52). Of the remaining 801, 366 (46%) were reported to have died; 435 (54%) were contacted directly and reminded about their clinic visit. When these patients were asked why they missed appointments, 169 (39%) cited structural or logistical barriers to adherence, such as feeling too sick to come to the clinic or being away from home temporarily. Psychosocial barriers were cited by 99 (23%) patients, including competing daily priorities and the negative influence of others. 53 (12%) patients reported medication-specific reasons, such as having a surplus of medication or no longer feeling ill. Patients with whom community workers made contact were more likely to return to care compared with those who were untraceable (28% vs. 12%, p<0.0001). Median time from community worker interaction to return clinic visit was 12 days (IQR=5-27).

Conclusions: Despite the availability of free ART in Lusaka, there are still many barriers to adhering to visit schedules. This community-based program to trace patients after missed visits improved follow-up rates modestly. Further operations research is needed to assess optimal strategies for outreach and its cost-effectiveness.

107. TITLE: RAPID SCALE-UP OF ANTIRETROVIRAL SERVICES IN ZAMBIA: 1-YEAR CLINICAL AND IMMUNOLOGICAL OUTCOMES.

Authors: Sinkala M, Levy J, Zulu I, Mwango A et al
Year: 2005
Org/Inst: Centre for Infectious Disease Research in Zambia, Zambian Ministry of Health, University of Zambia, University Teaching Hospital, Center for Disease Control and Prevention, University of Alabama at Birmingham.

Status: Published in the abstract book of the 13th Conference on Retroviruses and Opportunistic Infections in Denver, CO, February 5-8, 2006; Abstract 64.

Study Site(s): Lusaka
Source: 13th Conference on Retroviruses and Opportunistic Infections in Denver, CO, February 5-8, 2006; Abstract 64.

Background: Massive scale-up of HIV care and treatment services is currently underway in a number of developing countries. Whether these efforts will translate into favourable long-term outcomes is not fully known.

Methods: We report on programmatic outcomes from 18 public and private clinical sites across 3 provinces of Zambia. Clinical care has been standardized according to national guidelines. Initiation of ART is dependent upon World Health Organization (WHO) clinical staging and CD4 cell count. First-line drug regimens are zidovudine (ZDV) or stavudine (d4T), plus lamivudine (3TC), plus nevirapine (NVP) or efavirenz (EFV). Individual-level outcomes data are collected through a computerized record system and standardized chart
review. **Results:** From April 2004 to August 2005, we enrolled 18,075 adults into a government HIV care and treatment program, and started 11,074 (61%) on ART. Of those starting ART, 6806 (61%) were women. Among those commencing ART, mean CD4 was 131 (IQR 52 to182), mean body mass index was 21.3 (IQR 17.9 to 22.4), and 8009 patients (73%) were WHO stage III or IV. Over 81,248 patient-months, 1269 patients died (crude death rate 0.016 deaths/patient-month); 43% of deaths occurred in patients with entry CD4 ≤50 and 53% of deaths occurred within 60 days of enrolment. In a multivariable Cox regression, restricted to those on ART, risk of death was strongly associated with entry CD4+ count ≤50 (adjusted hazard ratio [AHR] = 2.1, 95%CI 1.8 to 2.4), WHO stage III or IV (AHR = 1.9, 95%CI 1.5 to 2.4), body mass index <16 (AHR = 2.2, 95%CI 1.8 to 2.5), haemoglobin <8 (AHR = 2.6, 95%CI 2.2 to 3.1), and male gender (AHR = 1.4, 95%CI 1.2 to 1.6). At least 6 months of follow-up was given 11,854 individuals to allow assessment of CD4 response. Those starting ART (n = 8284) had a greater mean increase in CD4 at 6 months (+61 vs. +5 cells/μL; p <0.0001) and at 12 months (+85 vs. ~23 cells/μL; p <0.0001) than those not on ART.

**Conclusions:** Rapid initiation of ART in a programmatic setting led to favourable clinical outcomes at 6 and 12 months in Zambia. Advanced HIV disease was a very strong predictor of mortality in this population, suggesting that every effort should be made to identify and treat infected patients earlier in their disease course.

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**Title:** Rapid Deployment of Antiretroviral Therapy (ART) Services Is Feasible and Effective in Resource-Limited Settings in Sub-Saharan Africa.

**Authors:** Stringer JSA, Zulu I, Chi B et al

**Year:** 2004

**Org/Inst:** Centre for Infectious Disease Research in Zambia, Zambian Ministry of Health, University of Zambia, University Teaching Hospital, Center for Disease Control and Prevention, University of Alabama at Birmingham, Elizabeth Glaser Paediatric AIDS Foundation

**Status:** Published in the abstract book of the 12th Conference on Retroviruses and Opportunistic Infections, Boston, MA, February 22-26, 2005;

**Study Site(s):** Lusaka

**Source:** 12th Conference on Retroviruses and Opportunistic Infections, Boston, MA, February 22-26, 2005; Abstract 638b.

**Introduction:** Donor mechanisms have made funding available for rapid scale-up of ART services in many settings. The feasibility and potential for favourable clinical outcomes of such programs are largely unknown in the poorest affected countries.

**Methods:** We helped the Zambian government in rolling out an ART program in Lusaka using primarily US Emergency Plan funding. Support included: 1) developing form-guided patient (pt) care protocols and 2) training non-MDs (nurses, clinical officers) in their use; 3) renovation of clinical space; 4) payment of overtime shifts for additional clinicians; 5) support of pharmacy and 6) lab; 7) development of an electronic pt tracking and outcomes monitoring system; 8) provision of clinical care oversight. First line drug regimens were ZDV or D4T + 3TC + NVP. We targeted populations likely to require ART.

**Results:** Between Apr and Dec 2004, we trained 246 providers and initiated free ART
services in 9 district health clinics and 2 hospices. 9740 pts were enrolled into HIV care. 61% were women. 6054 pts started ART based on CD4 and/or clinical eligibility. At time of writing, 1043 pts were enrolled for greater than 6 months and had outcomes data from their 6-month follow-up (f/u) visit. Median entry CD4 of f/u cohort was 115 (IQR: 46 – 246); 696 (67%) were WHO stage III or IV. Those starting ART had a mean CD4 increase of 143 ± 135 cells/cc and mean weight gain of 3.1±7.0 kg (vs. 26.0 ± 142 cells/cc and 0.2 ±3.7 kg among those not starting ART; p < 0.001 for both comparisons). Over a total of 5132 pt-months of follow-up, 110 pts died (crude death rate 0.021 deaths / pt-month). 42% of deaths occurred in pts with entry CD4 < 50 and 71% died within 60 days of enrolment. Factors associated with death at 6 mo f/u in bivariate analysis included baseline CD4 < 200 (RR=2.5; 95%CI 1.5-4.2), stage III or IV disease (RR=4.9; 2.6-9.3), BMI < 16 (RR=6.1; 3.6-10.5), TB co-infection (RR=2.0; 1.4-3.0), and haemoglobin <8 (RR=3.5; 2.2-5.5). In multivariable logistic regression, ART appeared protective against death (RR=0.7; 95%CI 0.3-1.4) after adjustments were made for CD4 and WHO stage. Risk of death remained strongly associated with WHO stage, BMI < 16, and haemoglobin < 8.

Conclusions: This early experience suggests that rapid scale-up of clinically effective ART services is feasible in resource-limited settings. Targeting very ill populations resulted in high program mortality, but also saved many who would have surely died.

109.  

**TITLE:** CARE AND TREATMENT OF HIV-INFECTED FAMILIES IS FEASIBLE IN LUSAKA, ZAMBIA  

**Authors:** Wamulume C, Stringer E. M, Luhanga D et al  

**Year:** 2004  

**Org/Inst:** Centre for Infectious Disease Research in Zambia, Zambian Ministry of Health, University of Alabama at Birmingham  

**Status:** Published in the abstract book of the XV International AIDS Conference, Bangkok, Thailand, July 11-16, 2004  

**Study Site(s):** Lusaka  

**Source:** XV International AIDS Conference, Bangkok, Thailand, July 11-16, 2004; Abstract ThPeB7085.

**Background:** In Zambia the proportion of children with either a mother or both parents dead is as high as 11%. Approximately 1,000 HIV infected mothers are identified each month through PMTCT services in Lusaka.

**Methods:** In April 2003, we initiated an HIV treatment program at one Lusaka District health clinic through the MTCT Plus Initiative. HIV-infected women were identified in antenatal and postnatal clinics and referred to the program. After an index woman enrolls, she is able to enrol her partner and children. Criteria for starting ART are: CD4 count <200/mm3, CD4<350 with WHO Stage II, III, or WHO Stage IV regardless of CD4. Individuals not meeting criteria for ART have regular clinic visits, receive multivitamins and INH prophylaxis against TB, and are given food supplements from the World Food Program.

**Results:** From Apr - Nov 03, we enrolled 79 adults: 60 women (76%) and 19 partners (24%). 51 (85%) of the women were pregnant and 9 (15%) postpartum. 34 children were enrolled. 46 of the women (80.8%) were married. Despite 49 of the 60 enrolled women disclosing their status to their partner, only 19 partners had enrolled thus far. The average age of the partners in the program was 35 yrs vs. 27 yrs in the women; p=.0001. Partners were also more educated than women (12.0 yrs vs. 8.5 yrs; p=0.002). Clinically, the majority of enrollees were WHO Stage I at baseline, 55(92%) women and 16 (84%) men (p=ns.) There was a trend toward higher CD4 among women compared to men at
enrolment (375 vs. 311; p=0.11). Through November, the number of persons initiating ART was 22 (27.8%). No patients in the program have discontinued therapy due to toxicity nor has anyone been lost to follow-up.

**Conclusions:** Although our HIV treatment program is small and new, results to date show that it is feasible in the Zambia setting.

**110.**

**TITLE:** RAPID ASSESSMENT OF ANTI RETROVIRAL THERAPY (ART) SERVICES IN ZAMBIA

**Author(s):** Macwangi M. and Siwale M.

**Year:** 2004

**Inst/Org:** NAC, MOH/CBOH and WHO

**Status:** Completed

**Study Sites:** National

**Source:** WHO, MOH and INESOR

**Objective:** The general objective of the study was to assess the status of anti-retroviral therapy (ART) implementation in the public and private sector in Zambia.

**Specific objective were:**

- To assess the current state of ART programs, including constraints faced in both the public and private sector institutions.
- To assess entry points into ART in both the public and private sectors;
- To assess the Home based care centers and access to ART programs for their clients.
- To assess community awareness of ART programs among the community,
- To assess accessibility of HIV/AIDS related and ART services by the community
- To recommend possible solutions to identified challenges.

**Methodology:** A rapid assessment was conducted of the services available to provide antiretroviral therapy (ART) in Zambia. Twelve public and 14 private sector institutions in thirteen Districts providing ART were surveyed using both qualitative and quantitative methods. Content analysis was used for the qualitative analysis of the study. Five evaluation instruments were used:

(i) Public sector provider questionnaire,
(ii) Private sector provider questionnaire,
(iii) Home based care provider questionnaire,
(iv) Focus group discussions and
(v) Key informant interviews. Interviews were conducted with representatives from the community including youth leaders, church leaders, traditional healers, family care givers and community leaders

**Results:** Key results include that institutions visited were collecting a lot of information being collected but there were no common specific indicators that were being tracked for over time; health facilities had the basic capacity to provide services for people living with HIV/AIDS but their ability to cope with the impending increase in demand for the services was limited and there was shortage of trained staff to cope with current and even worse the growing number of patients. The supply of test kits, laboratory reagents, specimen bottles and medicines needs to be discussed and planned in details to ensure regular and sustained supplies. The cost of ARVs and related expenses such as diagnostic services was of major concern to both providers and the community and finally the coordination of ART services among providers was weak resulting in duplication of services. Based on these findings these report makes recommendation s to strengthen and scale up ART services
Strategic objective 10: **Expand treatment for tuberculosis sexually transmitted infections (STIs) and other opportunistic infections (OIs)**

111. **TITLE:** CHALLENGES OF MANAGING TB AT KAMFINSA PRISON IN ZAMBIA  
**Authors:** Sanjobo N  
**Year:** 2003  
**Org/Inst:** Copperbelt University, Kitwe, Zambia  
**Status:** Published; The XV International AIDS Conference: Abstract no. TuPeC4692  
**Study Site(s):** Kamfinsa Prison Kitwe  
**Source:** The XV International AIDS Conference: Abstract no. TuPeC4692

**Issue:** TB is one of the most important opportunistic infections among inmates with HIV/AIDS. The emergence of HIV among the prisons population has increased susceptibility to TB.

**Description:** Kamfinsa Prison is the largest prison in Zambia. It was built over 40 years ago with a capacity to hold about 300 inmates. The current daily average population is 1000. 27% of the inmates are HIV positive, 15% suffer from STIs. An average of 80 inmates contracted TB at Kamfinsa Prison every year from 2000 unto 2003. 12% of the inmates who contracted TB died. The prison clinic lacks investigatory capacity for TB. The clinic has no transport to refer inmates to hospital, hence the delays in commencing treatment. The clinic has no Nurse. The only health worker available operates in 2 health centres. Nutrition supplements are not available to inmates on TB medication. The prison cells are highly congested, poorly ventilated and the infrastructure is dilapidated, an atmosphere conducive for the transmission of TB.

**Lessons learned:** Compliance to 'DOTS' has proved difficult to achieve because of the rudimentary health service available. Security concerns tend to compromise genuine public health issues.

**Recommendations:**  
All inmates have the right to access health care, including preventive measures, equivalent to that available to the community without discrimination.  
Government must enforce the provisions for the treatment of inmates as provided for in the Prisons Act of the Laws of Zambia.

112. **TITLE:** A STUDY TO DETERMINE THE CONTRIBUTING FACTORS TO THE HIGH PREVALENCE OF TUBERCULOSIS AMONG NURSES IN THE UNIVERSITY TEACHING HOSPITAL IN LUSAKA, ZAMBIA  
**Authors:** Chinwendo D and Chanda O.  
**Year:** 2001  
**Org/Inst:** The University of Zambia, School of Medicine  
**Status:** Published  
**Study Site(s):** University Teaching Hospital  
**Source:** The University of Zambia, School of Medicine
This study was undertaken in order to identify the contributing factors to the prevalence of Tuberculosis among nurses in UTH in order to design strategies for prevention of tuberculosis among nurses.

The objectives of study were: To identify both service and community factors that contribute to nurses developing tuberculosis; To establish the opinion of nurses towards tuberculosis prevention; To make recommendations to policy-makers regarding prevention strategies. The study was conducted at University Teaching Hospital in Lusaka with an establishment of 2656 workers. Data was collected using self-administered interview schedule, retrospective record review, and observation of infection, prevention and control measures in the hospital and focus group discussions with 12 nurses.

Results showed that socio-economic factors did not significantly affect the outcome of tuberculosis, confirming the correct status of unconventional tuberculosis. There was irregular supply of items required to maintain basic hygiene practices. Mycobacterium tuberculosis was isolated from nursing care equipment like suction tubing, a pillow and a locker in ward environment.

Focus group discussions showed that nurses believe that instituting primary preventive measures and better nutrition schedule are much more important and meaningful than ward rotations as one can be rotated from one high risk ward to another. The study also showed that the level of exposure does determine the outcome of tuberculosis (P. value 0.0107868). Illustrated in the study is the fact that BCG does not guarantee protection against the acquisition of tuberculosis among nurses (P. value 0.04238011).

Retrospective case review showed that 4 (80%) out of 5 tuberculosis patients who defaulted had a relapse which could have been a multi-drug-resistant tuberculosis which is easily transmissible and difficult to treat.

The study also found out that, community and health-care work place factors seem to synergistically contribute to nurses acquiring tuberculosis. It was noted, though, that sometimes when the factors are analysed singly, they seem not to affect the outcome of tuberculosis.

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113. TITLE: INTEGRATION OF TUBERCULOSIS (TB) AND HIV CARE IN PRIMARY HEALTH CARE SERVICES IN LUSAKA, ZAMBIA

Authors: Kaminsa-Kabanje S, Jham M, Kancheya N et al

Year: 2004

Org/Inst: Centre for Infectious Disease Research in Zambia, University of Alabama at Birmingham.

Status: Published in the abstract book of the XVI International AIDS Conference, Toronto, Canada, August 13-18, 2006

Study Site(s): Lusaka


Issues: Although >60% of TB patients are believed to be co-infected with HIV, links between these health services remain rudimentary at a primary care level. The ability to manage the convergence of TB/HIV epidemics is challenged by vertical approaches to care, and limitations in infrastructure and human resources.

Description: We developed a model for piloting integrated TB-HIV care. We believe that integrated care would allow staff to coordinate co-treatment; improve clinical monitoring/adherence; prioritize the transfer of patients between services; and address staff shortages by defining roles and sharing responsibilities. Existing outpatient, VCT, TB,
HIV, laboratory and pharmacy services were assessed at one government care facility in Lusaka, to map a strategy for services integration. A two-day clinic-based training was conducted to cross-train 28 health staff from various departments on TB-HIV and gather feedback on critical issues. Patient flow algorithms and re-formatted registers were developed for each department to clarify three elements: staff roles and responsibilities; patient flow taking into account multiple health centre entry points; specimen and information flow to ensure appropriate reporting/recording. A second clinic-based training was held to introduce revised algorithms and registers.

**Lessons learned:** Barriers to integration included: poorly defined outpatient flow, approximately six week delay for enrolment in HIV care, lack of systems to document HIV status, and difficulties prioritizing TB patient referral for HIV care. Integration strategies discussed and adopted were: diagnostic counselling and testing, immediate CD4 measurement for newly diagnosed HIV-infected TB patients, and spot sputum sampling in several clinic departments (VCT, HIV clinic, outpatient). Staff roles and responsibilities had to be re-defined. **Recommendations:** Through program assessment, clinic mapping and clinic-based cross training, the integration of TB/HIV care and diagnostic screening is feasible and can improve co-management and case referral.

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**114.**

**TITLE:** VISUAL INSPECTION WITH ACETIC ACID (VIA) FOR CERVICAL CANCER SCREENING IN HIV-INFECTED ZAMBIAN WOMEN.

**Authors:** Sahasrabuddhe V, Parham G, Mwanahamuntu M *et al*

**Year:** 2003

**Org/Inst:** Centre for Infectious Disease Research in Zambia, Zambian Ministry of Health, Center for Disease Control and Prevention, University of Zambia, University Teaching Hospital, University of Alabama at Birmingham

**Status:** Published in the abstract book of the XVI International AIDS Conference, Toronto, Canada, August 13-18, 2006

**Study Site(s):** Lusaka

**Source:** XVI International AIDS Conference, Toronto, Canada, August 13-18, 2006; Abstract THPE0193.

**Background:** Cytology-based cervical cancer screening programs have been difficult to sustain in resource-limited settings. New cost-effective tests and protocols for screening HIV-infected and other at-risk women should be evaluated. VIA offers an attractive alternative to cytology as a low-cost, low-tech screening tool that can link screening and treatment in the same clinic visit. We compared the accuracy of VIA versus cytology among HIV-infected women in Lusaka, Zambia.

**Methods:** We screened 150 non-pregnant, consenting HIV-infected Zambian women, using both VIA (performed by nurses trained on-site in Zambia) and liquid cytology using Thin-Prep Pap test (analysed in the US). A composite colposcopic-histopathological diagnosis served as the reference standard. We compared differences in sensitivity, specificity, and predictive values of the tests individually and in combination.

**Results:** The median age of women was 36 years (range 23-49 years) and their mean CD4+ count was 209/µl (S.E.+14.7). The VIA positivity rate was 46% while that of high grade squamous intraepithelial lesions (SIL) or suspected cancer on cytology was 52.7%. VIA had lower sensitivity (73.5% vs. 91.2%, p=0.05) than cytology but comparable specificity (62.1% vs. 58.6%, p=0.5). The specificity of the combination of the two tests (77.6%) was significantly higher than individual test specificities of VIA and cytology (p=0.01 and 0.02.
respectively). The corresponding combination sensitivity (70.6%) differed significantly with that of cytology (p=0.03) but not with that of VIA (p=0.7).

**Conclusions:** Although it had a lower sensitivity than cytology in our study, the comparable specificity makes VIA a useful adjunct test to cytology for reducing the number of false positive results. Reduced loss to follow-up may improve overall program effectiveness of programs incorporating VIA. “See-and-treat” protocols involving VIA-based screening need evaluation in clinical trials for HIV-infected women in resource limited settings.

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**115. TITLE:** SCREENING FOR TUBERCULOSIS (TB) IN HIV VOLUNTARY COUNSELING AND TESTING (VCT) SERVICES IN LUSAKA, ZAMBIA.

**Authors:** Jham M, Levy J, Kancheya N et al

**Year:** 2005

**Org/Inst:** Centre for Infectious Disease Research in Zambia, University of Alabama at Birmingham.

**Status:** Published in the abstract book of the XVI International AIDS Conference, Toronto, Canada, August 13-18, 2006

**Study Site(s):** Lusaka

**Source:** XVI International AIDS Conference, Toronto, Canada, August 13-18, 2006; Abstract MOKC203.

**Background:** Zambia faces concurrent TB and HIV epidemics with a high burden (62%) of co-infected patients. These patients have a high rate of mortality and respond optimally to care if identified and treated early. TB screening conducted as part of VCT can serve as an entry point for early TB diagnosis in a high-risk co-infection population.

**Methods:** In October 2005, a TB screening pilot was initiated within VCT services at a primary health clinic in Lusaka. Counsellors ask all clients if they are experiencing respiratory symptoms suggestive of pulmonary TB (PTB). All clients with a positive PTB screen, regardless of HIV test result, are referred and escorted by a VCT staff member to the laboratory for sputum collection and examination. If TB diagnosis is confirmed in HIV infected patients, TB treatment is initiated prior to enrolment in HIV care.

**Results:** HIV positive patients were 4.1 (95% CI 2.9, 5.6) times as likely to have a positive TB screen than HIV negative patients. However, of those patients identified with TB symptoms, HIV negative patients were 20.2 (95% CI 8.0, 131.2) times as likely to have a positive smear as HIV positive patients.

**Conclusions:** In settings of high TB and HIV prevalence, routine PTB screening in VCT centres is feasible and important to identify early the high percentage of respiratory symptomatic patients who otherwise would be missed. In our setting, despite symptom screening in HIV-infected individuals with a high risk of TB, smears yielded very few confirmed TB diagnoses. This suggests a strategy that includes more sensitive TB culture should be prioritized as part of the diagnostic work up for identifying PTB smear-negative co-infected patients.

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**116. TITLE:** CLINICAL OUTCOMES AMONG TB/HIV CO-INFECTED PATIENTS ENROLLED IN ANTIRETROVIRAL THERAPY (ART) IN LUSAKA, ZAMBIA.

**Authors:** Reid S, Levy J, Jham M, et al

**Year:** 2004
Background: Rapid spread of HIV in sub-Saharan Africa has fuelled TB incidence. In Lusaka approximately 30% of HIV patients will develop TB and co-infected patients are believed to have poor clinical outcomes. Rapid ART scale-up has been underway in the public sector since May 2004.

Methods: Part of scale-up is development of a computerized patient tracking system, used to collect baseline patient characteristics and track care.

Results: Of the 22,961 patients eligible for ART based on clinical or CD4 criteria, 1,527 (6.7%) were taking TB medication at enrolment. Comparison of patients “with TB” compared to those “without TB” demonstrate lower BMI in both males and females (p<0.0001 and p<0.0027 respectively), lower CD4 count (median 101 vs. 123, p<0.0001) and lower Haemoglobin (p<0.0325). Cox regression was performed among patients with stage III or IV disease on ART to evaluate the risk of death for patients entering the program already on TB therapy, stratified by CD4: < 50, 50-200, and >200. The HR for TB adjusted for anaemia, gender and adherence to ART therapy were 0.88 (95% CI 0.58, 1.34), 0.78 (95% CI 0.53, 1.17), 1.04 (95% CI 0.53, 2.07) respectively. In all CD4 strata TB patients on ART have the same risk of death as non TB patients on ART with stage III and IV disease at 18 months of follow-up.

Conclusions: At baseline, co-infected patients on TB therapy have significantly worse clinical profiles than non-TB patients. Despite this, TB patients diagnosed prior to placement on ART seem to have similar survival compared to non-TB patients. However, mortality may have been underestimated in the TB group as TB diagnoses were likely missed due to smear negatives and limited diagnostic capacity and these deaths would be included in the non-TB group. Active case-finding with prompt diagnosis and initiation of TB therapy remain critical in this patient population.
Methods: In collaboration with the Ministry of Health, TB/HIV integration activities began in December 2005 and expanded to seven health centres by March 2007. Principal activities included: developing staff capacity to manage co-infected patients, implementing HIV testing within TB departments, and establishing referral systems between departments.

Results: Using a provider-initiated approach, 2053 TB patients were offered HIV testing. Seventy-seven percent agreed to test and 69% of those tested were HIV-infected. Of these, 59% enrolled into HIV care. The proportion of ART program enrollees who were TB/HIV co-infected increased 38% after program implementation. The median CD4 count among co-infected patients was 161 cells/μl with 88% eligible for antiretroviral therapy.

Conclusion: Integration of HIV testing and referral services into urban primary care centres identified many co-infected patients and significantly increased the proportion of TB patients among people accessing HIV care. Ongoing challenges include maximizing the number of patients accepting HIV testing and overcoming barriers to enrollment into HIV care.

118. TITLE: CD4 T-CELL COUNT AND HIV-1 INFECTION IN ADULTS WITH UNCOMPLICATED MALARIA
Authors: ¹Jean-Pierre Van G, ²Mulenga M and ³Kasongot W et al
Year: 2004
Org/Inst: ¹Institute of Tropical Medicine, Antwerp, Belgium, ²Tropical Disease Research Center, Ndola, Zambia; ³University of Antwerp
Status: Published in an Abstract Book, 4th National Health Research Conference
Study Site(s): Ndola

Methodology: In Ndola, Zambia, at the health-centre level, we treated 327 non-pregnant adults for confirmed uncomplicated, clinical malaria. We assessed HIV-1 status, CD4 count, and HIV-1 viral load (if HIV-1-infected) at enrolment and at 28 and 45 days after treatment.

Results: After successful antimalarial treatment, the median CD4 count at day 28 of follow-up increased from 468 to 811 cells/μl in patients (paired t test, P<0.001 for both). CD4 count increment was inversely correlated with CD4 count at day 0 in both HIV-1 negative (<0.001) and HIV-1 positive patients (P=0.03). After successful treatment, the proportion of patients with CD4 counts <200/μL at day 45 decreased from 9.6% to 0% in HIV-1 negative and from 28.7% to 13.2% in HIV-1-positive malaria patients (P<0.001 for both). In patients with detectable but mostly asymptomatic parasitemia, CD4 count and, if HIV-1 infected, viral load at day 45 of follow-up were similar to those observed at enrolment.

Conclusion: Interpretation of absolute CD4 count might be biased during or just after a clinical malaria episode. Therefore, in malaria-endemic areas, before taking any decision on the Management of HIV-1-positive individuals, their malaria status should be assessed.

119. TITLE: SCALING-UP HIV/AIDS AND TB HOME-BASED CARE: LESSONS FROM ZAMBIA
Authors: Emmanuel F N¹, John D W¹, Elisabeth M² et al
Year: 2001
Home-based care coverage in Africa is currently very low and likely to reduce drastically in the near future. This paper investigates the low coverage of home-based care programmes in Africa and uses two home-based care projects in Zambia as case studies. The very limited involvement of governments in the provision of home-based care services appears to be one of the main reasons behind the low coverage of home-based care in Africa. Governments therefore should provide some form of basic home-based care services and/or strengthen support to other institutions providing home-based care. In order to facilitate governments’ involvement in home-based care activities, an analysis of tasks performed by community nurses and volunteers is used to identify tasks that government, missionary or NGO employed nurses may be able to provide without, or with very limited, donor assistance. However, further research and development is needed to develop affordable, feasible and sustainable home care programmes that can be implemented by staff working in government, NGO and missionary health facilities. In addition, innovative strategies are required to establish effective partnerships between the NGO, missionary and government health facilities.

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### TITLE: LACK OF HEMATOLOGICAL RECOVERY AFTER SUCCESSFUL MALARIA TREATMENT IN HIV-1 INFECTED PATIENTS

**Authors:** 1Jean-Pierre Van G, 2Mulenga M and 3Kasongot W et al

**Year:** 2006

**Org/Inst:** 1Institute of Tropical Medicine, Antwerp, Belgium, 2Tropical Disease Research Center, Ndola, Zambia; 3University of Antwerp

**Study Site(s):** Ndola


**Design, setting and Patients:** Between March 2003 and June 2005, a total of 971 non-pregnant adults with non-severe clinical malaria were treated at 4 primary health care centres in Ndola, Zambia and prospectively followed up for 45 days. Data were analysed in a linear regression model.

**Main outcome measure(s):** Haemoglobin change after successful antimalarial treatment.

**Objective:** To assess the impact of malaria treatment on the haemoglobin in HIV-1 infected adults and according to their degree of immune suppression.

**Results:** HIV-1 infected malaria patients had lower haemoglobin levels than non HIV-1 infected ones (123 g/L vs. 135 g/L; P<.001), low CD4 cell count was associated with low haemoglobin (Hb) (P= .01). Fourteen days after antimalarial treatment, mean haemoglobin decreased by 4.2 g/L (95% Confidence interval (CI), -5.8 - -2.5; paired t- test, P<.0001) in HIV-1 negative patients and by 5.0 g/L (95% CI, -7.2 - -2.8; paired t-test, P<.0001) in HIV-1 positive patients. Immune suppression was associated with a lower Hb decrease at day 14 (P=.037). Forty five days after successful malaria treatment, mean haemoglobin levels had increased significantly in HIV-1 negative malaria patients (+3.54 g/L ;95% CI, 1.37–5.70;
paired t-test, $P=0.0001$) but not in those infected with HIV-1 ($+0.68 \text{ g/L; 95\% CI, } -3.75 \text{ – 2.39}; \text{ paired t-test, } P=0.66$). The degree of immune suppression ($P=0.88$) did not influence haematological recovery.

**Conclusion:** In contrast to non HIV-1 infected individuals, haemoglobin values in HIV-1 infected individuals did not increase after successful antimalarial treatment. As anaemia is a well known prognostic marker of future disease progression or death, malaria preventive measures should be a priority for this vulnerable group.


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**121. TITLE:** FACTORS ASSOCIATED WITH RISKY SEXUAL BEHAVIOUR IN REGARD TO HIV PREVENTION AMONG PERSONS ATTENDING STD CLINIC AT THE UNIVERSITY TEACHING HOSPITAL, LUSAKA

**Authors:** Mwangala G. S.K.

**Year:** 2002

**Org/Inst:** The University of Zambia, School of Medicine

**Status:** Published

**Study Site(s):** University Teaching Hospital, Lusaka

**Source:** The University of Zambia, School of Medicine

The study sought to: determine the knowledge of HIV and STD among patients with STD; establish the sexual patterns of patients with STD; determine perception of risk to HIV infection among STD patients; determine factors independently associated with risky sexual behaviour.

A cross sectional study of 200 persons who attended a clinic for sexually transmitted diseases (STD) with genital ulcer disease and gonorrhoea was carried out between February and June 2001. This study was done at STD clinic at the University Teaching Hospital in Lusaka, Zambia. Interviews were carried out using a semi-structured questionnaire.

**Results:** Knowledge of HIV transmission and prevention was high (84.0%). A relationship existed between knowledge of STD before the current one and knowledge of relationship between STD and HIV [(OR 68.79, 95\% CI (9.57, 140.75)]. A total of 159 (98.0\%) patients reported having one sexual partner. Condom use was not associated with the number of sexual partners ($p+0.350$). Results using a logistic regression analysis showed that patients with multiple partnership were more likely to be male, [OR 1.79, 95\% CI (1.21, 2.66] and were more likely to drink alcohol [OR 1.88, 95\% CI (1.25, 2.81]. Ninety-five (48.0\%) of patients reported that they discussed sex with their partners. Discussion of sex among couples was independently associated with gender. Males were more likely to discuss sex, [OR 1.72, 95\% CI (1.26, 2.35)]. Marital status- the single were less likely to discuss sex [OR 0.54, 95\% CI (0.33, 0.90)]; while the married were 2.20 times more likely to discuss sex, [OR 2.20, 95\% CI (1.44, 3.36)]. Educational status – those with primary education were less likely to discuss sex [OR 0.42, 95\% CI (0.26, 0.67)]; while those with secondary education were 1.26 times more likely to discuss sex, [OR 1.26, 95\% CI (0.82, 193)]. One hundred and eighty nine (95.0\%) of the patients were not aware of their HIV status. The factors independently associated with perception of risk to HIV infection were knowledge of relationship between HIV and STD, [OR 8.78, 95\% CI (3.86, 19.97)] and positive history of STD, [OR 4.58, 95\% CI (1.90, 11.06)].

High knowledge of HIV and perception of self as being at risk of contracting HIV does not necessarily translate into safer sex practices. Promoting a level ground in communication skills especially discussion of sex in various strata.
122. **TITLE:** FAVOURABLE CLINICAL OUTCOMES AMONG HIV/TB CO-INFECTED PATIENTS IN LUSAKA, ZAMBIA  
**Authors:** Reid S, Sadoki E and Jham M et al  
**Year:** 2005  
**Org/Inst:** Centre for Infectious Disease Research in Zambia (CIDRZ), Lusaka, Zambia  
**Status:** Published in an Abstract Book, 4th National Health Research Conference  
**Study Site(s):** Lusaka  

**Objectives:** The main objective of the study was to assess the outcome of HIV patients who were co-infected with TB, and those not co-infected with TB.  
**Methodology:** A computerized patient tracking system used to collect baseline patient characteristics and track care; At the end of each patient visit, information from paper forms is entered into a centralized database designed to track late patient visits, assist program monitoring, and facilitate reporting to donor agencies; Outcome measures were mean CD4+ cell count change, survival, and treatment failure.  
**Results:** Of the 22,961 patients eligible for ART based on clinical or CD4 criteria, 1,527 (6.7%) were taking TB medication at enrolment and are labelled “With TB.” All patients in this cohort were eligible but not on ART. At base line TB/HIV co-infected patient tend to have more advanced HIV disease than those patients without TB. CD4 response to ART is similar in those patients with and without TB. In Kaplan-Meier analysis, we found that TB patients on ART were more likely to die but not more likely to meet criteria for treatment failure. We then stratified the populations according to WHO stage and TB status. Individuals on ART undergoing treatment for pulmonary TB were no more likely to die or fail treatment as others with Stage III disease (without TB infection). Similar trends were seen for individuals with extra-pulmonary TB and others with Stage IV disease.  
**Conclusion:** At baseline, co-infected patients have a significantly worse clinical profile than non-TB diagnosed patients. Despite this, TB patients on ART have similar survival compared to non-TB patients with the corresponding WHO stage. Prompt diagnosis and treatment of TB may be a factor in improving prognosis in this group of patients.  
**Funding Source:** The data presented is from abstracts presented at the Toronto HIV Conference 2006 by colleagues from our institution. Funding was through PEPFAR. The research had earlier obtained consent from the Research Ethics Committee and UAB/IRB.

123. **TITLE:** IMMUNODEFICIENCY VIRUS AND MALARIA INTERACTIONS: WHAT DO WE KNOW? WHAT ARE THE PUBLIC HEALTH IMPACTS IN ZAMBIA?  
**Authors:** Biemba G  
**Year:** 2003  
**Org/Inst:** Ministry of Health  
**Status:** Published in an Abstract Book, 3rd National Health Research Conference  
**Study Site(s):** -  
**Source:** Abstract Book, 3rd National Health Research Conference, Zambia
**Objective:** To review, critically analyse and summarize the evidence so far on the effect of HIV on malaria and examine evidence for the public health impact of this interaction in Zambia.

**Methodology:** We systematically reviewed studies reported between January 1982 and June 2003 on the interaction between HIV/AIDS and malaria, and analysed routine data from Zambia to study trends in morbidity and mortality attributable to the two conditions. From literature, we compiled point estimates comparing the risk of malaria in HIV positives versus the risk in HIV negatives.

**Results:** Results of reviewed studies show the risk ratio of malaria infection in HIV positives versus HIV negatives to range from 0.7 to 1.3 in children under 13 years and from 1.0 to 3.3 in those over 12 years. Only two studies done in adults showed statistically significant risk ratios, while those done in children showed little or no evidence of a true difference in malaria risk between HIV+ and HIV-negatives. The risk ratio for clinical malaria ranged from 0.7 to 2.05 (median 1.4) in children under 13 years. Most of these studies observed reduced malaria risk among HIV-infected children, but only one was statistically significant. In those over 12 years, the point estimates for the risk of clinical malaria ranged from a risk ratio of 1.2 (95% CI:0.9-1.6) to an adjusted odds ratio of 3.61 (95% CI: 1.04-12.51). A recent cohort study found a rate ratio of 2.8 (95% CI:1.8-4.4) and the odds of having clinical malaria increased with advancing HIV disease (p=0.0024). Among non-immune South African adults, two studies observed increased risk of severe malaria in HIV+ versus HIV-negatives; but evidence for increased severity and/or reduced response to therapy in areas of stable malaria is not conclusive. Overall, about 17 to 66% of malaria episodes in HIV infected adults (>12years) may be attributable to HIV infection and about 12 to 45% of these episodes in the study populations may be due to HIV.

HIV infected pregnant women (all parities) were on average 1.7 times at higher risk of malaria infection than HIV-seronegatives (range: 1.5-2.3; 95% CI: 1.61-1.82); and HIV positive primegravida with malaria have a higher risk of delivering low birth weight and pre-term babies than HIV-seronegatives (p=0.04, p=0.02 respectively). One randomised clinical trial observed a significantly reduced response to the 2-dose Sulphadoxine-pyramethamine (SP) IPT regimen in preventing placental malaria among HIV-infected pregnant women. The proportion of malaria due to HIV/AIDS in the study populations reviewed (PAF) ranged from 2.2 to 23.5%.

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**124.  **
**TITLE:** ACUTE SEVERE PNEUMONIA IN PREVIOUSLY HEALTH ADULTS. IS IT EARLY SIGN OF HIV, AIDS?

**Authors:** Soka N and Mulundu G

**Year:** 2001-2002

**Org/Inst:** University Teaching Hospital, School of Medicine, Lusaka, Zambia

**Status:** Published in an Abstract Book, 3rd National Health Research Conference

**Study Site(s):** Lusaka

**Source:** Abstract Book, 3rd National Health Research Conference, Zambia

**Methodology:** Patients were enrolled they got admitted to the admission ward during normal on-calls. Features of ALRTI were sought and Patients followed up in E21 and E22. If patients stayed in hospital for more than 24 Hours, they get counselling for HIV as part...
of care, and consequently sent to our HIV clinic if found positive. Patients were followed till discharged.

**Setting and Design:** Selection was done as patients get hospitalized to the UTH adult medical admission ward. Using a specific criteria patient underwent full clinical assessment. (History taking and physical examination). They were followed up in the general medical wards (E21 and E22) until discharged. Eligible candidates were 85. This pilot study took place from 2001-2002.

**Criteria:** Inclusion; either sex, 16-45 years. No previous hospitalization. No previous pneumonia, should have acute lower respiratory tract infection feature (cough<2 weeks, fever, dyspnoeic and evidence of Lung disease (bronchial breathing and or reputations). A good response to antibiotic after 3-6 days of treatment. **Exclusion:** If discharged within 24 hours of hospitalization, other co-morbid conditions, Diabetes, Asthma or any other respiratory diseases, pregnancy.

**Results:** 1007 admissions over a period of three months. 409 (40.6%) had a respiratory complaint. Of these 409, 180 (44%) had acute pneumonia in PTB, 14 (35.2%) were a mixture, e.g. pneumonia rule out TB, pneumonia with poor response to antibiotics, were outside the age of interest (45 and above), or were started on TB treatment. 85 (20.8%) had acute pneumonia, with no previous history of the same, and had a good response to antibiotics while on the ward.

Of the 85 patients with possible acute pneumonia 52 (61.2%) of them had HIV infection, of these 3 died (regardless of improving indices like fever). Radiological picture were not an inclusion criteria. However, 26/85 (30.5%) had consolidation. 39/85 (45.9%), 20/85 (23.6%). Others were a mixture (infiltrates localized or spread, interlobar effusion, vague pacifications).

Outcome measures: Improved care for patients with acute severe pneumonia associated with HIV infection. A research proposal was designed to address the issue of pneumonia in early HIV infection.

**Conclusion:** Acute severe (hospitalisable) bacterial pneumonia may be an early presentation of waning immunity due to HIV infection.

**Funding sources:** None, was a pilot

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**125. TITLE:** CAN TUBERCULOSIS RELAPSE BE PREDICTED?

**Authors:** Chongwe G

**Year:** 2006

**Org/Inst:** The University of Zambia School of Medicine

**Status:** Published

**Study Site(s):** Five urban clinics in Lusaka

**Source:** The University of Zambia

**Objectives:** The main objectives were to determine the characteristics of TB patients with relapse, identify the risk factors for TB relapse so that we can prevent future episodes.

**Design/setting:** This was a case control study conducted at five urban clinics in Lusaka district. We recruited 184 patients, 92 were patients who had had TB, successfully treated but relapsed (the cases), and these were compared with those who had previously been treated for TB in full but had not relapsed for at least six months (controls).

**Results:** The age distribution between the cases and controls was significantly different (p=0.048). Older patients were less likely to relapse than younger patients. No sex difference was observed between the cases and the controls. A positive sputum smear had a high sensitivity in predicting relapse but a low positive predictive value. The sensitivity of DOTS in predicting relapse was relatively high at 70.7 percent though it also had poor
positive predictive value. Having an HIV infection had a sensitivity of 64.1 with lower positive predictive value.

**Conclusions:** HIV infection, sex, area of residence and severity of initial illness were all poor predictors of relapse. Living in overcrowded communities and having an HIV infection are well recognized risk factors for tuberculosis aetiology but they may not be important in predicting which patients are more likely to relapse.

**Recommendations:** We need to do more research into more reliable and cost effective ways of identifying which patients are more likely to relapse and find better ways of preventing relapse. We also need to work towards ensuring that all centres providing tuberculosis services in this country also provide DOTS to sputum positive patients.

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**126. TITLE:** A CLINICAL AND PATHOLOGICAL STUDY OF CHILDREN WITH PNEUMOCYSTIS CARINII PNEUMONIA

**Authors:** Lishimpi K

**Year:** 2003

**Org/Inst:** The University of Zambia School of Medicine

**Status:** Published

**Study Site(s):** University Teaching Hospital, Lusaka

**Source:** University Teaching Hospital, Lusaka

**Objectives** - To assess the prevalence of PCP in Zambian children dying of respiratory diseases; To collect non invasive samples (oropharyngeal washings) for alternative diagnostic tests such as, Polymerase Chain reaction for identification of *Pneumocystis carinii* deoxyribonucleric Acid (DNA) and find how well this compares with the same test done on DNA extracted from left upper lung, and later correlate with histopathological findings done on lung tissue; To understand the clinical presentation of PCP, its histological findings as compared to PCR for *P. carinii* DNA done on left upper lung extracts; To determine the presence of HIV infection in these children by using Enzyme Linked Immunosorbert Assay (ELISA) on all children above 18 months, and PCR for HIV in children less than 18 months.

**The descriptive study conducted** a clinical –pathological study of 264 deaths from pulmonary disease at the University Teaching Hospital. Post mortem lung material were obtained and subjected to histo-pathological examination, and polymerase chain reaction (PCR) for *Pneumocystis Carinii* Deoxyribonucleric Acid (DNA). From the oropharyngeal washings DNA was extracted and PCR performed to detect the presence of *P. carinii*.

**Results and Conclusion:** Thirty five percent of children aged 1 month to 14 years dying from pneumonia in UTH have PCP and 93.2% of these children are missed clinically. Out of the children found with PCP, 87.5% were co-infected with HIV. The sero-prevalence for HIV infection in children who had died of pneumonia was 63%. PCP is an AIDS defining event/infection even in Zambian children below the age of one year. At the time of death children found with PCP were younger, age less than 8 months had long duration of difficulties in breathing, tachypnoea and cyanosis when compared to those with bronchopneumonia. However, children with bronchopneumonia had more significant lymphadenopathy and oropharyngeal Candidiasis. PCP can be diagnosed from oropharyngeal washings using PCR.

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**127. TITLE:** THE UNMET HEALTH NEEDS OF PLWHA IN MULTI-HEALTH DELIVERY SYSTEMS: A QUALITATIVE STUDY

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100
OF MEDICAL PLURALISM IN SELECTED DISTRICTS OF ZAMBIA

Authors:  
1Nyirenda A, 2Torfoss T and 3Ingstad B

Year:  
2004

Org/Inst:  
1Copperbelt Health Education Project (CHEP), Research Advisory Board, Kitwe; Zambia,  
2Norwegian Association of Heart & Lung Patients (LHL) Norway;  
3University of Oslo, General Practice

Status:  
Published in and Abstract Book, 4th National Health Research Conference

Study Site(s):  
Chililabombwe, Lufwanyama, Livingstone, Lusaka, Kitwe and Ndola Districts

Source:  

Objectives: The Purpose of the study was to identify, explore, describe and gain an in-depth understanding of the unmet needs of PLWHA and TB patients in the context of multi-service providers in selected districts of Zambia.

Methodology: Qualitative study conducted for 5 months (August-December 2004), involving 30 in-depth Interviews of People Living with AIDS and/or co-infected with TB; 10 Focus group discussions involving support group members in purposely selected areas; participant observation of 2 selected male PLWHA for 3 months; a workshop involving various health service providers like medical practitioners, traditional healers, EX-TB Patients and PLWHA to help derive recommendations on improvement of services.

Results: While people living with HIV/AIDS and TB patients had access to multiple providers of care and support, the quality of services were clearly not coordinated, making it increasingly difficult for clients to get the most out of them. Traditional healers are one of the single largest careers, yet their services remained less accepted in selected mainstream government managed institutions, hence the lack of formal referrals among systems. Self treatment was very common among PLWHA and TB patients most of whom relied mainly on information from peers and close relations and workmates to make informed choices on what treatment to take. Most remedies used by PLWHA were in form of herbal remedies or drug store purchases. The mere existence of multiple providers and their services did not in itself guarantee adequacy of support to PLWHA. People living with HIV/AIDS who are co-infected with TB were relatively more exposed to greater health-seeking dilemmas, given the challenges of stigma which relates TB with HIV infection.

128. TITLE: AN ASSESSMENT OF FEMALE ADOLESCENT HEALTH SERVICES

Authors:  
Vwalika B

Year:  
2003

Org/Inst:  
The University of Zambia

Status:  
Published

Study Site(s):  
Lusaka

Source:  
The University of Zambia

Adolescents form a significant portion of Zambia’s population and are being viewed as a target group for health messages and services.
Adolescents engage in sexual activities at a very early stage for various reasons. They are therefore exposed to a lot of STIs for which they need to be treated. STIs and especially the lack of treatment for them exposes these adolescents to the deadly HIV and AIDS. Not all adolescents have access to the health centres for treatment of STIs. In trying to find answers, 397 female adolescents who were attending 8 health centres in Lusaka for a period of 17 days were surveyed. The aim was to determine the level of availability of health services as related to STIs management among female adolescent and also to determine what problems are faced in the investigation, diagnosis and treatment of STI. The findings were that many adolescents failed to access management of STIs for many reasons. Among these were lack of money, poor attitudes from health workers, poor laboratory facilities, drug shortages and lack of privacy. Because of these problems many female adolescents preferred to have health centres specifically for adolescents. A fulfilling and positive experience in STI management is as important as a good outcome. Most of the factors noted above can be easily improved upon to contribute positively to the adolescents’ welfare.

**Strategic objective 11:** Strengthen home or community based care and support including access comprehensive palliative care and pain management

| 129. TITLE: | INNOVATIONS IN ARV COVERAGE FOR CHILDREN IN ZAMBIA THROUGH THE PALLIATIVE CARE SETTING |
| Authors: | Meade T¹, Robertson S.¹ and Mill S.¹ et al |
| Year: | 2005 |
| Org/Inst: | - |
| Status: | Published; AIDS 2006 - XVI International AIDS Conference: Abstract no. CDB0990 |
| Study Site(s): | Jon Hospice in Lusaka’s Kamwala Township |

**Issues:** As national ARV programs expand in many sub-Saharan African countries, there is concern that ARV distribution for children is not reaching target levels. Half the world’s 1 million HIV-positive children require ARVs; 90% live in sub-Saharan Africa. Fewer than 20,000 children in the region, however, are on ART. In response, a Zambian hospice operates a day-care as part of its palliative and home-based care programs to identify and treat HIV-positive children.

**Description:** Home-based palliative care has existed in Zambia for 30 years, but the overwhelming burden of AIDS led to the establishment of the country first in-patient hospices. Jon Hospice in Lusaka’s Kamwala compound is run by Kara Counselling and Training Trust, Zambia’s oldest and best known HIV NGO. The hospice operates a day-care for 35 HIV-positive children ages 3-12. Mostly orphans, many of these children had one or both parents die at the hospice. Others are referred by the hospice home-based care workers. Most live with extended family or neighbours who took them in when they became orphaned. Through the day-care, most of these children commenced ART during regular day-care hours.

**Lessons learned:** The majority of children attending Jon Hospice’s day-care have stabilized, exhibiting rising CD4 counts and dramatically improved health thanks to ART. The children’s marked improvement prompted caretakers and families to come for VCT and treatment and the percentage of in-patients in the hospice taking ARVs has risen from
less than 10% to more than 50% within the last year. This rise can also be attributed to increased availability of ARVs in Zambia.

**Recommendations:** The Palliative Care Association of Zambia (PCAZ) recognizes that associating a day-care with in-patient hospice and home-based care programs can increase the percentage of OVC able to successfully access ART when appropriate. These children would otherwise likely have gone untreated because of their disadvantaged situations.

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**130. TITLE:** CARING FOR HEALTH WORKERS: ADDRESSING PSYCHOSOCIAL BURDEN OF HIV/AIDS ON HEALTH PERSONNEL IN ZAMBIA

**Authors:** Kiragu K, Rutenberg N and Eerens P, et al

**Year:** 2004-2006

**Status:** Published

**Org/ Inst:** HORIZONS

**Study Site(s):** Southern and Copperbelt Provinces

**Source:** University Teaching Hospital

This study is examining the HIV/AIDS needs of hospital workers in Zambia. In 2004, baseline data were collected from 1,424 employees in five large hospitals in two Zambian provinces. Structured questionnaires were administered to a sample comprising physicians, clinical officers, nurses, paramedical staff, medical training students, and administrative and support staff. Focus group discussions were also conducted with similar cadres of hospital personnel. A provider-centered workplace intervention started in August 2004 and is ongoing. Follow-up data were collected in March 2006 from 1,461 employees in the same hospitals, using the same procedures as at baseline.

Hospital workers face potential HIV exposure at work but have limited awareness about post-exposure prophylaxis (PEP). Hospital workers are stressed from caring for HIV patients at work and at home. Intimate partner violence is a problem for many female hospital workers. Hospital workers report multiple partnerships accompanied by limited use of protection. “Trust” is a major reason why condoms are not used, even among respondents with multiple partners. Even among those with multiple partners, there is limited desire to use condoms. The level of HIV testing among health workers and their partners is low. Those respondents with multiple partners are no more likely to have been tested than those with one partner.

Preliminary analysis shows that the intervention was associated with increased awareness of PEP, access to condoms, and improved perceptions of management’s role in helping hospital workers address HIV/AIDS. Hospitals are not often seen as a workplace in the same sense as factories and farms, yet they are at the crux of managing the HIV epidemic. A country with a weak and incapacitated hospital work force is unlikely to deal effectively with HIV. The results suggest that both clinical and non-clinical staff in Zambian hospitals is uninformed about critical components of HIV prevention and many also engage in behaviours that put them at risk for HIV, pointing to the need for HIV/AIDS workplace programs for hospital workers. Interventions at hospitals are feasible but should be designed to fit staff members' busy work schedules.

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**131. TITLE:** DETERMINANTS OF HOSPICE USE AMONG TERMINALLY ILL PATIENTS IN LUSAKA ZAMBIA: A HIGH HIV PREVALENCE AND RESOURCE LIMITED SETTING
Issues: Hospice services have been available in Zambia for some years. The health system in Zambia is overburdened by the TB/HIV dual threat. Currently few terminally ill patients are able to access and benefit from these services. This observational study identifies determinants of hospice service uptake and factors leading to a lack of use of these services.

Description: A study done by Zambart project in 2001 at Jon Hospice in Lusaka, Zambia revealed that HBC centres refer patients who have no carers at home and also to relieve the families the burden of looking after patients in disadvantaged communities. Hospitals refer patients as a way of decongesting their wards. The role of the hospice as a place where terminally ill patients can choose as a place of end-of-life care has changed to that of diagnosing and caring for patients who do not want to be seen in public hospitals. Terminally ill patients who require intensive nursing care are disadvantaged. Providing nursing care to these patients is only possible at home through family care-givers.

Conclusions: Hospice services lack proper screening and diagnostic facilities like laboratory and x-ray. The difficulty faced by terminally ill patients in accessing care at public hospitals, means that they end up at the hospice before a diagnosis is made. The overwhelmed hospitals in a bid to reserve bed capacity refer terminally ill patients to the hospice. This has led to overloading and overstretching of hospice meagre resources. To improve hospice usage and deal with impediments, involve the community TB/HIV treatment advocates in the awareness campaigns for proper hospice usage through out-reach activities. Forming support networks for informal and family care-givers will help reduce the effects of emotional stress. Building and strengthening the human resource capacity will motivate staff as most of them work on voluntary basis.

132. TITLE: COPING STRATEGIES OF FAMILIES LIVING WITH INDIVIDUALS SUFFERING FROM HIV/AIDS: A CASE STUDY OF KASAMA URBAN AND PERI-URBAN
Authors: Muulu E
Year: 2003
Org/Inst: The University of Zambia
Status: Published
Study Site(s): Kasama urban and peri-urban in Northern Province
Source: The University of Zambia

Objective: to determine the problems and the coping strategies of families living with individuals suffering from HIV/AIDS.

Design: Cross sectional study and Focus Group Discussion (FGD). Setting: Kasama urban and peri-urban in the Northern Province of Zambia. Subjects: The subjects consisted of 106 caregivers randomly selected from families living with individuals suffering from HIV/AIDS who were under home based care programme. Of these caregivers 56 were drawn from the urban area and the rest from peri-urban. The FGD was composed of 10 participants who were neighbours to the families living with HIV/AIDS patients.
Main Outcome: Availability of resources that enable families cope with the care of HIV/AIDS patients, knowledge about the disease, and skill of care for HIV/AIDS patient.

Conclusion: Lack of resources such as food, medicines, money, materials and knowledge about the disease and skill of care made it difficult for families living with HIV/AIDS patients to cope with their care.

Beyond the obvious catastrophic effects of the HIV/AIDS pandemic on mortality, demographic changes, and the suffering of individuals and their families, we are still only learning about the complex longer-term effects of the pandemic on poverty and vulnerability. For example, the HIV/AIDS pandemic has substantially increased the number of widow-headed households in Africa. A huge number of conceptual and qualitative studies highlight gender inequalities in property rights, and the difficulties that widows and their dependents face in retaining access to land after the death of their husbands. HIV/AIDS has undoubtedly exacerbated such problems. However, there remains limited quantitative evidence using representative survey data on the extent to which widows lose their rights to land after the death of their husbands, whether they lose all or part of the land they were formerly controlling, and whether there are certain characteristics of the widow, her deceased husband, and/or her household that influence the likelihood of her losing land rights. It is highly possible that government programs designed to provide a safety net to vulnerable groups may not reach their potential if they ignore gender dimensions of local institutions and property rights.

Strategic objective 12: Support the utilization of alternative and/or traditional medicine which have scientifically demonstrated efficacy
**Introduction:** Despite being closer to the people, Traditional Leaders have been left out of development initiatives such as the fight against HIV/AIDS.

**Description:** Since 2000, WFC has been organizing workshops for Traditional Leaders on HIV/AIDS, Gender, Human Rights and governance issues throughout the Zambia. WFC facilitated the formation of the National Royal Foundation as well as provincial foundations as a forum for traditional leaders to share best practices in supporting family units that have been affected by HIV/AIDS as one of the objectives. The Southern Africa Development Community (SADC) Council of Traditional Leaders has been formed to lobby regional and international bodies on issues of significance such as the fight against the HIV/AIDS pandemic.

**Lessons Learnt:** As a result of the WFC program, Traditional Leaders are now being recognized as vital stakeholders in the fight against HIV/AIDS, gender imbalances, negative cultural practices and beliefs and human rights violations and are increasingly getting involved in development initiatives in the nation. Recently, the Zambia Integrated Health Programme (ZIHP) organized an HIV/AIDS workshop for 200 Traditional Leaders to put them at the Centre of all the initiatives aimed at combating HIV/AIDS.

**Conclusion:** Working with Traditional Leaders as key players in the fight against HIV/AIDS is one of the sure ways of combating the pandemic by challenging the negative cultural practices that perpetuate the spread of HIV/AIDS, gender imbalances and human rights violations.

**Recommendations:** Institutions involved in HIV/AIDS, gender, poverty and human rights issues to work with Traditional Leaders in order to put them at the centre of the fight against HIV/AIDS and involve them in the regional, national policy formulation and implementation processes.

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**135. TITLE:** A POLICY ANALYSIS FOR INTERVENTIONS TO BRIDGE THE GAP BETWEEN TRADITIONAL HEALERS AND THE PUBLIC SECTOR FOR HIV/AIDS CONTROL IN UGANDA AND ZAMBIA

**Authors:** Brugha R, Oliff M, Vongo R, et al

**Year:** 2002-2004

**Org/Inst:** Traditional Healers and Practitioners Association

**Status:** Published in an Abstract Book for the AIDS 2006 - XVI International AIDS Conference: Abstract no. THAE0202

**Study Site(s):** Zambia and Uganda

**Source:** AIDS 2006 - XVI International AIDS Conference: Abstract no. THAE0202

**Background:** Traditional Health Practitioners (THPs) are a major untapped resource for HIV prevention, care and support, and also a potential referral network for scaling up HIV/AIDS/STI control services in sub-Saharan Africa. An objective of the Bridging Gaps Project, Uganda and Zambia 2002-06, was to assess readiness and obstacles in the national policy environment to different forms of collaborations between THPs and Biomedical Health Practitioners (BHPs).

**Methodology:** Interviews were conducted with 51 national policy makers in two stages across the two countries, 2002-04: an average of 13 interviews per stage. Initial exploratory interviews were used to introduce the project; identify and collect reports on relevant policy issues; and to assess potential policy obstacles and stakeholder support for collaboration. Semi-structured follow-up interviews assessed risks, challenges, possible resistance and
approaches for managing stakeholders. Interviews were transcribed and analysed thematically.

**Results:** In both countries efforts to draft and enact new policies and legislation, as a framework for collaboration, have lacked momentum. Training of THPs and information exchange between the sectors are generally acceptable. However, official cross-referrals, i.e. where BHPs openly refer patients to THPs, have raised ethical concerns, encountered regulatory obstacles and are opposed by medical professional councils. Zambia has a broadly representative THP association with which Government can negotiate, whereas Uganda has many rival associations. A recent Public Private Partnership policy development may reinvigorate progress in Uganda. Major health sector reforms in Zambia and political uncertainty in Uganda are obstacles to imminent progress.

**Conclusions:** Implementation of a policy tracking component, in parallel to designing, implementing and evaluating a new HIV intervention, is comparatively simple and should be routine in major intervention research. Findings from the Bridging Gaps intervention will encounter greatly changed global and national policy environments, since its 2002 inception, with opportunities from new global funds but also residual policy-level obstacles to overcome.
harmful cultural practices, and become advocates of safe alternative. The author further looks at the healers Association limits in enforcing the best practice methods the adopt in relation to government policy on TM, giving possible ways needed to engage healers rather than alienate them when it comes to preventing HIV through adaptation of bad cultural values and building on aspects of culture that are beneficial.

**Strategic objective 13: Promote appropriate nutrition and positive living for PLHAs**

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<tr>
<th>137.</th>
<th>TITLE:</th>
<th>A PILOT RANDOMIZED TRIAL OF NUTRITIONAL SUPPLEMENTATION IN FOOD INSECURE PATIENTS RECEIVING ANTIRETROVIRAL THERAPY (ART) IN ZAMBIA</th>
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<tr>
<td></td>
<td>Authors:</td>
<td>Megazzini K, Washington S, Sinkala M, et al</td>
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<tr>
<td></td>
<td>Year:</td>
<td>2005</td>
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<td></td>
<td>Org/Inst:</td>
<td>Centre for Infectious Disease Research in Zambia, Zambian Ministry of Health, World Food Programme, University of Zambia, University Teaching Hospital, University of Alabama at Birmingham.</td>
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<tr>
<td></td>
<td>Status:</td>
<td>Published in the abstract book of the XVI International AIDS Conference, Toronto, Canada, August 13-18, 2006</td>
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<td></td>
<td>Study Site(s):</td>
<td>Lusaka</td>
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**Background:** In many parts of sub-Saharan Africa, where the need for ART is most urgent, there is also widespread hunger. Whether food supplementation can improve clinical and adherence outcomes of food insecure populations on ART has been widely debated, but not yet tested.

**Methods:** In the context of a home-based adherence support program attached to 8 government clinics in Lusaka, we randomly assigned 4 clinics to provide a monthly household food ration (micronutrient-fortified corn-soya blend, from World Food Programme) to food insecure patients starting ART; 4 clinics served as controls. Weight and CD4+ change were measured at 6 and 12 months. Adherence was assessed by timeliness of pharmacy visits. **Results:** At baseline, the median age, BMI, CD4+ count, WHO stage, haemoglobin, or gender distribution did not differ significantly between 375 food recipients versus 161 non-recipients. For those receiving food, median number of rations received was 9 (IQR: 6-10); median time between starting ART and first ration was 70 days (IQR: 44-125). We observed negligible differences in weight gain (kg) at 6 months (+5.6 vs. +5.0; p=0.48) and 12 months (+6.2 vs. +5.5; p=0.44) between food recipients and non-recipients. However, food recipients had a substantially greater increase in CD4+ count at 12 months than did non-recipients (+185 vs. +113; p=0.017). The mean number of days late for pharmacy visits per month was lower among food recipients versus non-recipients (2.4 vs. 3.4; p=0.008). Both the CD4+ and adherence findings remained statistically significant in multivariate analyses adjusting for sex, WHO Stage, and BMI at entry. **Conclusion:** In this pilot study, a monthly household food ration for food insecure patients commencing ART improved adherence by 40% and resulted in a better CD4+ response at 12 months of therapy. Further study is warranted of food supplementation as an adjunct to ART in food insecure patients.
138. **TITLE:** A WORLD FOOD PROGRAM DONATION TO THE MTCT PLUS FAMILY ARV CENTER AT CHELSTONE CLINIC IN LUSAKA, ZAMBIA  
**Authors:** McFarlane Y, Sinkala M, Luhanga D et al  
**Year:** 2003  
**Org/Inst:** Centre for Infectious Disease Research in Zambia, Zambian Ministry of Health  
**Status:** Published in the abstract book of the XV International AIDS Conference, Bangkok, Thailand, July 11-16, 2004; Abstract TuPe5285.  
**Study Site(s):** Lusaka  
**Source:** XV International AIDS Conference in Bangkok, Thailand, July 11-16, 2004; Abstract WePeE6761.

**Issue:** With >80% of people in Zambia living in abject poverty and nearly 20% infected with HIV, the interface of protein-energy malnutrition and AIDS is a serious concern. Since nutrition is paramount to good health and a key component to effective long-term care, donation of food supplements to HIV-infected patients should improve general health and ability to adhere to ARV regimens.

**Description:** In April 2003 we began a family-based antiretroviral treatment (ART) program in the Lusaka District. From the beginning the World Food Programme (WFP) donated food supplements to enrolled patients. All enrollees undergo economic and nutritional assessment at enrolment, which includes a home visit and questions related to food security. All enrolled women (88) receive a family ration of corn-soya blend (average 6kg). 30 women, most of whom are unemployed and divorced, widowed, or abandoned, receive additional supplements of maize meal, beans, and cooking oil. Donations are continuous. All patients receive nutritional counselling at each visit. Food is generally distributed monthly but some patients receive it biweekly. Nutritional need is great: even with the supplement 20% of patients report they do not have enough to eat at least 1x/week and 90% run out of food completely at least 1x/month.

**Lessons Learned:** Food availability and nutritional supplementation for vulnerable HIV-infected individuals is an important adjunct to long-term care. This pilot program is highly acceptable to its participants and non-stigmatising based on community feedback. Counsellors feel it helps stabilize patients' home situations and is a motivation in patient adherence to care and return for follow-up.

**Recommendation:** Food supplementation and donations programs such as this are feasible, acceptable to participants, and have a place in long-term HIV care in resource-poor settings. As the expansion of ART programs continue, food aid programs should be incorporated as a major therapeutic component.
3.3 THEME III. MITIGATING THE SOCIO-ECONOMIC IMPACT OF HIV AND AIDS

The overall objective under the theme of Mitigating the Socio-economic Impact of HIV and AIDS is to provide improved social support services for those made vulnerable from the socio-economic effects of the HIV and AIDS crisis such as orphans and vulnerable children, PLHA and their caregivers/families. Strategic objectives under this theme are as follows:

i. Protect and provide support for orphans and vulnerable children
ii. Provide social protection for people made vulnerable from the effects of HIV and AIDS
iii. Promote programmes of food security and income/livelihood generation for PLHAs and their caregivers/families

This section consists of abstracts that address the fore-going strategic objectives

<table>
<thead>
<tr>
<th>Strategic objective 14: Protect and provide support for orphans and vulnerable children</th>
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<tr>
<td><strong>139.</strong></td>
</tr>
<tr>
<td><strong>Authors:</strong> Mudenda O. S, Ngoma K.</td>
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<tr>
<td><strong>Year:</strong> 2004</td>
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<tr>
<td><strong>Org/Inst:</strong> Regional Psychosocial support Initiative (REPSSI)</td>
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<td><strong>Status:</strong> Published in and Abstract Book, 4th National Health Research Conference</td>
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<td><strong>Study Site(s):</strong> -</td>
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**Objectives:** To enhance and scale up existing workable psychosocial support programmes, activities and services to children and caregivers affected by HIV/AIDS, poverty, abuse and violence in the communities; To support and encourage participation of orphans and vulnerable children towards increased resilience, social stability and coping skills; To explore the different definitions of PSS and share the social benefits associated with the PSS package; To facilitate a sustainable holistic approach towards mitigating the negative effects of HIV/AIDS. This enables families to speak openly and explicitly about illness, death and dying.

**Methodology:** Structured in-depth oral/verbal interviews, focus group discussions and feedback reports; Story telling, traditional games, poems, role-plays and drawings by orphans and vulnerable children (OVCs); Video documentaries, literature materials, lectures, debates, simulations, case studies and life skills activities; Capacity building workshops, counselling, advocacy and lobbying;
**Results:** More than 60% of recognized orphans and vulnerable children (OVCs) programmes in the country have integrated practical psychosocial support into their programmes; The revised national children’s policy has psychosocial support and child counselling as an integrated component; 250 Psychosocial support trainers and child counsellors trained with a ripple effect of over 250,000 children receiving psychosocial support (PSS) assistance directly through individuals, household families, communities and partner networks countrywide; Of the 50 households surveyed, 70% of the respondents between the ages of 6-15 years agreed that the either their parents or guardians at one time have talked to them about HI/AIDS. An indicator that parents and guardians are now able to talk openly and explicitly about HIV/AIDS, illness, death and dying.

**Conclusion:** Psychosocial support is a sustainable essential care and support package. This package ranges from purely psychosocial support to the social measures needed to create an environment in which those affected by HIV/AIDS, poverty, abuse and violence can cope and thrive. It is a child-centered tool whose holistic approach makes it an essential element for meaningful and positive human development. It is the appropriate response at each level of the ‘the tower of stability’ towards increased resilience, social stability, security and coping skills of both male and female children affected by AIDS.

**Funding Sources:** The Swiss Agency for Development and Cooperation (SDC), Swedish International Development Agency (SIDA), Novartis Foundation for sustainable Development (NFSD).

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**140.** **TITLE:** AN ASSESSMENT OF THE IMPACT OF PARTNERSHIP IN EDUCATIONAL PROVISION TO VULNERABLE HIV/AIDS-AFFECTED CHILDREN IN CHONGWE DISTRICT  
**Authors:** Daka H. S.  
**Year:** 2005  
**Org/Inst:** The University of Zambia  
**Status:** Published  
**Study Site(s):** Chongwe  
**Source:** The University of Zambia

The findings of the study revealed that partnership in educational provision to vulnerable HIV/AIDS-affected children had a positive impact. The partners contributed to nutrition, health care, shelter and clothing of the vulnerable children, motivating them to continue with education.

The guardians and Orphans and Vulnerable Children (OVC) cited lack of provision of life-skills and psycho-social care. Bad morals like beer drinking by boys and early involvements in sexual relations by girls were things that contributed to school dropout.

Poor implementation of government policy was also found to be affecting vulnerable children’s access to education. This was evidenced by unfulfilled promises, e.g. vulnerable children were not a priority in as far as the distribution of education materials and enrolments are concerned, even if written policy stated so. There was also government’s failure to distribute educational materials to basic schools.

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**141.** **TITLE:** ORPHANED AND VULNERABLE CHILDREN IN ZAMBIA: THE IMPACT OF THE HIV/AIDS EPIDEMIC ON BASIC EDUCATION FOR CHILDREN AT RISK
Purpose: This study explored staff and student perceptions of the impact of the HIV/AIDS epidemic on the education of affected children in high-prevalence districts of the Copperbelt province of Zambia. The impact of the epidemic on student enrolment, attendance and completion rates, and on the quality of the learning experience, was investigated.

Programme description and sample The Ministry of Education assisted with the selection of districts in the Copperbelt Province with the highest prevalence of HIV/AIDS (34% to 39%). Four government schools with the highest HIV/AIDS prevalence rates and two community schools in impoverished communities were selected.

Design and methods: Statistical data from each school were made available. Six focus groups were held with District Education Board Personnel, NUT officials and the Copperbelt Special Education Standards Officer. Six interviews were held with school management teams. A total of 72 teachers and 64 students responded to questionnaires; 36 students also took part in four focus groups, each involving gender balanced groups of six to eight students from grades 4-8.

Results: The study provides information on the impact of the epidemic on basic education that has not previously been documented in Zambia and may assist the strategic planning and management of basic schools. A positive outcome of this study was that students, teachers and other professionals freely discussed issues concerning HIV/AIDS and its impact on education in a context where such issues are usually met with silence or denial.

Conclusions: The challenge for the Zambian Ministry of Education and the international community is not only to provide the right to basic education, but also to strengthen schools as inclusive and supportive communities. For students, this might focus on provision of alternative and more flexible opportunities for participation and learning, access to health and life skills education and appropriate counselling and support. For teachers, professional development opportunities to support the management of large classes and curriculum development - e.g. in the areas of life skills and vocational skills - are implicated.
paucity of research in basic schools to examine the experiences of AIDS-affected teachers and students.

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**143. TITLE:** RESEARCH ON WHETHER STREET CHILDREN CAN BE RECONCILED BACK TO SOCIETY

**Authors:** Lungu J. N

**Year:** 2002

**Org/Inst:** Youth Forum Zambia

**Status:** Published

**Study Site(s):** Lusaka

**Source:** Youth Forum Zambia

**Issues:** According to 1998 Living Conditions and Monitoring survey, 850,000 children are orphaned in Zambia. Children on the Brink Estimated that by 2002, Zambia would have 1.2 million orphans. Most of these orphans are a result of parents dying of HIV/AIDS. According to UNICEF 90,000 orphans in Zambia have simply been abandoned or fend for themselves.

**Description:** A Research conducted in Zambia, Central Africa March 2003 to find out whether children from the street can be reconciled back to society or institutionalized. Shadreck and Mwaba aged 12 and 13 respectively, where taken from the street and placed in a home for about 9 months in a project called OVC Help Initiative. The boys spent more than 2 years on the street and the Ministry Of Community where notified about the project. The boys where provided with basic necessities including basic education.
Lessons learned: Observations During First week. -Boys where dirty, had lice, most often refused to bath. -Abusive language, fights with friends, lies, isolation. -Could not read nor write.
Observations: After Six Months.
-Able to read and write simple words. -Bathed regularly even without being told
-Stopped telling lies and were obedient. -Social, attended activities like church, sports etc. -Developed initiative, innovation like gardening, repair of gadgets without being taught. -Love and acceptance key to rehabilitating children from the streets. Mwaba and Shaderick now living with an orphanage run by the Anglican Church and are a clear testimony that street children can be rehabilitated and reconciled back to society.
Recommendations:-More child-friendly transit-rehabilitation centres should be established. -Systems to identify and relocate street children early enough. -Laws protecting children from abuse should be strengthened. -More political will from Governments.

144. TITLE: IT TAKES A VILLAGE TO RAISE A CHILD: COMMUNITY RESPONSE TO HIV/AIDS AND PLIGHT OF ORPHAN
Authors: Kawilila S
Year: 2004
Org/Inst: Prison Fellowship Zambia, Chingola, Zambia
Status: Published in the AIDS 2006 - XVI International AIDS Conference: Abstract no. CDD0636
Study Site(s): Chingola

Issues: Zambia ranks as the world 14th poorest nations and has Africa 6th highest HIV/AIDS prevalence. Children in Zambia are being crushed by HIV/AIDS. Orphans are sick, suffering cruel deprivations and are frightened. It was the responsibility of the affected community to mobilize resources towards creating supportive and coping mechanisms required to address psychosocial and economic needs. Unfortunately, due to stigmatisation it isn’t the case with HIV/AIDS.

Description: Chingola Orphan Care project, whose mandate is to strengthen community partnership in empowering of Orphans and vulnerable children, is facilitating capacity building in Chingola. The project has trained and formed. Orphan Care committees to implement the activities which benefit children. The local people work side by side and inspire each other to address the impact of HIV/AIDS. Chingola Orphan Care role is to provide household support to meet the material, educational and emotional needs of the children. We also assist to develop strong community leadership, fostering accountability and transparency.
Lessons learned: - Problems are best addressed when the community is involved to develop their own solutions. Children who are cared by families within communities do thrive more than those in institutions; they receive more consistent care, develop better social and emotional relationships and form a strong self-image. The community, after implementing its own activity develops critical capacities to be able to carry on and protect the children in the face of HIV/AIDS.
Recommendations: Community empowerment process should allow communities to implement activities on their own.
It is essential to respect local leadership and community ownership if communities are to develop the capacity to meet their own needs.
Investing in grass root projects is one of the most effective ways in the battle against HIV/AIDS.

145. TITLE: INSTITUTIONAL RESPONSES TO HIV/AIDS PREVENTION AND CONTROL AMONG CHILDREN ENGAGED IN CHILD LABOUR: THE CASE OF LUSAKA.
Authors: Tembo R.
Year: 2004
Org/Inst: The University of Zambia
Status: Published
Location: Lusaka
Study Site(s): University of Zambia
Sources: The University of Zambia

The purpose of this study was to explore the range and scope of policies, funding, and programmes on HIV/AIDS prevention and control for children involved in child labour. To that end Government, NGOs and CBOs responsible for children and youth welfare were contacted.

The study was conducted in Lusaka. The research used qualitative methods to obtain data from the various sources. The respondents were purposively selected because of their stakeholder status in the child welfare sector or on issues relating to HIV/AIDS. In addition, in a form of snowball sampling, the service providers were asked at the time of the interview if they knew of any other organisation providing similar services. A Questionnaire was designed to guide the process of in-depth interviews. The study found that while most of the organisations reported having HIV/AIDS awareness programmes for OVC in general, prevention for child labourers receives a secondary response.

It was noted also that save for a few organisations, most organisations contacted do not have clear mandates, personnel and budgets to carry out HIV/AIDS promotion and prevention activities for child labourers. The study has also established that although a number of organisations are assisting OVC on issues related to HIV/AIDS, they reach only a small segment of thousands of child labourers.

The study also discovered that although some formal and informal mechanisms exist to share experiences, current responses to HIV/AIDS prevention for child labourers remains largely fragmented. Lessons can, however, be learned from project SCOPE/OVC’s efforts to strengthen District Coordinating Committees, and through them, more local counterparts. Hence there is need for a more thorough and in-depth survey of all organisations involved in HIV/AIDS prevention in the country. A number of recommendations are made on improving Institutional response to the HIV/AIDS prevention on child labourers in the Country.

146. TITLE: EQUIPPING COMMUNITIES FOR LONG TERM CARE AND SUPPORT OF OVC AND FAMILIES IMPACTED BY HIV/AIDS: LESSONS LEARNED IN DEVELOPING AND SCALING UP A COMMUNITY CARE COALITION MODEL IN AFRICA
Authors: Jere F.
Year: -
Org/Inst: World Vision (WV)
With the increasing numbers of orphans and vulnerable children (OVC) in Africa, World Vision (WV) has scaled up care and support in Eastern and Southern Africa. WV recognizes that short-term relief and service provision strategies are not adequate to address the large-scale, long-term, multi-sectoral OVC crisis generated by the HIV and AIDS pandemic. More sustainable and community-owned models are required. To scale up support for OVC, WV is implementing a development-oriented community-led OVC strategy which focuses on mobilizing and strengthening community-led care for OVC through Community Care Coalitions (CCCs).

Description: Developing and scaling up the CCC Model was done in 2 phases. Phase one piloted the model in Zambia and Uganda and helped to develop programming and training materials. Phase two, ongoing, involves scaling up and rolling out the model in high prevalence countries in Africa and documenting lessons for further learning and programming. CCCs in 14 high prevalence countries are caring for more than 500,000 OVC. CCCs and home visitors have new skills and capacity to care for OVCs and their households. Programming, implementing and training materials for use by community members and other partners have been developed and are being used. From 2006 more than one million OVCs are being targeted to receive care and support through this model.

Lessons learned: CCCs help reach many OVC, in a relatively short time period, with quality care. They build on local structures and strengths, enhance collaboration among initiatives underway and enable communities to care for their own children. They provide sustainable care of OVC.

Recommendations: Scaling up of such magnitude requires more resources (human and financial) and flexibility to adapt to different cultures and policies. On-going mentoring and support is essential to the success of CCCs.

Strategic objective 15: Provide social protection for people made vulnerable from the effects of HIV and AIDS

147. TITLE: SOCIAL NORMS, HUMAN RIGHTS AND PEOPLE LIVING WITH HIV/AIDS (PLWHA) IN RURAL COMMUNITIES OF ZAMBIA
Authors: Mwansa E.
Year: 2005
Org/Inst:
Status: Published; AIDS 2006 - XVI International AIDS Conference: Abstract no. CDD0941

Issues: Social norms and lifestyle in rural communities have been affected by HIV/AIDS. Rights of people living with HIV/AIDS are being violated and remain unchecked in these areas due to prevailing negative perceptions surrounding the infected people. This situation creates isolation and exclusion of PLWHA resulting in early morbidity.
Description: The Local Community Competence Building project based in five areas in rural Zambia, aims to improve the quality of life for PLWHA, strengthen capacities of health institutions and local actors response to the challenges of HIV/AIDS. It promotes rights of the infected and affected. It also raises human rights awareness regarding gender inequalities through research, ART, home based care, micro-finance, advocacy and community education on HIV/AIDS and STIs.

Lessons learned: Community life, culture and social norms have been affected leading to change in life styles i.e. wife inheritance, sexual cleansing and communal living. Stigma is still high especially in areas where people cannot freely disclose their HIV/AIDS status. PLWHA have developed coping strategies due to violation of their rights. PLWHA have limited access to health care in villages. Their right to lead a dignified life is stripped as they are seen as promiscuous people, called names and treated with hostility. Their rights to freedom and privacy are infringed as they suffer from gossip, insults and shame. Early morbidity remains high. The project is reducing stigma through intensified education on HIV/AIDS and human rights advocacy.

Recommendations: Intensify advocacy and awareness raising for respect of peoples rights regardless of their HIV/AIDS status. Encourage HIV/AIDS support groups as they free the mind and help the infected and affected people live freely. Increase access to ART and reintegration of the excluded people into society and its activities.

148. TITLE: PSYCHOSOCIAL SUPPORT TO CHILDREN LIVING WITH HIV/AIDS AND THEIR CAREGIVERS TO REDUCE STIGMA: A PROGRAMME IN ZAMBIA

Authors: Bwalya V. C\textsuperscript{1}, Bhat G J\textsuperscript{1} and Chitembo L\textsuperscript{2} et al

Year: 2002

Org/Inst: \textsuperscript{1}University Teaching Hospital, Lusaka, Zambia; \textsuperscript{2}Family Health International, Lusaka,

Status: Published

Study Site(s): University Teaching Hospital Lusaka

Source: The XV International AIDS Conference: Abstract no. E12546

Description: In October 2002 a Programme to provide psychosocial support to HIV infected children and their caregivers was started at the UTH Lusaka, Zambia. Following activities were initiated: Recreation activities such as singing, painting, story telling, games, and dancing to patients regardless of their HIV status, Picnic for members of Kids club, Teaching to children who stayed longer in the inpatient wards, Child Counselling on issues related to HIV/AIDS, Family review clinics and Production of Health Education Video

Lessons learned: During the twelve-month period a total of 1,614 HIV positive children were identified 788 were male and 826 were females. All were below the age of 15 years. A total of 6,451 including HIV Positive and Negative children and their parents participated in at least one form of recreational activities. Among them 1,832 were male children 1,649 female children, 2,629 mothers and 341 were fathers. For teaching in the inpatient wards 1,215 attended. Three Hundred and Thirty Three children were individually counselled. Both children and their caretakers appreciated our service. Chronically ill children benefited to continue their learning while they were in the hospital. Children and their parents interacted well irrespective of their HIV status, which has helped in reducing stigma.

Recommendations: There is an urgent need to expand this programme to other hospitals, and health centres in Zambia. Other countries in the region can learn from our experience.
<table>
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<tr>
<th>Title</th>
<th>Measuring the Impacts of HIV/AIDS-Related Deaths on Rural Farm Households in Zambia: Implications for Poverty Reduction Strategies</th>
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<tr>
<td>Authors</td>
<td>Chapoto A., Jayne T.</td>
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<tr>
<td>Year</td>
<td>2001-2004</td>
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<tr>
<td>Org/Inst</td>
<td>Department of Agricultural Economics, Michigan State University</td>
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<tr>
<td>Status</td>
<td>Published; AIDS 2006 - XVI International AIDS Conference: Abstract no. CDD1229</td>
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<td>Study Site(s)</td>
<td>Farm households</td>
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<td>Source</td>
<td>AIDS 2006 - XVI International AIDS Conference: Abstract no. CDD1229</td>
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**Background:** Fully two decades since the onset of the HIV/AIDS pandemic in Africa, there remains a lack of information about how rural households respond to the disease and are affected differently according to their varied conditions. This study determines the impacts of HIV-related mortality on household welfare, controlling for initial conditions, geographic factors, and the characteristics of the deceased person in the household.

**Methodology:** This study estimates household fixed effects models using nationally representative longitudinal data of 6922 farm households in Zambia, surveyed in 2001 and 2004, to measure the impacts of prime-age mortality on household composition, crop production, livestock assets and income.

**Results:** The study highlights four findings: (1) households try to bring non-resident adult members back to the farm after suffering a death, but their ability to do so is lower for initially poor households, and in households where the death was a male head of household; (2) contrary to conventional wisdom, we find no clear pattern of shifts to labour-saving crops among afflicted households; (3) the death of a male head in households that were poor to begin with suffer a 19% decline in the value of crop output per hectare, in contrast to non-poor households who are largely able to maintain former levels of crop productivity because they are better able to attract other extended family members; and (4) afflicted households first liquidate small animals to cope with the impact of prime-age mortality, and household cattle assets drop especially after the death of the male household head.

**Conclusions:** Investments in AIDS mitigation will be more effective if they take greater account of differences in household resources and conditions, the limiting factor of production in the particular farming system, and the position and gender of the deceased or ill person in the household.

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<tr>
<td>Authors</td>
<td>Chapoto A and Jayne T. S.</td>
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<td>Year</td>
<td>2006</td>
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<tr>
<td>Org/Inst</td>
<td>Department of Agricultural Economics, Michigan State University</td>
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<tr>
<td>Status</td>
<td>Published by Department of Agricultural Economics, Michigan State University in its series</td>
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Beyond the obvious catastrophic effects of the HIV/AIDS pandemic on mortality, demographic changes, and the suffering of individuals and their families, we are still only learning about the complex longer-term effects of the pandemic on poverty and vulnerability. For example, the HIV/AIDS pandemic has substantially increased the number of widow-headed households in Africa. A huge number of conceptual and qualitative studies highlight gender inequalities in property rights, and the difficulties that widows and their dependents face in retaining access to land after the death of their husbands. HIV/AIDS has undoubtedly exacerbated such problems. However, there remains limited quantitative evidence using representative survey data on the extent to which widows lose their rights to land after the death of their husbands, whether they lose all or part of the land they were formerly controlling, and whether there are certain characteristics of the widow, her deceased husband, and/or her household that influence the likelihood of her losing land rights. It is highly possible that government programs designed to provide a safety net to vulnerable groups may not reach their potential if they ignore gender dimensions of local institutions and property rights.

**Strategic objective 16: Promote programmes of food security and income/livelihood generation for PLHAs and their caregivers/families**

151. **TITLE:** URBAN FOOD SECURITY VULNERABILITY ASSESSMENT OF HIV AFFECTED HOUSEHOLDS  
**Authors:**  
**Year:** 2008  
**Org/Inst:**  
**Status:** Ongoing  
**Study Site(s):** Lusaka, Livingstone and Kitwe  
**Source:**

This survey addresses the food security of HIV affected households in urban areas. Data have been collected for 1385 HIV affected households in Kitwe, Livingstone and Lusaka.

The survey seeks to improve understanding of three aspects:

- The basic profile of HIV affected households in urban areas
- The extent of vulnerability faced by these urban households
- The key factors underlying vulnerability by analysing vulnerability groups

Key points that emerge from this assessment are the following:

**Profiling**

- There is no simple urban pattern – even the three urban areas addressed in this survey differ markedly. Thus targeting of urban households is not sufficient, and similarly blanket policies addressing all HIV affected urban households risk being unproductive.
- There is little evidence of child-headed households.
• 30% of households are caring for at least one orphan; three quarters are caring for a chronically sick person. Both of these caring responsibilities imply food security concerns for the household.
• Effective dependency rates are correspondingly higher in the most vulnerable households.
• Asset-rich households are less likely to suffer food insecurity.
• Women will only act as household head if the spouse is absent for some reason (including deceased).
• Households headed by women are more likely to host orphans.

Vulnerability measures
• The main indicators for food insecurity suggest that HIV affected households in these urban areas are at least as vulnerable as existing beneficiaries of WFP interventions. Coping strategies and food consumption scores both support this.
• The measurement of food security is complex, and there are no simple approaches to this. Results for differing measures can appear contradictory.

Vulnerability
• A relatively small group of worst off households can be identified in the basis of high CSI, low FCS and low asset wealth.
• A sizeable group of vulnerable households is identified, which is faring slightly better in terms of outcomes. Members of this group face the constant risk of slipping into the worst off category.
• The worst off depend heavily upon begging and food assistance.
• The vulnerable group depends far more upon casual labour – which is a risky and unstable source of income.
• Stable sources of income markedly improve food security – through regular income flows from wage/salaried employment, small businesses, petty trade or a skilled trade.
• Education similarly reduces the likelihood of food insecurity.
• The most insecure households in Lusaka are faring substantially worse than in Livingstone.

Potential interventions suggested by the analysis
• Measures to improve the nutritional food intake of the most vulnerable households.
• Measures to ease the caring burden in the most vulnerable households, who are looking after chronically sick or orphans, or following a death.
• Measures to improve capacity to earn a regular income – through a basic vocational acquisition.
• Measures to improve capacity to earn a regular income – through support to establish petty trading.
• Measures to improve capacity to earn a regular income – through acquisition of an asset (which allows a return to be earned).

The uncertainty of income from casual labour inhibits rational decision-making by households – even if ex-post income was sufficient. Provide support for moves to formalise employment by reducing the restrictiveness of Zambian labour contracts.
3.4. THEME IV.  STRENGTHENING THE DECENTRALISED RESPONSE BY MAINSTREAMING HIV AND AIDS

The main objective under the theme of strengthening the decentralised response by mainstreaming HIV and AIDS is to build capacity at all levels (national, provincial district and sub district) to manage and sustain a comprehensive response to the epidemic through efforts that create a more enabling environment for community based initiatives. The following are the strategic objectives under this theme:

i. Mainstream HIV and AIDS into district level development policies, strategies, plans and budgets

ii. Improve capacity of districts, provincial and national planning mechanisms promoting sectoral HIV and AIDS planning, monitoring and coordination

iii. Mainstreaming HIV and AIDS into sector (Private, public and civil society) development policies, strategies plans and budgets

iv. Develop and implement comprehensive workplace policies that take into consideration issues around education, awareness and prevention, treatment, care and support

v. Support the development of workforce development strategies which prioritize the key sectors critical to the response to HIV and AIDS

A systematic approach is needed to build local capacity at district level to manage and sustain a comprehensive response to the epidemic through efforts to create a more enabling environment to community based local level initiatives. This includes a focus on strengthening the capacity at district level for managing, coordinating and monitoring of multi-sectoral response and implementation of HIV and AIDS interventions and mainstreaming of HIV and AIDS into workplace and policies of public, private and civil society organisations to support harmonised and sustainable processes at the district level

This section consists of abstracts that address the foregoing strategic objectives

**Strategic objective 17:** Mainstream HIV and AIDS into district level development policies, strategies, plans and budgets

152. **TITLE:** TOO MANY JOBS, TOO FEW DOCTORS: PROBLEMS AND POSSIBLE SOLUTIONS FOR GOVERNMENT HEALTH INSTITUTIONS SHARING CLINICALLY TRAINED OFFICIALS WITH HIV/AIDS RESEARCH CENTRES

**Authors:** Chomba E.¹, Albertini J.²

**Year:** 2001
Introduction: The increased funding for HIV/AIDS research in developing countries has created a wealth of research opportunities for physicians, many of who are working for the Ministry of Health. Such positions offer higher wages than the government agencies can offer. These high wages have created a situation, which results in an extreme variation in salaries, and therefore a high turnover rate and training costs to both government institutions and international HIV/AIDS research centres. As a result, the need to share a limited number of clinically trained physicians between the government institutions and the HIV/AIDS research centres becomes a critical issue.

Methodology: Key informant interviews and literature reviews form the basis of this study. Research centres receive funding from international, national and bilateral donors. These organizations set up centres in developing countries and hire local clinical staff, many of whom were previously government employees.

Results: The siphoning off of skilled government workers has left a dearth in government health systems worldwide. Training leading to advanced degrees has been provided to more than 20 physicians affiliated with an HIV research project in Zambia to support an even distribution of human resources. Several of these researchers sponsored by this project now collaborate with the research project part-time while maintaining their responsibilities at government hospitals and health centres. This ensures technology transfer and allows civil servants to earn more without leaving government. Unfortunately, several other organizations have hired the few physicians available full time, which depletes government institutions even further.

Conclusions: Research projects must work closely with Ministries of Health to ensure that research and care mandates are mutually reinforced, and in particular to protect government against debilitating brain drain caused by a burgeoning NGO sector. International organizations must examine the impact they have on local government health systems and salary scales.

153. TITLE: ACCESS FOR ALL: CHALLENGES FOR AFRICA
Authors: S Chishimba¹, F Zulu¹, G Nguni²
Year: 2004
Org/Inst: ¹Commonwealth ACT, Lusaka, Zambia; ²Ministry of Youth, Sport and Child Development, Lusaka, Zambia
Status: Published in an Abstract Book of the XV International AIDS Conference: Abstract no. D12606
Study Site(s): National
Source: The XV International AIDS Conference: Abstract no. 12606

Issues: Significant strides have been recorded to establish the causal-effect relationships of HIV/AIDS. Critical to grapple with HIV/AIDS, is accessibility to: Behaviour Change Interventions (BCIs), supportive messages for PLWA, legal aid, care and support for OVCs and other survivors, treatment of STIs, palliative care which includes ARVs, treatment of opportunistic infections like TB, Voluntary Counselling and Testing, public viral load monitoring facilities, Prevention of Mother To Child Transmission of HIV (PMTCT), safe
blood, etc. These interventions are effect-based. Cause-based interventions have limited attention.

**Description:** Commonwealth ACT undertook a review of the health care delivery system and HIV/AIDS/STI/TB frameworks that have been developed since the advent of HIV/AIDS in Zambia. Literature was reviewed on studies that have already been undertaken to determine the success of health reforms and their implications on HIV/AIDS interventions. A study in five project sites of Commonwealth ACT was meant to validate current findings. Key informants were mothers as frequent users of health facilities. FGDs were used.

**Lessons learned:** The following affect accessibility to services: Poverty (material), long distances in terms of coverage, lack of information, illiteracy, gender inequality, and political affiliation and language barriers.

**Recommendations:** It has been declared that HIV/AIDS is not just a public health problem, but a development crisis as well. Therefore there is need for a paradigm shift from mere accessibility to AIDS related services to economic activities that enhance human development. Poverty is the major challenge that should be fought in Africa in order to address HIV/AIDS. People can access VCT, ARVs, HBC and other services, but they do not have enough income to buy food and access other services. Food distribution is no a solution to the crisis that Africa faces. Investing in sustainable food security and micro-financing for affected households, especially women would impact positively on the population.

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**154.**

**TITLE:** HIV/AIDS AND ECONOMIC GROWTH IN ZAMBIA

**Authors:** Sichone and Shadrick E. N.

**Year:** 2004

**Org/Inst:** African Institute for Economic Development and Planning (IDEP)

**Status:** Published

**Location:** Lusaka

**Source:** African Institute for Economic Development and Planning (IDEP)

**Objectives:** This study explores the relationship between HIV/AIDS prevalence and economic growth. The main objective of the study is to determine the effects of HIV/AIDS on household labour supply and economic growth in Zambia; and to assess the policy implications.

The study tests three hypotheses. First, that high HIV/AIDS prevalence reduces the GDP growth rate. Second, that high HIV/AIDS prevalence leads to a fall in savings and investment. Third, High prevalence of HIV/AIDS affects labour supply and may increase household poverty because of illness and deaths.

**Results:** The results show that productivity has been falling and economic cost associated with loss of labour as a result of deaths is found to account for 3 percent of GDP. HIV/AIDS impact on growth is by way of reduction in labour force and life expectancy that has fallen to 37.5 years. Women are found to have a higher infection rate and mortality than men hence need to address the gender dimension. HIV/AIDS is slowing economic activities and may be worsening the poverty situation at household level as a result of loss of labour and saving.

**Recommendations:** Policy recommendations are that first, Government check the high rate of attrition in the potential labour force and the declining life expectancy. Promote growth
by investing in infrastructure that supports agriculture, health and education. Encourage participation of women in production process and promote education policies that improve literacy and create awareness among the population. Second, Communities adopt strategies to address hunger, poverty and household security. Third, Donor agencies provide support to build capacity in national governments and communities to combat HIV/AIDS. Fourth, Research strengthen information gathering.

**Conclusion:** The study concludes that HIV/AIDS has had impact on the Zambian economy due to its effect on labour force. Because of this, there is need to promote policies that would encourage productivity and reduction in the loss of human capital.

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<th>Strategic objective 18:</th>
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**TITLE:** THE COST OF HIV / AIDS AMONG PROFESSIONAL STAFF IN THE ZAMBIAN PUBLIC HEALTH SECTOR

**Author(s):** Feeley R, Macwangi M, Rosen et al

**Year:** 2004

**Inst/Org:** Ministry of Health, Centre for International Health and Development, Boston University School of Medicine and Study performed for CBoH and USAID.

**Status:** Published in an Abstract Book, 3rd National Health Research Conference

**Study Site(s):** UTH, Lusaka DHMT and Kasama DHMT

**Source:** Abstract Book, 3rd National Health Research Conference, Zambia

**Objective:** The overall objective of this study was to estimate the costs to the public health service in Zambia of HIV and AIDS among professional employees.

**Methodology:** Costs associated with HIV/AIDS related illness and death among health professionals were estimated using a case/comparison methodology, estimates were developed for costs resulting from incremental absenteeism, death benefits and additional medical care of health professionals. The study population included all doctors, clinical officers and nurses employed at UTH, LDHMT and Kasama District. 108 deaths occurring over a three year period were compared with 216 currently serving professionals of similar age, sex and training. Observed death rates over the three year period were 0.4% for physicians, 2.8% for clinical officers and 3.5% for nurses. Costs ranged from $2,878 per death (clinical officers) to $4,256 per death (doctors) and totaled 3.6% of annual labor costs for all professionals at these sites.

**Results:** On average, professionals died at age 37.7 years, leaving 46% to 57% of the normal career remaining. To offset the observed deaths, output of newly trained clinical officers must increase by 80%, output of newly trained nurses by 50%. Providing HAART to health professionals is one way to reduce the impact of HIV/AIDS on the professional labor force. The costs measured for each death would purchase antiretroviral care for 6-8 years, and effective treatment of all infected professionals could reduce vacancy rates 5 years hence by 10% to 15%. 
Objective: This work was part of the large study assessing the public sector capacity to deliver their mandate in the context of HIV and AIDS. The objectives of this study were to: (i) assess the policy environment and efforts being made to enhance the fight against HIV/AIDS, (ii) Review studies conducted on the impact of HIV/AIDS and the application of the study recommendations, (iii) identify Capacity Issues that affect the ability of the Public Sectors to deliver on their mandates, (iv) identify gaps to facilitate development of interventions that will enhance the sector’s capacities to deliver on their mandate.

Methodology: The methodology included regular planning and consultative meetings, extensive review of relevant literature, records review and in-depth interviews with key informants in the sector, cabinet office and cooperating partners

Results: The policy environment for the mitigation of HIV/AIDS is conducive as evidenced by high political/goodwill from the government /co-operating partners. However, a number of these policies i.e. National HIV/AIDS policy, HIV/AIDS workplace policy, Human resource policy and the national health research policy are still in a draft form. Development of the HIV/AIDS workplace policies is not standardized in the public sector to facilitate tracking of implementation of policy efforts and impact on intended targets. The public sector capacity is constrained by poor national economic performance resulting in government’s failure to provide conducive work environment and competitive salaries and wages in order to attract and retain skilled personnel in the public sector The study also noted that a lot of studies on HIV/AIDS have been conducted but few directly address capacity issues in the public sector. This assessment also observed that management and coordination of research activities in the public sector is weak. Mechanisms to regularly update research agendas and priorities are weak. The study also noted that there is a growing link between research and policy and programs.

Recommendations: Specific recommendations for Enhancing Capacity were made:

- Finalize and Translate the Draft HIV/AIDS Sector Workplace Policy
- Standardize and harmonize, the health sector workplace policy with other sectors
- Review the public sector regulations and general orders in the context of HIV/AIDS
- Strengthen the planning and monitoring of human resources in the sector
- Strengthen the office of the focal point person to a functional level
- Strengthen management and financial systems
- Enhance health governance Structures and
- Strengthen research capacity and systems and conduct research to fill gaps in our knowledge
**Objectives:** This study sought to describe and quantify the impact of AIDS-related morbidity and mortality on the skilled labour force in tourism industry focusing on a government agency, ZAWA. Specifically, it aimed to answer three research questions; (1) To what extent is HIV/AIDS increasing labour costs for ZAWA?, (2) How is HIV/AIDS affecting Saw’s ability to fulfil its mission?, and (3) What are the net benefits or costs of providing treatment for AIDS to ZAWA employees?

**Methodology:** Study collected budgetary impact data which included; medical care, life insurance, funeral costs, recruitment and training of replacement and also mission impact that included; loss of days spent on patrol as a result of illness, management time, funeral attendance, vacancy, and training. Modelled potential net benefits of providing treatment with Anti-Retroviral drugs. Other data included ZAWA workforce characteristics; recent mortality; costs of benefits, recruitment, and training; and the number of days spent on patrol between 2003 and 2005 by a random sample of 238 wildlife police officers (WPOs), including 11 who died in service of AIDS or suspected AIDS.

**Results:** The primary task of WPOs is to patrol the national parks. Current workforce spent an average of 197 days on patrol per year. After adjusting for age, years of service, and worksite, WPOs who died of AIDS spent 63 days on patrol in their last 12 months of service (-68% decrease in performance), 97 days in their second to last year of service (-51%) and 124 days in their third to last year of service (-37%). For each employee who died, ZAWA reported losing an additional 6 person-days of supervisory time, 32 person-days for funeral attendance, and 73 person-days for recruiting and training a replacement. Total productivity loss per death was equal to 1.6 person-years. Each AIDS-related death also imposed an additional budgetary cost equal to 3.3 years’ annual compensation. Annual AIDS-related mortality was estimated at 3.1%, accounting for 80% of all employee attrition. As a result, ZAWA’s overall capacity to patrol the parks was reduced by 5.0%, labour costs increased by 9.7%, and the cost to provide one day of patrolling increased by 10.0%. Access to antiretroviral therapy (ART) was negligible in this population. If ART and pre-ART care could be provided for $500/patient/year, net savings to ZAWA would approach $300,000/year.
**Objective:** Through the Center for Disease Control and Prevention (CDC) University Technical Assistance Projects (UTAP) award, JHPIEGO and CDC have collaborated to develop a training course on antiretroviral therapy and opportunistic infections management for HIV/AIDS service providers in Zambia. Designed to be delivered using distance-learning approaches (i.e., through various electronic multimedia), the course is intended to provide continuing education to teams of clinicians (who have had basic training in HIV/AIDS care) at service delivery sites throughout the country.

**Results:** The course is composed of 12 technical modules, each containing a lecture recorded by a local clinical expert and accompanied by a visual presentation, and print materials, including assignments and tests. Such a format allows for continual reinforcement of key HIV/AIDS care and treatment concepts, and for quick and inexpensive periodic technical updates as clinical guidelines and protocols change in this highly dynamic field. Also included are recorded interviews with people living with HIV/AIDS (PLWHA), which will help clinicians understand the psychosocial aspects of providing HIV/AIDS services. Course exercises employ the performance and quality improvement (PQI) approach to help participants effectively transfer their learning to the workplace. They are also designed for use by teams, rather than individual providers, to reinforce the importance of working together helping to ensure continuity of care for PLWHA. Implementation of the course is now under way. Up to 100 providers from approximately 50 service facilities are targeted for enrolment in the course in the first year, with plans for nationwide scale-up in the next year. About JHPIEGO: JHPIEGO (pronounced “JA-PIE-GO”); an international health organization affiliated with The Johns Hopkins University in Baltimore, Maryland, builds global and local partnerships to enhance the quality of health care services for women and families. JHPIEGO’s focus is on training and support for health care providers including doctors, nurses, midwives and health educators working in limited-resource settings throughout Africa, Asia, the Middle East, Latin America and the Caribbean. JHPIEGO has Center of Excellence in Maternal and Child Health, HIV/AIDS, and Family Planning and Reproductive Health to strengthen services to women and families in 50 countries around the world.

159. **TITLE:** EMPLOYMENT OF OFF-DUTY STAFF AS A STRATEGY TO MEET THE HUMAN RESOURCE NEEDS OF AN EXPANDING PMTCT PROGRAM IN ZAMBIA.

**Authors:** Sinkala M, Chi B, Stringer E. M et al

**Year:** 2001

**Org/Inst:** Zambian Ministry of Health, Centre for Infectious Disease Research in Zambia

**Status:** Published in the abstract book of the XV International AIDS Conference in Bangkok, Thailand, July 11-16, 2004

**Study Site(s):** Lusaka

**Source:** XV International AIDS Conference in Bangkok, Thailand, July 11-
Issue: In Lusaka, Zambia, the district health system delivers ~47,000 infants per year in a setting of 25% HIV prevalence. Recent implementation and expansion of a district-wide PMTCT program has been extremely burdensome on an already depleted healthcare staff. The qualified midwife to patient ratio is 1:45, significantly higher than the 1:15 recommended by WHO.

Description: Rather than hiring additional staff for PMTCT, we have instead employed off-duty clinic personnel to fill extra shifts. This approach allows our midwives and nurses to earn supplemental pay, while offering the program substantial cost savings. Since program start-up in October 2001, the District PMTCT program has paid off-duty midwives US$67,289 to work 16,822 eight-hour shifts. We estimate that hiring and training additional staff to do the same work would have cost US$168,960. Thus, our strategy of employing off-duty staff for PMTCT has resulted in a cost savings of US$57,264 over the first year and US$38,064 in the second year, representing 184% and 123% of our average yearly expenditures thus far. Cost per shift is US$4 in the off-duty strategy versus US$11 in the first year and US$9 in subsequent years for the regular staffing strategy. This program has been acceptable to healthcare staff and has added benefit of building in-country capacity and integrating PMTCT into existing health services.

Lesson learned: By relying on an existing cadre of midwives and a novel overtime employment scheme, the Lusaka District PMTCT Program has been able to deliver VCT services in a cost-efficient manner. The degree of cost-savings will depend on local circumstances.

Recommendation: As health systems in resource-poor areas continue to scale-up PMTCT and antiretroviral treatment, our model of employing existing staff for additional, off-duty shifts is one way to insure the delivery of quality health care in a setting of increased human resource demands.

160. TITLE: HIV/AIDS STRATEGIES LACK STRENGTH DUE TO INEFFECTIVE YOUTH CAPACITY-BUILDING AND UNDERUTILIZATION OF ICTS IN DEVELOPING COUNTRIES

Authors: Sepiso S.O.
Year: 2005
Org/Inst: World Bank in Zambia and the National AIDS Council
Status: Published in the Abstract Book for AIDS 2006 – XVI International AIDS Conference: Abstract no. CDE0646
Study Site(s): National

Issues: 1. Peer Education is not sustainable as a tool to fight youth in Developing countries. 2. New approaches of Capacity-Building for Youth programmes are needed. 3. Training youth to be ICT-literate for employment in the HIV/AIDS sector saves funds, fights Brain-Drain in the Health Sector and would help attain the MDG targets for HIV/AIDS.

Description: A study commissioned by the World Bank in Zambia and the National AIDS Council revealed that a number of strategies such as Peer Education and Volunteerism in Zambia need addressing. A national HIV/AIDS Forum held in November 2005 in Zambia discovered shortcomings in Capacity-Building. We are now running a World Bank/Rotary
Club and US Government project to train youth workers in the HIV/AIDS sector as support for expensively trained staff to reach the MDGs target. The paper shall address these issues.

Lessons learned: In Zambia, capacity-building among youth interventions are lacking and new strategies are needed if we are to have meaningful impact on the fight against HIV/AIDS. Secondly, ICTs are an effective tool to fight unemployment in general, brain drain in the health sector and reduce patient to staff ratio in developing world. A Zambian project has shown this which is a new field of activity in Zambia. Case studies from Zambia and project success stories like the Zambia NGOs eRiding project shall be used to illustrate these.

Recommendations: peer education needs readdressing as it drains needed funds for the fight against HIV/AIDS. Instead, we need to train youth in ICT so they can gain employment in the HIV/AIDS sector. New Capacity building strategies like eRiding are needed in the fight against HIV/AIDS.

161. TITLE: INTEGRATION OF HIV CARE AND OUTPATIENT SERVICES IN PUBLIC HEALTH CLINICS IN LUSAKA, ZAMBIA: LESSONS FROM IMPLEMENTATION PLANNING.
Authors: Topp S. M, Chiko M. M, Manley N. R et al
Year: 2007
Org/Inst: Centre for Infectious Disease Research in Zambia, Zambian Ministry of Health
Status: Accepted for presentation at XVII International AIDS Conference; Mexico City, Mexico; August 3-8, 2008.
Study Site(s): Lusaka
Source: XVII International AIDS Conference; Mexico City, Mexico; August 3-8, 2008

Issues: Like many programs in sub-Saharan Africa, the urgent scale up of antiretroviral treatment (ART) in Lusaka, Zambia led to the establishment of HIV/AIDS services separate from routine outpatient (OPD) care. Over time, these vertical services have exacerbated pre-existing shortages of health care workers and physical space, making further scale up of ART services and the introduction of opt-out diagnostic counselling and testing (DCT) difficult.

Description: In September 2007, the Zambian Ministry of Health (MOH) began planning for a pilot program to integrate ART and OPD in two Lusaka primary health care clinics. Stakeholder meetings and early site visits revealed three key problems with the existing vertical system: i) operational constraints created by clinic space, ii) deficit of staff capacity and motivation and iii) interplay of HIV-related stigma between staff, patients and community. The purpose of piloting an integrated model is to address these problems and strengthen health care systems through consolidation of resources, improved consistency of clinical care, and stronger case finding and referral mechanisms. A four-month participatory planning phase focused on five strategic tasks to achieve this: i) development of an integrated patient flow model, ii) mapping of appropriate infrastructure needs iii) design of quality control systems, iv) planning of health care worker training and v) patient and community sensitisation and involvement.

Lessons Learnt / Next Steps: Participatory pre-implementation planning helped to address the clinical, logistical and social barriers to systems-change and develop an acceptable and clinically functional integration model. Careful monitoring and evaluation of the implementation phase will provide important data on the operational feasibility and
cost effectiveness of integrating OPD and ART in high-burden settings such as Lusaka, Zambia.

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**162.**

**TITLE:** EVALUATION OF POSITIVE LIVING ADVOCATES COURSE  
**Authors:** Dunnett-Dagg W A, Trivedi P, Patel D *et al*  
**Year:** 2003  
**Org/Inst:** DAPP in Zambia  
**Status:** Published in the XV International AIDS Conference: Abstract no. MoPeD3872

**Study Site(s):** Ndola  
**Source:** The XV International AIDS Conference: Abstract no. MoPeD3872

**Background:** An evaluation was carried out to examine the effectiveness of the Positive Living Advocates Course (PLAC) - one of the Post-test services offered by the Hope Projects under Development Aid from People to People in Zambia. The PLAC is 6-month training for PLHA who are ready to share their status and to become advocates in the community. PLAC teaches basic facts about HIV/AIDS, positive living, food & nutrition, importance of regular exercise, health & hygiene, advocacy, herbs & other affordable remedies.

**Methodology:** 208 participants from 13 Hope Projects were interviewed, 132 female & 72 male. The majority were graduates and the remainder were currently enrolled in the PLAC.

**Results:** The main reason given for attending VCT was prolonged sickness &/or death of spouse. People living in remote places preferred mobile VCT services. Initial reaction to an HIV positive test result was pessimistic, but many stated that after attending PLAC they felt accepted and supported. Participants reported behaviour change including fewer sexual partners, improved diet and better hygiene. They also reported increased use of herbs as an aid to health and treating their drinking water. Few were taking vitamin supplements, de-worming treatment or sleeping under mosquito nets. Most current participants are not able to share their status, except within the group, but many graduates are able to share their HIV status and to mobilise others to attend VCT. Most respondents have a large family and low income, mainly from small business/farming. They are spending less than 1$ on food daily and many were suffering from TB, Malaria, skin diseases and chest & abdominal pain.

**Conclusions:** Graduates from the PLAC benefit from increased knowledge and enhanced social support. The programme can be strengthened by emphasising protective health measures such as de-worming and use of mosquito nets. There is also need to enhance household food security and to boost household income.

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**163.**

**TITLE:** BUILDING HUMAN CAPACITY TO RESPOND TO HIV/AIDS- A CASE OF ZAMBIA  
**Authors:** Zulu K P  
**Year:** 2002  
**Org/Inst:** Zambia Association for Prevention of HIV and Tuberculosis  
**Status:** Published in The XV International AIDS Conference: Abstract no. E10179

**Study Site(s):** -  
**Source:** The XV International AIDS Conference: Abstract no. E10179
Background: Given the uniquely devastating impact of HIV/AIDS on households, communities and entire societies, national policies and poverty-reduction strategies need to be adjusted and expanded accordingly, without which HIV/AIDS will continue to erode human development achievements, without which deepen poverty and further hinder policy development that guarantee access to education, health and viable livelihood.

Methodology: Carefully compiled and tallied data can only hint at the epidemic’s human impact, whether at the global, societal, familial or individual level. Mobilizing and building the human capacity to cope with and overcome the effects of HIV/AIDS is therefore, essential to policy and programme implementation.

Conclusion: Often, circumstances have led policy-makers and social leaders to enlist community members as leaders of initiatives, rather than positioning them at the receiving end as mere "beneficiaries" or "clients". In Zambia a National Facilitating Team was formed to ensure that local responses are nurtured and expanded. Participating members of the team are drawn from national and local networks and organizations that are keen to develop human capacity as part of their response to HIV/AIDS. The Team is developing innovative ways of transferring knowledge, enabling networks and organizations to learn from local experiences and integrate these into national policies, that later inform programmes. This background has seen the enactment of the National HIV/AIDS,TB and STI Council as an "Act of Parliament". Legitimizing its existence as a legal entity empowered to sue and defend its affiliates.

164. TITLE: BUILDING COMMUNITY MOBILISATION SKILLS AT SCALE: THE SYNERGY OF RADIO DISTANCE LEARNING AND THE ROLL-OUT OF A NATIONAL CURRICULUM FOR HEALTH WORKERS IN ZAMBIA

Authors: Serlemitsos E. A. T¹, Bharath-Kumar U¹, Nyambe J A² et al
Year: 2003
Org/Inst: ¹Johns Hopkins University, ²Bloomberg School of Public Health/Center for Communication Programs, Baltimore, United States
Status: Published in The XV International AIDS Conference: Abstract no.TuPeE5476
Study Site(s): -
Source: The XV International AIDS Conference: Abstract no. TuPeE5476

Issues: Having impact on HIV/AIDS issues at community level is always a challenge, especially so when resources are limited and scattered communities need to be reached. Given the 16 percent prevalence of HIV/AIDS, creating skills to do HIV/AIDS activities within the approximately 10,000 communities in Zambia is necessary and urgent.

Description: In 1991 the Zambian Ministry of Health, as part of its Health Reform programme, began to promote community involvement to bring essential health care as close to the family as possible. 50 percent of Zambians are not within normal walking distance of a clinic. To address this, Neighbourhood Health Committees (NHCs) were created to link clinics and communities and increase access to basic health services. A national community mobilization curriculum was developed and a training of trainers and roll-out methodology was adopted to strengthen and increase effectiveness of the more than 100,000 NHC members countrywide, with specific focus on NHCs learning health promotion and community mobilization skills. This was complemented by a 26-week, 30-
minute radio distance learning course broadcast twice weekly in five languages. Print materials supplement the courses.

**Lessons learned:** The synergy of face to face training with distance education is both effective and affordable. NHCs find it easier to instruct their neighbours with radio learning as a teaching tool. To date more than 10,000 people have been trained through face to face instruction (in about 20 of 72 districts) at an average cost of US$ 40 per trainee, and over 25,000 through distance education (in most districts), at an average cost of US$13 per participant. Most of the NHCs created action plans based on health priorities identified by the community. HIV/AIDS consistently appeared as a top concern in all action plans.

**Recommendations:** Although evidence shows NHCs are now more empowered with information, materials and community mobilisation skills, a stronger relationship with the health centres is needed for NHCs to be even more effective in their work.

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### 165. COMMUNITY LEADERSHIP AND ACTION IN THE FIGHT AGAINST HIV/AIDS

**Authors:** Moonga C. N  
**Year:** 2005  
**Org/Inst:** Choma District HIV/AIDS Task Force  
**Status:** Published in an Abstract Book, 4th National Health Research Conference  
**Study Site(s):** Choma  

**Background:** HIV/AIDS has for the past two decades continued to spread across all continents killing millions of people, disrupting and impoverishing families and turning millions of children into orphans. In Zambia there is an estimated adult HIV prevalence of 16% whilst in Choma where Mboole Rural Development Initiative is found, the HIV prevalence is estimated at 19.2%. The spread of HIV is fuelled by the gender inequalities that exist in our communities.

**Objectives:** (i) Reduce illiteracy levels in the community especially among OVCs through school requisites support (ii) Empower women through provision of information on their rights (iii) Create employment for out of school youths through running IGAs (iv) Enhance household food security

**Lessons Learnt:** (i) Winning community support is the key to development and a sustainable fight against HIV/AIDS (ii) The spirit of volunteerism yields better results Technical support from district level structures is key in ensuring the sustainability of community initiatives (iii) The fight against HIV/AIDS does NOT start with money. However, it needs external resources to be enhanced

### 166. EMPOWERING A MULTI-SECTORAL RESPONSE TO HIV/AIDS AT THE DISTRICT LEVEL IN ZAMBIA

**Authors:** Hakoma C M.  
**Year:** 2006  
**Org/Inst:** SHARe - Zambia  
**Status:** Published in an Abstract Book, 4th National Health Research Conference  
**Study Site(s):** Copperbelt Province
Leadership is critical to the fight against HIV/AIDS at all levels. Organizational mechanisms mandated to coordinate and lead the multi-sectoral response to HIV/AIDS at the local level in resource-poor settings too often lack essential competencies in strategic planning and organizational development.

**Methodology:** The USAID-funded project SHARE (Support to the HIV/AIDS Response in Zambia) has been providing assistance to the District AIDS Task Forces, multi-sectoral coordinating mechanisms mandated by the Zambian Government to provide leadership at the district level. In Copperbelt Province, SHARE worked with ten districts to provide technical assistance and training them in organizational development and guiding them in drafting their strategic plans. The involvement of local government and community leaders was encouraged from the beginning of the process to ensure shared ownership of the response to HIV/AIDS.

**Results:** Districts increased the number of stakeholders engaged in the fight against the epidemic, developed shared visions, better articulated missions and clearer mandates. Districts developed also multi-sectoral HIV/AIDS strategic plans, along with monitoring and evaluation plans, which will allow increased coordination with provincial and national activities. Building from the strategic plans, districts have begun to mobilize resources locally to implement planned interventions.

**Lessons learned:** Technical assistance to district-level coordinating mechanisms requires initial relationship building and sustained involvement by organizations providing this support. Training expands organizational capacity, which facilitates the identification and execution of institutional mandates and strengthens planning and coordination activities. Coordinated and inclusive capacity-building activities increase the number of local stakeholders in the fight against HIV/AIDS.

**Conclusion:** Organizations with limited resources in the fight against HIV/AIDS must be supported to develop essential organizational capacities, clear mandates, and shared visions of success.

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**167.**

**TITLE:** CAPACITY ISSUES IN THE PUBLIC EDUCATION SECTOR: WHAT WE KNOW AND WHAT CAN BE DONE IN THE CONTEXT OF HIV/AIDS

**Author(s):** Macwangi M, Ndubani P and Ngwengwe

**Year:** 2004

**Inst/Org:** Public Service Management Division, Cabinet Office, Ministry of Health, United Nations Development Program and the University of Zambia

**Status:** Published by UNDP

**Study Sites:** National

**Source:** UNDP, UNZA, INESOR and MSDP

**Objective:** This work was part of the large study assessing the public sector capacity to deliver their mandate in the context of HIV and AIDS. The objectives of this study were to: (i) assess the policy environment and efforts being made to enhance the fight against HIV/AIDS, (ii) review studies conducted on the impact of HIV/AIDS and the application of the study recommendations, (iii) identify Capacity Issues that affect the ability of the Public Sectors to deliver on their mandates, (iv) identify gaps to facilitate development of interventions that will enhance the sector’s capacities to deliver on their mandate.
Methodology: The methodology included regular planning and consultative meetings, extensive review of relevant literature, records review and in-depth interviews with key informants in the sector, cabinet office and cooperating partners.

Objective: This work was part of the large study assessing the public sector capacity to deliver their mandate in the context of HIV and AIDS. The objectives of this study were to: (i) assess the policy environment and efforts being made to enhance the fight against HIV/AIDS, (ii) review studies conducted on the impact of HIV/AIDS and the application of the study recommendations, (iii) identify Capacity Issues that affect the ability of the Public Sectors to deliver on their mandates, (iv) identify gaps to facilitate development of interventions that will enhance the sector’s capacities to deliver on their mandate.

Methodology: The methodology included regular planning and consultative meetings, extensive review of relevant literature, records review and in-depth interviews with key informants in the sector, cabinet office and cooperating partners.

Strategic objective 19

Mainstreaming HIV and AIDS into sector (Private, public and civil society) development policies, strategies plans and budgets

Description: Studies in Zambia have shown significant attrition and associated costs from apparent HIV/AIDS infections among government employees in health care (Feeley, et al, 2004) and wildlife protection officers (Rosenj and Hamakaza, 2006). Little has been written on the impact of HIV/AIDS on professionals in the judicial system. Using personnel data from 2000 to 2005, and files for cases originated in 2000, the authors conducted a two pronged study of the impact of HIV/AIDS in the Zambian judicial system.
They looked at deaths among professionals working in the Zambian judicial system, and at the effect of death/illness on the time to case resolution. Chronic disease attrition among professionals in the courts was 4.4% per year, a quarter of all losses. In the police prosecution service, 20% of all attrition was due to chronic disease deaths. The average age at death for professionals in the judicial system was 34.3 years, even younger than that observed in a previous study of Zambian health professionals, and strong evidence that most of the deaths are due to AIDS, not the degenerative diseases of aging.

**Results:** In a sample of 1,040 cases filed in 2000 in the Magistrate and High Courts in Lusaka and Ndola, 8% of cases experienced one or more adjournments due to illness or death of a party. A quarter of these adjournments were due to the illness or death of the judge/magistrate or an attorney. Cases with an illness-related adjournment took 10 months to resolve, twice the average for cases with no illness related adjournment. If one of the parties died, cases took almost 17 months to resolve. The study showed that illness is contributing to delays in the administration of justice in Zambia.

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**170.**

**TITLE:** MAINSTREAMING HIV AND AIDS INTO PARLIAMENTARY DIMENSIONS FOR FORWARD LOOKING STRATEGIES THAT COULD ENHANCE COMMITMENT, ACCOUNTABILITY AND TRANSPARENCY IN THE SOUTHERN AFRICAN REGION

**Authors:** Dawson B.¹, Sekgoma B.²

**Year:** 2005

**Org/Inst:** ¹National Democratic Institute for International Affairs and the ²SADC Parliamentary Forum

**Status:** Published in the AIDS 2006 - XVI International AIDS Conference: Abstract no. CDE0607

**Study Site(s):** Mozambique, Namibia, and Zambia.

**Source:** AIDS 2006 - XVI International AIDS Conference: Abstract no. CDE0607

**Issues:** The SADC Parliamentary Forum considers the absence of consistent and harmonious parliamentary engagement in the review and implementation processes of HIV and AIDS commitment as a critical missing link in SADC response to firmly combat the HIV and AIDS epidemic. Yet this is essential for the successful, sustainable institutionalization of political leadership by Southern African countries.

**Description:** In an effort to better understand how legislatures are responding to the HIV and AIDS crisis and to identify areas where robust responses can be tailored for legislatures response the National Democratic Institute for International Affairs and the SADC parliamentary Forum conducted outreach to gain an enhanced understanding of current and past initiatives that are being conducted by Members of parliament in Mozambique, Namibia, and Zambia.

**Lessons learned:**

* A well functioning parliament is critical in situations where policy and legislation reform on HIV and AIDS has to be developed.
* Empowered Parliaments are effective watchdogs to support issue based political deliberations on HIV and AIDS.
* Parliaments have a crucial role in preventing escalating numbers of infections, in universal access to treatment.
Recommendations: HIV and AIDS programmes at country level need to enhance the ability of legislators to serve as leaders and reach out to citizen on HIV and AIDS issues. * There is need to strengthen the interface between parliament and civil society. * Interventions that are developed to combat HIV and AIDS need to keep pace with the political developments and political context of a country.

171. **TITLE:** THE ECONOMIC IMPACT OF AIDS ON THE EDUCATION SECTOR OF ZAMBIA: APPLICATION OF THE ED-SIDA MODEL

**Authors:** Desai K¹, Grassly N¹, Drake¹ et al

**Year:** 2000-2010

**Org/Inst:** ¹Imperial College, London, United Kingdom

**Status:** Published in the Abstract Book for the 2002 XIV International AIDS Conference Abstract no. C11067

**Study Site(s):** National

**Source:** Abstract Book of the 2002 XIV International AIDS Conference Abstract no. C11067

**Background:** Evidence suggests that teachers in Zambia (20% prevalence) are dying faster than new ones can be trained. Thus impact of HIV/AIDS can be seen to affect supply of education, impairing national Education For All (EFA) goals. We model how AIDS affects the primary teacher population and determine the economic impact AIDS has had on the Ministry of Education (MoE) of Zambia.

**Methodology:** A flexible spreadsheet based compartmental model called Ed-Sida projects number of teachers and HIV status to 2010 by capturing the dynamics of the teacher population in terms of recruitment, retirement, HIV infection and death. HIV incidence is based on Zambia-specific estimates of adult prevalence from HIV sentinel surveillance sites. Data for teacher numbers and recruitment were obtained from the MoE and Teacher Training Colleges. The model outputs teacher numbers to 2010, required recruitment levels relative to EFA goals, and teacher losses and absenteeism due specifically to HIV/AIDS. Costs of teacher training and salaries and sensitivity analyses allowed estimation of the economic impact of AIDS from the perspective of MoE.

**Results:** Current primary teacher population numbers 37,500 of which 7,900 are estimated to be HIV positive. The estimated number of primary school teachers who died from AIDS in 2000 is 815, corresponding to 45% of all teachers trained that year. This figure will grow to 1250 by year 2010. MoE must double it annual teacher output from training colleges (already implemented as new initiative) to meet EFA goals. The major projected financial cost to 2010 associated with HIV/AIDS occurs at the level of teacher training (US$15,045,000; 61%) followed by absenteeism (US$8,097,000; 33%).

**Conclusions:** A proper understanding of the impact of HIV/AIDS on education in Zambia is necessary to mitigate the shortfall of required qualified teachers, meet the real costs of facing AIDS in education, and assure EFA goals.

**Strategic objective 20:** Develop and implement comprehensive workplace policies that take into consideration issues around education, awareness and prevention, treatment, care and support
Methodology: A standard questionnaire was designed and distributed to all employees through their respective Departments/sections. The questionnaire called for honest responses to all questions, no name was required.

Results of Data Analysis: Data analysis covered demographical information, knowledge/information levels on VCT, and reasons for not taking an HIV test, necessity of taking a test, awareness about workplace HIV/AIDS policy, VCT centre, family involvement, and performance of peer educators.

Objectives: To establish employees’ level of awareness on HIV/AIDS; to establish employees’ attitude towards VCT; to establish levels of stigma associated with HIV/AIDS; to evaluate activities of workplace peer educators.

Conclusion: Confidentiality, stigma and discrimination are one area employees felt needed further reassurance from management; through the Company policy on HIV/AIDS was in place, a good number of employees had read and understood it; There is need for the Company to arrange different Clinics to dispense ARVs to infected employees/family members; More campaign is needed in order to influence behavioural change; There is need to scale-up community activities to reach out family members of employees.

Funding sources: Zambia National AIDS Network (ZNAN)
education, education through theatre, song, and dance, and distribution of adapted written IEC materials.

**Lessons learned:** This hard-to-reach but highly vulnerable group has been successfully reached through a core team of ZDF trainers, clinical service providers, and peer educators. Senior ZDF leaders are increasingly aware of and committed to tackling HIV/AIDS among the ranks.

**Recommendations:** Key next steps include intensified advocacy at the command level, greater involvement of HIV-positive ZDF personnel, and addressing policy issues that facilitate transmission.

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**174.**

**TITLE:** WHEN SCALING-UP IS THE ONLY ALTERNATIVE: EXPERIENCE WITH WORKPLACE HIV PROGRAMS IN ZAMBIA

**Authors:** Nyumbo M, Lungu R. and Mutonyi S.

**Year:** 2006

**Org/Inst:** Zambia Integrated Health Programme (ZIHP)

**Status:** Published

**Study Site(s):** National

**Source:** Zambia Integrated Health Programme (ZIHP)

In Zambia as elsewhere, HIV affects people during their most productive years and 16 percent of Zambians between ages 15 and 49 are infected with the virus. Thus, HIV and AIDS have had a significant impact on the country’s workforce across sectors. Workplace programs have long been recognized as an integral part of a comprehensive national response to HIV and AIDS. JSI launched the workplace program FACEAIDS in 2001. By 2005, private-sector workplace programs had expanded to 121 workplaces in 37 districts, covering all 9 provinces and reaching over 50,000 employees.

**Measuring Progress and Determining Impact:** Impact under ZIHP was measured by a baseline survey conducted in 1999 and an end-of-project (EOP) survey conducted in 2003. Process-Level **Results:** Expanded the private sector workplace program from 4 workplaces in 3 districts and one province, reaching a workforce of 474 employees (under ZIHP, 2001), to 121 workplaces in 37 of Zambia’s 72 districts, covering all 9 provinces and reaching more than 50,000 employees. In JSI’s experience, the following are the most important steps to starting a workplace program: Ensure managers feel a need for the program, Gain total commitment from management, Sign an MOU with management, Create a sense of ownership, Develop an organizational policy and Develop an implementation plan, Implement, monitor, and evaluate workplace programs have become an essential part of a comprehensive national response to HIV and AIDS in Zambia. Through ZIHP and now SHARE, JSI has made significant contributions to the development of effective workplace programming. Our workplace programs continue to grow and draw interest from employers. In spite of this, there are some employers who are not yet interested. As the epidemic’s impact deepens, however, demand is expected to increase. As employers observe other companies implement successful workplace programs, pressure and policy requirements from parent companies and the unrelenting toll of death and absenteeism on productivity will leave Zambia’s institutions and companies unable to ignore the needs of their employees any longer. Innovative ways must be found to meet this demand. One way forward might be to franchise the FACEAIDS program, allowing local NGOs to carry out workplace programs using this successful model in areas of Zambia that have not yet been reached.
175. TITLE: COMMUNICATION TOOLS USED AND THEIR HIV/AIDS PERCEIVED EFFECTIVENESS IN DISSEMINATING MESSAGES FOR THE WORKFORCE IN ZAMTEL

Authors: Nyundu W
Year: 2007
Org/Inst: The University of Zambia
Status: Published
Study Site(s): Zamtel Lusaka
Source: The University of Zambia

Objective: The study intended to establish the communication tools used and their perceived effectiveness in disseminating HIV/AIDS messages for the workforce in Zamtel. For that reason, the report presents communication tools used such as workshops, seminars, magazines distribution, health talks, interpersonal communication and electronic media to disseminate HIV/AIDS information to employees.

The findings showed that the majority of the respondents, 69.1 percent, revealed that the HIV/AIDS communication dissemination methods used by Zamtel were effective but the degree of effectiveness varied. Ultimately, the report presents recommendations for the future basing on the analysis of the findings of the study. Among the recommendations are that, Zamtel to seriously train peer educators among employees who will confidently and effectively disseminate HIV/AIDS information, Zamtel to use employees who have opened up living with HIV/AIDS to give testimony to help in behavioural change and also Zamtel to incorporate HIV/AIDS information during departmental meetings with staff.

176. TITLE: PRINT MEDIA JOURNALISTS' INADEQUACIES IN THE COVERAGE OF HIV/AIDS

Authors: Njungu L H ¹, Muliokela L ²
Year: 2003
Org/Inst: ¹Zambia Institute of Mass Communication, Lusaka, Zambia; ²National College For Development & Management Studies, Kabwe, Zambia
Status: Published in and Abstract Book of the XV International AIDS Conference: Abstract no. WePeE6701
Study Site(s): -
Source: The XV International AIDS Conference: Abstract no. WePeE6701

Background: The Print media in Zambia is predominantly newspapers, some of which are dailies and others weekly. Recently, a study was undertaken to evaluate the depth of HIV/AIDS coverage by print media journalists in Zambia and critically assess whether their articles were issue oriented and of intrinsic value.

Methodology: The study confined itself to stories in six leading popular newspapers in the country. It analysed the articles (News, features, editorials and columns etc.) written by these local journalists and featured between June 2002 and June 2003. The content analysis, among many other things, focused on: (i) Story depth (ii) Application of interpretative reporting (iii) Accuracy (iv) Inherent reader value (v) Topicality etc.

Results: During the period under review, there wasn't adequate and effective reportage of HIV/AIDS. Over 80 percent of locally written articles were devoid of issues. The articles in
general did not address issues that were of intrinsic value to the readers. Many local articles were event driven; meaning it was mere reportage of so and so has said this and that or so and so has done this or that. There was negligible deliberate effort on the part of journalists to generate own HIV/AIDS stories. Some articles exposed author's scanty knowledge of the epidemic while others lagged far much behind in terms of keeping up to date with modern advancements regarding the pandemic. Interpretative reporting for the sake of facilitating reader comprehension of issue at hand was almost non-existent.

**Conclusion:** Local print journalists’ participation in the fight against HIV/AIDS is below par and needs to be jacked up. Zambian Journalists should be an essential part of the solution to the HIV/AIDS pandemic. However, this can only be guaranteed by deliberately training them in this field.

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**177.**

**TITLE:** THE ENCOUNTER BETWEEN SPORT AND HIV/AIDS: CRITICAL VIEW POINTS ON THE USE OF SPORT AS A VEHICLE FOR ADDRESSING HIV/AIDS

**Authors:** Mwaanga O.¹, Siyakutela G.², Mwansa K.³ et al

**Year:** 2004

**Org/Inst:** EduSport Kicking AIDS Out

**Status:** Published in an Abstract Book for the AIDS 2006 - XVI International AIDS Conference: Abstract no. THPE0424

**Study Site(s):** -

**Source:** AIDS 2006 - XVI International AIDS Conference: Abstract no. THPE0424

**Issues:** Despite the growing popularity of the use of sport to address and minimize the impact of HIV/AIDS, our understanding of the processes that underlying such interventions are still in their infancy. This area, also called Kicking AIDS Out, remains dominated by activities based on unquestioned and uncritical assumptions of the efficacy of sport in addressing HIV/AIDS. With a realistic framework, I conceptualizing the use sport for addressing AIDS drawing upon relevant social theories and concepts as well as building on the my expertise in using sport for addressing HIV/AIDS for over 10 years now. Therefore I provide a critical case study of a holistic and comprehensive sport for addressing AIDS program in Zambia, drawing on longitudinal case studies of the various programmes, document analysis and interviews and focus groups with young Kicking AIDS Out practitioners.

**Description:** The EduSport Kicking AIDS Out program has been in operation since 1998. The program is unique in far as it tries to deliver AIDS-related interventions at all levels where it is needed. The program also relates to the broader context (beyond the ABCs) to include poverty, school education, gender equity and empowerment. The main delivery methodology for this program is the peer coaching (education).

**Lessons learned:** Programs are successful when the sports people are willing to develop their HIV/AIDS competence; to partner with non-sport partners involved in matters relating to HIV/AIDS and when the programs address broader concerns; use local wisdom and are culturally appropriate. Long term interventions are better in building community awareness and sustaining individual behaviour change relating to HIV/AIDS. When carefully used, sport can deliver AIDS-related interventions at all levels where it is needed.

**Recommendations:** We need to conceptualise and provide evidence for sport as intervention for addressing HIV/AIDS. This will require more research and giving front liners a better platform to share their experiences.
Strategic objective 21: Support the development of workforce development strategies which prioritize the key sectors critical to the response to HIV and AIDS

178. TITLE: ASSESSING NEEDS FOR HIV/AIDS WORKPLACE PROGRAMME
Authors: Kalwani R, Sinyangwe G, Lungu R
Year: 2001
Org/Inst: The Zambia Integrated Health Programme (ZIHP)
Status: Published in The XV International AIDS Conference:
Abstract no. D12798
Study Site(s): Lusaka,
D12798

Background: The Zambia Integrated Health Programme (ZIHP) acknowledges the HIV/AIDS pandemic within its midst. It has responded by forming an HIV/AIDS workplace programme through activities like training of counsellors, flexible working time and provision of ARVs. Despite these activities, the workplace programme suffered as there was no designated staff to move the implementation of activities. A team, with a leader who is open about her positive status, was then identified to manage the workplace programme. With the HIV/AIDS workplace policy and team in place, a study was then undertaken to come up with specific staff needs in order to determine the best activities that would meet these needs. The objectives were to assess the HIV/AIDS needs of the members of staff within ZIHP and determine what individual members of staff can contribute.

Methodology: The study, purposive in nature, used a qualitative self administered questionnaire with both open and closed questions. The open ended questions enabled respondents to express their views regarding the topic in question. 78 members of staff were included regardless of their area of specialisation. Of these, 40 questionnaires were collected. One questionnaire was not entered due to error. Data entry was done using Microsoft Excel.

Results: 89.7% were aware of the workplace policy and team. 94.9% were aware of counsellors and 20.5% were very likely to seek services from counsellors, 28.2% were likely. 25.6% were unlikely and very unlikely. 64% would like to seek counselling outside ZIHP and 31% within ZIHP by ZIHP counsellors, 5% would like to access counselling outside ZIHP by ZIHP counsellors. Staff further indicated activities to be implemented.

Conclusion: There is need to strengthen the available services, reviewing the counselling strategy, promotion of peer driven activities and sharing organizational experiences and lessons learnt with other organizations. There is also the need to continuously document lessons, experiences and challenges within the workplace programme.

179. TITLE: FROM KNOWLEDGE/ATTITUDES TO PRACTICES: M&E FOR HIV/AIDS WORK WITH POLICE OFFICERS IN ZAMBIA
Authors: Nkhoma S¹, Bhatt P¹, Khan N.¹, et al
Year: 2005
Background: Empirical evidence indicates that uniformed personnel are seriously affected by HIV/AIDS. While HIV/AIDS education, prevention and care programs have been mounted for police few programs have monitored their impact on police legal and ethical practices in the context of HIV/AIDS. The Support to HIV/AIDS Response (SHARE) project in Zambia systematically monitored the impact of its training program for police.

Methodology: SHARE in conjunction with Zambia AIDS Law Research and Advocacy Network (ZARAN) conducted 20 three day workshops reaching more than 300 police officers across Zambia. The workshops covered HIV/AIDS facts, HIV/AIDS occupational and personal risks, universal precautions, stigma and discrimination and the role of police officers in protecting human rights in the context of HIV/AIDS. A KAP survey was administered at the beginning and end of each workshop.

Results: The findings indicated an increase in police officers HIV/AIDS knowledge. Before the workshops 86% of police officers could identify three main ways through which HIV is transmitted. This increased to 99% with insignificant differences between genders. Knowledge on human rights and ethics in the context of HIV/AIDS increased after the training from 70% to 95%. 70% were not in favour of HIV+ officers going for peacekeeping missions because of perceptions that such officers would fall ill during the missions before the workshops, this changed to 90% in favour after the workshops.

Conclusions: KAP scores were high before the workshops. They increased further after the workshops suggesting a shift in additional work on police policies while recognizing the importance of repetition and reinforcement of KAP work. Further suggestions included formalizing AIDS policies for police, supporting the police victims support unit and applying the police code-of-ethics in the context of HIV/AIDS. Support in monitoring and evaluating peer education campaigns that officers have initiated as a result of the workshops was another suggestion.

Background: Gender-related factors normally shape the extent to which men and women become vulnerable to HIV infection, and in the ways in which AIDS affects them and the kind of response they give. In Zambia, cultural and economic factors make gender based inequalities more pronounced. This study set to establish whether gender based inequalities exists among hospital workers.
Methodology: 30 FGDs were conducted in five large hospitals in Zambia. More than 150 staff were interviewed. These included health and non-health workers. FGDs were conducted separately for men and women. Various aspects of HIV/AIDS as it affects hospital workers were explored. This paper only discusses the views of hospital workers on Gender issues as it relates to HIV/AIDS.

Results: Respondents felt that male and female hospital workers with HIV/AIDS, were treated the same by colleagues and management. Although both female and male hospital workers are affected by HIV/AIDS in the same manner, the difference, according to respondents was at the time of illness. A wife nurses the man when he is sick whereas the mother or auntie will have to nurse the woman. The sick woman has to continue doing her daily chores such as cooking. On the question of domestic violence and wife battering for refusing to have sex with the husband; all respondents felt it was not right. However, examples that were given showed otherwise. Women were beaten for demanding to use a condom after the husband was unfaithful. Some felt there was justification for beating the woman if she refuses to have sex with the husband.

Conclusion: Culture has a very strong influence on how hospital workers think and do things. Their views on Gender issues are a reflection of what the general public thinks and what culture dictates. Thus even though it is assumed that health workers are more sophisticated than the general public, the data suggests a need for programs that can help them deal with these strong cultural influences.
3.5 THEME V. IMPROVING THE MONITORING OF THE MULTI-SECTORAL RESPONSE

The overall objective under the theme of Improving the Monitoring of the Multi-Sectoral Response is to improve the capacity of all partners to use monitoring and evaluation information for decision making and strengthening effectiveness and efficiency of services delivery, including operational research, financial resources monitoring and performance management mechanisms. Strategic objectives under this theme include:

i. Strengthen mechanisms and systems for monitoring and evaluation of the mutisectoral response
ii. Improve capacity of implementing partners for monitoring and evaluation of the situation and the response
iii. Strengthen operational and behavioural research and access to information on best practices and cost effective interventions

This section consists of abstracts that address the fore-going strategic objectives

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<th>Strategic objective 22: Strengthen mechanisms and systems for monitoring and evaluation of the mutisectoral response</th>
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181. **TITLE:** IMPACT OF AIDS ON ZAMBIA'S TOURISM INDUSTRY: THE CASE OF LIVINGSTONE  
**Authors:** Rosen S.5, Hamazakaza P.6 and L. Long1  
**Year:** 2005  
**Org/Inst:** Center for International Health and Development (CIHD), Boston University, Boston, MA, USA and Farming Systems Association of Zambia, Lusaka, Zambia  
**Status:** Published in and Abstract Book, 4th National Health Research Conference  
**Study Site(s):** Livingstone  

**Objectives:** The study sought to answer four questions; (1) is HIV/AIDS reducing labour productivity in the tourism sector in Livingstone? (2) Is HIV/AIDS increasing labour costs in the tourism sector in Livingstone? (3) What are the net benefits or costs of providing
treatment for AIDS to tourism sector employees? (4) What opportunities exist for mitigating the impact of AIDS on tourism sector development?

**Methodology:** The study collected data from two sources. First, detailed human resource and financial data were collected from Sun International, the largest employer in Livingstone. These data were used to estimate the costs of HIV/AIDS-related medical care, termination benefits, funerals, and recruitment and training of replacement workers and to model the potential net benefits of providing treatment with antiretroviral drugs. Second, a survey was conducted of small and medium enterprises in the tourism industry in Livingstone to ascertain the impact of HIV/AIDS on SMEs and the responses of SMEs to the epidemic.

**Results:** HIV prevalence among tourism industry employees in Livingstone was estimated at 37 percent. The total cost to Sun International for each employee lost due to AIDS averages 3 to 4 times the annual compensation received by the employee. If no employees had access to effective treatment, AIDS would be causing a loss of roughly 3.4 percent of the company’s employees per year and an 11% increase in the cost of labour to the company. Since many employees do have access to antiretroviral therapy, however, actual mortality and costs are much lower. Provision of antiretroviral therapy would be a profitable investment for the company at all job levels. In the surveyed SMEs, overall annual attrition of permanent employees averaged 12.4% in the year preceding the survey, with 15% of the staff attrition being attributed to ill health or death. Loss of an employee to AIDS cost the SMEs, on average, the equivalent of one year’s annual salary. SME managers reported losing few employees to AIDS, however, and fully two thirds of them stated that AIDS is currently having little or no impact on their companies. Most SMEs were involved in at least one HIV-related prevention or care activity but spend relatively money on it.

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**182. TITLE:** THE COMBINED EFFECT OF TREATMENT EFFICACY AND POPULATION COVERAGE ON PREVENTING MOTHER TO CHILD TRANSMISSION OF HIV  
**Authors:** Megazzini K, Sinkala M and Chi B et al  
**Year:** 2001  
**Org/Inst:** Centre for Infectious Disease Research in Zambia (CIDRZ)  
**Status:** Published in an Abstract Book, 3rd National Health Research Conference  
**Study Site(s):** Lusaka  
**Source:** Abstract Book, 3rd National Health Research Conference, Zambia

**Methodology:** We have modelled the number of infant HIV infections prevented in a hypothetical cohort of 10,000 HIV-infected, pregnant, Zambian women considering three different antiretroviral regimens and a range of achievable population coverage rates. The regimens compared are: (1) single dose nevirapine (SD NVP); (2) combination zidovudine-nevirapine beginning at 36 weeks of gestation (ZDV 36-NVP) and (3) combination zidovudine-nevirapine beginning at 28 weeks of gestation (ZDV 28-NVP). We have identified the lower population coverage threshold which must be achieved by the combination zidovudine-nevirapine regimens to prevent as many infant infections as are currently prevented by single dose nevirapine.

**Results:** A range of infant HIV infections can be averted in a hypothetical cohort of 10,000 HIV-infected, pregnant, Zambian women depending upon the efficacy of the antiretroviral regimen used and the level of population coverage achieved. Given the known efficacy of
SD NVP (i.e., 47%) and the 2003 population coverage level in Lusaka (i.e., 30%), 353 new infant HIV infections were being prevented out of a possible 2,500 infections in 2003. An absolute coverage threshold of 20.0% must be achieved with the ZDV 36-NVP regimen and 15% with the ZDV 28-NVP regimen in order for these regimens to prevent as many infant infections as SD NVP at a population coverage level of 30%.

**Conclusions:** The advent of more complex and efficacious antiretroviral regimens has challenged the continued use of single dose nevirapine to prevent vertical transmission of HIV. Superior efficacy may not always translate into fewer infant HIV infections if the complexity of the antiretroviral regimen used severely compromises population coverage. This may be particularly true in resource poor environments.

183. **TITLE:** PREVALENCE AND DISTRIBUTION OF HPV-GENOTYPING AMONG HIV-INFECTED WOMEN IN ZAMBIA.

**Authors:** Sahasrabuddhe V. V, Mwanahamuntu MH, Vermund SH et al

**Year:** 2006

**Org/Inst:** Centre for Infectious Disease Research in Zambia, Zambian Ministry of Health, University of Zambia, University Teaching Hospital, University of Alabama at Birmingham

**Status:** Published as manuscript in *Br J Cancer* 2007

**Study Site(s):** Lusaka

**Source:** *Br J Cancer* 2007; 96(9): 1480-3.

We screened 145 HIV-infected non-pregnant women at a tertiary care centre in Lusaka, Zambia. Liquid-based cytology and human papillomavirus (HPV) genotyping with PGMY09/11 biotinylated primers (Roche Linear Array HPV genotyping test) maximised sensitivity of cytology and HPV assessments. Among high-risk (HR) types, HPV 52 (37.2%), 58 (24.1%) and 53 (20.7%) were more common overall than HPV 16 (17.2%) and 18 (13.1%) in women with high-grade squamous intraepithelial lesions or squamous cell carcinoma (SCC) on cytology. High-risk HPV types were more likely to be present in women with CD4+ cell counts <200 microl(-1) (odds ratios (OR): 4.9, 95% confidence intervals (CI): 1.4-16.7, P=0.01) and in women with high-grade or severe cervical cytological abnormalities (OR: 8.0, 95% CI: 1.7-37.4, P=0.008). Human papillomavirus diversity in high-grade lesions and SCC on cytology suggests that HPV 16- and 18-based vaccines may not be adequately polyvalent to induce protective immunity in this population.

184. **TITLE:** PRIORITIES FOR ANTIRETROVIRAL THERAPY RESEARCH IN SUB-SAHARAN AFRICA: A 2002 CONSENSUS CONFERENCE IN ZAMBIA

**Authors:** Zulu I1,2,3, Schuman P4; Musonda R5,6 et al

**Year:** 2002

**Org/Inst:** 1University Teaching Hospital, Zambia, 2University of Zambia School of Medicine, Zambia, 3Centre for Infectious Disease Research in Zambia, 4William Beaumont Research Institute, Royal Oak, MI, ETATS- UNIS, 5Tropical Disease Research Centre, Ndola, Zambia, 6National AIDS Control Programme, Lusaka, Zambia
Background: A consensus conference was held to discuss priorities for antiretroviral therapy (ART) research in Zambia, one of the world's most heavily HIV-affected nations. Zambia, like other resource-limited settings, has increasing access to highly active antiretroviral therapy (HAART) because of declining drug costs, use of government-purchased generic medications, and increased global donations. For sustained delivery of care with HAART in a resource-constrained medical and public health context, operational research is required and clinical trials are desirable. The priority areas for research are most relevant today given the increasing availability of HAART.

Methods: A conference was held in Lusaka, Zambia, in January 2002 to discuss priority areas for ART research in Zambia, with participants drawn from a broad cross section of Zambian society. State-of-the-art reviews and 6 intensive small group discussions helped to formulate a suggested research agenda.

Results: Conference participants believed that the most urgent research priorities were to assess how therapeutic resources could be applied for the greatest overall benefit and to minimize the impact of nonadherence and viral resistance. Identified research priorities were as follows:

i. To determine when to initiate HAART in relation to CD4+ cell count
ii. To assess whether HIV/AIDS can be managed well without the use of costly frequent viral load measurements and CD4+ cell count monitoring
iii. To assess whether HIV/AIDS can be managed in the same fashion in patients coinfected with opportunistic infections such as tuberculosis and HIV-related chronic diarrhea, taking into consideration complications that may occur in tuberculosis such as immune reconstitution syndrome and medication malabsorption in the presence of diarrhea
iv. To carefully assess and characterize toxicities, adverse effects, and viral resistance patterns in Zambia, including studies of mothers exposed to prepartum single-dose nevirapine
v. To conduct operational research to assess clinical and field-based strategies to maximize adherence for better outcomes of ART in Zambia
vi. To assess ART approaches most valuable for paediatric and adolescent patients in Zambia Conference participants recommended that HIV-related clinical care and research be integrated within home-based care services and operated within the existing health delivery structures to ensure sustainability, reduce costs, and strengthen the structures.

Conclusion: Our consensus was that antiretroviral clinical trials and operational research are essential for Zambia to address the new challenges arising from increasing ART availability. There is global consensus that antiretroviral clinical trials in resource-constrained countries are possible, and the capacity for such trials should be developed further in Africa.
Background: The burden of HIV is beyond what the national health systems in ECSA can handle, and efforts to scale up effective programs have intensified. VCT is recognized as central to combating the epidemic through prevention and care. Access to antiretroviral therapy is increasing; however, only about 10% of people who are infected know their status and can take advantage of therapy. This review provides an overview of VCT policies, programs, and guidelines available in ECSA.

Methodology: A study team elicited responses from national AIDS program managers using a detailed questionnaire; they interviewed VCT staff and primary stakeholders, conducted a literature review on VCT in ECSA, and visited program in Kenya, Malawi, Uganda, Zambia, and Zimbabwe.

Results: Most HIV testing is initiated not by the client but by employers, insurers, or institutions of higher learning. In their national HIV/AIDS policy documents, ECSA countries recognize that VCT is critical to controlling HIV/AIDS, but only Botswana, Mauritius, Uganda, and Zimbabwe have national VCT policies. Most of the guidelines were developed by nongovernmental organizations and are not comprehensive. Except in Kenya, and soon, Malawi, Swaziland, and Uganda, no guidelines cover all aspects of VCT. Except for Mauritius and Seychelles, where VCT services are offered in integrated sites, countries are using a combination of VCT models and integrating VCT into other health services.

Conclusions: Issues that lend themselves to regional collaboration include harmonization of policies; guidelines for counselling, testing, data collection, and training curricula; procurement of test kits; and resource mobilization. Other issues include creating awareness and demand for VCT, strengthening human resources and infrastructure, and ensuring high quality service. The focus will be on scaling up and providing high-quality VCT service, strengthening post-test support services, and monitoring the quality of care.

186. TITLE: FAVORABLE AND UNFAVORABLE HLA CLASS I ALLELES AND HAPLOTYPES IN ZAMBIA'S PREDOMINANTLY INFECTED WITH CLADE C HUMAN IMMUNODEFICIENCY VIRUS TYPE 1

Authors: Jianming T1, Shenghui T1, Elena L2 et al
Year: 2002
Org/Inst: 1Departments of Medicine, 2Epidemiology and International Health, 3Pediatrics, University of Alabama at Birmingham, Birmingham, Alabama, 4Tropical Disease Research Center, Ndola, Zambia
Study Site(s): Lusaka
The setpoint of viral RNA concentration (viral load [VL]) during chronic human immunodeficiency virus type 1 (HIV-1) infection reflects a virus-host equilibration closely related to CD8+ cytotoxic T-lymphocyte (CTL) responses, which rely heavily on antigen presentation by the human major histocompatibility complex (MHC) (i.e., HLA) class I molecules. Differences in HIV-1 VL among 259 mostly clade C virus-infected individuals (137 females and 122 males) in the Zambia-UAB HIV Research Project (ZUHRP) were associated with several HLA class I alleles and haplotypes. In particular, general linear model analyses revealed lower log10 VL among those with HLA allele B*57 (P = 0.002 [without correction]) previously implicated in favourable response and in those with HLA B*39 and A*30-Cw*03 (P = 0.002 to 0.016); the same analyses also demonstrated higher log10 VL among individuals with A*02-Cw*16, A*23-B*14, and A*23-Cw*07 (P = 0.010 to 0.033). These HLA effects remained strong (P = 0.0002 to 0.075) after adjustment for age, gender, and duration of infection and persisted across three orders of VL categories (P = 0.001 to 0.084). In contrast, neither B*35 (n = 15) nor B*53 (n = 53) showed a clear disadvantage such as that reported elsewhere for these closely related alleles. Other HLA associations with unusually high (A*68, B*41, B*45, and Cw*16) or low (B*13, Cw*12, and Cw*18) VL were either unstable or reflected their tight linkage respecting disequilibria with other class I variants. The three consistently favourable HLA class I variants retained in multivariable models and in alternative analyses were present in 30.9% of subjects with the lowest (<10,000 copies per ml) and 3.1% of those with the highest (>100,000) VL. Clear differential distribution of HLA profiles according to level of viremia suggests important host genetic contribution to the pattern of immune control and escape during HIV-1 infection.

187. TITLE: NATURAL HISTORY OF HIV IN A COHORT OF RECENTLY POSTPARTUM WOMEN AND THEIR INFANTS IN LUSAKA, ZAMBIA
Authors: Levy J. W, Kaseba C. M, Matongo I et al
Year: 2004
Org/Inst: Centre for Infectious Disease Research in Zambia, University of Zambia, University Teaching Hospital, Zambian Ministry of Health, University of Alabama at Birmingham
Status: Published in the abstract book of the XV International AIDS Conference, Bangkok, Thailand, July 11-16, 2004; Abstract ThPeC7313
Study Site(s): Lusaka
Source: XV International AIDS Conference, Bangkok, Thailand, July 11-16, 2004; Abstract ThPeC7313

Background: The natural history of HIV infection in a postpartum breastfeeding population in Zambia is not well described.
Methods: As part of a contraceptive clinical trial in Lusaka, Zambia, we prospectively followed HIV-infected women and their infants for up to two years postpartum. Women were enrolled at 6-8 weeks postpartum and those with clinical AIDS were excluded. All women received single-dose NVP for perinatal prophylaxis, but none received antiretroviral treatment of their disease. Maternal deaths were evaluated by verbal autopsy.
Results: 599 HIV-infected women were enrolled, 361 had reached the 6 month follow-up and 143 women had reached the one year follow-up at time of analysis. 559 of 599 (93%) of women were breastfeeding. The mean BMI at enrolment was 24.2 (SD 23.9-24.6). The mean CD4 count at the time of enrolment was 505 cells/mm3 (SD 486-531). 58 women (9.8%) had CD4 less than 200 at enrolment, but no evidence of clinical AIDS. The mean change in BMI over one year was .07 (p=ns). The mean decrease in CD4 count over 1 year was 92 cells/mm3 (95% CI: 70 -116). 11 maternal deaths had occurred at time of analysis. Women who died had lower enrolment CD4 counts than did survivors, 225 vs. 510 (p<0.001). Verbal autopsy revealed that 5 of 11 (45%) deaths were definitely AIDS related and the remaining 6 were probably AIDS related. At the time of analysis, 41 (6.8%) children had died. Among women with surviving infants, mean CD4 at enrolment was significantly higher than that in women whose infants had died (514 v. 386; p=0.002.) Infant infection status evaluation is ongoing. Conclusions: This interim analysis of postpartum women in Zambia suggests high death rates among the women and their offspring and underscores the urgent need for family antiretroviral therapy.

188. TITLE: SHORT-TERM SAFETY AND ACCEPTABILITY OF THE INTRAUTERINE CONTRACEPTIVE DEVICE IN HIV-INFECTED POSTPARTUM WOMEN: A RANDOMISED TRIAL.
Authors: Kaseba CM, Stringer EM, Sinkala M et al
Year: 2004
Org/Inst: University of Zambia, University Teaching Hospital, Centre for Infectious Disease Research in Zambia, Zambian Ministry of Health, University of Alabama at Birmingham
Study Site(s): Lusaka

Background: The copper intrauterine device (IUD) is among the most effective contraceptives known, but the WHO and others have recommended against its use in HIV-infected women due to a theoretical risk of pelvic inflammatory disease (PID). Most IUD-attributable PID occurs within one month of insertion.

Methods: Between Jun ’02 and Oct ’03, we randomised 599 HIV-infected women in Lusaka, Zambia to receive either the IUD (ParaGuard TCu 380A, n=297) or “user’s choice” hormonal contraception (oral or injectable, n=302) Standardized follow-up, including detailed assessment for PID, occurs at 1, 6, 12, 18, & 24 months, and is ongoing. All women have reached the 1 mo visit.

Results: At enrolment (4-8 wks postpartum), there were no statistically significant differences between randomization groups in age, parity, income, marital status, education, tribe, BMI, CD4 count, or hematocrit. Mean CD4 for the entire cohort was 505 cells/mm3 (SD 258). 58 (9.8%) women had CD4 < 200. At 1 month, 1 woman in the IUD arm met criteria for PID compared to 0 in the hormonal arm (p = ns.) The woman with PID presented with abdominal pain and discharge prompting IUD removal. Cultures were + for Chlamydia. The patient received oral antibiotics and did not develop fever. Other reported minor side effects at 1 mo were rare and did not differ by randomization arm (IUD vs. hormonal): abdominal pain (3.8% vs. 2.5%), pelvic pain (0.4% vs. 0%), discharge (2.1% vs. 0.4%), nausea or vomiting (0.7% vs. 0%), irregular bleeding (2.4% vs. 2.5%) or
headache (1.7% vs. 2.5%). 2 patients (1 IUD, 1 hormonal) discontinued contraception after their newborns died. 2 patients randomised to the hormonal arm switched to the IUD arm, and one patient randomised to IUD switched to oral contraceptives. There were no IUD expulsions. 6-month data will be available on all participants in Apr ’04.  
**Conclusions:** The rate of IUD-attributable PID in HIV-infected women through 1 month of placement was 0.3%. The IUD appears to be a safe and acceptable method of contraception for HIV infected women.

189. **TITLE:** ESTIMATES OF ADULT MORTALITY FROM CENSUS DATA IN ZAMBIA IN THE ERA OF HIV  
**Authors:** Dzekedzeke K ¹, Fylkenses K ²  
**Org/Inst:** ¹Central Statistical Office, Lusaka, Zambia and ²Centre for International Health, University of Bergen, 5021 Bergen, Norway  
**Year:** 2002  
**Study Site(s):** Urban and rural communities of Zambia  
**Source:** Abstracts Book for the Dissemination Seminar on NUFU project “Strengthening HIV-related interventions in Zambia: co-operation in research and institution capacity building” (2002-2006): University of Zambia and University of Bergen

**Background:** Assess HIV era adult death rates in Zambia with census data.  
**Methodology:** Preston-Bennet method that utilises two census age distributions without assuming stability in populations and use of model life tables was used with graduated census data for 1969-1980, 1980-1990 and 1990-2000 intercensal periods. Estimated death rates for adults 15-49 years were evaluated with those from sibling’s survival data for 1990-2000 from Zambia Demographic and Health Survey (ZDHS); and from a 1995/96-1998/99 cohort of adults by HIV sero-status in selected communities.  
**Results:** Respective Population Attributable Fractions (PAF) due to deaths among infected in cohort and HIV prevalence were: men 59.6% and 19.7% and women 67.3% and 26.7%. Respective total, women and men death rates per 1000 PYO were: in the intercensal periods, 1969-1980: 15.7 and 16.3; 1980-1990: 12.0, 13.6 and 10.1; an 1990-2000: 22.2, 23.2 and 21.1; ZDHS for 1990-1996: 11.0, 10.8 and 11.1; for 1996-2002: 14.6, 15.2 and 14.0; and cohort: 15.6, 17.5 and 12.5. Total death rates were 85% and 40% higher in 1990-2000 than in 1980-1990 and 1969-19980 to 1980-1990.  
**Conclusion:** Consistent pattern of estimates by sex irrespective of data source for late 1990s shows plausibility of census estimates. Estimates for the 1990s from ZDHS and cohort were closer but censuses estimates were higher most likely due to biases caused by correlation of siblings’ deaths and shorter durations of observation in the surveys. Typically, adult death rates tend to be higher among men than women in 1969-1980 and 1990-1996 but the opposite was the case in the late 90s. Deterioration of death rate and its change in favour of men is likely due to HIV as shown by the lower prevalence and PAF among men than women in the cohort followed up from 1995/96-1998/99.

190. **TITLE:** THE ANNUAL JOINT REVIEW OF ZAMBIA’S NATIONAL AIDS PROGRAMME  
**Authors:** Serlemitsos E. ¹, Chirwa B.U. ², Simwanza A. ²

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Issues: The Zambian National AIDS Council was established by an act of Parliament in 2002. The Act outlines the establishment of the Council, the Secretariat and the Financial Provisions. The Act also includes a requirement for the Council to submit an annual report of activities. The Council and Secretariat have chosen to conduct an Annual Joint Review of the National AIDS Programme to satisfy the statutory requirement of an annual report.

Description: The Joint Review is conducted in March - April and is a process that involves many stakeholders and implementing partners. Teams are formed to conduct field work in various sites throughout the country. The information is then compiled and reported back to a large gathering of representatives from all the District AIDS Taskforces, implementing partners and other stakeholders. The feedback from the dissemination is further compiled into the report that is then submitted to the Cabinet Committee on HIV/AIDS by the June 30th deadline.

Lessons learned: By bringing in a broad range of stakeholders, the NAC has achieved a more comprehensive review, which is a positive. A limiting factor has been that such a process is time consuming and requires a high level of human resource inputs to bring it all together. Furthermore, the quality is, on occasion, compromised. This is the price of greater involvement of people from all walks of life, however, the NAC is ultimately engaging more Zambians in the fight against HIV and AIDS. As more Zambians play a direct role in HIV programming, NAC anticipates a more rapid scale up of the response.

Recommendations: As a country, Zambia needs to continue to engage in wide participation, but in the process, create more skills building opportunities so the contributions individuals are making at their level become of greater value more quickly.

191. TITLE: ALLOCATING RESOURCES FOR HIV/AIDS PREVENTION, CARE AND TREATMENT IN ZAMBIA
Authors: Forsythe S\textsuperscript{1}, Chisumpa V\textsuperscript{2}, Sikanyiti P\textsuperscript{3}
Year: 2004
Org/Inst: -
Status: Published in the AIDS 2006 - XVI International AIDS Conference: Abstract no.CDD1290
Study Site(s): -

Methodology: The analysis from this report involves assessing 3 scenarios using the Goals Model (Futures Group). All scenarios assume Zambia will achieve full coverage of HAART, PMTCT and blood screening by 2009. Scenario 1 assumes no growth in prevention spending. Scenario 2 assumes full funding for all interventions. Scenario 3 assumes the 3 interventions are funded plus $30 million for OVC and prevention.

Results: Scenario 1 concludes that resources for HIV/AIDS would need to rise from $100 million in 2004 to $260 million per year by 2009. This increase is dominated by treatment, with $190 million per year consumed by ARV provision by 2009. Zambia reduction in
prevalence is likely to be reversed by the increased access to ARVs (15.4% vs. 13.3% by 2009) due to reduced mortality. In Scenario 2, funding would reach $442 million by 2009 and there would be almost no reversal in prevalence. Scenario 3 would result in the prevalence of HIV reaching 14.2% by 2009, partially offsetting the rise in HIV prevalence.

Conclusions: Resources are assumed to increase 2 ½ to 4 times between 2004 and 2009. Even with such a rise in funding, policymakers must establish clear priorities and understand what is achievable. The results indicate that the prevalence of HIV is likely to rise if Zambia successfully implements its treatment program, suggesting the need to also increase prevention spending so as to increase treatment and restrain prevalence.

192. TITLE: OPERATIONALISING THE THREE ONES IN RESOURCE-POOR SETTINGS: COORDINATING MULTIPLE PARTNERS IN ZAMBIA
Authors: Sunkutu K.¹, Simwanza A.², Sozi C.³
Year: 2005
Org/Inst: ¹World Bank, ²National AIDS Council, ³UNAIDS
Status: Published in the AIDS 2006 - XVI International AIDS Conference: Abstract no. WEPE0897
Study Site(s): -

Issues: 16% of the adult Zambian population lives with HIV. Subsequently there are numerous local and international actors, (bilaterals, multi-laterals, NGOs, FBOs, CBOs, universities/research institutions, etc). To coordinate the efforts of these parties, the National AIDS Council (NAC) was enacted in December 2002. The NAC chief role is to coordinate the multi-sectoral activities of all stakeholders, based one strategic plan and one M&E Framework. However the coordination efforts and capacities are spent managing numerous individual processes associated with such a diverse group, as well as the reluctance by some players to fit into the common agenda. Consequently, not enough action is realized on the ground. There is no clear and current picture of who is doing what and where. Other coordinating challenges are multiple and diverse training and reporting systems. Consequently, there is a large disparity between the money spent on programmes and equitable benefits accruing to communities, since there are too many organizations and administrative demands, concentrated mainly in the urban areas at the expense of the rural communities.

Description: In order to operationalise the Three Ones:
- a national coordination format addressing priority programmatic and geographical areas was formulated;
- National and sub-National intervention entry points were defined; reporting formats defined;
- Training materials were standardised. These were field tested in 10 sites. Un-linked service availability surveys will be collated to produce a consolidated electronic register for use in directing stakeholders into priority interventions.

Lessons learned:
- Simplified, standardised reporting systems reduce workload inadequate human resources demand innovative use of available people and resources
• NAC does not have sub-National representation and cannot physically coordinate at such levels.

• Recommendations:
  All stakeholders to enter HIV programming through NAC and onto identified sub-National coordinators
  Different constituent partners need to adapt coordination mechanism and coordinate themselves with regular reports to NAC

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<th>193.</th>
<th>TITLE:</th>
<th>ANTENATAL CLINIC-BASED HIV PREVALENCE IN ZAMBIA: DECLINING TRENDS BUT SHARP LOCAL CONTRASTS IN YOUNG WOMEN.</th>
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<tr>
<td>Authors:</td>
<td>Sandøy I.F², Kvåle G², Michelo C¹ et al</td>
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<tr>
<td>Year:</td>
<td>1994-2002</td>
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<tr>
<td>Org/Inst:</td>
<td>¹Department of Community Medicine, School of Medicine, University of Zambia, Lusaka, Zambia, ²Centre for International Health, University of Bergen, 5021 Bergen, Norway</td>
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<td>Status:</td>
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<td>Source:</td>
<td>Abstracts Book for the Dissemination Seminar on NUFU project Strengthening HIV-related interventions in Zambia: co-operation in research and institution capacity building” (2002-2006): University of Zambia and University of Bergen</td>
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Objectives: To describe regional variation in human immunodeficiency virus (HIV) prevalence trends in the period 1994-2002 and to assess the effects on prevalence trends of residence, educational level and age, and potential interaction between these variables.

Methodology: The data were from the national HIV sentinel surveillance system comprising information collected using interviews and unlinked anonymous testing of blood among pregnant women attending antenatal clinics in 22 sites in 1994, 1998 and 2002.

Results: There was a decline in HIV prevalence in the age group 15-24 years in the period 1994-2002 both in rural (by 11%) and urban (by 26%) areas. The decline was strongest among highly educated women. However, this overall decline masked striking differences at community (site) levels with clearly declining epidemics in many sites contrasted by increasing epidemics in some and stability in others. Urban/rural residence, age, educational attainment, marital status and parity were factors closely associated with HIV infection. Having born many children was associated with lower risk of being infected by HIV, even in the age group 15-24.

Conclusions: The HIV prevalence decline in young women is likely to reflect a drop in incidence during the period. However, there were sharp geographical contrasts in trends. Such local contrasts probably indicate differences in effectiveness of preventive interventions. Understanding factors and mechanisms explaining the differences will be of critical importance to better guide preventive interventions.

| 194. | TITLE: | UNDERSTANDING THE DYNAMICS OF HIV/AIDS AND FAMILY PLANNING AT THE COMMUNITY LEVEL IN ZAMBIA |

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In the midst of an HIV and AIDS epidemic that is characterized predominantly by heterosexual transmission, individuals of reproductive age in Zambia make fertility-related decisions in an environment much more complex than in previous generations.

This report examines the role of HIV and AIDS in fertility decision-making, changing social norms about child-bearing and contraceptive use, and it explores the role of communication in that process. Focus group discussions and semi-structured interviews were used in data collection.

Among many important perceptions about HIV Prevalence in the Community were:

Awareness of HIV/AIDS was widespread in all the study sites, and concern about the consequences at both the community and household levels was expressed by focus group participants.

Due to their first-hand experience with HIV and its consequences, people living with HIV/AIDS also mentioned the personal effects of HIV:

The findings show that opposition to HIV-positive people choosing to initiate or continue childbearing is fairly normative. Most community members expressed the need to advise their male and female relatives who were HIV positive to refrain from having children in the event that they tested positive. The concern most often expressed among community members was that the child would die prematurely. There was a widespread belief among focus group participants that the children of HIV-positive men will inevitably contract the virus. When asked what advice they would give a woman who knew that she was HIV-positive, many respondents expressed a concern for her health.
modifiable list to model a specific protocol. The user specifies conditions for the selected tests, inputs local performance parameters (or selects best, mid, or worst case published sensitivity and specificities), and stipulates estimated prevalence and number of persons to be tested.

**Results:** The spreadsheet performs Bayesian and other required statistical calculations to produce EXPECTED net protocol sensitivity and specificity, false negative and false positive counts, number of HIV tests of each type required for the protocol, total cost of tests used, and a measure of the protocol testing bias. During a discussion of the merits of introducing electronic readers at a planning meeting in Zambia, using the tool demonstrated no significant expected marginal benefit for cost, given prior local performance.

**Conclusions:** This decision support tool has been useful in ad hoc modelling of selected rapid test strategies and quickly comparing their projected performance. It is flexible in that intermediate calculations and formulae are available for review and adaptation to special cases, and most researchers and program specialists can use spreadsheets. We expect the tool will be useful for those planning to implement new or evaluate existing HIV testing strategies.

196. **TITLE:** PREVALENCE AND PREDICTORS OF SQUAMOUS INTRAEPITHELIAL LESIONS OF THE CERVIX IN HIV-INFECTED WOMEN IN LUSAKA, ZAMBIA

**Authors:** Parham G.1, Sahasrabuddhe V.2, Vermund S.2, B et al

**Year:** 2005

**Org/Inst:** University Teaching Hospital, Center for Infectious Disease Research in Zambia, University of Vanderbelt

**Status:** Published in the AIDS 2006 - XVI International AIDS Conference: Abstract no. TUAB0303

**Study Site(s):** Lusaka

**Source:** AIDS 2006 - XVI International AIDS Conference: Abstract no. TUAB0303

**Background:** HIV-infected women are at higher risk for the development of HPV-induced squamous intraepithelial lesions (SIL) of the cervix. HIV-infected women living in resource limited settings like Zambia are now accessing antiretroviral therapy and may live long enough for cervical cancer to manifest and progress. It is important to develop appropriate guidelines for screening in the context of cervical cancer prevention.

**Methodology:** We evaluated the prevalence and predictors of cervical cytological abnormalities among 150 consecutive, eligible, non-pregnant HIV-infected women accessing HIV-care services in Lusaka, Zambia. A pelvic examination was performed and cervical specimens were analysed with liquid-based monolayer cytology (Thin Prep Pap Test®: Cytyc Corporation) and testing for HPV using Roche Linear Array® PCR assay.

**Results:** The median age of study participants was 36 years (range 23-49 years) and their mean CD4+ count was 209/µl (S.E.+14.7). The prevalence of SIL was 76% (114/150). The prevalence of SIL was 76% (114/150); 23.3% (35/150) women had low grade SIL, 32.6% (49/150) had high-grade SIL, and 20% (30/150) had lesions suspicious for squamous cell carcinoma (SCC). High-risk HPV types were present in 85.3% (128/150) women. On bivariable analyses, age, CD4+ cell count and presence of any high-risk HPV type were found to be significantly associated with the presence of severely abnormal cytology, i.e., high grade SIL and suspicious for squamous cancer. Multivariable logistic regression modelling suggested the presence of any high-risk HPV type as an independent predictor of severely abnormal cytology (Adjusted OR: 12.4, 95% C.I. 2.62-58.1, p=0.02).
Conclusions: The high prevalence of abnormal squamous cytology in our study is one of the highest reported in any population worldwide. It is essential to develop, implement, and evaluate cost-effective screening tests and appropriate treatment protocols for HIV-infected women in resource limited settings who, on antiretroviral therapy, may live long enough to develop HPV-induced invasive cervical cancer.

Background: Fertility desires of HIV positive women and factors influencing their reproductive decisions are generally poorly understood. Motherhood is considered an important aspect of a woman’s life. Women with HIV infection are discouraged from getting pregnant but in sub-Saharan Africa social pressure may influence HIV positive women’s decisions to conceive. While a supportive environment in developed countries has enabled women with HIV to make informed reproductive decisions, have access to appropriate health care and reproductive services, this is not a reality for the majority of women in resource poor settings.

Methodology: To explore the social and cultural factors and services influencing reproductive decisions of HIV positive women, a qualitative study was conducted in three of 24 public health centres in Lusaka, Zambia. Purposive and snowball sampling led to recruiting 25 HIV positive women between 20 - 49 years old. During in-depth interviews, these women described their experiences with regard to reproductive health services, social and cultural factors relating to their reproductive decisions.

Results: This study found that access to support from health centres, partners, family and public depended on women’s degree of openness about their HIV positive status within their social and cultural context. A high degree of openness favoured accessing available support and making informed reproductive choices. Women who were most hesitant about revealing their HIV status had least control over their reproductive decisions.

Conclusions: Existing reproductive services did not meet the needs of HIV positive women in Zambia. Motherhood was critical for all women. Despite their state of health or available services, women desired to have at least one child. Recommendations from this study have far reaching implications on policy development and public health practice in resource poor settings.
Background: Concerns over NVP-induced hepatotoxicity among individuals with high CD4 has prompted recommendations against its use in women with CD4 >250 and men with CD4 >400. However, little data are presently available from African populations, where NVP is common.

Methods: We analysed a large cohort of patients receiving NVP-based ART in Lusaka, Zambia. We defined incident hepatotoxicity as elevations in ALT or AST following ART initiation. Analysis was restricted to those without baseline AST/ALT elevations. Severity grading was based on published toxicity thresholds.

Results: From May-04 to Nov-05, 12,227 individuals started NVP-containing ART. 7,592 (62%) were women. 472 had elevated ALT/AST at baseline and were excluded. Among 11,755 individuals in this analysis, there were 4,888 patient-years of follow-up. Median CD4 was 120 cells/uL (IQR=59-194). Gender, age, baseline CD4, baseline WHO stage, and weight did not predict severe toxicity (grade 3/4). In multivariable analysis, those with CD4 between 51-200 (adjusted hazard ratio [AHR]= 1.00; 95%CI=0.95-1.06), 201-350 (AHR= 1.00; 95%CI=0.93-1.07), and ³351 (AHR=1.00; 95%CI=0.90-1.11) had similar risk for severe hepatotoxicity compared to individuals with CD4 <50. Women with CD4 >250 cells/uL (n=1,066) had similar risk for severe hepatotoxicity compared to those with CD4 £250 cells/uL (n=5,891; AHR= 0.98; 95%CI=0.91-1.06). Due to limited cases, we could not assess risk of hepatotoxicity in men above and below the CD4=400 threshold.

Conclusion: In this large programmatic ART cohort, severe hepatotoxicity was a rare event for individuals on NVP-containing ART. We did not observe a higher risk of transaminase elevation in individuals with higher entry CD4 count.

199. TITLE: IMPACT OF AN INTERVENTION ON ATTITUDES TO AND PRACTICE OF COLLABORATION BETWEEN TRADITIONAL HEALERS AND BIOMEDICAL WORKERS FOR IMPROVED QUALITY OF STI/HIV/AIDS SERVICES

Authors: Ndubani P1, Kaboru B.B.2, Zulu R1 et al
Org/Inst: 1Institute for Economic and Social Research (INESOR)
Year: 2005
Status: Published; AIDS 2006 - XVI International AIDS Conference: Abstract no. MOPE0809
Study Site(s): -

Background: The WHO and several studies have recommended collaboration between traditional healers and bio-medically-trained health workers, as key to scaling up HIV/AIDS control activities. However, few intervention studies have focused on enhancing these provider’s attitudes to and practice of collaboration. In this paper, we describe changes in attitudes and practice of collaboration between the two groups of providers, after a participatory intervention in Zambia.
Methodology: Self-administered tools to assess participant’s attitudes to and practices of collaboration and quality of service were used before and after the intervention (18 biomedical workers and 30 healers). To explore the possibility of a broader impact, interviews were conducted with no-participants in the intervention but working in the intervention district (76 healers and 65 biomedical workers) and control district (93 and 58, respectively) before and after the intervention.

Results: Biomedical workers’ attitudes changed after the intervention regarding beliefs that traditional medicine is good, that healers are potential good HIV counsellors and that collaboration is feasible. Referrals from biomedical to healers for HIV counselling and care showed significant increase (p<0.05). Significant changes were observed regarding healer’s willingness to visit biomedical units (p<0.001), their belief that biomedical are corrupt (p<0.001), look down on healers (p=0.005) and that inter-professional collaboration is feasible (p<0.001). Confidence in their role in HIV prevention (p=0.002) and counselling (p<0.001) increased among healers. Compared to the control district, more biomedical (35% vs. 3%, p<0.001) and healers (42% vs.16%, p=0.002) from intervention area reported intersectoral collaboration. The average number of patients referred per healer/month at intervention district was 4 vs. 3 at control (p=0.171) for PMTCT; 5 vs. 3 for VCT (p=0.067); 4 vs. 2 for ARV (p=0.067).

Conclusions: Dialogue-building interventions can have compelling effects on practitioner’s attitudes and practice of collaboration and subsequently improve AIDS care and coverage of PMTCT, VCT and ARV programs.

Strategic objective 24: Strengthen operational and behavioural research and access to information on best practices and cost effective interventions

200. TITLE: ZAMBIA ANTENATAL CLINICAL SENTINEL SURVEILLANCE REPORT. KALA AND MWANGE REFUGEE CAMPS 2005
Authors: United Nations High Commissioner for Refugees
Year: 2006
Org/Inst: United Nations High Commissioner for Refugees
Status: Published
Study Site(s): Kala and Mwange Refugee Camps
Source: United Nations High Commissioner for Refugees

Kala and Mwange refugee camps participated in a cross sectional survey of women attending ANC to determine the HIV and syphilis prevalence among these women in 2005.

Objectives: The protocol was similar to that of the Zambia 2004 ANC SS. As a cross sectional survey, the HIV and syphilis prevalence data gathered cannot show causal association with any other variables. Likewise, it should not be used as a measure of HIV or syphilis prevalence among all people in the refugee camps. These data should be used for trend analysis in upcoming years which will allow for an early warning of changes that may be occurring in HIV or syphilis prevalence in the camps. These data may also be compared with similarly collected from other ANC SS sites in order to make statements comparing the relative burden of HIV infection in the ANC populations using the clinics at these different sites.

The overall prevalence for HIV that was found among the 540 women included in the final dataset was 2.4%. In Kala camp, the prevalence of HIV infection was 3.4%, and in Mwange camp the prevalence of HIV was 1.2%. The overall syphilis prevalence among
these women was 1.7%. Because the absolute counts of positives for either HIV or syphilis were quite small, the prevalence estimates have wide confidence intervals and the two sites do not differ significantly.

**Results:** Women who were found to have HIV or syphilis were more likely to report having had at least one abortion or stillbirth in the past. This demonstrates the importance of programs that identify and treat syphilis among pregnant women and their partners. It also shows the importance of programs that include testing for HIV as a routine procedure when people report for treatment of any medical condition. Another important finding documented in this report is the quality of the data collected as a result of more time and resources used for staff training at the refugee camps. The result of this extra attention was data of very high quality which facilitated data cleaning and analysis.

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**201.**

**TITLE:** A TEST OF THE NEW VARIANT FAMINE HYPOTHESIS IN ZAMBIA

**Authors:** Mason N. ¹, Chapoto A. ², Jayne T.S. ¹

**Year:** 2004

**Org/Inst:** -

**Status:** Published; AIDS 2006 - XVI International AIDS Conference: Abstract no. TUPE0866

**Study Site(s):** National

**Source:** AIDS 2006 - XVI International AIDS Conference: Abstract no.TUPE0866

**Background:** There is a common perception that rural poverty and vulnerability in southern Africa have worsened since the early 1990s. De Waal and Whiteside (2003) have hypothesized that severe agrarian poverty coupled with the HIV/AIDS epidemic is making communities in southern Africa more vulnerable and less resilient to exogenous shocks such as drought and creating new variant famine (NVF). To date, there has been little empirical validation of this hypothesis. Zambia is an appropriate test case for the NVF hypothesis because it is among the seven most highly HIV/AIDS-affected countries in the world and has been plagued by frequent droughts over the last 15 years.

**Methodology:** The NVF hypothesis is tested using nationally-representative data from approximately 7,000 agricultural households in 52 districts surveyed annually between 1991 and 2004.

Using fixed effects estimation, the study measures the impact of lagged HIV prevalence rates on cultivated area, the value of crop output, and productive assets for 52 districts over time, after controlling for other exogenous shocks and trends. We also examine whether lagged HIV prevalence rates affect the impact of rainfall shocks on district-level welfare trends.

**Results:** Preliminary results suggest a robust negative relationship between lagged HIV prevalence and agricultural output as well as productive asset holdings in Zambia. A one percentage point increase in lagged HIV prevalence rates is associated with a 2.2% decline in the mean value of household crop output. However, there is only weak evidence to suggest that rising HIV prevalence rates have exacerbated the impact of drought on agricultural output.

**Conclusions:** Unless HIV prevalence rates in rural Zambia decline substantially, there will be severe cumulative effects on agricultural communities’ livelihoods over time. Agricultural performance and rural livelihoods will increasingly be influenced by health policy decisions and technology innovations capable of moderating the spread of HIV.

Authors: Michelo C\textsuperscript{a,b}, Sandoy I. F. \textsuperscript{b} Fylkesnes K\textsuperscript{b} et al

Year: 1995-2003

Org/Inst: \textsuperscript{1}University of Zambia, Community Medicine, Lusaka, Zambia, \textsuperscript{2}University of Bergen, Centre for International Health, Bergen, Norway

Status: Published in abstracts for AIDS 2003, 20: 1031-1038

Study Site(s): Kapiri Mposhi and Chelston Township Lusaka Zambia

Source: Abstracts Book for the Dissemination Seminar on NUFU project Strengthening HIV-related interventions in Zambia: co-operation in research and institution capacity building” (2002-2006): University of Zambia and University of Bergen

Objectives: Higher educational attainment is associated with a greater risk of HIV infection in Sub-Saharan Africa. We investigated change over time in HIV prevalence by educational attainment in the general population.

Methodology: The data stem from serial population-based HIV surveys conducted in selected urban and rural communities in 1995 (n=2989) and 2003 (n=4442). Analyses were stratified by residence, sex and age-group. Logistic regression was used to estimate age – adjusted odds ratio of HIV between age (≤ 4 school years) and higher education (≥ 8 years) for the rural population and between low (≤ 7 school years) and higher education (≤ 11 school years) for the urban population.

Results: There was a universal shift towards reduced risk of HIV infections in groups with higher than lower education in both sexes among urban young people [odds ratio (OR), 0.02; 95% confidence interval (CI), 0.05-0.73] in men and (OR, 0.33; 95% CI, 0.15-0.72) in women. A similar pattern was observed in rural young men (OR, 0.17; 95% CI, 0.05-0.59) but was less prominent and not statistically significant in rural women. In age 25-49 years, higher educated urban men had reduced risk in 2003 (OR, 0.43; 95% CI, 0.26-0.72) but this was less prominent in women.

Conclusion: The findings suggested a shift in the association between educational attainment and HIV infections between 1995 and 2003. The most convincing sign was the risk reduction among more educated younger groups where most infections can be assumed to be recent. The changes in order groups are probably largely influenced by differential mortality rates. The stable risk among groups with lower education might also indicate limitations in past preventive efforts.


Authors: Michelo C\textsuperscript{a,b}, Sandoy I. F. \textsuperscript{b} Fylkesnes K\textsuperscript{b} et al

Year: 1995-2003

Org/Inst: \textsuperscript{a}School of Medicine University of Zambia, Zambia and \textsuperscript{b}Center for International Health, University of Bergen, Norway

Study Site(s): -
Background: Understanding the epidemiological HIV context is critical in building effective setting-specific preventive strategies. We examined HIV prevalence patterns in selected communities of men and women aged 15–59 years in Zambia.

Methodology: Population-based HIV surveys in 1995 (n = 3158), 1999 (n = 3731) and 2003 (n = 4751) were conducted in selected communities using probability proportional to size stratified random-cluster sampling. Multivariate logistic regression and trend analyses were stratified by residence, sex and age group. Absence, <30% in men and <15% in women in all rounds, was the most important cause of non-response. Saliva was used for HIV testing, and refusal was <10%.

Results: Among rural groups aged 15–24 years, prevalence declined by 59.2% (15.7% to 6.4%, P < 0.001) in females and by 44.6% (5.6% to 3.1%, P < 0.001) in males. In age-group 15–49 years, declines were less than 25%. In the urban groups aged 15–24, prevalence declined by 47% (23.4% to 12.4%, P < 0.001) among females and 57.3% (7.5% to 3.2%, P = 0.001) among males but were 32% and 27% in men and women aged 15–49, respectively. Higher educated young people in 2003 had lower odds of infection than in 1995 in both urban [men: AOR 0.29(95%CI 0.14–0.60); women: AOR 0.38(95%CI 0.19–0.79)] and rural groups [men: AOR 0.16(95%CI 0.11–0.25), women: AOR 0.10(95%CI 0.01–0.25)]. Although higher mobility was associated with increased likelihood of infection in men overall, AOR, 1.71(95%CI 1.34–2.19), prevalence declined in mobile groups also (OR 0.52 95%CI 0.31–0.88). In parallel, urban young people with ≥11 school years were more likely to use condoms during the last casual sex (OR 2.96 95%CI 1.93–4.52) and report less number of casual sexual partners (AOR 0.33 95%CI 0.19–0.56) in the last twelve months than lower educated groups.

Conclusion: Steep HIV prevalence declines in young people, suggesting continuing declining incidence, were masked by modest overall declines. The concentration of declines in higher educated groups suggests a plausible association with behavioural change.

### 204. TITLE: TREATMENT OF INTESTINAL HELMINTHS DOES NOT REDUCE PLASMA CONCENTRATIONS OF HIV-1 RNA IN COINFECTED ZAMBIAN ADULTS

Authors: Modjarrad K, Zulu I, Redden D. T et al
Year: 2003
Org/Inst: Centre for Infectious Disease Research in Zambia, University Teaching Hospital, University of Zambia, University of Alabama at Birmingham
Status: Published as manuscript in J Infect Dies 2005
Study Site(s): Lusaka

Background: Infection with intestinal helminths may stimulate dysfunctional immune responses in human immunodeficiency virus (HIV)-infected persons. Studies have yielded conflicting results regarding the impact of antihelminthic treatment on plasma concentrations of HIV-1 RNA.

Methods. We conducted a prospective study of 54 HIV-1- and helminth-coinfected and 57 HIV-1-infected, helminth-uninfected asymptomatic adults living in Lusaka, Zambia, to assess the impact of antihelminthic treatment on plasma concentrations of HIV-1 RNA.
Results: Median baseline viral load was 0.33 log(10) copies/mL lower in the helminth-infected group than in the uninfected group. Mean viral load between pretreatment and posttreatment visits increased in the helminth-infected (mean, 4.23 vs. 4.29 log(10) copies/mL; P=.6) and helminth-uninfected (mean, 4.39 vs. 4.52 log(10) copies/mL; P=.2) groups. Helminth-infected participants with high pretreatment viral loads had a mean 0.25-log(10) copies/mL decrease after treatment (P=.3), and helminth-uninfected participants had a mean 0.02-log(10) copies/mL decrease (P=.8).

Conclusions: We did not find an overall association between treatment of intestinal helminth infections and reduction in viral load in coinfected adults. Future studies may need to focus on adults with intense helminth infections that live in rural areas or on adults or children who harbor higher helminth burdens and plasma concentrations of HIV-1 RNA.

205. TITLE: PREVALENCE AND PREDICATORS OF INTESTINAL HELMINTH INFECTIONS AMONG HUMAN IMMUNODEFICIENCY VIRUS TYPE 1-INFECTED ADULTS IN AN URBAN AFRICAN SETTING
Authors: Modjarrad K, Zulu I, Redden D. T et al
Year: 2003
Org/Inst: Centre for Infectious Disease Research in Zambia, University Teaching Hospital, University of Zambia, University of Alabama at Birmingham
Status: Published as manuscript in Am J Trop Med Hyg 2005
Study Site(s): Lusaka

Sub-Saharan Africa is disproportionately burdened by intestinal helminth and human immunodeficiency virus (HIV)-1 infection. Recent evidence suggests detrimental immunologic effects from concomitant infection with the two pathogens. Few studies, however, have assessed the prevalence of and predictors for intestinal helminth infection among HIV-1-infected adults in urban African settings where HIV infection rates are highest. We collected and analysed sociodemographic and parasitologic data from 297 HIV-1-infected adults (mean age = 31.1 years, 69% female) living in Lusaka, Zambia to assess the prevalence and associated predictors of helminth infection. We found at least one type of intestinal helminth in 24.9% of HIV-infected adults. Thirty-nine (52.7%) were infected with Ascaris lumbricoides, and 29 (39.2%) were infected with hookworm. More than 80% were light-intensity infections. A recent visit to a rural area, food shortage, and prior history of helminth infection were significant predictors of current helminth status. The high helminth prevalence and potential for adverse interactions between helminths and HIV suggests that helminth diagnosis and treatment should be part of routine HIV care.

206. TITLE: COST AND ENROLLMENT IMPLICATIONS OF TARGETING DIFFERENT SOURCE POPULATION FOR AN HIV TREATMENT PROGRAM
Authors: Chi B, Fusco H, Sinkala M et al
Year: 2004
Org/Inst: Centre for Infectious Disease Research in Zambia, Zambian Ministry of Health, University of Alabama at Birmingham
Status: Published as a manuscript in J Acquir Immune Defic Syndr 2005; 40: 350-55.
Study Site(s): Lusaka

**Background:** Rapid scale-up of antiretroviral therapy (ART) is a worldwide priority, and ambitious targets for numbers on ART have been set. Antenatal clinics (ANCs) and tuberculosis (TB) clinics have been targeted as entry points into HIV care.

**Methods:** We developed a conditional probability model to evaluate the effects of ANC and TB clinic populations on ART program enrolment.

**Results:** To start 1 individual on ART, 3 TB patients have to be screened at a crude program cost of 36 US dollars per patient initiated on therapy. By contrast, 48 ANC patients have to be screened at a cost of US 214 US dollars per patient on therapy. In an incremental analysis in which ANC HIV testing was borne by a program to prevent mother-to-child transmission, recruitment efficiency increased (8 screened per patient starting ART) and cost decreased (114 US dollars per patient on therapy). Absolute numbers starting ART, however, remained fixed. If all 60,000 ANC patients seen yearly in the Lusaka District were screened, 1247 would start ART. Approaching the district’s 35,000 annual TB patients would generate 11,947 patients on ART.

**Conclusion:** In areas with high HIV prevalence, targeting chronically ill populations for HIV treatment may have significant short-term benefits in cost savings and recruitment efficiency.

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**207. TITLE:** POTENTIAL COST-EFFECTIVENESS OF MATERNAL AND INFANT ANTIRETROVIRAL INTERVENTIONS TO PREVENT MOTHER-TO-CHILD TRANSMISSION DURING BREAST-FEEDING.

**Authors:** Maclean C. C and Stringer J. S.

**Year:** 2004

**Org/Inst:** Centre for Infectious Disease Research in Zambia, University of Alabama at Birmingham

**Status:** Published as a manuscript in *J Acquir Immune Defic Syndr* 2005

**Study Site(s):** Lusaka


**Introduction:** One-third of maternal-to-child HIV transmission occurs during breastfeeding (BF). Several trials are currently evaluating the efficacy of postpartum antiretrovirals to reduce BF transmission.

**Methods:** This study used Markov modelling to define the circumstances under which the following interventions would be cost-effective: BF for 6 months with daily infant nevirapine (NVP) prophylaxis; maternal combination antiretroviral therapy (ART) during pregnancy and for 6 months of BF; and maternal combination ART only for women who meet CD4 criteria. Each was compared to: BF for 12 months; BF for 6 months; and formula feeding for 12 months. Strategies were evaluated for a hypothetical cohort of 40,000 pregnant women in sub-Saharan Africa, in the context of available voluntary counselling and testing in antenatal care. Model estimates were derived from the literature and local sources. Sensitivity analyses were performed on uncertain estimates. The perspective used was that of a government health district.

**Results:** Using base case estimates, BF for 6 months was the economically preferred strategy: it cost 806,995 dollars and generated 446,208 quality-adjusted life-years (QALYs). Providing daily infant NVP cost an additional 93,638 dollars and generated 1183 additional QALYs, but its incremental cost-effectiveness ratio (ICER) of 79 dollars/QALY...
exceeded the standard willingness to pay (64 dollars/QALY) for most resource-poor settings. Maternal combination ART was potentially very effective but too costly for most resource-poor settings (ICER: 87 dollars/QALY). In order for daily infant NVP during BF to be preferred, it must have ≥44% relative efficacy or cost ≤5.00 dollars/mo. If NVP were donated, it would only have to be minimally effective to be the economically preferred strategy. If ART cost ≤34.50 dollars/mo, ART to all mothers would become the preferred strategy under our assumption of 82% efficacy. **Conclusions:** Providing antiretrovirals during BF represents a promising alternative, should their effectiveness, and feasibility be proven.

**208.** **TITLE:** SIMPLE ASSESSMENTS OF ADHERENCE TO ANTIRETROVIRAL THERAPY PREDICT VIROLOGIC FAILURE IN HIV-INFECTED PATIENTS IN LUSAKA, ZAMBIA.  
**Authors:** Goldman J. D, Mumba P, Cantrell R. A *et al*  
**Year:** 2006  
**Org/Inst:** Centre for Infectious Disease Research in Zambia, University of Alabama at Birmingham, Vanderbilt University  
**Status:** Published in the abstract book of the 3rd IAS Conference on HIV Pathogenesis and Treatment, Sydney, Australia, July 22 -25, 2007; Abstract WEAB105  
**Study Site(s):** Lusaka  
**Source:** 3rd IAS Conference on HIV Pathogenesis and Treatment, Sydney, Australia, July 22 -25, 2007; Abstract WEAB105.

**Objectives:** In resource-limited settings, evaluation of adherence to antiretroviral therapy (ART) is critical given the poor availability of routine viral load (VL) testing and limited options for second-line therapy. We evaluated the association of adherence measurements with virological failure in Lusaka, Zambia.  
**Methods:** In the ART program, patients receive monthly dispensations of drugs and are followed in a computerized database. Patients in this analysis were on ART > 100 days before treatment failure was suspected. Virological suppression was defined as < 400 copies/mL. Adherence measures included days late for monthly pharmacy visits averaged over the course of treatment and patient self-report of missed doses three days prior to pharmacy visits.  
**Results:** 124 of 415 patients tested (30%) had detectable VL. The median time from ART initiation to VL measurement was 602 (IQR = 439–750) days. Median number of days late per month was 0.9 (IQR = 0.2–2.2) for suppressed patients vs. 1.6 (IQR = 0.5–3.0) for non-suppressed patients (p<0.01). Compared to those who were never late for pharmacy pick-ups, the risk of detectable VL was higher among those who were below the median of 1.0 day late per month (RR=1.9; 95%CI = 0.99–3.5); those between the median and the 90%tile of 4.2 days late per month (RR=2.2; 95%CI = 1.2–4.0); and those above the 90%tile (RR=3.1; 95%CI = 1.6–5.9). These findings held after adjusting for age, baseline haemoglobin and baseline CD4. Only 76 patients (22%) reported missing one or more doses of ART and these patients were at higher risk for virological failure (RR = 1.5; 95%CI = 1.1–2.1).  
**Conclusions:** The degree of lateness for pharmacy refills correlates in a dose response relationship with virological failure. While few people reported missing ART doses, those with positive responses were more likely to have detectable viral load.
209. **TITLE:** CHILDREN ENROLLED IN A PUBLIC HIV CARE AND TREATMENT PROGRAM IN LUSAKA, ZAMBIA: RAPID SCALE-UP AND FIRST-YEAR CLINICAL OUTCOMES.  
**Authors:** Mbewe M, Bolton C, Levy J, et al  
**Year:** 2004  
**Org/Inst:** Centre for Infectious Disease Research in Zambia, Zambian Ministry of Health, Center for Disease Control and Prevention, Elizabeth Glaser Paediatric AIDS Foundation, University of Alabama at Birmingham.  
**Status:** Published in the abstract book of the XVI International AIDS Conference, Toronto, Canada, August 13-18, 2006; Abstract MOAB0201.  
**Study Site(s):** Lusaka  
**Source:** XVI International AIDS Conference, Toronto, Canada, August 13-18, 2006; Abstract MOAB0201.

**Background:** Access to and uptake of paediatric HIV care and treatment in most resource-limited settings remain inadequate, with few programs meeting the WHO target that 10% of patients on antiretroviral therapy (ART) be children.  
**Methods:** Paediatric ART services are provided in primary government clinics. ART eligibility is based on WHO staging and age-based CD4 criteria. Virological diagnosis is limited; most children <18 months start therapy on clinical criteria.  
**Results:** Between May-04 and Oct-05, 1815 children were enrolled. Of these, 1319 (629 girls, 690 boys) initiated ART. Median age was 6.5 years; 74% were <5% weight-for-age. Mean CD4+ at ART initiation was 650 (±520) for children <1 year; 484 (±390) for children age 1-5 years; and 254 (±234) for children 6 years. Initial regimens included: 545(41%) ZDV+3TC+NVP; 610(46%) D4T+3TC+NVP; 48(3.6%) ZDV+3TC+EFV; 68(5.2%) D4T+3TC+EFV; and 48(3.6%) other regimens. Over 664 child-years on ART, 60 children died (9.0/100 child-years). In Cox proportional hazard modelling, WHO stage III or IV (HR 3.0; CI 1.7-5.7) and low CD4 (HR 2.4; CI 1.1-5.4) were predictors of mortality on ART. Weight-for-age <5%, adherence, gender, and TB at enrolment were not associated with death. The proportion of total ART program enrolment comprising children increased modestly from 5.8% in the first 6 months to 7.3% in the last 6 months (p<0.001).  
**Conclusions:** In this population without full access to infant HIV diagnostics, more than two-thirds of HIV infected children presenting for care were eligible for ART. Providing quality HIV care and treatment to children on a large scale in a resource-limited setting is feasible but requires a strong commitment to paediatric care.

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210. **TITLE:** A RANDOMIZED TRIAL OF THE INTRAUTERINE CONTRACEPTIVE DEVICE VS HORMONAL CONTRACEPTION IN WOMEN WHO ARE INFECTED WITH THE HUMAN IMMUNODEFICIENCY VIRUS  
**Authors:** Stringer E. M, Kaseba C, Levy J, et al  
**Year:** 2007  
**Org/Inst:** Centre for Infectious Disease Research in Zambia.  
**Status:** Published by Am J Obstet Gynecol. 2007 Aug; 197(2):144.e1-8  
**Study Site(s):** Lusaka  
**Source:** Am J Obstet Gynecol. 2007 Aug; 197(2):144.e1-8
Objective: The purpose of this study was to determine whether the intrauterine contraceptive device (IUD) is effective and safe among women who are infected with the human immunodeficiency virus (HIV).

Study Design: We randomly assigned 599 postpartum, HIV-infected women in Zambia to receive either a copper IUD or hormonal contraception and followed them for at least 2 years. RESULTS: Women who were assigned randomly to hormonal contraception were more likely to become pregnant than those who were assigned randomly to receive an IUD (rate, 4.6/100 vs. 2.0/100 woman-years; hazards ratio, 2.4; 95% CI, 1.3-4.7). One woman who was assigned to the IUD experienced pelvic inflammatory disease (crude rate, 0.16/100 woman-years; 95% CI, 0.004-868); there was no pelvic inflammatory disease among those women who were assigned to hormonal contraception. Clinical disease progression (death or CD4+ lymphocyte count dropping below 200 cells/microL) was more common in women who were allocated to hormonal contraception (13.2/100 woman-years) than in women who were allocated to the IUD (8.6/100 woman-years; hazard ratio, 1.5; 95% CI, 1.04-2.1).

Conclusion: The IUD is effective and safe in HIV-infected women. The unexpected observation that hormonal contraception was associated with more rapid HIV disease progression requires urgent further study.

211. TITLE: EARLY CLINICAL AND IMMUNE RESPONSE TO NNRTI-BASED ANTIRETROVIRAL THERAPY AMONG WOMEN EXPOSED TO SINGLE-DOSE NEVIRAPINE FOR PREVENTION OF MOTHER-TO-CHILD HIV TRANSMISSION.

Authors: Chi B, Sinkala M, Stringer EM, et al
Year: 2007
Org/Inst: Centre for Infectious Disease Research in Zambia, Zambian Ministry of Health, Center for Disease Control and Prevention, Elizabeth Glaser Paediatric AIDS Foundation, University of Alabama at Birmingham
Status: Published as manuscript in AIDS 2007
Study Site(s): Lusaka

Objective: To determine whether prior exposure to single-dose nevirapine (NVP) for prevention of mother-to-child HIV transmission (PMTCT) is associated with attenuated CD4 cell response, death, or clinical treatment failure in women starting antiretroviral therapy (ART) containing non-nucleoside reverse transcriptase inhibitors (NNRTI).

Methods: Open cohort evaluation of outcomes for women in program sites across Zambia. HIV treatment was provided according to Zambian/World Health Organization guidelines.

Results: Peripartum NVP exposure status was known for 6740 women initiating NNRTI-containing ART, of whom 751 (11%) reported prior use of NVP for PMTCT. There was no significant difference in mean CD4 cell change between those exposed or unexposed to NVP at 6 (+202 versus +182 cells/microl; P = 0.20) or 12 (+201 versus +211 cells/microl; P = 0.60) months. Multivariable analyses showed no significant differences in mortality [adjusted hazard ratio (HR), 1.2; 95% confidence interval (CI), 0.8-1.8] or clinical treatment failure (adjusted HR, 1.1; 95% CI, 0.8-1.5). Comparison of recent NVP exposure with remote exposure suggested a less favourable CD4 cell response at 6 (+150 versus +219 cells/microl; P = 0.06) and 12 (+149 versus +215 cells/microl; P = 0.39) months.
Women with recent NVP exposure also had a trend towards elevated risk for clinical treatment failure (adjusted HR, 1.6; 95% CI, 0.9-2.7).

**Conclusion:** Exposure to maternal single-dose NVP was not associated with substantially different short-term treatment outcomes. However, evidence was suggestive that exposure within 6 months of ART initiation may be a risk factor for poor treatment outcomes, highlighting the importance of ART screening and initiation early in pregnancy.

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**212. TITLE:** INFLUENCE OF BMI ON PREGNANCY OUTCOMES OF HIV-INFECTED AND -UNINFECTED ZAMBIAN WOMEN.

**Authors:** Banda Y, Chapman V, Goldenberg R. L. *et al*

**Year:** 2007

**Org/Inst:** Centre for Infectious Disease Research in Zambia, University of Zambia, University of Alabama at Birmingham

**Status:** Published as manuscript in *Trop Med Int Health* 2007

**Study Site(s):** Lusaka

**Source:** *Trop Med Int Health* 2007; 12: 856-61.

**Objectives:** To determine the influence of body mass index (BMI) on pregnancy outcomes of HIV-infected and HIV-uninfected Zambian women and to assess the possible role of BMI on mother-to-child transmission rate of HIV.

**Methods:** We analysed data from a clinical trial on nevirapine administration for the prevention of mother-to-child transmission of HIV in Lusaka, Zambia. Demographic characteristics, medical information and pregnancy outcomes were used in this secondary analysis.

**Results:** A total of 1211 women were included in this analysis and 36% were HIV-infected. Among HIV-infected women, maternal parity and prior stillbirths increased with increasing BMI in univariate analysis. Mean birth weight rose as well at 28.3 g [95% confidence interval (CI)=14.0-42.6] of infant weight per BMI unit. Transmission of HIV from mother to child appeared inversely related to BMI when compared according to BMI quartile (P for trend=0.07). In the HIV-uninfected group, infant birth weight increased with increasing BMI, at 32.7 g (95% CI=23.5-41.9) of infant weight per BMI unit.

**Conclusion:** Birth weight increased alongside BMI in both HIV-infected and HIV-uninfected women. There is a suggestion that women with lower BMI have a greater risk of perinatal HIV transmission, even after adjustments for HIV viral load and CD4 count.

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**213. TITLE:** WEALTH AND EXTRAMARITAL SEX AMONG MEN IN ZAMBIA

**Authors:** Sitawa R. K. and Yanyi K. D

**Year:** 2002

**Org/Inst:**

**Status:** Published in the International Family Planning Perspectives, 2005, 31(2):83-89

**Study Site(s):** Zambia

**Source:** International Family Planning Perspectives Volume 31, Number 2, June 2005

**Context:** In Zambia, most people know about sexually transmitted infections (STIs) and HIV/AIDS, but this knowledge has not translated into safer sexual practices. An estimated 16% of adults are HIV-positive, with the majority having acquired the infection through...
heterosexual contact. It is important to know whether characteristics such as wealth are correlated with extramarital sex among men, because men who have sex outside of marriage are key agents of heterosexual transmission of STIs and HIV.

**Methods:** Data for analysis came from 1,239 married men who participated in the 2001–2002 Zambia Demographic and Health Survey. Multivariate analyses were performed to identify factors associated with men's extramarital sexual behaviour, with a focus on wealth.

**Results:** Overall, 19% of married men had had extramarital sex in the year prior to the survey; their mean number of partners was 1.3. Of the three proxies for wealth included in the multivariate analyses—education, occupation and household wealth index—none were associated with extramarital sex. Living in Southern and Western Provinces of Zambia was associated with significantly increased odds of extramarital sex (2.3 and 3.5, respectively); older age (0.4), older age at first sex (0.6–0.7) and living in Northern Province (0.4) were associated with significantly decreased odds of sex outside of marriage.

**Conclusions:** Cultural norms specific to regions play an important part in sexual behaviour. Socially defined sexual behaviour patterns can shed light on extramarital sex and the spread of STIs, including HIV.

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**214. TITLE:** HIV TYPE 1 INFECTION IS A RISK FACTOR FOR MORTALITY IN HOSPITALIZED ZAMBIAN CHILDREN WITH MEASLES  
**Authors:** Moss WJ, Fisher C, Scott S, et al  
**Year:** 1998-2003  
**Org/Inst:** Department of Molecular Microbiology and Immunology, Johns Hopkins Bloomberg School of Public Health, Johns Hopkins University, Baltimore  
**Status:** Published in the T1: Clin Infect Dis. 2008 Feb 15;46(4):523-7.  
**Study Site(s):** Lusaka  

**Background:** Measles remains a significant cause of vaccine-preventable mortality in sub-Saharan Africa, yet few studies have investigated risk factors for measles mortality in regions of high human immunodeficiency virus type 1 (HIV-1) prevalence.

**Methods:** Between January 1998 and July 2003, children with clinically diagnosed measles who were hospitalized at the University Teaching Hospital in Lusaka, Zambia, were enrolled in an observational study. Demographic and clinical information was recorded at enrolment and at discharge or death. Measles was confirmed by detection of antimeasles virus immunoglobulin M antibodies, and HIV-1 infection was confirmed by detection of HIV-1 RNA.

**Results:** Of 1474 enrolled children, 1227 (83%) had confirmed measles and known HIV-1 infection status. Almost one-third of the HIV-1-infected children with measles were <9 months of age, the age of routine measles vaccination, compared with one-fourth of the uninfected children (P = .07). Death occurred during hospitalization in 23 (12.2%) of the HIV-1-infected children and 45 (4.3%) of the HIV-1-uninfected children (p < .001) with measles. After adjusting for age, sex, and measles vaccination status, HIV-1 infection (odds ratio, 2.5; 95% confidence interval, 1.4-4.6), < or =8 years of maternal education (odds ratio, 2.4; 95% confidence interval, 1.2-4.8), and the presence of a desquamating rash (odds ratio, 2.2, 95% confidence interval, 1.3-3.6) were significant predictors of mortality due to measles.
Conclusions: In a region of high HIV-1 prevalence, coinfection with HIV-1 more than doubled the odds of death in hospitalized children with measles. Increased mortality among HIV-1-infected children is further evidence that greater efforts are necessary to reduce transmission of the measles virus in regions of high HIV-1 prevalence.

Background: The age at which passively acquired antibodies are lost is critical to determining the optimal age for measles vaccination. Little is known about the influence of human immunodeficiency virus type 1 (HIV-1) infection on levels of prevaccination antibodies to measles virus.

Methods: Antibodies to measles virus were measured by plaque reduction neutralization assay in HIV-1-infected, HIV-seropositive but uninfected, and HIV-seronegative Zambian infants aged 6 weeks to 9 months. Regression models were used to estimate age-specific antibody concentrations.

Results: Neutralizing antibodies to measles virus were measured in 652 plasma samples collected from 448 infants, of whom 61 (13.6%) were HIV-1 infected, 239 (53.4%) were HIV seropositive but uninfected, and 148 (33%) were HIV seronegative. The best fitting model suggests that HIV-1-infected infants have lower levels of passively acquired antibodies to measles virus at birth than do HIV-seronegative infants, but their antibody levels decrease more slowly. By 6 months of age, 91% (95% confidence interval, 83%-99%) of HIV-1-infected infants, 83% (95% confidence interval, 77%-89%) of HIV-seropositive but uninfected infants, and 58% (95% confidence interval, 51%-64%) of HIV-seronegative infants were estimated to have antibody levels that were unlikely to affect immune responses to measles vaccine (cutoff value for immune response, <50 mIU/mL). By 9 months of age, 99% of all infants had antibody levels <50 mIU/mL.

Conclusions: Infants born to HIV-1-infected women are less likely to have passively acquired antibodies that would neutralize measles vaccine virus and, thus, have an increased risk of measles prior to the age of routine vaccination. Protection could be achieved by administration of the first dose of measles vaccine prior to 9 months of age.

216. TITLE: REDUCING UNCERTAINTIES IN GLOBAL HIV PREVALENCE ESTIMATES: THE CASE OF ZAMBIA
Authors: Kumbutso D¹, Fylkesnes K²
Year: 1994-2002
Org/Inst: Central Statistical Office, University of Bergen, Norway
Status: Published in BMC Public Health 2006, 6:83
Study Site(s): National (Urban and rural Zambia)
Source: Abstracts Book for the Dissemination Seminar on NUFU project. Strengthening HIV-related interventions in Zambia: cooperation in research and institution capacity building” (2002-2006): University of Zambia and University of Bergen

Background: The premise for using antenatal care (ANC) clinic data for estimating HIV prevalence in the general population is the finding from community studies in sub-Saharan Africa that total HIV prevalence in pregnant women attending ANC clinics closely approximates levels in the total general population of both women and men aged 15-49 years. In this study, the validity of the of national level HIV prevalence estimates for the total general population 15-49 years made from ANC clinic and population survey data was assessed.

Methodology: In 2001-2002, a national population HIV prevalence survey for women 15-49 years and men 15-59 years was conducted in Zambia. In the same period, a national HIV sentinel surveillance survey among pregnant women attending ANC clinics was carried out.

Results: The ANC HIV prevalence estimates for age-group 15-49 years (rural: 11.5% CI, 11.2-11.8; urban: 25.4%, 95% CI, 24.8-26.0; adjusted national: 16.9%; 95% CI, 16.6-17.2) were similar to the population survey estimates (rural: 10.8%; 95% CI, 9.6-12.1; urban: 23.2%; 95%ci 20.7-25.6; national: 15.6%; 95% CI, 14.4-16.9). The HIV prevalence urban to rural ratio was 2.2 in ANC and 2.1 in population survey estimates.

Conclusions: The HIV prevalence estimates for the total general population 15-49 years derived from testing both women and men in the population survey was similar to the estimates derived from testing women attending ANC clinics. It shows that national HIV prevalence estimates for adults aged 15-49 years can also be obtained from ANC HIV sentinel surveillance surveys with good coverage when ANC attendance and fertility are high.

217. TITLE: HIV-1 SEROPREVALENCE AMONG PAEDIATRIC ADMISSIONS AT THE UNIVERSITY TEACHING HOSPITAL (UTH) – LUSAKA
Authors: Sitali M
Year:
Org/Inst: The University of Zambia, School of Medicine
Status: Completed
Study Site(s): Lusaka
Source: The University of Zambia, School of Medicine

The seroprevalence of human immunodeficiency virus type 1(HIV-1) among paediatric admissions were studied at the University Teaching Hospital (UTH) Lusaka, Zambia during the period from 22<sup>nd</sup> November to 15<sup>th</sup> December, 1995. This was at a time when the number of admissions to the department of Paediatrics and Child Health were highest. The admission rate on average at this time of the year is 2,000 children per month. This busy period usually starts from the month of October to February each year. The study was a cross sectional survey, evaluating disease presentation among HIV-1 positive and HIV-1 negative children admitted to the department. The children were enrolled to the study using a systematic sampling method around the clock at the outpatient department. A standardized questionnaire was administered to every fifth child admitted. A consent was sought from the accompanying adult to recruit the child and test the child for HIV. Blood for laboratory tests including HIV test was collected.
During the period of the study 2011 children were admitted to hospital out of which three hundred and three (303) joined the study. The overall HIV-1 seroprevalence for the study group was 30.4 percent while that for the children aged 18 months and more was 27.8 percent. There was no sex difference in the HIV-1 seroprevalence. Educational levels of the mothers was used as a proxy to determine socio-economic status of the children. The mothers who had secondary school education and higher were categorized as belonging to a group of high socio-economic class while those who had no formal education or primary school education belonged to the low socio-economic class. There was a high HIV-1 seroprevalence in children whose mothers had secondary school education or higher as compared to children born to mothers with primary school education or none. This means HIV seropositivity was more common in children from high socio-economic class than from those of low socio-economic class. The illnesses that were seen in the study period were Respiratory tract infection, Protein energy malnutrition, Malaria, Gastro-enteritis, Measles and Anaemia. RTI and Anaemia were seen more in the children who were HIV-1 seropositive than in the HIV-1 seronegative group. The mortality rate in the HIV-1 seropositive children was 15.6 percent as compared to 9.3 percent in the HIV-1 seronegative children. The illnesses that were associated with death in both HIV seropositive and HIV seronegative children were RTI, PEM, G/E, Malaria and Measles. The main cause of death in children who were HIV-1 seropositive was RTI while PEM cause more death for those who were HIV-1 seronegative Postmortems were not carried out to confirm the causes of death in these children.

218. TITLE: LUUMBO ADP HIV, AIDS BASELINE SURVEY -GWEMBE DISTRICT
Authors: Ndonji K.
Year: 2002
Org/Inst: Luumbo Area Development Programme (World Vision Zambia)
Status: Published in an Abstract Book, 3rd National Health Research Conference
Study Site(s): Gwembe
Source: Abstract Book, 3rd National Health Research Conference, Zambia

Problem statement: The figures in 2001-2002 Zambia Demographic and Health Survey showed Southern province prevalence figures to be 20 percent, the third highest in Zambia from Copperbelt and Lusaka (ZDHS, 2002). This showed that HIV/AIDS was more than twice as high in urban areas as in rural areas. The ADP is found in an area where the HIV/AIDS Prevalence was high. There was no information on knowledge, attitude and practices on HIV/AIDS. Therefore there was a need to carry out the survey in the programme area in Gwembe district.

Objective: To assess the levels of knowledge, attitudes and practices in HIV/AIDS in Luumbo ADP area in Gwembe district.

Methodology: It was an intervention study to find out the knowledge, attitudes and practices on HIV/AIDS. The data was collected through the use of structured and unstructured questionnaires in Gwembe district of Southern Province. The target group was a cross section of the population of Luumbo ADP. The survey used cluster and random sampling to provide unbiased and representative estimation of the information obtained. The sample size was 368 head of households.

Results: generally this has made the HIV/AIDS messages to be known by the people through posters (99%) among other important outcomes.
Conclusions: The ADP should address the issue of attitudes of people towards those who are HIV/AIDS positive. Prevention strategies should be enhanced. Care of orphans through Home Based Care groups be scaled up in the community as well creation of many VCT centres. Source of Funding: Luumbo ADP (World Vision Zambia)

Main Objectives: Determine the HIV and Aids knowledge, attitude and practices of the students in the various schools and years of study at UNZA.

Description: The baseline survey was a cross-sectoral study that collected data from various schools and years of study using quantitative approaches both with structured and semi-structured questionnaires. The total number of all the students enrolled by year of study was used as the sampling frame.

Key findings: The study found that hearing about HIV and Aids was universal. Some students (76.1%) indicated that they knew enough about the pandemic, with some saying they were sick and tired of hearing about the pandemic. The study also indicated that more than half of the respondents (51.1%) had a boy or girl friend. It was also revealed that some respondents had more than five sexual partners the previous 12 months. Equally disturbing was the finding that the respondents also conduct anal sex (3.0%) and oral sex (17.9%). In all the encounters use of condom is not a norm.

Recommendations: There is a strong need for effective collaboration among the number of organisations dealing with HIV and Aids at UNZA. More creative and innovative ways of spreading HIV information should be put in place and intensified in order to reduce myths and misconceptions surrounding HIV/Aid. Access to condoms within campus should be intensified and promotion of VCT in order to entice utilisation of free antiretroviral drugs.

Ever since the first AIDS case was noted in Zambia in 1984, much effort has been made to monitor the HIV/AIDS situation in Zambia. Since the early 1990s, Zambia has depended on the Epidemiological Sentinel Surveillance (ESS) system among pregnant women to
monitor trends in the HIV epidemic. The 2001-2002 ZDHS was the first nationally representative survey in Zambia to include voluntary syphilis and HIV testing. HIV testing was carried out anonymously and the test results could not be linked to the respondent’s individual information, except for age, sex, residence (urban-rural), and province. ZDHS involved the collection of blood specimens from all eligible women and men from the main survey who voluntarily consented to syphilis and HIV testing. Dried blood spots (DBS) for HIV testing were made from the blood collected for syphilis. Syphilis testing was done in the field, all RPR reactive samples were collected in cryo-vials and transported to TDRC for confirmatory testing using Treponema Palidum Haemaglutination Assay (TPHA). HIV testing was done using Wellcozyme HIV 1&2 GACELISA on DBS. All positives and 10% negatives were retested using BION0R HIV 1&2 and any discordant cases were retested using Western Blot.

Overall, 6% of women and 8% of men aged 15 – 49 tested positive for syphilis in Zambia. Syphilis prevalence rates were slightly higher among urban residents of Copperbelt and Lusaka than among those living in rural areas and other provinces. HIV testing gave an overall prevalence of 16% for Zambia. Women were more likely to be HIV-positive than men (18% and 13%, respectively). HIV prevalence is more than twice as high in urban areas as in rural areas (23% and 11%, respectively).

| 221. TITLE: | HELMINTHIC INFECTIONS HAVE A MAJOR IMPACT ON THE PATHOGENESIS AND VACCINATION AGAINST HIV INFECTION: SHOULD WE DE-WORM THE POPULATIONS? |
| Authors: | Bentwich Z. |
| Year: | 2005 |
| Org/Inst: | - |
| Status: | Published; AIDS 2006 - XVI International AIDS Conference: Abstract no.TUPE0016 |
| Study Site(s): | Ethiopia and Zambia |

**Methodology:** Sequential T cell subsets and thorough immune activation profile, as well as clinical follow up, were determined in - HIV-infected ET and non Ethiopian Israelis(IM), HIV non infected ET and non Ethiopian Israelis (IS) HIV plasma viral load was determined in HIV + Ethiopians living in Ethiopia, and Zambians in Zambia, before and after being treated for helminth infections.

**Results:** a) Helminthic infections are associated with chronic immune activation, energy and a dominant TH2 immune profile. b) Most of these changes return to normal 6-12 months after de-worming. c) Increased susceptibility to HIV infection of PBMC from ET , is related to chronic immune activation to increased CCR5 expression and to low chemokine secretion. d) Eradication of helminthic infection in dually infected Ethiopians living in Ethiopia decreases significantly plasma HIV viral load, but was not observed in Zambia.

**Conclusions:** 1) Helminthic infection make the host more susceptible to HIV, less able to cope with it, and defective in generating protective immunity. 2) These elements account for the rapid spread of HIV and tuberculosis in helminth infested regions and should be considered in any vaccine design and trial. 3) These findings together with additional recent studies in humans and primates, support the notion that eradication of helminthic infections
should be urgently considered and at least tried in large scale studies and not least in the context of protective vaccine trials.

222. TITLE: GENITAL HERPES AND HIV CO-INFECTION IN LUSAKA ZAMBIA
Authors: Sadoki E. and Reid S.
Year: 2004
Org/Inst: Centre for Infectious Disease Research in Zambia (CIDRZ)
Status: Published in an Abstract Book, 3rd National Health Research Conference
Study Site(s): George Compound and Matero Township
Source: Abstract Book, 3rd National Health Research Conference, Zambia

Study, Setting and Population: Data for this study was collected from an ongoing clinical Trial: HPTN 039; This is a multi-site, randomised, double-blind, placebo controlled two arm trial; The purpose is to look at the effect of suppressive doses of Acyclovir in preventing HIV acquisition; The population is high risk HIV negative, HSV-2 positive women in George and Matero compounds; Follow-up: monthly with quarterly HIV tests for 18 months; Endpoint: HIV seroconversion; Data was collected for a four month period (March 11 to July 15, 2004)
Outcome: HIV prevalence; HSV-2 prevalence; Clinical presentation of HSV-2 genital herpes.
Objectives: To describe HSV-2, HIV prevalence and clinical presentations of HSV-2 in George and Matero compounds in Lusaka.
Design: Prevalence survey.
Results: Among HIV negative women 56% were seropositive for genital herpes. Among HIV positive women 73.0 % were seropositive for genital herpes. The following were commonly observed presentations of HIV-2 in our population: Vulvar vesicles, ulcers Gluteal vesicles, pustules and ulcers; Cervicitis with vesicles, pustules and ulcers.
Conclusion: HIV sero-prevalence of 52% in women in the Lusaka compounds of George and Matero. HSV-2 sero-prevalence of 56 to 73% in the Lusaka compounds of George and Matero. HSV-2 seroprevalence is 17% higher in the HIV infected compared with non infected women. Genital herpes in Zambian women presents with a wide variety of symptoms
It is well established that HSV-2 seropositivity enhances HIV acquisition; therefore we believe HSV-2 epidemic is fuelling the high HIV prevalence in George and Matero compounds. Funding sources: This is an NIH funded trial but no specific funding was required for this project

223. TITLE: DOSE DEPENDANT EFFICACY OF SP-IPT FOR MALARIA IN PREGNANCY AMONG HIV INFECTED ZAMBIAN WOMEN.
Authors: Chalwe V, Gill CJ and MacLeod et al
Year: 2006
Org/Inst: Tropical Disease Research Center (TDRC)
Status: Published in and Abstract Book, 4th National Health Research Conference
Study Site(s): Ndola


**Methodology:** We conducted a sub analysis of data from a recently completed placebo controlled, double-blinded RCT comparing standard 2-dose SP/IPT vs. monthly SP-IPT among a population of HIV infected women from Ndola, Zambia, an area with hypo-holoendemic malaria transmission. However, given different entry points during pregnancy, patient follow up, and actual delivery dates, mothers may have received between 1-6 doses of SP at study end. We calculated Chi square or paired t-tests comparing the effect of single dose vs. 2 or more, 3 or more, and 4 or more doses of SP. Primary outcomes in this analysis were maternal haemoglobin (Hb), placental infection (% positive by histology), infant birth weight (grams), infant cord blood parasitemia (% positive), and gestational age <37 weeks by Dubowitz (%).

**Results:** 394 women completed the trial; placentas were obtained for 360 (91.4%). 34 women received 1 dose of SP; 357 ≥ 2 doses; 178 ≥ 3 doses; and 122 ≥ 4 doses. All outcomes displayed a clear dose dependent benefit of more frequent doses of SP compared with single dose. Infant birth weight and proportion with delayed developmental age at delivery were most sensitive to the effects of higher dose SP.

**Conclusion:** Our data suggest a dose dependant benefit to SP-IPT, though are insufficient to define an optimum breakpoint above which additional doses provide negligible further benefit. Single dose SP was clearly inferior to all other dosing regimens and should not be used - even in the setting of relatively mild malaria transmission as present in this study.

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<tr>
<th>224. <strong>TITLE:</strong></th>
<th>AN OPEN OBSERVATIONAL AND EXPLORATORY CLINICAL TRIALS ON THE SAFETY AND EFFICACY OF THE THREE ZAMBIAN TRADITIONAL HERBAL MEDICINES IN HIV POSITIVE INDIVIDUALS</th>
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<tr>
<td><strong>Authors:</strong></td>
<td>Chikusu P, Mutemba C and Chitalu N</td>
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<tr>
<td><strong>Year:</strong></td>
<td>2006</td>
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<tr>
<td><strong>Org/Inst:</strong></td>
<td>Ministry of Health and Central Board of Health</td>
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<tr>
<td><strong>Status:</strong></td>
<td>Completed but not yet published</td>
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<tr>
<td><strong>Study site(s):</strong></td>
<td>Lusaka</td>
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<tr>
<td><strong>Source:</strong></td>
<td>Ministry of Health</td>
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**Objective:** To investigate the safety and efficacy of selected herbal formulations over a period of six months.

**Materials and Methods:** The total number of participants enrolled in the study was 26 broken down in each group as follows: 10 (5 males and 5 females) in Sondashi group, 11 (4 females and 7 males) in the Mayeyani group and 5 (4 females and 1 male) in the Mailacin group. The clients had not taken any herbal medicine before, including the herbs under study, had never taken ARVs before, had no ongoing active infection (such as TB, pneumonia, meningitis and diarrhoea), female clets were not pregnant, and clients were aged 20-45 years.

The study was administered by the Traditional ealth Practitioners (THP) using their specific formulations and determined their dosage and dosing frequency as prescribed by them. Samples were subjected to quality control at an independent laboratory using the HPLC method and nn of the samples were found with ARVs.

**Results:** No significant changes were observed in viral load over the six months study period; no significant changes in CD4 count were observed study period; liver and kidney functions remained within acceptable limits; no patient became anaemic over the six
months period; all patients but two registered gaining body weight; all patients had detectable viral load at the end of the six months period.

**Conclusion:** There was no evidence of toxicity that could be attributed to the products; there was no significant increase or decrease in viral load/CD4 was observed during the study period; despite no significant increase or decrease in CD4 cell count and viral load, the 9 clients out of 26 showed increase in CD4 cell count with corresponding viral load reduction as follows: for Sondashi formula, were six clients out of ten. Codes 01, 02, 03, 05, 07 and 14; for Mayeyanin formulation, there were two out of eleven. Codes 15 and 19; for Mailacin formulation, there was one out of five. Code 11.

The general well being of improved appetite and weight gain was observed in all the participants except in the two of them.

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**225. TITLE:** REDUCTION IN PRE-TERM DELIVERY AND NEONATAL MORTALITY AFTER THE INTRODUCTION OF ANTENATAL CO-TRIMOXAZOLE PROPHYLAXIS AMONG HIV-INFECTED WOMEN WITH LOW CD4 CELL COUNTS.

**Authors:** Ming Li¹, Jesus F² and Salazar-Gonzalez³ et al

**Year:** 2006

**Org/Inst:** Departments of Surgery,¹ Medicine, Duke University Medical Center, Durham, North Carolina 27710,¹⁴ Department of Medicine, University of Alabama, Birmingham, Alabama 35294,²Department of Pathology and Laboratory Medicine, Emory University, Atlanta, Georgia 30329,³

**Status:** Published by J Infect Dis. 2006 Dec 1;194 (11):1510-8. Epub 2006 Oct 19 by University of Chicago Press

**Study Site(s):** Lusaka


Cotrimoxazole prophylaxis is recommended for subgroups of human immunodeficiency virus (HIV)-infected adults and children to reduce all-cause morbidity and mortality. We investigated whether antenatal cotrimoxazole prophylaxis begun during pregnancy for HIV-infected pregnant women with low CD4 cell counts would affect birth outcomes.

**Methodology:** Cotrimoxazole prophylaxis was introduced as a routine component of antenatal care for HIV-infected women with CD4 cell counts <200 cells/ micro L during the course of a trial of mother-to-child HIV transmission in Lusaka, Zambia. Rates of pre-term delivery, low birth weight, and neonatal mortality were compared for women with low CD4 cell counts before and after its introduction.

**Results:** Among 255 women with CD4 cell counts <200 cells/ micro L, the percentage of pre-term births (< or =34 weeks of gestation) was lower (odds ratio [OR], 0.49 [95% confidence interval {CI}, 0.24-0.98]) after cotrimoxazole prophylaxis was introduced than before; there was a significant decrease in neonatal mortality (9% to 0%; P=.01) and a trend toward increased birth weight ( beta =114 g [95% CI, -42 to 271 g]). In contrast, there were no significant changes in these parameters over the same time interval among women with CD4 cell counts > or =200 cells/ micro Liter.

**Conclusion:** Antenatal provision of cotrimoxazole for HIV-infected pregnant women with low CD4 cell counts may have indirect benefits for neonatal health.
Introduction: The Zambia-Emory HIV Research Project (ZEHRP) in Lusaka, Zambia has provided couples voluntary counselling and testing (CVCT) for HIV since April 1994. Recently, HIV prevalence and self-report of prior testing have increased.

Methodology: HIV prevalence and prior testing are described for 7774 couples attending ZEHRP CVCT between January 2002 and February 2005. Data are compared with over 10,000 couples tested from 1995-2000 and 665 couples tested at two antenatal clinics in 2001. All clients received HIV results, counselling, and condom skills training as a couple.

Results: From 1995-2000, 57% of couples were concordant negative (−−), 20% discordant (+−), and 23% concordant positive (++). At two antenatal clinics in 2001, 3-8% of women reported previous HIV testing. From 2002-2005, the proportion of concordant positive, discordant, and concordant negative couples changed from 28% (++), 20% (+−), and 52% (−−) in 2002 to 36% (++), 18% (+−), and 46% (−−) in 2005. The proportion of clients previously tested at non-ZEHRP clinics increased from 9% of women and 7% of men in 2002, to 28% of women and 17% of men in 2005. The proportion of couples with both partners previously tested increased from 4% to 14%, and the proportion with neither partner previously tested decreased from 87% to 62%. Many women reported previously testing at antenatal clinics. ARV programs opened at nearby government clinics in quarter four of 2004, and the proportion of couples with at least one HIV+ partner increased from 53% to 58% during that time.

Conclusions: At ZEHRP, the proportion of clients previously tested for HIV has steadily increased in the last 3 years. This corresponds with the introduction of PMTCT and VCT programs, and confirms that these services are encouraging individuals to test with their spouses. Although most HIV-positive individuals are asymptomatic at VCT, simple symptom-based ARV referral procedures are needed.
Throughout the world, medical science has had some notable deficiencies resulting in doubtful practices and worrying attitudes. In developing countries like Zambia modern health infrastructure is characterized by lack of physicians, paramedical staff and medical bills that are unaffordable to the general population. The search for solutions in many health problems lies in the exploration of traditional medicine. The Traditional healer remains to a large extent the focal point of the search for therapy for Malaria and HIV/AIDS in Zambia and Africa as a whole.

Research Initiative on Traditional Anti-malarial and anti-HIV/AIDS Methods in Zambia (RITAM-ZAMBIA) is will be a non-profit making organization whose general objective is to promote research in traditional medicine. It is an organization that seeks to identify, promote and encourage research in traditional medicines as part of the delivery health services in Zambia. The aim of RITAM-ZAMBIA will be to identify ways in which traditional medicine can effectively contribute to the fight against Malaria and HIV/AIDS. The most fundamental challenge is the planning and implementation of collaborative activities within Zambia and with others outside Zambia.

RITAM-ZAMBIA shall collect and classify traditional medicines used in the treatment and prevention of Malaria and HIV/AIDS and analyse for their safety, efficacy and toxicity. RITAM-ZAMBIA will carry out all the necessary coordination in research work on traditional medicines and provide information pro-actively as well as respond to queries from the community by use of published articles and documents. Information on traditional medicine is important in keeping traditional healers as well as other users of traditional medicines well informed. RITAM-ZAMBIA will provide members of the public with an opportunity to understand better the aspects concerning usage and safety of traditional medicines. RITAM-ZAMBIA will provide information in the following components:

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228. TITLE: KNOW YOUR HIV AND AIDS EPIDEMIC IN ZAMBIA
Authors: Macwangi M and Phiri B
Year: 2007-2008
Org/Inst: National HIV, AIDS, STIs and TB Council and The Joint United Nations programme on HIV and AIDS
Status: Ongoing
Study Site(s): National

Objectives: The general purpose of this study was to determine HIV Incidence among adult population groups with risk behaviours and to collect information that would facilitate the development of the road map to “Know your HIV and AIDS Epidemic” in Zambia.

Methodology: This work was guided by the “Know Your HIV and AIDS Epidemic” Model. The work involved extensive literature review of relevant national and regional research reports and documents. A structured questionnaire was use to collect information form research institutions and researchers. To solicit input from a wide audience, the draft report was reviewed by key personnel at NAC and UNAIDS and a dissemination and consensus meeting with the HIV and AIDS Prevention Theme Group and researchers was held.
Results: Preliminary results of this work show that among the Zambian population most adults were in the category of *Low Risk Heterosexual (LRH)*. This category accounted for about half the adult population and includes adults in mutual monogamous or serial monogamous couples where the only risk is thorough discordance. The next category, *Casual Heterosexual (CHS)* includes adults who have had more than one partner in the last 12 months or who have had sex with a none-regular, non-cohabiting partner. It accounted for about 17%. The next group was *Clients of Female Sex Workers* and accounted for about 10% of the adult population, *No Risk Heterosexual* i.e. adults that do not inject drugs and are not involved in any sexual activity (UNAIDS 2007) was 9% and *Partners of CHS* was 8%. Others were *Partners of Clients of Female Sex Workers* 5%, *Female Sex Workers* 2.7%, *Men having Sex with other Men (MSM)* 0.03% and *Partners of MSM* 0.02%. There was no data on adults who are injecting intoxicating drugs i.e. *Injecting Drug Use*. HIV Incidence i.e the cumulative number of cases of HIV infections in 12 months, was highest in the *Low Risk Heterosexual* at 29% followed by *Casual Heterosexual Sex* at 19% and their *Partners* at 14%. *Clients of Female Sex Workers* was 10%, *Partners of Clients of Female Sex Workers* was 8% and the rest were below 0%.
3.6 THEME VI. INTEGRATING ADVOCACY AND COORDINATION OF THE MULTI-SECTORAL RESPONSE

The overall objective of Integrating Advocacy and Coordination of the Multi-sectoral response to strengthen capacity for advocacy and coordination by all partners and strengthen the enabling framework to facilitate a sustainable scale up of service delivery

i. Strengthen the institutional and the legal framework

ii. Improve coordination and resolve areas of application and gaps in the multisectoral response to HIV and AIDS to include resource management

iii. Advocate for mainstreaming effective policy implementation and fighting stigma and discrimination

iv. Promote effective leadership for the multisectoral response for HIV and AIDS

This section consists of abstracts that address the fore-going strategic objectives

**Strategic objective 25: Strengthen the institutional and the legal framework**

<table>
<thead>
<tr>
<th>229.</th>
<th>TITLE: HUMAN-RIGHTS BASED APPROACHES TO HIV/AIDS IN TWO AFRICAN COUNTRIES</th>
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<tbody>
<tr>
<td>Authors:</td>
<td>Patterson D(^1), Falconer D. A(^1) and Forman L (^3) et al</td>
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<tr>
<td>Year:</td>
<td>2002</td>
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<tr>
<td>Org/Inst:</td>
<td>(^1)Canadian HIV/AIDS Legal Network, Montreal, Canada; (^2)Faculty of Law, University of Toronto, Toronto, Canada; (^3)University of Toronto, Toronto, Canada</td>
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<tr>
<td>Status:</td>
<td>Published in an Abstract Book for the XV International AIDS Conference: Abstract no. MoPeE4191</td>
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**Source:** The XV International AIDS Conference: Abstract no. MoPeE4191

**Issues:** While the importance of respecting human rights in responding to the HIV/AIDS epidemic is generally acknowledged, practical applications of these principles in international development programming have not been widely explored or documented. This two-year project supported rights-based approaches to law and policy reform in Kenya and Zambia.

**Description:** Legal organizations addressing HIV/AIDS issues in each country were identified. Initial assessments indicated the need for organizational development training and support as well as assistance with substantive issues relating to HIV/AIDS law, ethics and human rights in each country. Four technical assistance missions and one final project evaluation mission were undertaken in 2003.

**Lessons learned:** Each organization developed a three-year strategic plan, and used the project as a springboard for related activities. Both organizations were strengthened as national institutions. Both organizations have had a significant input into human rights-orientated reform of law and policy in their respective countries over the project period, and in promoting a rights-based approach amongst legal practitioners and decision-makers. Regional linkages and linkages with the Canadian counterpart were also strengthened. The
Canadian partner organization increased its understanding of the challenges of both organizational development and HIV/AIDS law and policy reform in resource poor settings. Rights-based approaches provide both a theoretical basis and practical guidance for law and policy reform. National organizations of lawyers and others formed to address HIV/AIDS issues can advance these approaches with legal technical and other support from Canadian counterparts.

**Recommendation:** Legal organizations addressing HIV/AIDS should be supported, and this experience documented and shared, including through regional networks.

**Strategic objective 26:** Improve coordination and resolve areas of application and gaps in the multisectoral response to HIV and AIDS to include resource management

No appropriate abstracts were submitted

**Strategic objective 27:** Advocate for mainstreaming effective policy implementation and fighting stigma and discrimination

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<tr>
<th>230.</th>
<th>TITLE:</th>
<th>THE ROLE OF FAITH-BASED ORGANIZATION'S IN HIV/AIDS ADVOCACY AND POLICYMAKING</th>
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<tr>
<td><strong>Authors:</strong></td>
<td>Taylor A. R. T</td>
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<td><strong>Year:</strong></td>
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<td><strong>Status:</strong></td>
<td>Published in The XV International AIDS Conference: Abstract no. MoPeE4085</td>
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<tr>
<td><strong>Study Site(s):</strong></td>
<td>South Africa, Zambia, and Haiti</td>
<td></td>
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<tr>
<td><strong>Source:</strong></td>
<td>The XV International AIDS Conference: Abstract no. MoPeE4085</td>
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FBO's are already playing a key role in raising money and providing services around HIV/AIDS prevention, care and treatment across the world. However, many religious organizations have been slow or reluctant to address the political issues around AIDS due to fears and stigma around sex, sexuality, and drug use. FBO's have played instrumental roles in advocating on behalf of marginalized and impoverished people and in social justice movements.

**Objectives:** This presentation will explore the barriers, opportunities, and experiences of FBO's in HIV/AIDS advocacy. The presentation will explore the importance of FBO's around public policy and legislation and the implications of FBO involvement in such advocacy efforts. Due to the experience and nationality of the presenter, the presentation will focus on the role churches have played in the United States around HIV/AIDS advocacy. However, the presentation will also examine case studies of FBO involvement in South Africa, Zambia, and Haiti. FBO's, particularly predominantly white, evangelical leaders and denominations in the U.S. played a crucial role in influencing and shaping the President's Emergency AIDS Relief Plan, particularly in terms of pressuring Congress to include abstinence only language in Congressional bills. We will explore the implications of religious beliefs on HIV/AIDS policymaking and programming.

**Results:** We will also analyse a case study from a coalition of black churches in Boston through the Black Ministerial Alliance that elected to make HIV/AIDS one of its core
committees after an advocacy campaign was conducted from within the coalition. The Coalition has been vocal in the state of Massachusetts and in the city of Boston around HIV/AIDS issues. We recommend that FBO's develop policy statements surrounding HIV/AIDS and that they work increasingly in collaboration with other advocates to bring greater moral urgency to the fight against HIV/AIDS.

231. TITLE: HIV/AIDS IMPACT ON THE ZAMBIAN HEALTH SYSTEM
Authors: Sundewall J.1, Cheelo C.2, Mphuka C.3 et al
Year: 2005
Org/Inst: 1Ministry of Health, 2Ministry of Finance and 3National AIDS Council/NAC
Study Site(s): Mufulira and Siavonga

Background: HIV/AIDS (HIV) impact on health systems is becoming increasingly recognized. It is not contested that the pandemic is placing added burden to already overstretched public health care systems in low-income countries. There is however limited evidence on where and how HIV impacts health systems. We report findings from a pilot study conducted in Zambia which tried to identify areas of impact of HIV on the Zambian public health care system. The study focused on the impact on the organization and management of the health system.

Methodology: The main method of data collection was semi structured interviews with national and district level respondents. At national level, representatives of donor agencies, government of Zambia (Ministry of Health, Ministry of Finance and National AIDS Council/NAC), NGOs and civil society organizations were conducted. Data was also collected at district level where district officials and NGOs in two districts (Mufulira and Siavonga) were interviewed. In addition to the interviews, an extensive review of policy documents relating to HIV-programmes and structures was conducted.

Results: The study revealed several interesting findings. It indicated that power relationships between government structures were sometimes unclear. For example, the relationship and division of responsibility between the MoH and the NAC. Also, the mandate and capability of the National AIDS Council to coordinate a multi-sectoral response to HIV was questioned. Secondly, there were indications from the study that there are difficulties when it comes to coordinating efforts for HIV, especially at district level. Respondents indicated that coordination of HIV-efforts seem to vary between district and between programmes.

Conclusions: We are reluctant to draw strong conclusions from this pilot study. We, however, identified important areas for future research, namely how coordination of donor activities in HIV is undertaken, and the role of NAC in particular and the health sector in general in coordinating multi-sectoral responses to HIV.

232. TITLE: GENDER-BASED ABUSES AND WOMEN’S HIV TREATMENT IN ZAMBIA
Authors: Human Rights Watch
Year: 2006-2007
Description: Zambia is one of many countries setting ambitious targets for rapidly scaling up antiretroviral treatment for HIV/AIDS and is making impressive progress. It is addressing a range of obstacles to treatment and receiving substantial donor support to overcome them. However, women's unequal status in Zambian society gravely undermines their ability to access and adhere to antiretroviral treatment (ART), and the government is paying little if any attention to the gender dimension of treatment, especially the impact of entrenched discrimination and gender-based violence and abuse.

Objectives: Human Rights Watch investigated the negative impact of gender-based human rights abuses on women's access and adherence to HIV treatment in two provinces in Zambia, Lusaka and the Copperbelt, in 2006 and 2007. Women there told Human Rights Watch how beatings and rapes by their intimate partners, emotional and verbal abuse, loss of property upon divorce or death of a spouse, and fear of such abuses affected their access and adherence to HIV treatment. The abuses thwarted their ability to seek HIV information and testing, discouraged them from disclosing their HIV status to partners, delayed their pursuit of treatment, and hampered their ability to adhere to HIV treatment regimens.

Recommendations:
To the Zambia National Assembly
- Ensure that as the draft constitution is finalized, provisions on equality before the law regardless of sex, and provisions prohibiting any law, culture, custom, or tradition that undermine the dignity, welfare, interest or status of women or men are retained in the final version.
- Adopt specific legislation to prevent and remedy sexual and domestic violence. This should include civil and criminal judicial remedies, and the provision of services to survivors.

To the Ministry of Justice and the Gender in Development Division
- Support efforts to review and transform discriminatory aspects of customary law.

To the Cabinet Committee on AIDS, the National AIDS Council, the Ministry of Health, and the Gender in Development Division
- Facilitate the establishment and implementation of programs in the healthcare system to address gender-based abuses, as follows:
  - Establish a multi-sectoral taskforce that would study different models for addressing gender-based abuses in health settings (see Appendix II), devise a model that is effective and appropriate for Zambia, pilot it, and implement it in the nine provinces.

Integrate initiatives addressing gender-based abuses, especially gender-based violence, into ART and HIV programs.

233. TITLE: THE IMPACT OF HIV/AIDS AND AIDS POLICIES ON WORKERS AND CAREGIVERS OF FBOS AND NGOS IN ZAMBIA AND ZIMBABWE
Authors: Chishimba S. Zanamwe L. Chifwepa K. et al
Year: 2004
Background: Faith Based Organisations (FBOs) and Non-governmental Organisations (NGOs) have pioneered advocacy for workplace HIV/AIDS policies. However, there are a few NGOs and FBOs that have workplace policies in their organisations to protect employees and caregivers. A study conducted between January and April 2004 in Zambia and Zimbabwe by the Catholic Centre for Justice Development and Peace, and Development Associates sought to establish the impact of HIV/AIDS and policies on the performance of organizations and coping mechanisms.

Methodology: A sample size of 40 FBOs and NGOs was selected. Structured questionnaires, Focus Group Discussions and in-depth interviews with key informants were used for data collection. Quantitative analysis was done using SPSS.

Results: 75% of organizations did not have AIDS policies in both countries. For the few organizations with workplace policies, 33.3% and 100% of employees reported that employers terminated contracts of employees sick of suspected HIV/AIDS in Zambia and Zimbabwe respectively. 30.8% of respondents in Zambia reported that sex took place with fellow employees, while 59.5% indicated that sexual partners were outside the workplace. AIDS related mortality; 43.9% and 18.5% of organizations in Zambia and Zimbabwe respectively reported loss of at least one employee to HIV/AIDS (55% of employees who died were males). 92.7% and 67.6% of organizations in Zambia and Zimbabwe respectively reported employee absenteeism related to HIV/AIDS funerals and sicknesses of their relatives. Interventions reported included awareness campaigns and referrals for VCT.

Conclusions: Even though NGOs have pioneered HIV/AIDS prevention, care and support for communities, interventions that target their own employees and volunteers are either inadequate or non-existent. This presents a silent crisis, which would have debilitating impacts in future. FBOs and NGOs need to set the pace in order to inspire the private sector and governments to take action.
Background: The Global Fund to Fight AIDS, Tuberculosis and Malaria is a new financial instrument providing large resources to disease afflicted countries. 60% of funds have been approved for HIV/AIDS control, most to Africa. While too early to assess its impact, we report findings on the functioning of new country structures, which will be critical to the Fund's success.

Methodology: Semi-structured interviews were conducted in mid 2003 with 137 national level stakeholder representatives, including 65% of Country Co-ordination Mechanism (CCM) members in Mozambique, Tanzania, Uganda and Zambia. Further data collection and interviews will be conducted, February-May 2004.

Results: CCMs were not yet well embedded in country systems, partly due to uncertainties around their purpose once Fund support had been approved. Competitive tensions, as well as lack of clarity, were evident in their remit vis-à-vis national AIDS authorities. The Global Fund was supporting the development of new partnerships between government, private-for-profit and civil society sectors, although the latter's expectations were difficult to contain and mistrust among partners was evident in some settings. The Fund was also catalysing the development of country policies around access to antiretroviral treatment. Governments were attempting to manage multiple new HIV/AIDS financing initiatives, including World Bank MAP and Clinton Foundation which, if well co-ordinated, could improve treatment access and HIV control.

Conclusions: Greater coherence and co-ordination among financing and technical agencies are required, if global and country HIV/AIDS goals are to be reached. These and further findings from field work in 2004 (on CCM, Principal Recipient, disbursement and Local Fund Agent processes) will provide important early lessons on policy and systems opportunities and obstacles to the Global Fund's success.

235. Title: A REVIEW OF POLICIES, GUIDELINES AND PROGRAMS IN VOLUNTARY COUNSELING AND TESTING (VCT) IN EAST, CENTRAL, AND SOUTHERN AFRICA (ECSA)
Authors: Ndyanabangi B. A
Year: 2002
Org/Inst: -
Status: Published in The XV International AIDS Conference: Abstract no. WeOrE1265
Study Site(s): Kenya, Malawi, Uganda, Zambia, and Zimbabwe.
Source: The XV International AIDS Conference: Abstract no. WeOrE1265

Background: The burden of HIV is beyond what the national health systems in ECSA can handle, and efforts to scale up effective programs have intensified. VCT is recognized as central to combating the epidemic through prevention and care. Access to antiretroviral therapy is increasing; however, only about 10% of people who are infected know their status and can take advantage of therapy. This review provides an overview of VCT policies, programs, and guidelines available in ECSA.

Methodology: A study team elicited responses from national AIDS program managers using a detailed questionnaire; they interviewed VCT staff and primary stakeholders, conducted an literature review on VCT in ECSA, and visited program in Kenya, Malawi, Uganda, Zambia, and Zimbabwe.
Results: Most HIV testing is initiated not by the client but by employers, insurers, or institutions of higher learning. In their national HIV/AIDS policy documents, ECSA countries recognize that VCT is critical to controlling HIV/AIDS, but only Botswana, Mauritius, Uganda, and Zimbabwe have national VCT policies. Most of the guidelines were developed by nongovernmental organizations and are not comprehensive. Except in Kenya, and soon, Malawi, Swaziland, and Uganda, no guidelines cover all aspects of VCT. Except for Mauritius and Seychelles, where VCT services are offered in integrated sites, countries are using a combination of VCT models and integrating VCT into other health services.

Conclusions: Issues that lend themselves to regional collaboration include harmonization of policies; guidelines for counselling, testing, data collection, and training curricula; procurement of test kits; and resource mobilization. Other issues include creating awareness and demand for VCT, strengthening human resources and infrastructure, and ensuring high quality service. The focus will be on scaling up and providing high-quality VCT service, strengthening post-test support services, and monitoring the quality of care.

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236. TITLE: REDUCTION IN PRE-TERM DELIVERY AND NEONATAL MORTALITY AFTER THE INTRODUCTION OF ANTENATAL CO-TRIMOXAZOLE PROPHYLAXIS AMONG HIV-INFECTED WOMEN WITH LOW CD4 CELL COUNTS.
Authors: Ming Li¹, Jesus F² and Salazar-Gonzalez³ et al
Year: 2006
Org/Inst: Departments of Surgery,¹ Medicine, Duke University Medical Center, Durham, North Carolina 27710,¹⁴
Department of Medicine, University of Alabama, Birmingham, Alabama 35294,² Department of Pathology and Laboratory Medicine, Emory University, Atlanta, Georgia 30329,³
Study Site(s): Lusaka

Cotrimoxazole prophylaxis is recommended for subgroups of human immunodeficiency virus (HIV)-infected adults and children to reduce all-cause morbidity and mortality. We investigated whether antenatal cotrimoxazole prophylaxis begun during pregnancy for HIV-infected pregnant women with low CD4 cell counts would affect birth outcomes.

Methodology: Cotrimoxazole prophylaxis was introduced as a routine component of antenatal care for HIV-infected women with CD4 cell counts <200 cells/ micro L during the course of a trial of mother-to-child HIV transmission in Lusaka, Zambia. Rates of pre-term delivery, low birth weight, and neonatal mortality were compared for women with low CD4 cell counts before and after its introduction.

Results: Among 255 women with CD4 cell counts <200 cells/ micro L, the percentage of pre-term births (≤ 34 weeks of gestation) was lower (odds ratio [OR], 0.49 [95% confidence interval {CI}, 0.24-0.98]) after cotrimoxazole prophylaxis was introduced than before; there was a significant decrease in neonatal mortality (9% to 0%; P=.01) and a trend toward increased birth weight (beta =114 g [95% CI, -42 to 271 g]). In contrast, there were no significant changes in these parameters over the same time interval among women with CD4 cell counts > or =200 cells/ micro Liter.
Conclusion: Antenatal provision of cotrimoxazole for HIV-infected pregnant women with low CD4 cell counts may have indirect benefits for neonatal health.
### APPENDICES

#### I. LIST OF HIV AND AIDS, STIs AND TB STUDIES REVIEWED AND APPROVED BY RESEARCH ETHICS COMMITTEES

**LIST OF RESEARCH PROPOSALS REVIEWED AND APPROVED BY THE UNIVERSITY OF ZAMBIA (UNZA) 2003-2007**

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<td>Elizabeth Stringer, Christine Kaseba</td>
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<td>Steward Reid</td>
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<td><strong>PRESENTERS</strong></td>
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<tr>
<td>Dr. A. M. Ngwengwe</td>
<td>Senior Lecturer/ Statistician</td>
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<tr>
<td>Dr. M. Macwan’gi</td>
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<tr>
<td>Mr. B. Phiri</td>
<td>Science and Technology Officer/Associate Consultant</td>
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<tr>
<td>Prof. J.T. Karashani</td>
<td>HOD Anatomy – Sch of Med, UNZA</td>
<td>UNZA, SOM</td>
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<td>Mr. J. Mkandawire</td>
<td>Webmaster</td>
<td>MOH</td>
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<td>Mr. G. Chitalu</td>
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