SAC 03B - Meanings of Romantic Love among Young Swazi Adults and Implications for HIV Risk Behaviors

Author: Allison Ruark, PhD

Objective: The topic of love and emotional attachment has been largely ignored by social science research of the HIV/AIDS epidemic, in spite of the obvious linkages between these topics and sexual behaviors which may place men and women at risk of HIV/AIDS. This research explored understandings of love among young Swazi adults.

Methods: Fourteen Swazi men and 14 Swazi women between the ages of 20 and 39 were recruited from central Mbabane. They discussed their life histories, sexual relationships, and ideas about what made a good sexual relationship through 117 in-depth interviews (with three to five interviews per participant conducted over an average of 9 months). In addition, four focus group discussions (FGDs) were held with 20 women and 13 men and focused on relationship satisfaction. Interviews and FGDs were recorded, transcribed and translated from siSwati into English, and coded using a Grounded Theory and narrative analysis approach.

Results: Both men and women described love as being the most important characteristic of a good relationship, and love was the most frequent answer to the question of what motivated sexual partnerships. Love was felt to be closely related to characteristics including sexual exclusivity, trust, and respect. Both men and women distinguished between love-based and lust-based sexual partnerships although some participants also believed that love did not require sexual exclusivity. Some women communicated scepticism, based on their life experiences, about whether attaining love was possible. Love was felt to be communicated through material support and exchange, both within family relationships and sexual and romantic relationships, and participants' understandings of these exchanges defied conventional understandings of "transactional sex".

Conclusion: Seeking love can motivate risky relationships (such as concurrent sexual partnerships or tolerating a partner's concurrency), while being in love can motivate risk behaviors (such as a lack of condom use or failure to communicate about HIV status and testing). HIV prevention interventions which target risky sexual behaviors should ground such interventions within an understanding of the emotional context of sexual relationships, including the importance to young Swazi adults of giving and receiving love.

SAC 11B - Assessing the sexual behaviour and HIV knowledge among students in Swaziland: Are 'all in' to end adolescent AIDS?

Kevin Makadzange[1] Mildred Xaba[2] John Hlophe[3] Rejoice Nkambule[2] Tigest Ketsela Mengestu[1]
Sub-theme: Social sciences
Objectives: Adolescents and young people are less likely to be vulnerable to HIV when they are offered relevant gender-sensitive prevention information, skills and services in an enabling and protective environment. The study therefore aimed to assess sexual behaviours and HIV knowledge among high school students aged 13 to 17 years.
Methods: A cross sectional descriptive school based national survey was conducted among students in forms 1 to 5. A two-stage cluster sample design was used to produce data representative of all students in Forms 1-5 in Swaziland.
Results: A total of 3, 680 students from 25 schools took part in the survey. A total of 957 (28%) reported being sexually active with 25% of them starting before the age of 14 years. The majority reported taking alcohol or other drugs before engaging in sex; 12% had slept with more than 2 people in their life time and one third never used a condom during their last sexual encounter. About 40% of the students had never received information on the benefits of not having sexual intercourse or how to avoid HIV infection or AIDS in any of their classes. A total of 1 865 (51%) had never been taught where to get tested for HIV infection and 38% of the students never talked about the disease with their parents or guardians. In addition 44 % of the students did not know that a pregnant

woman with HIV or AIDS can infect her unborn child whereas 26% did not know that a health looking person can be infected with HIV .
Conclusion: The evidence reveals that young people engage in risk sexual behaviours. Though HIV prevention and control messages are being disseminated through schools some young people are being left out. Efforts to improve this situation including use of qualitative research studies to understand the reasons behind the risk behaviours and some children being missed are urgently needed.

SAC 31B- Food insecurity increases risk of intimate partner violence among pregnant women in Swaziland

Rebecca Fielding-Miller, PhD MSPH; University of California, San Diego

Introduction: Women who experience food insecurity may be more likely to experience intimate partner violence (IPV) and other forms of gender based violence. Qualitative work in southern Africa suggests that food insecurity may drive women to risky sexual encounters and partnerships, or inhibit their ability to exit an abusive relationship. However, to date there is very little quantitative evidence exploring the association between food security and IPV, or mechanisms that may mediate this relationship.

Methods: We interviewed 400 women accessing antenatal care in Swaziland using audio computer-assisted self-interviews. Women were asked about motives for sexual relations with their most recent partner and experiences with food insecurity. We then used structural equation modeling to measure the association between food security and intimate partner violence, with constrained relationship agency as a hypothesized mediator.

Results: Having sex with a partner for reasons of poverty, money, hunger, fear a partner would leave, violence, or being forced by parents represented a single latent construct, which we labeled constrained agency. IPV was independently associated with both constrained agency (standardized coefficient 0.162, $p = .05$), and lower levels of food security (standardized coefficient -.297, $p<.001$). Higher food security was associated with less constrained agency (standardized coefficient -.463, $p<.001$). Rural residence and lower education were both associated with decreased food security.

Conclusion: The effects of food security on relationship agency mediate, but do not completely account for, the link between food security and IPV. Women experiencing food insecurity may be at increased risk of IPV for a number of reasons. Food insecurity may result in less relationship agency, or IPV may precipitate food insecurity. The relationship between food security, agency, and IPV may also be cyclical. More work in the region is needed to fully understand this relationship, however our findings suggest that efforts to integrate violence prevention into broader development efforts likely have greater potential than efforts that address these targets separately.

SAC 36B - The power of Social Behaviour Change Communication in Engaging Men for Increased uptake of Healthcare services. A case of Kwakha Indvodza

Author: Kwakha Indvodza

Project – Kwakha Indvodza is a unique project that provides a mentoring experience to boys and young men who have been denied, through absenteeism, a positive masculine influence in their lives. KI's provides a unique mentoring experience aimed at vulnerable young men (aged 15 to 25) and structured around three core areas of adolescent male development: financial independence, male health, and social responsibility. By combining daily and weekly activities with educational and community-based events, we are working to create a healthy, resilient and more equal generation of Swazi youth.

Issue –Whilst there has been increased attention focused on the basic human needs and psychosocial support of OVC and adolescents in Swaziland, there remains a significant gender-gap in programming, with the majority of interventions aimed at the girl child. As much as women are at risk to a number of social and health related problems they do not exist in isolation and yet programming rarely considers the male influences on the decisions made by women. Evidence suggests that the vulnerability is exacerbated by key drivers such as promiscuity, poor male circumcision rate at 48%, low condom usage at 54% and only 62.3% know their HIV status (MICS, 2014), a situation which if left unattended through gender blind programming will seriously affect both genders, including women, negatively. Kwakha Indvodza is breaking ground by implementing innovative male-focussed programs.

Results: KI has a comprehensive package of interventions, carefully designed at sculpting a well-balanced, healthy, socially minded and successful young man who can lead his home and community into the future. The programme areas and results are as follows:

1. Male Health: This has increased knowledge levels acquired from various facilitators coupled with positive peer pressure the uptake of HTC, condom efficacy and uptake as well as other HIV prevention topics.
2. Social Entrepreneurship: Youths have been equipped with various entrepreneurial and business management skills. As a result of their hard work, the participants were able to earn a total of over E1000 each from their initial projects.

3. Information Mentoring Centre (IMC): A key access point for information and health service referrals. With a weeklong activity schedule, the first days of the week focus on mathematics and science. Towards the end of the week the boys are treated to edutainment activities, which help demystify a number of HIV related misconceptions.

Lessons Learned:

- Men and boys are more willing to discuss health issues than usually assumed, given that the appropriate space is created.
- SRHR product knowledge amongst KI young men is much higher than the national average.
- Stigma and discrimination against women remains high.
- Current health care facilities are not conducive for men, thus many participants report avoiding the clinic.
- Providing health services in a community-group setting and immediately after sensitization shows increased convention rates.
- Social entrepreneurship empowers and mobilizes men and boys for other activities.

SAC 46B - A multi-sectoral human development-focused HIV response is key to attaining health for all

Authors
Michelle Brear, Pinky Shabangu, Karin Hammarberg, Jane Fisher

Theme
Social sciences (human rights)

Objective
The Swaziland Government recognises health as a human right that can only be achieved with a multi-sectoral, human development-focused human immunodeficiency virus (HIV) response. However international donors typically fund 'vertical' (HIV-specific) interventions that are short-term and fail to address the biopsychosocial determinants of health and HIV risk. People who have first-hand experience of the biopsychosocial contexts in which Swaziland's high HIV prevalence occurs, have unique knowledge that can inform human development-focused HIV responses. The objective of our presentation is to document and learn from "community voices", regarding the effects of existing, and priorities for future, human development-focused HIV responses.

Methods
Following ethics approval, we conducted mixed-methods, participatory action research in a rural Swazi community in 2013. It involved a household census and focus group discussions (FGDs) about health-related matters, with male and female adults, youth and children, selected randomly from a sampling frame of household members identified by in the census. Descriptive statistical analysis of census data are integrated with and supplement the results of interpretive analysis of FGDs.

Results
The FGD participants considered recent multi-sectoral, human development interventions improved health and life. These included a preschool and primary school, neighbourhood care points, a livestock 'dip tank' and electricity and water infrastructure. However some facilities and services were not accessible to all (e.g. 69% of household census respondents reported not having piped water). The FGD participants perceived further human development interventions were needed to attain health for all, including: accessible health clinics and high schools; improved transport infrastructure and services; income-generating and/or employment opportunities; clean, piped water for domestic and agricultural use; and improved household infrastructure (including toilets). The participants perceived community members wanted to contribute labour-power but needed external financial assistance to access material resources.

Conclusion
"Community voices" supported, and indicated that the world can learn from, the Swaziland Government's multi-sectoral, human development-focused HIV response. Extending multi-sectoral human development approaches is essential for attaining the human right to health.

SAC 47B - Using Young People's Stories to Inform Interventions to Improve Treatment Outcomes Among HIV+ Adolescents in Swaziland

Topic: Using Young People's Stories to Inform Interventions to Improve Treatment Outcomes Among HIV+ Adolescents in Swaziland

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Background
This study used stories written by young people to examine stigmatizing attitudes towards HIV/AIDS among adolescents and youth in Swaziland. Data was collected among 449 students who participated in a youth writing contest on HIV/AIDS and sexuality.

Method
Evidence was collected from stories contributed by Swazi adolescents and youth to the 2014-2015 Global Dialogues Trust youth story writing contest. The contest invited young people to come up with an original idea for a short film about HIV/AIDS, sexuality, violence against women, or alcohol, drugs & sex. They were asked to share a true story they had experienced. The scripts were used to increase understanding of stigma faced by adolescents living with HIV. Individuals were selected to review the scripts and separate them by their themes to identify the different problems that young people experience around HIV/AIDS.

Results Young people from 40 schools, 10 from each school, were mobilized to participate in the contest through handwritten scripts. 800 leaflets were distributed in the 40 schools. 449 entries were collected from participating students. 10% of the stories were written from the perspective of an ALHIV. The stories described how the protagonists were stigmatized because their parents were either living with HIV or had died from AIDS. They indicated that they experienced the stigma from community members and were humiliated by teachers and their peers. Furthermore the stories revealed that stigma affected their adherence to treatment and even disclosure of their HIV status. Following the lessons learnt from the stories, a longitudinal survey is being conducted in Swaziland and it will investigate the effectiveness of teen clubs in improving treatment outcomes among HIV+ adolescents in Swaziland.

The recommendations of the survey will assist in designing a teen club model that will address the challenge of stigma and discrimination among HIV+ adolescents/youth. This will result in increased adherence to treatment and disclosure.

Conclusion: HIV related stigma is a dangerous phenomenon as it has the potential interfere with other treatment outcomes that include adherence to treatment and disclosure. Young people out of fear of being stigmatized can react by not disclosing their HIV status to partners and even hide their treatment. Because of this they can default treatment and Swaziland is likely to have a new society of HIV+ young people who are spreading a drug resistant HI Virus.

SAC 52B - Power, agency and choice: People living with HIV's initiation of early antiretroviral therapy in the context of practitioner-patient relationships in Shiselweni, Swaziland

*****Shona Horter[1,2], Alison Wringe[2], Velibanti Dlamini[1], Bernhard Kerschberger[1], Sikhathele Mazibuko[3], Barbara Rusch[4]
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Ethics: Ethics approval was obtained from the Swaziland Ethics Committee (SEC) and MSF Ethics Review Board (ERB).
340 words

Sub-theme: Social Sciences
Objective: The World Health Organisation now recommends immediate antiretroviral therapy (ART) initiation after a HIV diagnosis for all adults, following evidence of associated health benefits and transmission reduction. Swaziland is one of the first countries to pilot early access to ART (EAA) for all adults diagnosed with HIV under routine programme conditions. A qualitative study was conducted to explore people living with HIV's (PLHIV) experiences with EAA in Shiselweni, Swaziland.
Methods: Médecins sans Frontières and the Swaziland Ministry of Health started EAA in Shiselweni in October 2014. Participants were recruited purposively from the pilot cohort, to include those otherwise ineligible for ART (e.g. with CD4 counts above 350), and those who had, and had not, initiated ART. 15 in-depth interviews were conducted with individuals newly diagnosed with HIV. Interview transcripts were analysed thematically using coding, with constant comparison of patterns and concepts within and between cases, and discrepancies from majority themes were actively sought. Nvivo 11 aided analysis.
Results: Participants described the need to 'surrender to' and 'obey' the 'law' of health services, demonstrating subservience in their relationships with providers. There was an expectation that patients should follow health advice as prescribed, with the 'experts' being deemed as responsible for patients' lives. As a result, patients generally exhibited limited autonomy regarding the decision to initiate early ART, with some wanting to do as they were advised, as well as some feeling unable to refuse ART. However, patients' agency could break the bounds of these typically hierarchical practitioner-patient relationships, and some participants would exert their resistance of this power, for example by reportedly agreeing to initiate ART to providers and then not taking the drugs.
Conclusions: The power dynamics within practitioner-patient relationships can undermine patients' autonomy in deciding whether to initiate early ART. Some patients bow to the EAA rules and expectations, with many initiating early ART accordingly; and others demonstrate ways to resist them. Further research among those who initiate early ART is needed, to explore how these issues will influence their on-going engagement with treatment and care over time.

SAC 53B - The ART of acceptance: acceptance, denial and linkage to HIV care in Shiselweni, Swaziland: a qualitative study

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Ethics: Ethics approval was obtained from the Swaziland Ethics Committee (SEC) and MSF Ethics Review Board (ERB).
350 words
Sub-theme: Social Sciences
Objective: Timely access to antiretroviral therapy (ART), adherence and retention in care can improve individuals' health outcomes and reduce transmission. Médecins sans Frontières and the Ministry of Health provide decentralised HIV and TB care in Shiselweni, southern Swaziland. Community-based HIV testing services (HTS) have achieved high coverage but relatively low rates of linkage to HIV care, reasons for which are insufficiently understood. A qualitative study was conducted to explore social factors influencing linkage to HIV care for those testing HIV-positive via community-based HTS.
Methods: Participants were sampled purposively to explore a range of linkage experiences among both genders and different age groups. Interviews were conducted with 28 people living with HIV (PLHIV; linked and not linked to care) and 11 health practitioners. Data were analysed thematically to identify emergent patterns and categories, using Nvivo 10. Principles of grounded theory were applied, including constant comparison of findings within and between cases, raising codes to a conceptual level and inductively generating theory from participant accounts.
Results: The process of HIV status acceptance or denial had a strong influence on patients' health-seeking behaviours, and their linkage to care. This process was non-linear and varied temporally, with some individuals experiencing denial for extended periods of time. Denial was linked to perceptions of HIV risk, with those who did not perceive themselves to be at risk less likely to expect and therefore be prepared for a positive result. Status disclosure was seen as supporting linkage and often took place following acceptance of HIV status. HIV status acceptance motivated health-seeking and tended to be accompanied by a perceived need for, and positive value placed on HIV health care. More than half of 'not linked' participants reported having linked to care.
Conclusions: How people process a HIV-positive result could fundamentally influence their engagement with HIV treatment and care. These findings reinforce the need for an individualised and tailored approach to HIV testing and post-test follow-up, including counselling (potentially over multiple sessions) to support acceptance and disclosure. This is particularly relevant in light of 90:90:90 targets and the need to better support PLHIV to engage with HIV treatment and care following diagnosis.

SAC 55B - HIV-positive individuals' experiences with early antiretroviral therapy in Shiselweni, Swaziland: maintaining health and a hidden HIV status

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Ethics: Ethics approval was obtained from the Swaziland Ethics Committee (SEC) and MSF Ethics Review Board (ERB).
350 words
Sub-theme: Social Sciences
Objective: 'Universal Test and Treat' could contribute to the normalisation of HIV, with suggestions that HIV-related stigma may reduce if uptake is high. However, it is unknown how asymptomatic people living with HIV (PLHIV) will respond to earlier treatment initiation. Médecins sans Frontières and Swaziland Ministry of Health began piloting early access to ART (EAA) under routine programme conditions in Shiselweni, in October 2014. A qualitative study was conducted to explore PLHIV's experiences with EAA in this setting.
Methods: Participants with CD4 counts over 350, who would not previously have been eligible for ART, were recruited purposively from the cohort of patients who had recently been diagnosed with HIV and had been offered EAA. 15 in-depth interviews were conducted with PLHIV who had initiated ART and those who had not. Interviews were translated and transcribed, then analysed thematically using coding. Analysis drew upon principles of grounded theory including constant comparison, and used Nvivo 11 as an analytic aid.
Results: In the absence of biomedically recognised markers of HIV symptoms (i.e. amongst those with high CD4 counts and low WHO disease stage), some patients described embodied signs of HIV, for example feeling something was wrong in their veins, which warned them of the potential for imminent health deterioration. Fear of death and the desire to maintain good health were said to motivate patients to initiate early ART. Participants described the importance of maintaining a hidden HIV status, with early ART offering the potential to support this through preventing the development of HIV-related symptoms. However, it could also be potentially exposing, and engagement with HIV services could cause patients to anticipate stigma expressed through fear of being discovered as on ART (and therefore HIV positive) by the wider community.
Conclusions: Some PLHIV were motivated by anticipated health benefits from earlier ART initiation, and identified signs of HIV in their bodies, despite being 'asymptomatic'. Discourses of stigma remained pervasive throughout PLHIVs' reasoning for embracing or rejecting the initiation of ART before illness onset. Engagement in HIV care among PLHIV who initiate early ART may remain fragile while anticipated and felt stigma are present in their care-seeking narratives.

SAC 56B - Empowering In-School Adolescent Girls for Prevention of Sexual and Gender Based Violence (SGBV) and HIV in Swaziland

Sub Theme: HIV Prevention – Social Sciences

Authors :C Manzini-Henwood[1], Chi-Chi Undie, J Keesbury and Francis Onyango[2]
Affiliations
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Objective
There is evidence of direct and indirect links between SGBV and HIV, with violence being a cause and outcome of HIV infection. In Swaziland 48% of females aged 13-24 years are reported having experienced sexual violence and only 37% of adolescent females report their first sexual experience was voluntary. HIV risk among girls increases across adolescence, with a prevalence of 5% compared to 3% among male counterparts.
This study aimed to assess the effectiveness of a girls' empowerment intervention in changing in-school girls' knowledge, attitudes and practices related to SGBV.

Methods

A pre- and post-intervention comprising baseline and endline self- administered questionnaires was used without a comparison group in three secondary schools in Lubombo Region. In each school, girls aged 16 and above participated in interactive weekly girls' clubs facilitated by a trained mentor guided by the SWAGAA Girls Empowerment Club manual.

Results

There were significant improvements in SGBV awareness among girls. Students reporting ever experiencing SGBV either at school or in the community increased from 50% to 67%.
However, there was no significant change in the proportion of girls that indicated they would report sexual comments by a teacher to authority figures (from 38% to 40%); nor in the proportion of girls that reported they would decline sexual advances from a student (69% at baseline and endline) or from a teacher (47% at baseline and 43% at endline).

Conclusions

The study findings show increased abuse reporting among in-school girls, and demonstrate the ability of the model to contribute to improved SGBV outcomes and in turn HIV Prevention among adolescent girls. While Girls' clubs were effective in increasing their awareness and reporting of SGBV, they were less successful in influencing decline of sexual advances from fellow students or teachers. The model could further be strengthened by incorporating components for enhancing self-efficacy among girls.

SAC 57B - A Women's Empowerment Program for improved Gender, Economic Empowerment, care and support for OVC in Swaziland

Authors: Choice Makufa, Daisy Kisyombe, Nicole Miller
Sub Theme: Social Sciences: Impact Mitigation

Project:
The WORTH project aimed to understand vulnerabilities and mitigate the impact of gender inequalities and socio-economic disparities in OVC families that increase women's vulnerability to HIV infection. Groups of 18-25 women saved and loaned out money for 18 months. Supportive supervision and mentorship on community banking, micro enterprises, gender norms, GBV, and OVC support was provided by six trained Empowerment Workers implementing in Lubulini, Nkilongo and Somntongo Tinkhundla.

Issue:
Social and structural determinants that increase women's vulnerability to HIV include: majority of new HIV infections (62%) occur in females; increasing trend in female-headed households 40%(1986) to 48%(2006) and likely to be poorer (63% live below the poverty line); fewer women (44%) are gainfully employed and have less control over the money they earn.

Results:
Data was collected at baseline, during implementation, and at endline. 38 WORTH groups were formed (n=494). Endline data showed an increase in women with savings, earnings and loan uptake and repayment.

Socio-economic factor		**Baseline**	**End line**
Micro Enterprise earnings	E501-E1000 E1001-E5000 +E5000	(10%) (3%) (3%)	(18%) (12%) (5%)

Access to clinics increased by 10 points and reduced morbidity among OVC from 14.7% to 4%. OVC reporting "feeling confident" increased from 46.8% to 61.4%. On the *Progress out of Poverty Index* indicators, an increase in use of electricity for cooking, and acquisition of assets from 5% to 19.8%. The table below shows changes in gender attitudes:

Gender Attitude	**Baseline**	**End line**
Reject GBV due to economic dependency	48%	60.9%
Strongly disagreed that wife abuse by man is a private matter	47%	50.4%
Strongly disagreed that they engage in sex for economic gain.	35%	42.5%
Strongly disagreed that man's violence against his children is a private matter	59.7%	64.2%
Can't negotiate safer sex because of economic dependency	68.2%	40%

Lessons Learnt:
WORTH interventions have shown positive trends towards improving socio- economic status of women and can be used as a platform to reduce vulnerability to HIV infection for women and improve outcomes for OVC.

SAC 58B - Voluntary Medical Male Circumcision Attitudes and Beliefs

Authors: Bindza Ginindza, Daisy Kisyombe, Nicole Miller

Sub-theme: Behavioral and Cultural influences

Objectives: The objective was to find out the current barriers to VMMC to inform the demand creation activities by identifying clients' beliefs, references and convenient locations for VMMC. The survey explored information gaps, internal and external attitudes and beliefs about male circumcision and provide a benchmark for the design of the demand creation activities in response to barriers for male circumcision.

Methods: Qualitative and quantitative methods of data collection were used. These included questionnaires with 1014 boys and men aged 10-29 years old. 5 focus group discussions were held with 30 women and 55 men. The sample was stratified by Inkhundla, School, Community based on the proportion of population of boys and young men in schools. Data collectors were trained on the data collection tools, data ethics and child protection. Data collection questionnaires were in both English and SiSwati. The quantitative data was collected using mobile technology through the use of mobile survey software and existing cellular networks to provide an electronic platform for data collection and allow for immediate data upload. Data analysis used SPSS V23 and MAXQDA.

Results: Results demonstrated that participants had concerns around changing messaging from the time VMMC was introduced to now. "When MC was first introduced, the message was that you will not contract HIV. It later changed that you can contract HIV, it just reduces the risk." Other concerns were around not having proof that VMMC does not reduce libido. The men requested testimony from women who have slept with a man before and after circumcision. Some men also felt VMMC was "useless" since you have to use the condoms after circumcision. The women appreciated that VMMC decreases contracting STIs. From the total of 1014, 570 were not circumcised. 22% mentioned that they do not want to be circumcised and 22% said yes they do want. The preferable time for circumcision was school holidays and only 9% stated that they do not want to be circumcised because of pain.

Conclusion: Consistency around VMMC messaging among implementers is key to uptake. Use of role models (VMMC champions), including women, can help alleviate fears and concerns around circumcision.

SAC 60B - Constrained agency as the risk factor for intimate partner violence in transactional sex relationships

Author: Rebecca Fielding-Miller, PhD MSPH

Introduction: Women who engage in transactional sex (TS) are more likely to experience intimate partner violence (IPV). Given the normative nature of male financial support and romantic gift giving, it is important to understand the mechanisms through which these generate IPV, including how different reasons for engaging in TS – from survival to a desire to fashionable goods -- impact IPV risk.

Objectives: We hypothesized that: 1) Women with less constrained agency within their relationships would experience less IPV, independent of the amount of material goods provided by their male partner, and 2) different motives for TS would be associated with different levels of risk.

Methods: We used cultural consensus modeling to generate distinct models of TS motives. We then recruited women from antenatal clinics in Swaziland for an audio computer-assisted self-interview survey measuring experiences with IPV, items received from a partner, and motives for engaging in sex. We used structural equation modeling to examine the separate roles of constrained agency and TS on IPV for different models of TS.

Results: We identified three TS models: one which typified older, rural, married women (nkhosi), one typified by urban women hoping for marriage (aspirational), and one typified by university students (university). Constrained agency, represented by having sex with a partner for reasons of poverty, money, hunger, fear a partner would leave, violence, or being forced by parents, was significantly associated with IPV (standardized coefficient 0.19, $p<0.001$). Engaging in the aspirational and university TS models to greater degrees was protective against IPV (both standardized coefficient -0.12, $p=.05$) while the nkhosi model was insignificantly associated with IPV (standardized coefficient -0.11, $p=.09$). Higher education was associated with increased relationship agency.

Conclusion: If women lack alternative sources of income or the ability to exit relationships, male financial support and gift giving function as a mechanism of control, increasing IPV. In aspirational and university relationships, economic support may signify a loving committed relationship, decreasing IPV risk. More financial support is not protective for married women. Preventing IPV requires recognition of the social and emotional role of male financial support, along with efforts to increase women's economic and social agency within their relationships.

SAC 66B - Do adults modify frequency of condom use if they suspect their partner is HIV positive? Findings from a national household survey in Swaziland

Submission to: From AIDS Crisis to Opportunities: What the World can learn from Swaziland meeting**,** July 12-14, 2016, Mbabane, Swaziland

Do adults modify frequency of condom use if they suspect their partner is HIV positive? Findings from a national household survey in Swaziland

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Background: Inconsistent condom use could contribute to high HIV incidence in generalised epidemics. HIV prevalence among adults 18-49 years in Swaziland is estimated at 32%. We assessed whether adults modified consistency of condom use if they suspected their partner was HIV positive.

Methods: A secondary analysis of the 2011 Swaziland HIV incidence Measurement Survey (SHIMS) was conducted. SHIMS was a nationally representative cross-sectional household survey of 18,172 adults 18-49 years. Participants reporting sexual activity in the previous 6 months were asked if they thought any of their 3 most recent partners was HIV positive or negative, and if they used condoms with these partners always, or inconsistently (sometimes or never). We used multivariable logistic regression to determine correlates of inconsistent condom use with a suspected HIV positive partner.

Results: Of 13,971 adults reporting sexual activity (57% female, 43% male), 2,265 (16%) reported sex with a partner they thought was HIV positive, 1,344 (9.6%) of whom reported inconsistent condom use. The majority, 8,251 (59%) reported sex with a partner they thought was HIV negative, of whom 5,911 (42%) reported inconsistent condom use. Higher odds of inconsistent condom use with a suspected HIV positive partner were observed among females, adjusted odds ratio, AOR (95% Confidence Interval): 1.2 (1.1, 1.4). Regionally, the practice was more common in Manzini AOR 1.2 (1.1, 1.4) and less common in Lubombo AOR 0.7 (0.6, 0.8), reference: Hhohho. Higher odds were observed among those with primary education, AOR 1.3 (1.1, 1.5), reference: tertiary education; among single adults AOR 1.3, (1.1, 1.5), reference: adults married and living with partner; and among adults with sexual debut at 14 -16 years of age AOR 1.4 (1.1, 1.7), reference: sexual debut at ≥22 years. Residing in an urban area was associated with lower odds AOR 0.8 (0.7, 0.9), reference: rural area.

Conclusions: Condoms were inconsistently used even when adults suspected their partner was HIV positive. Reasons for this warrant exploration with qualitative studies. Suspicion of partner HIV exposure seemed low in this high prevalence setting, definitive determination of partner HIV status through partner testing and disclosure should be encouraged.

SAC 71B - Legal Responses to HIV and AIDS: Lessons from Swaziland

DR. MUSA NJABULO SHONGWE

Sub-theme: Social Sciences (Law)

Abstract

Objective: Since 1999, the HIV/AIDS epidemic in Swaziland has been declared a national disaster. The impact of the pandemic necessitated a multi-faceted response from the government aimed at stopping new infections, reversing the spread, reducing the vulnerability of affected individuals, eradicating poverty, and ensuring equity. The objective of this paper is to analyse the particular legal responses that Swaziland has advanced towards the HIV/AIDS pandemic. The paper advances the importance of 'law' as a tool that can create an enabling environment for a national response to HIV/AIDS. It analyses how the government has successfully crafted the normative framework so as to make it responsive to the fight against HIV/AIDS.

Methodology: The paper conducts a critical evaluation of the Swaziland legal framework. It assesses whether and to what extent Swazi law addresses the public health and human rights issues related to HIV and AIDS. Through the application of a human rights based theory, the paper assesses the domestication of Swaziland's treaty commitments, the constitutional and statutory framework, as well as case law. The paper also analyses the shortcomings of the Swaziland legal system in the fight against the scourge of HIV/AIDS, in particular, those problems based on traditional law, as well as the successful means of overcoming those challenges.

Results and Conclusions: The paper argues that the Swaziland government has successfully developed a credible legal and policy environment for responding to HIV/AIDS. The paper also argues that there are some laws that still need to be reviewed and amended so that the legal system adequately addresses the public health and human rights issues related to HIV and AIDS. The paper suggests improvements to the legal system which include access to legal services for vulnerable populations and aligning the legal framework with the Constitution of Swaziland and international conventions to which Swaziland is party.

SAC 01C- Impact of Option B+ on ART uptake and retention in Swaziland: a stepped-wedge trial

Authors:
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Background
Retaining HIV-infected pregnant and postpartum women in care is critical to prevent mother-to-child HIV transmission (PMTCT) and promote maternal health. New PMTCT approaches call for lifelong antiretroviral therapy (ART) for all HIV+ pregnant women (Option B+), a departure from strategies that used CD4 count to determine ART eligibility (Option A). Yet there are few implementation data on the impact of Option B+ on maternal retention in antenatal and postnatal care.

Methods
Using a stepped-wedge design the *'Sitkulwane Lesiphephile–Safe Generations'* study compared maternal retention under Option A (based on ≤350 cells/μL) versus Option B+ in 10 primary care facilities across Swaziland. Pregnant HIV+ women not on ART making a first antenatal visit formed monthly facility-level cohorts that were followed through 6 months postpartum using routine health records. In analysis, the month of transition from A to B+ was excluded. Retention was defined as engagement in care within 56 days of delivery during the antenatal period and during a 3-month window before 6 months postpartum. Generalized estimating equations with a probit link were used to generate adjusted risk ratios (aRR) comparing outcomes under Options A versus B+ after accounting for age, CD4, gestation at 1st antenatal visit, and known HIV status.

Results
1 856 women were included: 56% (n=1043) under B+ and 44 % (n=813) under A. Patient characteristics were similar under B+ and A: mean age, 26 years; median gestational age at first antenatal visit, 20 weeks; median CD4, 404 cells/μL; CD4 ≤350, 33%. After transitioning to B+, the proportion of women receiving ART antenatally was higher (94 %) vs A (38%; p<0.001). The proportion of women with CD4 ≤350 initiating ART antenatally also increased under B+ (94% vs 72%; p<0.001). Among all HIV+ women, 63% attended ANC 56 days prior to delivery: 68% under B+ vs 57% under A (aRR, 1.22; p<0.001). Overall, postpartum retention was low (42%). In the analysis of all HIV+ women, postpartum retention was significantly higher under B+ (50%) vs A (31%) (aRR, 1.43; p<0.001). However, when the analysis was restricted to women on ART, postnatal retention was somewhat lower under B+ vs A (53% vs 69%; aRR, 0.75; p<0.001).

Conclusion
Implementation of Option B+ greatly increased ART initiation antenatally and improved ART coverage among women with advanced HIV disease in Swaziland, but postpartum retention remains an important challenge requiring urgent intervention.

Keywords: Option B+, PMTCT, Retention, Loss to follow-up

SAC 04C - HIV/AIDS and Food Insecurity in Swaziland: Impact on ART Adherence

Authors: Robin Root, MPH, PhD[1]; Arnau Van Wyngaard, PhD[2]; Alan Whiteside, D Econ[3]

Background: Environmental degradation, food and trade policies, and ART rollout are three dynamics that impact populations throughout much of Africa. While major aid and relief agencies have developed food security and HIV/TB programs, these agencies remain unable to adequately intervene in the short or long-term drivers of 'food insecurity.' This paper reports findings from a study that assesses (1) the current impact of

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[2] **Arnau van Wyngaard holds a PhD** from the University of South Africa in the Science of Missions. He started his research on AIDS in Swaziland in 1992 and has written numerous articles about HIV and AIDS and the role of the church. He completed an Advanced Health Management Program from Yale University and is a Research Associate, Department of Science of Religion and Missiology, University of Pretoria and CEO of Shiselweni Home-Based Care. Contact email: wyngaard@lando.so.za
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Swaziland's food insecurity on ART adherence, and (2) PLWHA strategies for addressing food shortages on a day-to-day basis.

Methods: Prospective data were collected using in-person questionnaires with HIV-positive care supporters (N=200) who provide home-based care to PLWHA in rural Swaziland. Our study population is vulnerable on three fronts: (1) they are HIV positive in a direly impoverished region; (2) like their clients, many suffer from food shortages; (3) they are unpaid care supporters delivering vital health counseling. We frame our descriptive analysis with national and regional food security data from the Swaziland Multiple Indicator Cluster Survey (MICS) and Famine Early Warning System (FEWS).

Results: A descriptive analysis of prospective questionnaire data illustrate the impact of Swaziland's current drought and chronic food insecurity on ART adherence in the country's most vulnerable region, as well as strategies for daily survival. Our findings are significant for assessment of the impact of food insecurity on HIV-positive care supporters' wellbeing, a population for which, throughout Africa, there is sparse data, and on whom governments and global health agencies increasingly rely for many important health outreach services, include ART adherence counseling and support.**Conclusions:** Our data illustrate the impact of food insecurity on ART adherence in a chronically impoverished region and PLWHA modes of daily survival. In the absence of structural interventions to redress the entrenched poverty, agencies and governments must support community networks to help implement emergency food relief and health services initiatives. Adequate nutrition and reliable antiretroviral treatment (ART) are essential to PLWHA wellbeing. The intersection of these dynamics and their impact on HIV/TB-related wellbeing require urgent short-term interventions and long-term strategic planning. National health ministries and global health organizations must coordinate policies/programming with economic planning units and international development organizations. **SAC 16_C - Adherence and outcome after 36 months of isoniazid-preventive therapy in two rural clinics of Swaziland**

Sub-theme: Treatment, care and support.

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Ethical approval was obtained from the Swaziland Scientific and Ethics Committee and MSF ERB.

Objectives

The efficacy of 36 months isoniazid preventive therapy (IPT) has been proven in clinical trials among PLHIV with positive tuberculin skin test, but feasibility in real life conditions is poorly documented. We evaluated outcome, tolerance and adherence to IPT in two rural clinics in Swaziland.

Methods

Patients with positive TST after negative TB symptom screening or recently finishing tuberculosis treatment were started on IPT for 144 weeks. Patients were seen routinely at least every three months by a nurse who recorded adverse drug reactions. Every semester, adherence was assessed in a sample of patients by testing for isoniazid in the urine.

Results

Of 288 patients included between August 2012 and March 2013, 252 (87.5%) had already been on ART for a median of 2.2 years (IQR 1.0 – 3.8). The median CD4 count was 477 cell/microL (IQR 344 – 616) and 102 (35.9%) had been treated for TB previously. Of the 287 who started IPT (1 refusal), 253 (88.2%), 234 (81.5%) and 228 (79.4%) were still on IPT after 48, 96 and 144 weeks, respectively. Of 41 patients who discontinued IPT, 21 defaulted (of which 17 also defaulted HIV care); 17 stopped because of adverse events (hepatotoxicity, rash, weight loss, neuropathy, non-specific weakness or psychosis); and 3 were discontinued by the caregiver (2 by mistake and 1 because of TB symptoms later diagnosed as non-tuberculous mycobacteria).

Five patients (1.7%) died while on IPT (all for causes not related to IPT, including 2 with TB-compatible symptoms), five (1.7%) developed TB of which 2 were isoniazid-resistant, and 9 (3.1%) were transferred to another clinic.

Isoniazid could be found in the urine of 74.3% (81/109) patients supposedly on IPT after 144 weeks, only slowly decreasing from 85.0% (96/113) after the first 24 weeks. Side-effects were mentioned to the nurse during routine visits by 5.6% (16/287), 2.0% (5/253), and 0.9% (1/234) patients after 48, 96 and 144 weeks, respectively.

Conclusion

In a real-life setting, long-term isoniazid was well tolerated and adherence could be maintained over time. Most treatment discontinuations and default occurred during the first year on treatment.

SAC 07C - HIV Prevention Needs for Men who have Sex with Men in Swaziland

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Objective: In Sub Saharan Africa, the HIV prevention needs of men who have sex with men (MSM) are poorly described, putting these men – and their sexual partners – at high risk for HIV infection. In Swaziland, providing effective HIV prevention interventions for MSM depends upon identifying their risk factors and the barriers and facilitators to accessing appropriate services. This study describes the HIV prevention needs of MSM in Swaziland and the service gaps in current HIV prevention programmes.

Methods: This descriptive, mixed-methods study employed a purposive snowball sampling technique to recruit MSM from the Manzini region to engage in face-to-face interviews for the collection of quantitative and qualitative data. Additionally, selected managers of HIV prevention programmes were interviewed as key informants who could describe the current state of HIV services for MSM in the country.

Results: Findings from the survey data with MSM (n=35) highlighted that HIV knowledge and understanding of HIV prevention strategies (e.g. voluntary male circumcision, PrEP) was limited. Nearly a quarter of the MSM reported having sex with a female partner in recent months. The qualitative narratives with MSM (n=15) revealed that a variety of personal factors (e.g. self-stigma, alcohol abuse) and social factors (e.g. stigma from healthcare providers, lack of support) contributed to unprotected sex, risk behaviors, multiple sexual partners, and poor health care access. A majority of the sample (80%) was younger than 30 years old. Additional qualitative interviews with HIV prevention programme managers (n=5) from NGOs and the Ministry of Health identified gaps between the needs of the MSM and available programmes, resources, and services. While acknowledging that there has been positive progress since 2011, the managers noted a need for targeted funding for outreach and education to reduce new infections among MSM and their sexual partners.

Conclusions: In Swaziland, the HIV prevention needs of MSM can be improved. Healthcare worker stigmatization is a barrier to accessing health services. Strategies for reducing new HIV infections and implications for the uptake of ART services will be discussed. Directions for future HIV research in the MSM population will be offered.

SAC18C - Baylor-Swaziland Centre of Excellence; challenge clinic-a multi-disciplinary intervention for Paediatric and Adolescent stepped up adherence support

Authors: **F. A. Anabwani*[1],** M. Beneus [1,2] , S. Dlamini[1], M. Hlatshwayo[1,2]

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Text: **Background:** Treatment failure is a common problem across all age groups of HIV-positive patients attending follow-up care from the Baylor College of Medicine-Bristol Myers Squibb Children's Clinical Centre of Excellence (COE). Contributory factors include drug fatigue, complex psychosocial problems and change of caregivers, which underscore the need to engage a multidisciplinary team in the follow-up care of these clients. It is for this reason that Challenge Clinic was commenced in March 2014.
Description: Challenge Clinic (CC) is an intervention which provides multidisciplinary care for children failing antiretroviral therapy (ART). Patients are concurrently reviewed

by a team of two doctors and a social worker, with the objective of early recognition and follow-up of clients at high risk of treatment failure. Inclusion criteria are defaulters, children 0-18 years of age and PMTCT clients with a viral load greater than 1000. Also included are adults failing ART who have a child with the same problem. Referral to Challenge Clinic is done by the aforementioned doctors and appointments scheduled on Thursdays. Psychosocial factors leading to poor ART adherence are discussed and comprehensive follow-up plans made. Home visits (InReach) are scheduled to conduct spot pill-counts, verify adherence and obtain insight into their social support system.

Results: A cumulative total of 105 patients are enrolled into Challenge Clinic, with 49 (47%) female and 56 (53%) male patients. The patient demographics comprise 65 (62%) adolescents and 14 (13%) adults, with 16 (15%) of the patient population under 5 years of age. Of the aforementioned patients, 70 (67)% are on 1st line HAART, 34 (32.3%) on 2nd line HAART, and 1 (0.95%) on 3rd line HAART. The total number of active patients is 72 (69%), and the total number of discharged patients 29 (28%). A cumulative total of 4 (3%) patients defaulted from care following Challenge Clinic enrollment.

Conclusions: Increased psychosocial support is mandatory, especially in the face of a growing number of adolescents and children under 5 years of age with treatment failure. Closer monitoring, stepped up adherence counseling, InReach and Challenge Clinic are multidisciplinary psychosocial support interventions that offer comprehensive management of treatment failure.

SAC18C - Baylor-Swaziland Centre of Excellence; challenge clinic-a multi-disciplinary intervention for Paediatric and Adolescent stepped up adherence support

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Issues:
Baylor Swaziland's Board of Directors approved a strategic plan in December 2014 thatincluded the Mother Baby Pair (MBP) concept.Prior to this concept, mothers and their children received care together at the 6 week Post Natal Care (PNC) visits only. After 6 weeks many babies were brought to facilities by other caregivers. This meant that mothers were missing key services such as FP, ongoing HIV testing and cervical cancer screening, and that babies were not getting retested for HIV at the appropriate intervals.

Description:
The 2015 Swaziland National Guidleines on the MBP package were created following recommendationsby WHO that clinicsshould provide comprehensive services for mothers and their babies from the prenatal period through 5 years of age. Because the strategic plan supported this model at the Baylor College of Medicine-Bristol Myers Squibb Children's Clinical Centre of Excellence (Baylor COE), the program has already begun implementation. As an alternative to having one PMTCT room that follows pregnant women and infants up to 6 weeks old & one room devoted to child health and vaccinations, two unique rooms have been set aside to see primarly mother/baby pairs. The nurses will provide babies with growth monitoring, immunizaitons, HIV testing, developmental assessment, nutritional management prophylaxis as needed (INH, CTX, NVP) and provide mothers with familyplanning, ART refills, HIV re-testing, nutriton counseling and internal referral for cervical cancer screeningat 6 weeks post delivery then annually.

Lessons learned:
Ongoing challenges exist in maintaining clinical flow while reducing patient wait times to incentivize mothers to come with their children. Durring implementation, the program must be open to feedback and changes to develop the most sucessful mother baby care delivery model.

Next steps:
Over time, measurements of wait times should be reduced, retention rates should be up, and most importantly mothers and their babies will receive the entire health care package needed at each clinical encounter. These measurements will be reviewed by the quality improvement team quarterly and adjustments to the model will be made to continue to improve the experience for the patietns.

Word Count: 340

SAC20_C - Improving adherence, retention in care and outcomes among PLWHA through Community-based Anti-retroviral Therapy Groups in rural Shiselweni

Sub theme: Treatment, Care and Support

Project:

This is a pilot project in decentralisation of antiretroviral treatment (ART) services for medically stable patients in health care facilities to community care. This is through formation of patient-dependent Community ART Groups (CAGs). These self-formed groups comprise of 4 to 6 patients of which in a rotational schedule one representative from the group reports to the clinic for drug pick up for all the group members.

Issue

The project addresses:

1. Transport or distance and cost-related barriers to HIV care leading to high defaulter rates.
2. Improves client support system through peer-grouping and reduction in self-stigma.
3. Enhance community ownership of HIV care and reduce overall stigma and discrimination at community level.
4. Reduce workload at busy and short staffed facilities by avoiding routine refill encounters with stable clients.

Results

Summary of implementation process:

The initial step was community sensitisation and mobilisation of relevant stake holders including community leaders and rural health motivators (RHMs). The recruitment process, guiding and supporting those who indicated interest on forming groups followed. The group representative was then sent to the facility to register the whole group where the eligibility criterion for each patient was further assessed. In the facility all the necessary monitoring tools are given to the group representative.

Barriers:

One of the initial major barriers was resistance to change by the health care workers in the health facility.

Facilitators:

The already existing PLWA support groups made it easier to easily formulate the groups and community level. As well as the support from community leaders and RHMs

Lesson learned

Implications of project:

The stigma and discrimination is gradually decreasing at community level as evidenced by majority of PLWAs ready to be part of CAGs and being accountable to one another. The leaders are ready to give necessary support in the community models of care.

Suggested way forward:

The CAGs are to be considered as one of the models of care in Swaziland for chronic conditions.

SAC 28_C VIROLOGICAL SUPRESSION OF CHILDREN AND ADOLESCENTS ATTENDING A RURAL CLINIC IN SWAZILAND

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Baylor College of Medicine Texas Children's Hospital Bristol Myers Squibb Children's Clinical Centre of Excellence, Mbabane, Swaziland

Background: The Hlathikhulu Satellite Center of Excellence (COE) is a rural clinic located in the southern Shiselweni region of Swaziland within the regional hospital campus, its catchment area remote and rural. At the clinic, we offer comprehensive TB/HIV services to young children, adolescents and their caregivers. Since 2009, we have enrolled 759 adolescents and young children, with 378 active on antiretroviral therapy (ART). Most of these children and adolescents are orphans from poor socioeconomic backgrounds, residing with elderly or unreliable caregivers or in child-headed households. Since December 2012, all clinic clientsaccessed annual and targeted viral loads supported by Doctors Without Borders.

Methods: We retrospectively reviewed data extracted from the clinic electronic medical record (EMR) database. 351 children were active and on ART, with a documented viral load result at any point in time. 10 were excluded as they were classified as pre-ART clients.

Results: Among the 341 client charts analyzed, 194/341 (57%) were males and 147/341 (43%) females. The mean age was 10.8 years old, with 140/341 (41%) young children (0 to 10 years old) and 201/341 (59%) adolescents (>10 to 19 years old). 267/341 (78%) of the clients were on a non-nucleoside reverse transcriptase inhibitor (NNRTI) regimen and 74/341 (22%) on a protease inhibitor (PI) based regimen. A total of 62/341(18%) clients had a detectable viral load. Among these, 42/62 (68%) were on an NNRTI-based regimen and 20/62 (32%) on a PI-based regimen. Among all patients with a detectable VL, 11% were adolescents and 7% young children (0 to 10 years old).

Conclusions: Our cohort included numerous children and adolescents with detectable viral loads.Though most children were failing a NNRTI-based regimen, the percentage of those failing a PI based regimen is concerning, as access to third line regimens is limited. Given that ART is life-long with limited treatment options in Swaziland, it is crucial that structures are implemented to ensure that children and adolescents remain virologically suppressed. With many of them residing in broken families, offering them comprehensive social support is paramount. More research is needed on interventions which improve the long term clinical outcomes of many of theseadolescents and children.

SAC30_C - How accurate is the WHO first line ART switching algorithm? : Evidence from southern Swaziland.

Sub-theme: Treatment, care and support

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Ethical approval was obtained from the Swaziland Scientific and Ethics Committee and MSF ERB.

Objectives:

The World Health Organisation (WHO) recommends the use of viral load (VL) monitoring to determine virologic failure (two consecutive VLs >1000 copies/ml despite intensive adherence counselling) and treatment switching for these patients. High cost of genotyping limits evidence demonstrating if this

algorithm accurately predicts if patients have truly developed resistance to their current regimen and indeed need to switch.

Methods:

From August 2013 to September 2014, 298 dried blood spot samples of patients on ART with suspected virologic failure were sent for resistance testing at the CDC in Atlanta utilizing the HIVdb Stanford Genotypic Resistance Interpretation Algorithm. Drug resistance, defined as high or intermediate level was assessed for adults (age>=18 years) on lamivudine (3TC) with zidovudine (AZT) or tenofovir (TDF) combined with nevirapine (NVP) or efavirenz (EFV). A patient was considered eligible for switching if they had developed high or intermediate resistance to both NNRTIs (NVP and EFV). A positive predictive value (PPV) of the WHO algorithm was calculated using the number of people that had genuine resistance and therefore needed to be switched.

Results:

219 samples were successfully genotyped (123 females and 94 males). 135 were adults. 59 (43.7%) were on AZT/3TC/NVP, 23 (17%) on AZT/3TC/EFV, 13 (9.6%) on TDF/3TC/NVP and 40 (29.6%) on TDF/3TC/EFV. AZT resistance in the four regimens ranged from 10 – 71.2% ($p<0.001$), 3TC from 85 – 93.2% ($p=0.569$), TDF from 28.8 – 50% ($p=0.157$) and from 87.5 – 94.9% ($p=0.623$) for both NVP and EFV. Overall PPV was 91.9% and ranged from 87.5% ($p=0.5986$) for TDF/3TC/EFV to 94.9% ($p=0.6477$) for AZT/3TC/NVP. TDF/3TC/EFV had the highest likelihood of resuppression following a switch to second line owing to the low cross resistance to AZT (10%) which would be included in their second line regimen along with lopinavir/ritonavir (LPV/r). TDF/3TC/EFV was also the most robust regimen having the lowest resistance to all other drugs except TDF.

Conclusions:

Genotyping demonstrates high accuracy of the WHO switching algorithm in predicting if patients have developed resistance to their current regimen. We recommend that patients meeting these criteria where possible should be switched immediately to reduce the adverse effects of staying on a failing regimen.

SAC39_C - Profile of the aging population of People living with HIV (PLHIV) on antiretroviral therapy

Sub theme: Treatment Care and Support

Marianne Calnan[1], Munyaradzi Pasipamire[1], Fred Busulwa[2]
1 University Research Co. LLc, 2 Good Shepherd Hospital

Objective: Swaziland introduced Antiretroviral therapy in 2003 at Mbabane Government Hospital and has since scaled it up to 147 facilities. With the provision of ART in the country for 13 years, there is an increasing aging HIV infected population on treatment. An aging population requires a health system that is geared towards managing chronic diseases especially those of the non-communicable type. However, the Swaziland National AIDS Program (SNAP) has not described the aging population and this is what the study set out to do.

Methods: De-identified patient data as of December 31, 2015 from GSH electronic patient records system was extracted in to StatsDirect statistical software V3.0.167 for analysis. A descriptive analysis was done with frequencies for categorical variables and means for continuous variables. Differences in means were also calculated.

Results: Of 23,234 PLHIV on treatment registered at GSH, 3,090 (13.3%) met the eligibility criteria of being older than 55 years currently. There were 1530 (49.6%) women and 1556 (50.4%) men. The current mean age was 63.2 years old (95% CI 62.9 -63.5) while the mean age at initiation of ART was 57.3 years old (95% CI 57 -57.6). However, 1,010 people (32.7%) were older than 55 years old at initiation of ART. The mean duration on ART was 6.7 years (95% CI 6.6 – 6.8) for those still active in care with no difference between the men and women (two sided p=0.4075). More men (34%) than women (27%) were no longer active in care and this was statistically significant (p< 0.0001). Of the 678 (22%) who had a current regimen recorded, 46 (6.8%) were on second line regimen with more men (67.4%) than women (32.6%). The mean number of years on ART for those on second line was 9.4 years (95% CI 8.6 – 10.1) and 74% (34) had been on ART for at least 8 years.

Conclusion: The aging population accounts for a significant proportion of PLHIV on treatment. The program needs to pay attention to this population as their care is more complex due to age related co-morbidities, degenerative conditions and drug relative complications especially among those on second line therapy.

SAC 40C - Predictors of survival among HIV positive children on ART

Authors: P.L. Shabangu[1], N. Mthethwa[2]
Sub-theme: Treatment, care and support
Institutions: *Institute for Health Measurement, Mbabane Swaziland[1], National Paediatric HIV Care & Treatment Office SNAP-MOH[2]*

Objective: Swaziland continue to scale up paediatric HIV and AIDS care, treatment and support services. As a results 12,914 HIV-positive children were initiated on ART by 2015. Although 12,914 of children have been initiated on ART, predictors of survival among the children remain unknown. The objective of the study is to determine predictors of survival among HIV positive children initiated ART.
Methods: A retrospective cohort analysis of de-identified medical records was conducted. All ART Children (< 15 years), who were started on ART between 2005 and 2008, and they were followed up until failure. The study measured hazard ratio and predictors of survival among HIV positive children. The Multiple Cox Proportional-Hazard Regression Model to model association between survival and baseline covariates.
Results: The estimated hazard ratio of death for children who were early initiated on ART relative to those who were delayed ART is 0.39 (95% CI: 0.23-0.64). This hazard ratio (0.39) suggests that children who were early initiated on ART, while holding all other predictors constant, were dying at a rate that was estimated to be 61% lower than children who were delayed ART (p=0.001). Children who were diagnosed with TB at baseline, all other variables hold constant, were estimated to have 3.81 (95% CI: 2.36-6.13) times higher hazard of death than those who were TB negative. Children [0-2 years) had 66% higher hazard of death (HR: 1.66 [95% CI: 1.28- 2.14], p<0.001) than children within the age group of [5-15) years. Children who were nourished had 84% lower hazard of death than severe malnourished children (HR: 0.16[95% CI: 0.10-0.26], p<0.001).
Conclusion: The study demonstrate that ART paediatric services are effective in increasing survival among HIV infected children and early initiated children have high survival probability, while active TB, malnutrition, and delayed ART initiation remain predictors of poor survival among HIV-infected children.

SAC 59_C - Viral load suppression after Lifelong ART initiation among HIV-infected Pregnant and Lactating women in Swaziland: "Opportunities for achieving 90-90-90 target"

Sub-theme: Treatment, care and support

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Institutions: *Institute for Health Measurement, Mbabane Swaziland[1], Sexual Reproductive Health Unit, MoH[2], SNAP-MOH[3]*

Objective: Swaziland adopted the 2013 WHO consolidated guidelines on use of ART for treating and preventing HIV, and piloted Life-Long ART initiation for pregnant and lactating women initiative in 2013. Although the country has made impressive strides in scaling up the programme, clinical outcomes for pregnant and lactating women on ART remain unknown. The objective of this study was to determine viral load suppression: single HIV-$_1$ RNA measure of <1000 copies/mL among HIV positive Pregnant and Lactating women initiated on Lifelong ART.

Hypothesis: When administered well, Life-Long ART initiation among HIV positive Pregnant and Lactating women leads to desired clinical outcomes.

Methods: A retrospective cohort (12-60 months of follow-up) analysis of 1068 HIV positive pregnant and lactating women initiated on Lifelong ART was conducted. We measured proportions of women with supressed viral load and incidence rate of virological failure per 1000 person-months. Association between viral load suppression and predictors was tested using Cox Proportional Hazards regression model.

Results: The proportions of women (n=1068) with supressed viral load were 87.56 %, 88.09%, 87.81%, 86.87%, 84.29%, 83.52% at 12, 24, 36, 48, 60, and 72 months of follow-up period. The incidence rates of virological failure (>=1000 copies/mL) were 0.92 (95% CI: 04-1.8); 2.06 (95% CI: 1.2-3.4); 3.35 (95% CI: 2.1-5.3); and 4.98 (95% CI: 3.1-7.9) per 1000 persons-months at 12, 24, 36, 48, and 60 months of follow-up period, respectively. Modelling of predictors for supressed viral load to be finalised.

Conclusion and implications: The study demonstrate effect of Lifelong ART on clinical outcomes among HIV positive Pregnant and Lactating women with low clinical regression rates. Understanding predictors for positive outcomes will inform development of an effective model for Lifelong ART HIV positive Pregnant and Lactating women in Swaziland.

Key words: *Lifelong ART; Viral load suppression; ART regimen*

SAC08_D - Integration of cardiovascular disease risk factor (CVDRF) screening into HIV services: A time-motion study of CVDRF screening amongst patients on HIV treatment at an urban health facility in Swaziland

Palma AM, Rabkin M, Gachuhi AB, Simelane S, McNairy ML, Nuwagaba-Biribonwoha H, Bongomin P, Okello VN, Bitchong RA, El-Sadr WM

Background: In sub-Saharan Africa, the burden of cardiovascular disease (CVD) amongst persons living with HIV (PLWH) is high and rising rapidly. Screening and management of modifiable CVD risk factors (CVDRF) including diabetes, dyslipidemia, hypertension and tobacco smoking are recommended for PLWH but are not routinely provided in low-resource settings, where concerns about feasibility are often cited. We conducted a time-motion study of CVDRF screening in a large urban antiretroviral treatment (ART) clinic in Swaziland to assess the feasibility of integrating CVDRF screening into HIV care by assessing its impact on patient flow and HIV service delivery.
Methods: A convenience sample of PLWH ≥40 years attending routine ART clinic visits at Raleigh Fitkin Memorial Hospital was screened for CVDRF, including: hypertension using two blood pressure (BP) measurements; cigarette smoking using patient interview; and diabetes and dyslipidemia using point-of-care (POC) blood tests. We used validated time-motion study methodology to measure visit time spent receiving HIV care and CVDRF screening. Using Wilcoxon rank-sum tests, we compared screened and unscreened patients to assess total visit time and time spent receiving HIV-specific services.
Results: To date, we have observed 143 patient visits (93 including CVDRF screening and 50 without). Visits including CVDRF screening took significantly more time than visits without screening (median [range]: 15 [10-30] minutes *vs.* 4 [2-11] minutes, $p<0.001$). No difference was detected in the amount of time spent providing HIV-specific services (median [range]: 5 [3-12] *vs.* 5 [3-11] minutes, $p=0.389$). The median (range) number of minutes spent on the most time-consuming components of CVDRF screening were: 12 (6-22) minutes obtaining finger-stick samples and performing POC analyses, 3 (1-4) minutes measuring BP, and 2 (2-4) minutes providing behavioral counseling. Nurses were able to "multitask" during POC analysis, providing ART refills and behavioral counseling and documenting screening results in patient medical records while waiting for POC test results.

Conclusions: Provision of CVDRF screening more than tripled the length of routine ART appointments but did not reduce the time spent on HIV services. Program managers need to take into account longer visit duration in order to integrate periodic CVDRF screening and counseling into HIV programs.

SAC 12_D - Barriers to accessing and utilising primary health care services by HIV/AIDS orphans living in child-headed households in Shiselweni region, Swaziland

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Background: In Swaziland 45% (229.000) of children are orphans or vulnerable due to the high HIV prevalence of 26%. These children have been infected or affected by HIV/AIDS yet they have not been able to access and utilize primary health care services which are one of the key elements of child rights. This study was conducted to identify barriers to access and utilize Primary Health Care (PHC) services by HIV/AIDS orphans from child-headed households who live in the rural community of Swaziland.

Objective: To determine the factors that influence access and utilization of Primary Health Care services by HIV/AIDS orphans living in child –headed households.

Methods: The study used qualitative design to collect data from 20 participants aged 9-18 years. Purposive sampling was used to child-headed households and individual face-to-face interviews were conducted with the eldest child in the family as the primary respondent regardless of sex. Data saturation was reached after 20 households. Thematic content analysis was used and Andersen health services utilization model was utilized as framework to identify factors influencing health service utilization.

Results: The highest level of education among participants was grade 10 and lowest was grade 3. 65% were females 35% were males. Seven themes emerged from participants' description as inhibiting access and utilization of PHC services.(1) The children did not have money for transport.(2) Some child-headed households did not have a clue of the available health services in health facilities.(3) There were very few health professionals managing large numbers of sick people resulting in long queues.(4) Long waiting hours at health facilities to get services (5) Health care workers were known for expressing negative behaviors and attitudes on child-headed households members.(6) Poor and unreliable transport system with only one bus ferrying people to and fro the health facilities and if missed or has a breakdown the journey cannot be continued. (7) Most children were walking long distances from home to the health facilities or to where they were fetching buses which ferries them to health facilities.

Conclusion: While socio-economic and behavioral factors were identified as hindering HIV/AIDS orphans in child-headed households from accessing PHC services, current community efforts to increase provision of health services are commandable although they need strengthening to ensure that child-headed households are not deprived .

SAC 15D - Is the HIV epidemic "Greying" in Swaziland?

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Background: Swaziland has the highest HIV prevalence in the world and prevalence decreases with older age, but remains high, even in those aged □50. With ART, AIDS-related deaths have declined by >50% and life expectancy has risen from 48 in 2000 to 53 in 2013. As ART coverage continues to expand and PLWH age on treatment, prevalence among older adults is predicted to rise. We describe the proportion of patients on ART that are above 50 years and compare the findings with the experience and projected trends in SSA.
Methods: In 2015, SNAP in partnership with PEPFAR/ICAP piloted the integration of NCDS using the HIV platform at six health facilities in the country. Routine data from the HMIS targeting the six pilot sites were analysed to determine the proportion of clients > 50 years, duration on ART and the proportion with hypertension and obesity.
Results: In one year 22 %(1277/5914) and 15 %(860/5914) of clients >50 years with documented body mass index had overweight or obesity respectively. Of the total 5723 patients on ART that were screened for hypertension at six facilities, 901(15.7%) were > 50 years. The proportion of patients with hypertension was 47% (424/901) among those with age > 50 years compared to 30% (1458/4822) for those <50 years.
Conclusion: the proportion of patients on ART with age > 50 years was high compared to the average of 9.7% for SSA. This proportion is likely to increase as a result of increased ART coverage in the country and warrants the routine screening of patients for precursors of cardiovascular disorders including hypertension, which are related with aging population. The prevalence of hypertension is also high more so for those above 50 years. The later needs to be identified and managed accordingly as it will counterbalance the gain made by ART.

SAC17_D BAYLOR SWAZILAND CENTER OF EXCELLENCE MOTHER BABY PAIR APPROACH: INNOVATIVE CARE PACKAGE FOR INCREASED SERVICE DELIVERY

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Issues:
Baylor Swaziland's Board of Directors approved a strategic plan in December 2014 that included the Mother Baby Pair (MBP) concept. Prior to this concept, mothers and their children received care together at the 6 week Post Natal Care (PNC) visits only. After 6 weeks many babies were brought to facilities by other caregivers. This meant that mothers were missing key services such as FP, ongoing HIV testing and cervical cancer screening, and that babies were not getting retested for HIV at the appropriate intervals.

Description:
The 2015 Swaziland National Guidleines on the MBP package were created following recommendationsby WHO that clinicsshould provide comprehensive services for mothers and their babies from the prenatal period through 5 years of age. Because the strategic plan supported this model at the Baylor College of Medicine-Bristol Myers Squibb Children's Clinical Centre of Excellence (Baylor COE), the program has already begun implementation. As an alternative to having one PMTCT room that follows pregnant women and infants up to 6 weeks old & one room devoted to child health and vaccinations, two unique rooms have been set aside to see primarly mother/baby pairs. The nurses will provide babies with growth monitoring, immunizaitons, HIV testing, developmental assessment, nutritional management prophylaxis as needed (INH, CTX, NVP) and provide mothers with familyplanning, ART refills, HIV re-testing, nutriton counseling and internal referral for cervical cancer screeningat 6 weeks post delivery then annually.

Lessons learned:
Ongoing challenges exist in maintaining clinical flow while reducing patient wait times to incentivize mothers to come with their children. Durring implementation, the program must be open to feedback and changes to develop the most sucessful mother baby care delivery model.

Next steps:
Over time, measurements of wait times should be reduced, retention rates should be up, and most importantly mothers and their babies will receive the entire health care package needed at each clinical encounter. These measurements will be reviewed by the quality improvement team quarterly and adjustments to the model will be made to continue to improve the experience for the patietns.

SAC25_D - Completion and Reasons for Non-completion of Isoniazid Preventive Therapy among HIV Infected Patients in Swaziland

AUTHORS: N. Mahlalela, M. Pasipamire, L. V. Adams, M. Calnan, S. Mazibuko, S. M. Haumba, S. Ginindza, E. A. Talbot

BACKGROUND: Isoniazid Preventive Therapy (IPT) has not been a success globally; there is limited uptake of IPT and the few patients who started IPT have a documented completion of therapy. In Swaziland, IPT have been offered since 2011, however there is relatively low records of IPT completion. The main purpose of the study is to examine factors related to completion of IPT among People Living with HIV (PLHIV) in Swaziland.

METHODS: The study analyzed a prospective cohort of PLHIV initiated on IPT between February 2015 and February 2016. The patients received motivational counselling and follow-up calls from health care workers for the duration of therapy. They could opt to receive therapy through any of three models (routine facility pick-up, community based delivery of isoniazid and peer support model). All participants

were either adults or children living with HIV. Patients were followed up for a minimum of six months and maximum of nine months.

RESULTS: Among 909 enrolled patients, 813 (89.4%) completed treatment and 96 (10.6%) did not. Of the 96 patients who were unable to complete treatment, 56 (58.3%) stopped taking INH drugs, 37 (38.5%) were lost to follow up, 2 (2.1%) died while on therapy and only 1 (1.1%) patient developed TB. Among the 56 who stopped INH, 32 of them were stopped by clinician due to adverse effects: 15 (47%) of them had allergies to INH, 6 (19%) had elevated liver function, 3 (9%) had poor adherence and the remainder were stopped due to other reasons.

CONCLUSIONS: The study showed a high rate of patients completing INH therapy which was supported by the documentation of therapy outcomes in their files. To improve uptake of IPT, documentation of IPT is vital in the patients chronic care continuum.

SAC27_D - Technological innovations for improved care and management of People Living with HIV

Sub-theme: Systems and synergies

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Institutions: *Institute for Health Measurement, Mbabane Swaziland*[1, 2, 3], *MOH-HMIS Unit*[4]

Project: An integrated Client Management Information System (CMIS) aimed at improving health care provision and patient management in health facilities. The specific objectives are: i) to develop a unique patient identification and registration system; ii) to develop modular application for capturing clinical service data; and iii) to ensure efficient reporting of clinical service data in all the levels of health system.

Issue: In the context of patient-centred approach to health care provision, the Ministry of Health is in dire need to transition from inefficient paper-based system to an electronic modular client management information system (CMIS). The ministry needs a system that will uniquely identify patients across health facilities nationwide, and enhances provision of quality HIV care continuum to yield positive outcomes.

Results: A robust CMIS has been developed to capture HIV service data on diagnosis, linkage to care, clinical assessment, co-infections management, treatment, and clinical progression. The system documents unique longitudinal patients' records; tracks and monitors of patients across facilities; shares patients' medical information among clinicians; efficiently refers and link patients to care and treatment; documents allergies, vital sign, labs, and automate transcription and dispensing of treatment. The system aids clinicians in managing and monitoring patients to ensure provision of safe and quality services. The CMIS has ability to document number of HIV tested individuals versus number of HIV tests performed. In addition, the system is an optimal platform for measuring and monitoring the ambitious 90-90-90 target.

Lessons learned: While running in three health facilities, the system already demonstrates the ability to capture a patient's information across the different regions of Swaziland, which also serves as a testament to the mobility of population and reinforces the need for further system rollout. Clinicians appreciates the ability to have a consolidated view all of patient's clinical information at their fingertips. Such information informs evidence-based medicine, which will in turn lead to positive clinical outcomes.

SAC 29_D - High rates of Silicosis, Tuberculosis and Occupational related disabilities amongst ex-miners in Swaziland

SUB-THEME: SERVICE DELIVERY

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BACKGROUND: Swaziland has one of the highest incident TB cases in the world compounded by the prevailing HIV epidemic with a co-infection rate of 78%. The National TB control Program (NTCP) with support of USAID through URC launched a project to screen and identify target populations acting as sources of TB infection within communities, one such group are the ex-miners. The South African mine workers have been assessed and found to have the highest incidence of TB in the world at 3000/100,000, far exceeding the WHO definition of TB Emergency (250/100,000). This is corroborated by the fact most of the mine workers are illegal migrants with associated poor work conditions, prolonged exposure to dust without adequate ventilation, crowded accommodation and inadequate health care system predisposing them to Silicosis, TB and HIV.

INTERVENTION: An outreach team composed of an Occupational Lung Health Consultant, a Medical Officer and two nurses visited each of the four health facilities selected in the regions to provide assessments for ex-miners. The assessments consisted of a detailed history, a physical examination, TB and HIV screening, a chest X-ray, spirometry and audiometry. Information on each participant was recorded on a standard tool that had been developed.

RESULTS: Nine hundred and eleven (911) ex-miners were assessed. Of these 499 (55%) had either active TB or previously received TB treatment. HIV infection was found among 29% (264), silicosis among 83.1%, (757) TB/HIV co-infection among 25% (228), Pneumoconiosis in 37% (337), Noise induced hearing in 43% (392), Massive Lung fibrosis in 16% (146) and hypertension in 21% (191) of these miners.

CONCLUSION: There is a high burden of TB (55%) and Silicosis (83%) amongst ex-miners in Swaziland as well as TB/HIV co-infection at 25%. This is compounded by the high prevalence of occupationally related disabilities (NIHL at 43% and MLF (16%) both of which significantly reduce the quality of life. The health service in the country needs to provide comprehensive lung health assessments and treatment as well as screening facilities for HIV and TB that can be used to improve the care of the miners.

Table 1: Findings

Major Findings	Number/ %
Number seen	911
Active TB or had received TB treatment	55%
HIV+	29%
Silicosis	83.1%
TB/HIV	25%
TB/Pneumoconiosis	37%
TB/HIV/Pneumoconiosis	16%
Noise Induced Hearing Loss (NIHL)	43%
Massive Lung Fibrosis (MLF)	16%
Hypertension	21%

SAC34_D - Implementation of combination ART Refill Models in rural Swaziland.

Sub Theme: Systems and Synergies

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Objectives: The WHO advocates for differentiated HIV care and considers a broad range of community-based care models for patients stable on anti-retroviral therapy (ART). These care models aim to better respond to patient needs and to alleviate pressure on health systems caused by rapidly growing patient numbers. Most settings, however, utilized a single community-based care model only. We operationalized a combination of community ART care models in the public health sector and assessed early outcomes.

Methods: Three community ART delivery care models were deployed in the rural Shiselweni region (Swaziland), from 02/2015 to 12/2015. First, Treatment Clubs (TC) are groups of 30 patients stable on ART who meet every 3 months at a secondary health facility for patient education and drug-refills. Second, Community ART Groups (CAG) comprise a maximum of 6 patients who alternate to attend the primary health clinic for consultation and pick up drugs for the other group members. Third, Comprehensive Outreach Care (COC) integrates drug refills into existing mobile clinic outreach activities for geographically isolated communities. We described baseline factors at enrolment, and the 6 month retention in the community care model and proportion of patients transferred back to routine clinical care.

Results: On average, 47 patients enrolled into community-ART care each month: 51.1% into TC (242 patients in 8 groups), 34.0% in CAG (164 patients in 38 groups) and 14.9% in COC (65 patients in 2 remote communities). All patients had a VL<1,000 copies/ml, the median CD4 was 512 (TC), 528 (CAG) and 657 (COC) cells/µl (p=0.27), the median age was 40, 40 and 45 years (p=0.11), and 74.8%, 66.5% and 64.6% were females (p=0.03). The retention in care after 6 months was highest in TC (97.5%) when compared to CAG (79.2%) and COC (78.4%) (p<0.01). 53/471 patients (11.3%) returned back to and were retained in routine clinic care and one (0.21%) was recorded as death in COC.

Conclusions: Concurrent implementation of three community ART care models was feasible. Although a proportion of patients returned back to clinic care, overall ART retention was high and should encourage program managers to apply differentiated care models adapted to their specific setting.

SAC 38D - Inadvertent Resistance Amplification through Treatment of Isoniazid Mono- and Poly-Resistant Strains of Tuberculosis in Swaziland

Authors: Arnold Mafukidze, Sandile Ginindza, Adman Shabangu, Munyaradzi Pasipamire, Samson Haumba, Marianne Calnan, Jennifer Furin

Background:
The introduction of the Xpert MTB/RIF for the detecting TB and Rifampicin (R) resistance has revolutionized the diagnosis and management of drug-resistant TB (DR TB) however its inability to detect isoniazid (H) resistance poses a risk for undiagnosed H mono- and poly drug-resistant forms of TB. These are the more common forms of DR TB. The aim of this retrospective study was to describe possible errors in the design of treatment regimens and practices potentiating Extensively drug-resistant TB (XDR-TB) in Swaziland.

Methods:
A retrospective records review for patients initiated on treatment for H mono- and polydrug-resistant TB at the National TB Hospital (NTH) in Swaziland, between 1 January 2012 and 31 December 2013 was conducted. Demographic variables and laboratory results for Xpert MTB/RIF results, Line Probe Assay (LPA) results, phenotypic Drug Susceptibility Test (DST) results, anti-TB drug regimens and treatment outcomes were collected.

Findings:
A total of 69 patients were identified, representing about 25% of all DR-TB patients enrolled at the NTH during the period. Forty Six percent (32 patients) of bacteriologically confirmed TB H mono- and poly drug resistant cases had consistent sputum smear and culture follow-up while on treatment. Of the 69 patients, 21% (15) died while on treatment and 6% (4) defaulted treatment Of the 32 patients with complete follow up, 67% were cured while 33% failed the initial PDR-TB treatment regimen. The remaining 18 (26%) patients were assigned outcome of completed treatment. The cumulative rate of unfavorable treatment outcomes was 58%. In 75% of the cases with unfavorable treatment outcomes, a formulaic approach to treatment was applied without considering the contact history and the interval treatment history from the time the sample was sent until the results were received.

Conclusions:
The patients who were on treatment based on a formulaic approach had high failure rates, this could be due to undiagnosed drug resistance or inadvertent amplification of drug resistance due to a weak regimen. There is an urgent need to investigate the data to quantify the problem and then use this information to inform the practice guidelines.

Title: Understanding the barriers to antiretroviral therapy initiation for HIV-positive children 2-18 months of age in Swaziland: a qualitative analysis

Sub-theme: Treatment, care and support

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Objective: During the past decade, HIV/AIDS has remained the leading cause of death among children under 5 years in Swaziland. However, early initiation of antiretroviral therapy (ART) can reduce HIV-related mortality by as much as 75%. Hence, it is critical to ensure that HIV-infected infants have early access to antiretroviral therapy (ART). Swaziland made great progress in expanding PMTCT services, but only 28% of HIV-infected infants are on ART. This study was designed to collect qualitative data from mothers and caregivers of HIV-positive children to identify the barriers to ART initiation.

Methods: The results presented are based on a qualitative analysis of transcripts collected during focus group discussion (FGD) sessions conducted in between July 2014 and August 2015 among cases and controls. The cases were parents/caregivers of HIV DNA PCR-positive infants, aged 2 to 18 months, who were eligible for ART but had not been enrolled on ART in Swaziland between January 2011 and December 2012. The controls were HIV DNA PCR-positive infants of the same age group who were enrolled in ART after being diagnosed during the same period of time. Thirty-four caregivers (14 cases and 20 controls) participated in the FGDs. All FGDs participants were female caregivers. FGDs were conducted in siSwati and translated to English. A thematic rapid analysis using ATLAS.ti 7.5 (Scientific Software Development GmbH, Berlin) was used to support and verify themes in the FGD dialogues.

Results: Denial, guilt, lack of knowledge, TB/HIV co-infection, HIV-related stigma, lack of money, and distance to clinics were reported by the participants as barriers to ART initiation. It was reported from the cases that denial of one's own HIV status or that of one's child played a role in the decision against initiating a child on ART. The control FGDs also highlighted denial as a possible cause for non-initiation to ART. Additionally, it was emphasized by the participants that delays in the ART initiation process, rude and inappropriate treatment at the facilities, lack of privacy and confidentiality, as well as lack of counseling from the health care workers were barriers to ART initiation. The findings further revealed that non-initiation on ART was not linked to a negative perception of the treatment.

Conclusion: The themes represented in the FGD sessions highlighted numerous barriers to ART initiation and provided good insight on the challenges faced by caregivers of HIV-positive infants and children in Swaziland. Findings suggest a need to improve service delivery practices, and increase access to education and counseling services that will facilitate the ART initiation process and the development of positive coping mechanisms for caregivers with HIV-positive children.

Title: Understanding the barriers to antiretroviral therapy initiation for HIV-positive children 2-18 months of age in Swaziland: a quantitative analysis

Sub-theme: Treatment, care and support

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Introduction: HIV is a major public health challenge in Swaziland, as the country has the highest HIV prevalence in the world (27.7%). The rate of HIV is even greater among pregnant women with a prevalence of approximately 42%. HIV-positive pregnant women in Swaziland give birth to over 17,000 HIV-exposed infants each year, making the scale-up of prevention of mother-to-child transmission (PMTCT) of HIV a priority for the government of Swaziland. Though Swaziland achieved high coverage rates of antiretroviral therapy (ART) for PMTCT, increased coverage of ART for eligible children is still needed. About 4,000 children (0-14 years old) in Swaziland were eligible for ART in 2012 with 54% actually receiving ART. This study was conducted to identify possible barriers to ART initiation among HIV-positive children based on caregiver perceptions and their engagement in health care.

Methods: The results presented are based on information collected using a quantitative interviewer-administered questionnaire among 40 cases (caregivers of infants 2-18 months of age who were not initiated on ART after a positive HIV DNA PCR diagnosis) and 198 controls (caregivers of infants 2-18 months of age who were initiated on ART after a positive HIV DNA PCR diagnosis). The questionnaire highlighted socio-demographic information (e.g., age of caregiver, religion, number of children), mother/caregiver information (e.g., financial and emotional support, access to healthcare, health-

seeking behaviors, substance use, HIV status), and health and reproductive practices among caregivers (e.g., CD4 count of patients, and whether biological mothers were on ART during pregnancy).

Results: Out of the 238 caregivers who completed the questionnaire, 15 were males and 223 were females. Multivariable logistic regression analysis showed that children who were taken to the clinic every month were 13 times more likely to initiate ART than children taken to the clinic less often (OR 13.02, 95% CI = 1.511-112.11). Children of caretakers with an excellent or good relationship with healthcare providers were 9 times more likely to initiate ART than those reporting an average or poor relationship (OR 8.78, 95% CI 1.29-59.5). The odds of initiation on ART for children whose caretakers attend their clinic appointments consistently were 21.4 times greater than for children of those who rarely, sometimes, or never attend clinic appointments (OR 21.43, 95% CI 1.59-289.65). Approximately 11% of cases and 12% of controls reported that they had experienced HIV stigma. Alcohol use during pregnancy was significantly different between cases and controls (11% vs. 3%, respectively; p=0.0463). A slightly higher percentage of cases (54%) reported attending antenatal clinics greater than 4 times during the pregnancy compared to 47% of controls. More cases than controls (59% vs. 46%) reported taking ARVs during pregnancy, but not significantly different.

Conclusion: Caregivers' uptake of health care and frequency of clinic visits were associated with the initiation of the infants into ART. The results suggest that frequent encouragement of caregivers to attend clinic visits, the development of an enabling environment at the clinics, and the quality of patient-provider relationships are important factors that may encourage the initiation of infants on ART.