CONCEPT PAPER

DEVELOPMENT OF AN HIV/STD/TB/MALARIA CONTROL PROGRAMME IN GEITA MINE AND ITS SURROUNDING COMMUNITIES

Geita Mine Community Health Project

1.7.01

CONCEPT PAPER

1. BACKGROUND

1.1 Mining and health in the Lake Victoria Goldfields

The major HIV/AIDS epidemic of East and Central Africa has particularly affected the Lake Zone of Tanzania and countries bordering Lake Victoria. The HIV/AIDS epidemic is fuelled by the high prevalence of other sexually transmitted diseases (STDs) such as syphilis and gonorrhoea, because these other infections considerably increase the risk of transmission of HIV during sexual intercourse. A collaborative team from the African Medical and Research Foundation (AMREF), the National Institute of Medical Research, Mwanza (NIMR), and the London School of Hygiene and Tropical Medicine (LSHTM) carried out population-based surveys in Mwanza Region during the early 1990s. These showed that the average proportion of 15-54 year-old adults who were HIV infected ranged from 3% in rural villages to 7-8% in larger settlements on major roads to almost 9% in Mwanza town. The same studies showed that approximately 13% of 15-54 year-old adults had at least one STD. Commercial sex workers (CSW), long-distance truck drivers, and migrant workers are at particularly high risk because of their tendency to have multiple sexual partners.

AMREF is part of a collaborative team based in Mwanza since 1989 whose main aim has been to work with the Government of Tanzania and communities in the region to develop and rigorously evaluate the effectiveness of interventions to reduce the public health impact of STDs, especially HIV/AIDS. In 1993, the team conducted a population-based survey of HIV and other STDs in two rural communities with substantial artisanal gold mining activity: Kakola in Kahama District, Shinyanga Region and Mugusu in Geita District, Mwanza Region. This study showed that the prevalence of HIV and STDs was already much higher in mining areas compared to other communities, with 15% of males and 23% of females being HIV infected and 12% and 17% of men and women respectively having evidence of active syphilis.

1.2 Recent AMREF Baseline Health Survey results

The recently established AMREF Mine Health Project conducted its own Baseline Health Survey in December 2000 & January 2001 funded jointly by Geita Gold Mine Limited (formerly Ashanti Goldfields), African Mining Services (AMS) and Meremeta Limited. The population survey measured prevalence rates of HIV infection, other sexually transmitted infections (STIs), malaria & schistosomiasis as well as health-related knowledge & behaviour in and around the Geita Mine. The provisional results, which are reported in full elsewhere, provide us with an up-to-date assessment of the health situation locally enabling us to make a measured response to the key diseases identified.
In short, the HIV prevalence figures confirmed the pre-existence of a local HIV epidemic with 19% of men and 16% of women living in Geita Town and as many as 39% of high risk women working in bars and guest houses already infected with HIV. In contrast only 4% of national male mine workers were found to have HIV infection.

The high rates of self-reported STIs over the past 12 months and positive syphilis serology suggesting past exposure to syphilis in all groups emphasize that people continue to be engaged in high-risk sexual behaviour. This is confirmed by the percentage of national male mine workers who admitted to multiple sexual partnerships over the previous 3 months (35%) as well as paid sex over the past year (54% with 30% not always using condoms during these paid acts).

Likewise turning to self-reported episodes of malaria, 74% of the mine workforce experienced at least 1 episode of clinical malaria over the last 12 months with 43% describing 2 or more episodes. This was associated with a poor utilization of standard malaria prevention measures; 47% never use bed nets and 63% have never used an insecticide-treated net.

2.0 HIV/STD/TB/MALARIA CONTROL PROGRAMME CONCEPT PROPOSED BY AMREF

2.1 **Goal**

To improve the health of mine workers in Geita Mine and surrounding communities with particular emphasis on HIV, other STIs & malaria in the context of the local HIV/STI epidemic.

2.2 **Aim**

To develop and implement a sustainable programme of health promotion, disease prevention and improved treatment in mine workers and communities surrounding the Geita mine with a particular focus on HIV, other STDs, TB and malaria.

3. SPECIFIC OBJECTIVES

3.1 To promote healthy behaviour with respect to HIV, other STIs and malaria in the mine workforce through Awareness Workshops and an ongoing Peer Educator scheme

3.2 To facilitate community participation in the prevention of HIV, STI, TB and malaria transmission as well as the care of those already infected by training & supporting representatives of local community groups as Peer HIV Educators/Counselors

3.3 To implement focused interventions targeting female bar & guest house workers treating STIs and promoting safer sexual behaviour

3.4 To establish a sustainable Voluntary Counselling and HIV Testing service (VCT) in Geita Town for both mineworkers & their families and the general community as an entry point for other prevention and care interventions

3.5 To measure the impact and assess the effectiveness of this intervention package in the communities around the mine and the mineworkers themselves.

4. BENEFICIARIES

The primary beneficiaries of this programme will be the mining workforce, their employers and the residents of communities around the mining area, including high-risk groups

Secondary beneficiaries will be the District AIDS Task Force Team in Geita District, Geita District Health Management Team (DHMT), Regional AIDS Coordinator and Mwanza Region Health Management Team (RHMT), the National AIDS Control Programme (NACP) and the Ministry of Health.

5. PROJECT DESCRIPTION

The following strategies and activities need to be undertaken to accomplish the main objectives under the guidance & advice of an advisory committee as laid down in a written memorandum of understanding drawn up between the collaborators for this programme i.e. GGML, AMS and AMREF and its collaborating team (the AMREF/NIMR/LSHTM Collaborative Group). The advisory committee for the project will comprise representatives from AMREF Tanzania, GGML, AMS, LSHTM, NIMR and the MoH, to guide and advise on the activities outlined below.

5.1 To promote healthy behaviour with respect to HIV, other STIs and malaria in the mine workforce through Awareness Workshops and an ongoing Peer Educator scheme

5.1.1 Regular Awareness raising workshops with a particular emphasis on HIV, other STIs, malaria and TB

5.1.2 Initial training and ongoing support of representatives of the mine workforce acting as Peer Educators

5.2 To facilitate community participation in the prevention of HIV, STI, TB and malaria transmission as well as the care of those already infected by training & supporting representatives of local community groups as Peer HIV Educators/Counselors

5.2.1 Selection, training and ongoing support of representatives of existing community groups as Peer Health Educators

5.2.2 Development and distribution of locally appropriate health promotion materials e.g. leaflets, posters and T-shirts

5.2.3 Establishing the social marketing of marketable health products e.g. insecticide-treated bed nets and condoms by providing initial funding to set up a community revolving fund

5.3 To implement focused interventions targeting female bar & guesthouse workers treating STIs and promoting safer sexual behaviour

5.3.1 Initial series of HIV/STI Awareness Workshops targeting identified high-risk groups in the community

5.3.2 Initial training and ongoing support of representatives of the female bar and guesthouse workers acting as Peer Educators

5.3.3 Establishing an Outreach SRH service in Geita Town offering prompt, accessible and effective treatment of STIs along with health education, counselling and support.

5.3.4 Facilitating the distribution of male and female condoms utilizing social marketing methods

Further interventions targeting female bar workers may include:

- Assisting them to conduct a situation analysis of their own health problems and needs
- Providing training in practical life-skills to assist in risk reduction behaviour
- Assisting them to form cooperative groups to allow improvement of living and working conditions, access to regular supplies of condoms etc.
- Advising them in their negotiations with key stakeholders such as the owners of food & recreation facilities and relevant district authorities e.g. the police to enable them to successfully promote safer sexual practices with all their clients

5.4 To establish a sustainable Voluntary Counselling and HIV Testing service (VCT) in Geita Town for both mineworkers & their families and the general community as an entry point for other prevention and care interventions

5.4.1 VCT Awareness Raising and marketing through community workshops and explanatory leaflets and posters

5.4.2 Training and ongoing supervision of selected health workers from the public and private sector as Pre- and Post-Test Counsellors

5.4.3 Initial Laboratory training in Rapid HIV test methods along with ongoing supervision for health workers

5.4.4 Provision of a private & confidential VCT testing facility in Geita Town with necessary systems in place for confirming initial positive results on rapid testing and quality control

5.4.5 Identification, training and supervision of suitable local community groups willing to provide post-HIV test support & counselling in the form of **Post-Test Clubs**

5.4.6 Medical follow-up & treatment of HIV positive clients focusing on screening for TB, prevention & treatment of opportunistic infections, malaria and symptom control.

5.5 To measure the impact and assess the effectiveness of this intervention package in the communities around the mine and the mineworkers themselves.

5.5.1 Initiate a system for monitoring and evaluating the prevalence of key conditions including HIV, STIs, TB and malaria in the mine workforce & surrounding community. This will include a repeat health survey in the 3rd year of the project as well as the regular collection of routine data.

5.5.2 Supervision of mobile clinic health workers, peer health educators in the mine and community and counsellors & laboratory staff involved in VCT service.

5.5.3 Monitoring of process indicators utilizing both quantitative & qualitative research methods in order to inform & strengthen current interventions.

The case study that refers to this document is available at: http://www.weforum.org/globalhealth/cases

6. JUSTIFICATION FOR PROPOSED STRATEGIES

6.1 The need for a multi-dimensional approach

Overall the baseline survey HIV prevalence figures are lower than many people feared, confirming the value of mounting a vigorous response at an early stage in the life of the mine. It is clearly not "too late" to seek to address the current situation. However, these figures still represent a serious threat both to the health of the mine workforce and that of the surrounding communities, and hence to the overall productivity of the mine. There is an urgent need for a comprehensive community health programme with a particular emphasis on the prevention of HIV, other STIs, malaria and also tuberculosis (TB) which is more prevalent in individuals with HIV infection.

The proposed Geita Mine Community Health Project will therefore include both the provision of improved health services within the communities surrounding the mine and an active and sustained HIV/STI/TB/malaria prevention programme.

The stepwise increase in HIV prevalence across the three groups in particular has important implications for the kind of HIV prevention strategy to be used. For example as far as the mine management is concerned, there are strong grounds for redoubling efforts to educate their workforce and encourage healthy sexual behaviour to maintain this relatively low prevalence. In addition it is also in the interest of the mine managers to focus interventions on the identified high-risk group, namely female bar workers, who are an important potential source of new HIV infection for their employees. Measures to encourage safer sexual practices in this high-risk group as well as prompt and effective treatment of any concomitant sexually transmitted infections could significantly reduce the risk of HIV transmission to the workforce and the general population as a whole. Lastly, the local community within which the mine workforce live and from which many are drawn, has itself a high prevalence of HIV infection with evidence of ongoing high-risk sexual behaviour. The prevalence of self-reported symptoms/signs suggesting STIs in women in the community was very high (28% urethral discharge, 41% dysuria & 23% genital ulceration over the past 12 months) and 50% had evidence of a current urinary tract infection on testing.

None of these three groups exist in isolation, but rather it is clear from the survey that all three are strongly inter-related when it comes to social & sexual behaviour. Consequently any strategy to address this current situation requires specific targeted interventions for mineworkers, high-risk groups and the community at large. To neglect any of these groups would seriously undermine the impact of the overall programme.

6.2 Linking HIV prevention with care

With a high prevalence of HIV infection in the community there is already a considerable burden of HIV-related disease. This is, in itself, sufficient justification for a health care and social support component in such a programme. However, there are also other important reasons for integrating care and prevention measures in the context of an HIV epidemic.

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- Care & treatment of those with STIs is an established strategy of preventing HIV transmission and as an opportunity for delivering HIV prevention messages.
- Care measures encourage community responsibility and facilitate their involvement in managing HIV infection.
- The presence of existing care services for those already infected is a strong incentive for others to come forward for testing and to receive advice on how to protect themselves (if HIV negative) and their partners (if HIV positive), as well as to assist in planning their lives.
- With the increasing acceptance and uptake of VCT services, increasing numbers of people will be aware of their HIV status and thus be in need of care and support.
- Care measures have the ability to reduce high-risk behaviour by encouraging greater acceptance of status and openness and truthfulness with sexual partners.

6.3 Voluntary Counselling and HIV Testing as an entry point for HIV prevention and care.

VCT is an important entry-point to both HIV prevention and HIV-related care. People who test HIV positive can have early access to a wide range of services including medical care, ongoing emotional support and social support. People who test negative can have Counselling, guidance and support to help them remain negative.

Our experience of giving results to the 28% of subjects in the baseline survey who requested VCT was that many incorrectly assume that they are already HIV infected. Knowing that they are HIV negative may significantly increase the incentive for such people to adopt safer sexual practices.

People known to be HIV positive can be screened and monitored for signs of TB and treated appropriately at an early stage. In addition if TB screening is negative, HIV positive clients can be offered TB prophylaxis in order to reduce the risk of developing active TB and of passing TB on to others.

A VCT service without the availability of ongoing support and referral options for care of those infected should be considered unethical. Ideally such follow-up care should include counselling, social support, medical follow-up and treatment with prophylactic drugs to prevent complications of HIV infection (e.g. TB, chest infections).

6. EXPECTED OUTPUTS

A. OUTPUTS	PERFORMANCE INDICATOR
• Peer Educators trained from within workforce, local community & female bar workers	• Number of Peer Educators who complete initial training and who attend monthly support meetings
• Provision of Outreach SRH services taregting high-risk groups	• Number of patients seen each month • Number of male & female condoms distributed
• Provision of VCT service	• Number of clients undergoing pre-test counselling, HIV testing and post-test counselling • Number joining Post-Test Clubs • Number attending medical follow-up
• Distribution of health products	• Numbers of ITNs, insecticide tablets and condoms distributed
B. OUTCOMES	
• Improved treatment of STIs in high-risk groups	• Improved cure rates in Mobile STD clinic
• Reduced stigma attached to HIV infection	• Numbers being testing their HIV status, reporting informing partners/family members/ employers and joining Post-Test clubs
• Increased sense of community responsibility for HIV prevention measures	• Support of Community Peer Educator/Counsellor scheme
• Increased community participation in the care of those already HIV infected	• Number of community groups involved in care of HIV + clients • Number of clients attending Post-Test clubs
C. IMPACT	
• Improved health status of population surrounding Geita and within the mine	• Reduced prevalence of STD/HIV/TB/malaria infections as measured by follow-up Health survey.
• Reduction in health-related risk behaviour • Increase in healthy behaviour	• Reported change of risk behaviour as measured by the periodic epidemiological surveys and other evaluation tools e.g. reported behaviour of clients by CSWs; observed increased condom, bed nets and insecticide treatment tablet usage.