

**Comprehensive review of behaviour change for preventing
HIV transmission through sexual transmission in Zimbabwe
- 2005 -**

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Disclaimer

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SUMMARY AND RECOMMENDATIONS

This summary covers only the main findings and primary recommendations covered in the body of the report.

Scope of review

The overall aim of this review is to provide an evidence base for the development of a comprehensive, effective national HIV behavioural prevention strategy focusing on sexual transmission of HIV in Zimbabwe.

This covers two components:

- A situation analysis reviewing key studies (published and unpublished research studies, programme evaluations, reviews) on the status of the epidemic in Zimbabwe, with a focus on the underlying behavioural factors related to vulnerability to HIV infection through sexual transmission.
- A response analysis reviewing key studies, assessments and evaluations of interventions aimed at reducing HIV infections, with a view to understanding current approaches and activities, gaps and opportunities.

Methodology

An extensive bibliographic search was conducted for relevant literature to inform the situation and response analyses. This was followed by a three-week period of interviewing, during which 55 interviews were conducted with key informants involved in research and intervention programmes concerned with sexual behaviour vectors of HIV transmission.

Situation analysis

Zimbabwe is in the mature stage of a generalised HIV/AIDS epidemic although there are important age, gender and locality differences in HIV prevalence.

A recent¹ comprehensive review of epidemiological data from Zimbabwe provides evidence that HIV incidence declined over the period 2000-2004. Moreover, it was shown that sexual behaviour change has contributed to this and that it has therefore contributed to the documented change in national prevalence over the period.

Concerning perceptions of vulnerability, basic knowledge about population-level HIV infection risks and methods of prevention has been well-established since the middle 1990s at least. However, it is questionable that the levels of practical knowledge related to prevention practices are adequate. This includes knowledge of interventions and their availability. It is important to understand knowledge in relation to new interventions such as PMTCT, ART or PEP and there is currently little known about this. Females appear to consistently lag behind males in most areas of HIV/AIDS-related knowledge.

Behaviour change has been most notable in the areas of condom use in non-regular relationships. There is some indication that these changes took place in the 1990s and that gains have continued in recent years. Condom use in regular and marriage relationships remains low.

There is no strong evidence of change in age of first sex for either sex. It is pointed out that Zimbabwe ranks among the countries with highest age of sexual debut.

Age differentials at first sex and in subsequent sexual experience are particularly high in Zimbabwe and an epidemiological vector affecting young women's vulnerability to infection.

A number of other areas of risk are identified and discussed. Most notable is the prevalence of concurrent partnerships in adult and married relationships, which are identified as a special risk, given the acute dynamics of HIV infection which predispose concurrent partners to particularly high levels of infection.

¹ Gregson 2005

The largely urban ‘small house’ phenomenon and the cultural background of polygyny provide a supportive context for multiple partnering which must be seen as an important driver of the epidemic in Zimbabwe. Regular partners are a major source of infection to women and marriage rather than diminishing possibilities of infection, as is the case in some societies, exposes women to risks which are difficult to control.

Little is known about the risk and prevention behaviours of HIV-positive people.

An emerging risk identified in the report is the association between AIDS optimism and inhibition of HIV prevention behaviours and it is suggested that it will be important to research the question of whether scaling up of antiretroviral therapy will pose a risk to behavioural successes achieved.

Relatively high levels of stigma are evident in behavioural surveillance surveys. This is noted as an epidemiological risk factor given the positive relation between stigma reduction and prevention uptake.

In an advanced generalised epidemic the relative importance of targeted interventions such as STD prevention tends to diminish over time. Behavioural prevention aimed at partner reduction, particularly concurrent partners, and prevention aimed at decreasing age differentials at first sex for women are noted as the interventions that are most likely to have the largest impact at this stage, if successfully implemented.

Although a good volume of high-quality epidemiological research has been produced in Zimbabwe, a number of areas of research have been overlooked and are recommended as in need of attention: These include:

- The influence of concurrent sexual relations on HIV prevalence and decline, including the extent of the ‘small house’ phenomenon and its influence on HIV transmission trends.
- The prevalence of identified cultural practice risks.
- Knowledge related to new interventions including PMTCT, PEP and ART.
- Factors related to consistent and correct condom use.
- Factors supportive of high age of sexual debut.
- The role of high viraemia following infection in the course of the Zimbabwean epidemic.
- The impact of the roll-out of ART on HIV prevention behaviour.
- Behaviour change among HIV-positive people.
- Epidemiological risk posed by resettlement of people in rural and urban areas.

There is a need to improve access to and utilisation of existing research in prevention planning and periodically to take stock of research priorities in support of prevention planning at a national level.

Response analysis

Recognition that Zimbabwe has an advanced generalised epidemic and that risk of infection is not limited to specific bridging populations or groups, should not detract from the need for a well targeted approach that recognises the need to direct resources. A strategic approach is needed even when there is a need for a population-wide approach. Such an approach would recognise that segments of the population are confronted with different risk situations, making certain interventions more promising for them than others.

The report considers the need for responses to be based on an understanding of the most epidemiologically sensitive behaviours. There is a need for a national behaviour change strategy related to sexual transmission that provides a framework for an integrated approach recognising that programmes have interactive effects which pose both risks and opportunities. There is also a need to integrate prevention efforts with treatment, care and support programmes to a much

greater extent, particularly with respect to VCT, ART and sexual and reproductive health including family planning.

There is a need to develop an understanding of ways of linking the many and disparate HIV behavioural prevention activities into a supportive and better integrated framework, noting that many projects struggle to be effective in the absence of infrastructural support.

Appropriate sectoral co-ordination structures are in place, with some remediable exceptions. There is general recognition of the role of NAC in supporting a coordinated response, and NAC has an appropriate institutional framework which includes a behaviour prevention coordinator. There will be a need to strongly promote a national behaviour prevention strategy once developed, and to promote alignment of existing strategies with this.

Almost all groups at risk have already been identified and are receiving some attention, although the quality, consistency and comprehensiveness of programmes vary greatly. There is currently no way of knowing the level of coverage of behaviour change programmes although the district level M&E system and linked district atlas system currently being piloted offer strong possibilities for monitoring of programme efforts and planning for wider coverage.

The issue of how programmes expand is of some concern. Some programmes tend to expand by becoming more comprehensive rather than by doing more of what they do best and developing good relations to other programmes with complementary services. There are risks and opportunities associated with models of expansion based on increasing programme comprehensivity versus complementarity.

The most notable systemic developments necessary to improve behavioural response are:

- The need to accompany new innovations with public information campaigns, to reduce risks that may be introduced and to optimise appropriate utilisation of services
- Consideration of the need to integrate prevention and other services should be included in a national behaviour change strategy. There are particular opportunities associated with integrating prevention and treatment efforts.
- The need to ensure the use of more systematic and theory-driven approaches to behaviour change across the country and to distinguish these from event-based behaviour change projects which may have relatively little impact.
- Programmes need to be resourced and planned following an understanding of epidemiological risk and prevention opportunity.

Peer education approaches have proved difficult to sustain in many contexts although there is international evidence that they can be effective. They have proved most effective when not regarded as stand-alone projects and when integrated with other strategies and approaches. The assumption that peer education is necessarily the best approach to educating young people needs to be critically re-examined and peer-education is not necessarily a low-cost, easy-to-implement option. On the contrary effective peer education programmes have involved high maintenance and support and the success of projects is contingent on their connection to service networks.

Whilst there are many high quality manuals, workbooks, toolkits and communication tools there are distribution problems, because users in need of such products sometimes do not have access or training in their use.

Allegiance to theoretical models is concentrated in larger organisations, and is often not sustained through the delivery chain so that those implementing programmes are sometimes not adequately versed in the frameworks on which their methodologies are based. This appears to be a particularly notable problem in cascade models of training.

- Condom promotion and uptake of condom use in casual sexual relationships in particular must be considered a successful element of Zimbabwean HIV and AIDS response.
- Condom promotion and distribution strategies have worked and need to be sustained.

- Social understanding of efficacy vs. effectiveness of condoms needs to be enhanced. More emphasis needs to be placed on correct and consistent use of condoms in regular relationships, especially for young people in cross-generational relationships.
- Disagreement about condom education and distribution in schools needs to be resolved as a matter of priority.
- The female condom has a market and is seen as an important and preferred prevention tool for sero-discordant couples.
- Interactive effects of knowledge of new innovations needs to be understood as they may pose both opportunities and threats (e.g. ART).

Delay of debut has been the most prominent focus in both secular and religious prevention efforts among young people and the exclusivity of the approach has been sustained by the lack condom promotion in schools. But the goals of programmes need to be more clearly conceived. It is unrealistic to delay debut until marriage considering that by the age of about 24 only 50% of Zimbabweans are married.

There needs to be a more differentiated targeting of sexually active and non-sexually active youth. This needs to be done such that one objective is not undermined by the other; i.e. promotion of condom use does not undermine the intentions of those who choose abstinence as an ideal. The international literature provides little reason to believe that the promotion of condom use among sexually active young people promotes sex. Similarly there is little reason to believe that sexual and reproductive health education promotes sex. Negative promotion of condoms constitutes a risk to some groups and in this and other areas of prevention programming it would be important to establish a guiding principle of no negative promotion of alternatives, except on the grounds of scientific evidence.

There is no peer-reviewed literature that abstinence-only-until marriage has worked as a stand-alone strategy in any context. The value of abstinence-only programmes for young people must be directly challenged. Supporting the message to reduce the number of sexual partners and to delay the age of first sex should remain an important but not exclusive emphasis of prevention campaigns. Evidence points to the need for mixed strategies and strategies that cater to a much greater extent to 50% of young people who are already sexually active in the 18-20 year-old age bracket.

Age mixing is identified as a major driver of HIV infection among young women in particular. This is a largely overlooked area of intervention. A review of international work in this area should be conducted and the socio-cultural issues at play in Zimbabwe should be investigated as a prelude to a concerted effort to develop an intervention agenda.

Much more attention ought to be given to the epidemiological risks of concurrency in marriage. Concurrent partnerships, predominantly focused on the risky behaviour of males over the age of 25 must be a priority, including the under-researched and overlooked role of 'small houses' in sustaining the epidemic.

- The recent concerted declaration by the Heads of Christian Denominations Church's which denouncing a range of risky cultural practices is a major recent development in the fight against HIV/AIDS. The Church is uniquely positioned to create new norms in this area in support of behavioural prevention.

In Zimbabwe, VCT is widely considered a primary HIV prevention activity. However, reviews of the efficacy of VCT for prevention are equivocal about its value in prevention. Evidence suggests that epidemiologically significant prevention effects are most likely to accrue from increasing numbers of HIV positive individuals and sero-discordant couples undergoing testing rather than large numbers of HIV-negative people.

The integration of VCT services into sexual and health reproductive programmes offers opportunities for expansion through a number of sexual and reproductive health programmes,

especially family planning programmes. These are, however, experiencing considerable funding problems on the back of funding cuts.

Prevention has mostly been approached from the perspective of those needing to avoid infection, rather than those who are infective. Relatively little work has focused on motivating people who may be HIV-positive to avoid passing on the virus. There are significant opportunities in this area and herein lies the greatest prevention potential of VCT.

The quality and quantity of epidemiological research surpasses that conducted on interventions. There are many unaddressed questions relating to intervention. The following are some issues that need to be addressed concerning response needs to the changing epidemic:

- Influence of HOCD policies and strategies on uptake of VCT and on identified cultural risk practices.
- Operational research on development of integration of prevention programmes with care and support, most importantly for HIV-positive people.
- The need for a standing research advisory group to be tasked with identifying national research and monitoring priorities relating to behavioural prevention. Such a group should also promote dissemination of research findings and reviews of research in particular areas.
- The need to establish a programme of research on new interventions and their repercussions: e.g. the impact of ART on VCT provision and uptake and on prevention and knowledge of post-exposure prophylaxis.
- Behavioural factors that influence service demand, access and provision.
- Influence of social policies, strategies and practices on prevention behaviour and use of services.

1. INTRODUCTION

The Zimbabwe National Policy on HIV and AIDS and the National Strategic Framework on HIV and AIDS for 2000-2004 have guided the country's response since 1999. These are in the process of being reviewed and updated. This process commenced with the National Conference on HIV and AIDS in June 2004, which aimed to take stock of the epidemic and responses, and devise overall guidance for the coming years.

Recent national policies and guidelines on reproductive health, orphan care, youth, home-based care, gender, and anti-retroviral treatment are in place, although not yet integrated under a national strategic framework. Whereas there seems to be consensus on the way ahead regarding care, treatment and mitigation aspects of the response to the pandemic, no clear and consensually supported prevention strategy has so far been conceived. Prevention incorporates a number of programme areas including blood safety, prevention of mother-to-child transmission (PMTCT), provision of sexual and reproductive health services (SRH), prevention of nosocomial infection and behaviour change relating to sexually transmitted infections. The latter is the particular focus of the current review.

Despite a 1998 effort ('Beyond Awareness' initiative) to draft a national HIV behaviour change strategy, there is currently none in place. It is intended that a planned national strategic framework on HIV and AIDS, will incorporate a behaviour change strategy. It is recognized that many stakeholders have interests in and are involved in providing behaviour change programmes, and it is seen as important that future efforts are aligned with and guided by a clear strategic framework.

Within the new overall National Strategic Framework, the National AIDS Council, relevant line ministries, and the United Nations intend to collaborate on developing a distinct national HIV prevention strategy, with the overall goal of reducing the number of new HIV infections. In preparation of this national HIV prevention strategy a comprehensive but rapid review of programmes and research on behaviour change was commissioned with guidance from the NAC Technical Support Group on Behaviour Change.

2. OBJECTIVES AND SCOPE

The overall aim of this review is to provide an evidence base for the development of a comprehensive, effective national HIV behavioural prevention strategy focusing on sexual transmission of HIV in Zimbabwe.

The objectives are to: Compile, summarise and review research relevant to prevention of sexual transmission of HIV in Zimbabwe; review programmes designed to prevent transmission; and, make recommendations for the development of a national behavioural prevention strategy.

The scope of the report covers two components:

- A situation analysis reviewing key studies (published and unpublished research studies, programme evaluations, reviews) on the status of the epidemic in Zimbabwe, with a focus on the underlying behavioural factors related to vulnerability to HIV infection through sexual transmission.
- A response analysis reviewing key studies, assessments and evaluations of interventions aimed at reducing HIV infections, with a view to understanding current approaches and activities, gaps and opportunities.

3. METHODOLOGY

3.1 Data gathering

An extensive search was conducted for internet resources to inform the situation and response analyses. This focused on scientific and grey-research literature, with an emphasis on literature that was evidence-based. Both qualitative and quantitative studies were sought. Behaviour-change-related policy documents were also collected. The search focused on Zimbabwe, but

included key analyses from the international arena, with an emphasis on sub-Saharan Africa. All documents were recorded in a spreadsheet together with access details. More than 120 documents of direct relevance have been collected.

This was followed by a three-week period of interviewing, during which 55 interviews were conducted with key informants² involved in research and intervention programmes related directly or indirectly to behaviour change. These included line ministries, NAC, ZNPFC, UN agencies, NGOs and donors. Visits were also conducted to facilities and district offices in rural and urban areas. Consultants assisting in reviewing the National Strategic Framework and areas of implementation related to behaviour change were also interviewed.

The fieldwork provided opportunities to gather programme research reports, operational assessments, evaluations and relevant communication products, all providing insight into behavioural intervention foci and approaches.

3.2 Report writing

A preliminary presentation was made to a Behaviour Change Forum meeting convened by the NAC Technical Support Group on Behavioural Change. Then a draft report was presented to a Behaviour Change Review and Strategy Development Workshop in Harare on 6-7 October 2005. Subsequent to this a revised version was commented on by reviewers and a final version was then submitted.

² See Appendix 2

4. SITUATION ANALYSIS: HIV VULNERABILITY AND SEXUAL BEHAVIOUR RISK

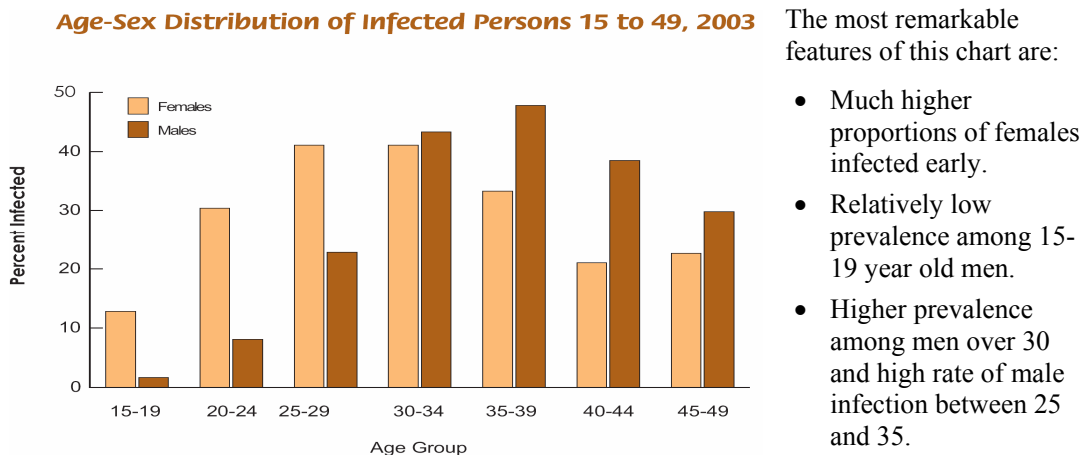
4.1 Epidemiological dynamics

4.1.1 A generalised epidemic

Zimbabwe has the fourth highest HIV prevalence rate in the world. The first national prevalence estimate produced in 2003³ indicates that HIV prevalence among adults aged 15-49 is 24.6%. This means that about one in four of the adult population – a total of about 1.6 million adults – are HIV infected and Zimbabwe far exceeds the ‘5% prevalence among women attending urban antenatal clinics’ criterion for a generalised epidemic.

According to modelled estimates the acceleration of the epidemic in Zimbabwe has been largely driven by sexual transmission, with estimates that 80-90% of infections arise from heterosexual transmission, 10-15% through mother-to-child transmission⁴ and a very small share, by one estimate as little as 1%, through other routes such as infected blood.^{5,6} Although infection risk has generalised to the entire sexually active population, the population is not uniformly affected. Age, gender and locality are all associated with uneven distribution of the epidemic.

The following chart shows prevalence by age and gender in a 2003 population study of HIV prevalence.⁷



Source: MOHCW 2004

Other key features of the epidemic:

- More than half of all new infections occur among young people aged 15-24.⁸
- Youth aged 15-19 years, particularly girls, are most vulnerable to HIV/AIDS infection, and the differences in infection levels between women and men are most pronounced among young people (aged 15-24 years). Young women (aged 15-24 years) are three to six times more likely to be infected than young men.⁹
- Evidence from the Zimbabwe Young Adult Survey (YAS) (2001-2003) shows that among 15-18 year-old girls, those who are enrolled in school are more than five times less likely to

³ Zimbabwe MOHCW 2003; this has not been subsequently updated.

⁴ Mother-to-child transmission is a relatively benign epidemiological vector since infants are unlikely to infect others.

⁵ Dube et al. 2005

⁶ MOHCW 2005b

⁷ MOHCW 2004

⁸ MOHCW 2003

⁹ YAS 2001-2003; Gregson et al. 2002

have HIV than those who have dropped out.¹⁰

- Recent research has shown that being female and an orphan is strongly associated with HIV prevalence in rural Zimbabwe.¹¹
- It is not only in respect of age and gender that the epidemic disproportionately affects sectors of the population. In spite of this being a generalised epidemic, the population is far from homogeneous with regard to the spread of HIV infection.
 - In 2003 HIV prevalence in small towns, growth points, farming estates, army encampments and mining areas was 35% – higher than that in the cities (28%) and subsistence farming areas (21%).¹²
 - There is evidence that HIV prevalence is elevated in roadside trading centres along major highways.¹³
 - The following specific types of locality have been identified as high-risk localities: rural growth points; border towns; displaced communities where social cohesion is low and family structure is threatened; informal settlements; temporary employment sites (e.g. gold panning areas).

There are a number of other population groups in Zimbabwe which reportedly have higher levels of HIV than the general population. A 1998 UNAIDS¹⁴ report states that prevalence among military personnel was three to four times higher than the civilian population. Relatively little is known about prevalence in prisons, the male homosexual community, groups involved in illicit activities such as cross-border trade, foreign populations¹⁵ residing in the country, and there are gaps in knowledge of many economic sectors and sub-populations. It should not be assumed that because Zimbabwe has a generalised epidemic that there are not pockets of significantly higher prevalence than the national average.

There has been much written¹⁶ about the impact of epidemic phases on approaches to prevention. The literature supports the general idea that targeted, core-group approaches, focused on bridging populations, and with emphasis on STIs provide the most efficacious approach to prevention in the early stages of an HIV epidemic. In more mature epidemics the efficacy of such approaches diminishes as the entire population needs to find ways of managing risk. There is also broad agreement in the literature that a country may have many epidemics and new risks may arise that refuel the epidemic, effectively mirroring the early history of the epidemic, with high rates of incidence in groups previously relatively uninfected such as young people and married women.

4.1.2 Evidence of decline in prevalence and incidence

The 2004 ANC surveillance report¹⁷ suggests that prevalence has declined over recent years, with substantial declines in HIV prevalence in the 15-44 year-old (from 32% to 24%) and 15-24 year-old (29% to 20%) age-groups over the period 2000 to 2004. The consistency of this decline is evident in antenatal surveillance data across age groups. This should not overshadow the fact that there were an estimated 166,000 new HIV infections aged 15 to 49 in 2003, but does give cause to reflect on whether the epidemic is beginning to stabilise.

There is need to ask whether the decline in prevalence reflects a decline in the rate of new cases (incidence). It could be the case that the natural course of the epidemic might make it look like

¹⁰ UNICEF 2004. Girls, HIV/AIDS and Education, UNICEF, December 2004, p. 15, with data gathered from YAS 2000-2001, HIV/AIDS.

¹¹ Gregson et al. 2005

¹² MOHCW 2004

¹³ Gregson et al. 2002; Decosas 2002

¹⁴ UNAIDS 1998. It must be noted that the sources are not stated in that report.

¹⁵ Mainly Malawian, Zambian and Mozambiquean.

¹⁶ Boily et al. 2005

¹⁷ Zimbabwe MOHCW 2004

the epidemic is stabilising when the number of deaths equals or exceeds the number of new infections.

However, a comprehensive epidemiological data review addresses these and other complexities which may create false conclusions that declining prevalence reflects declining incidence. It concludes that “The decline in national HIV prevalence between 2000 and 2004 resulted from a combination of declining HIV incidence and rising mortality occurring from the mid- and early-1990s, respectively.”¹⁸ The point is that mortality considered, there seems to have been a decline in incidence.

The above review further concluded that sexual behaviour change has contributed to the declines in HIV incidence in Zimbabwe.

4.2 Vulnerability: Behavioural risk

A number of national surveillance surveys conducted in Zimbabwe since the late 1980s have included behavioural surveillance data.¹⁹ These include: the Zimbabwean Demographic and Health Surveys (DHS) in 1988, 1994 and 1999; the National Youth Reproductive Health Survey in 1997 commissioned by Zimbabwe National Family Planning Council (ZNFPC); a series of biannual surveys on knowledge, attitudes, practices and beliefs (KAPB) commissioned by Population Services International (PSI) between 1997 and 2003; the Zimbabwe Young Adult Survey (YAS) 2003-2003, and a national youth survey conducted by UNICEF in December 2004.

Although these studies differ in design, sampling, and type of information collected they do provide a good foundation for understanding behaviour change over a period of 16 years.

In addition, a large range of smaller qualitative smaller studies have been conducted as baseline studies, situation analyses and programme evaluations. These also provide insight into specific locations and population groups.

4.2.1 Knowledge of HIV/AIDS

There is much evidence that basic factual knowledge about HIV/AIDS and prevention is well established at a population level.

- Eighty six percent of females (aged 15-49) had heard of HIV/AIDS by 1988 and by 1999 this had risen to 96% of females and 99% of males.²⁰
- Between 1994 and 1999 DHS surveys, the proportion of respondents who were aware that a healthy-looking person can be HIV infected did not change, and remained slightly higher for men than women (85% and 76%, respectively in 1999).
- In the 1999 DHS survey, 88% of males and 86% of females had a general knowledge of mother-to-child transmission of HIV. Considerably fewer respondents knew about MTCT during delivery (males, 19%; females, 14%) or the risks of breastfeeding (males, 36%; females, 33%).
- In all surveys males were more knowledgeable about HIV/AIDS and related issues than females, including knowledge of mother-to-child transmission in DHS surveys and STDs in the PSI 2003 survey.

The following are some of the most significant findings from the DHS²⁷ concerning knowledge about prevention methods:

- Between 1994 and 1999, the proportion of women who believed that there was no way to avoid AIDS declined (from 9% to 5%), while the proportion of men with that belief did not change (3%). In 1999, a slightly higher percentage of men than women knew that using condoms was an HIV prevention method (81% versus 73%, respectively).

¹⁸ Gregson 2005, p43

¹⁹ See Appendix 3

²⁰ DHS 1998 – Mandishona 1989; DHS 1994 – Parirenyatwa 1995; DHS 1999 – Machirovi 2000

- In 1999, women were slightly less likely than men to have knowledge of selected HIV prevention methods (65% and 71%, respectively).
- When asked to spontaneously list HIV prevention methods, a significantly higher proportion of both women and men mentioned having only one partner or limiting partners as a prevention method, from 1994 to 1999 (women - 42% to 63%; men - 52% to 69%).
- When asked to spontaneously list HIV prevention methods, in 1999, compared to 1994, the proportion of men who mentioned abstinence increased twofold (from 16% to 30%), while the increase was more limited for women (from 11% to 17%). Thus, in 1999 men were almost two times more likely than women to mention abstinence as an HIV prevention method.
- When asked to spontaneously list HIV prevention methods, the proportion of respondents who mentioned the use of condoms increased by 10 percent between 1994 and 1999, however it remained higher for men compared to women (76% and 66%, respectively, in 1999).

Unfortunately, surveys have tended not to keep track of changing knowledge needs in terms of people's response to the epidemic. There is a need to assess practical knowledge related to some aspects of prevention. For example, there has been little indication about the extent to which the population is aware that the administration of post-HIV prophylaxis within 72 hours after rape is a highly effective prevention measure; or about the perceived efficacy of condoms.

Knowledge about prevention options and resources and about risk behaviours may be considerably less developed than is people's general basic information about HIV/AIDS. The 1997 National Youth Reproductive Health Survey²¹ showed at the time that considerable ignorance existed among young people about reproductive health issues and a greater proportion of adolescents had misconceptions about these issues.

4.2.2 Perception of risk

A review²² of the literature on the interactions of perceived personal vulnerability and risk-reduction behaviour finds that people may perceive themselves not to be personally vulnerable because they adopt risk-prevention measures. This has sometimes led to the erroneous finding that there is not a positive relationship between perception of vulnerability and risk-reduction.

Another reason for assuming a weak relationship exists between perceived vulnerability and risk-reduction is the frequent claim that awareness of the risks of HIV/AIDS infection is high, but that behaviour change is low. This means that people might know they are at risk but this knowledge does not translate into preventive action. Again this may be based on fallacy, in this case that awareness of population vulnerability is equivalent to awareness of personal vulnerability. In fact it may be the case that due to personal or cultural beliefs, perceptions of population vulnerability do not imply perception of personal risk.

It is important to understand how Zimbabweans perceive the relative risks of different types of sexual relationships and practices, yet there is little available analysis of this. It is suggested below that actual risks may differ in types of relationships and sexual practices. It may well be the case that risky relationships, such as concurrent relationships, which are relatively stable, are perceived as low risk. Little data is available on the perceived HIV sero-status of partners and the way this affects perception of risk. This is an important topic requiring further research. There is also little known about discussion of HIV with a partner. This involves a degree of recognition of risk, but this indicator, whilst used in other countries, does not seem to have been widely used in Zimbabwe.

Relative perceived risk of the consequences of unprotected sex is also an issue that needs to be further considered. It is well-established²³ internationally that the risk of becoming pregnant is

²¹ ZNFPC 1999

²² Cohen & Bruce 1997

²³ Cohen & Bruce 1997

perceived as the greatest event risk, followed by sexually transmitted infections. However, it is uncertain the extent to which the public understands the actual risks of HIV infection, including risks associated with concurrent STIs and contact with acutely HIV-infected partners. And not enough is known about the perception of the relative risks of HIV infection under different conditions and in different sexual acts.

4.2.3 Youth sexual behaviour

There are three indicators commonly used to assess behavioural risk relating to early sexual experience.

- Age at sexual debut: Proportion of 15-19 year-olds who had sex before age 15.
- Sexual activity: Percentage of young people (usually aged 15-19) that are sexually active.
- Age mixing: The proportion of young women who have had sex in the last year with a partner 10 or more years older than herself.

i. Age at sexual debut

The use of mean (average) age to report age of first sex is commonly used to report sexual debut data and this is inappropriate for this kind of data^{24 25}. Reporting of percentages of populations that have had previous sexual experience or mean ages of sexual experience make it problematic to compare data across surveys.

Between the three rounds of DHS surveys from 1988 to 1999, the age at which half of young people (aged 15-24) had first sex (median age) did not significantly change. In 1999 median age for females was 18.8 and for males it was 19.9. A median age of 18.5 years for both men and women is reported in a study in rural Manicaland.²⁶ In the latter study, focus group estimates of the age when sexual experience starts indicated younger ages, but this does not necessarily contradict the median estimates.

Comparison of 2001 and 2003 PSI surveys suggests that between these years the median age at first sex (age by which half of respondents had sex) increased 17.8 to 18.4. But a higher age was reported in 1999 by the DHS survey and the Manicaland survey. This means that the results should be interpreted cautiously and a review of data in this area²⁷ concludes that there is no change in age of first sex apparent for either sex. The same review concludes that the age of first sex is slightly younger in rural areas.

It is interesting to consider the meaning of the DHS data in relation to similar data from other countries. If we compare²⁸ the 1999 DHS findings to findings from other countries for the closest period we see that Zimbabwe has one of the highest median ages of sexual debut in the region (5th from highest out of 18 sub-Saharan countries for males and 5th from highest out of 30 countries where data is available for females). Furthermore age of debut has remained stable since 1988 suggesting that high age of debut is probably not a result of prevention programme effects.

The epidemiological significance of age of sexual debut is unclear although Ugandan success in containing the spread of its HIV epidemic is often said to have been achieved partly through delaying sexual debut. Uganda had a median female debut age of 16.5 for females and 18 for males in 2000²⁹. In the 1980s the Zimbabwean age of debut was higher than the Ugandan 'post success' median in Uganda and Zimbabwe should not be seen as being at special risk on this account.

It is of interest to consider the overall epidemiological significance of delaying sexual debut. It

²⁴ Termed 'censored data' and requiring the use of survival analysis (life tables).

²⁵ Bakilana 2005; Zaba et al. 2004

²⁶ Gregson et al. 2002

²⁷ Gregson 2005

²⁸ Country data for this comparison is sourced from UNAIDS 2002.

²⁹ UNAIDS 2004

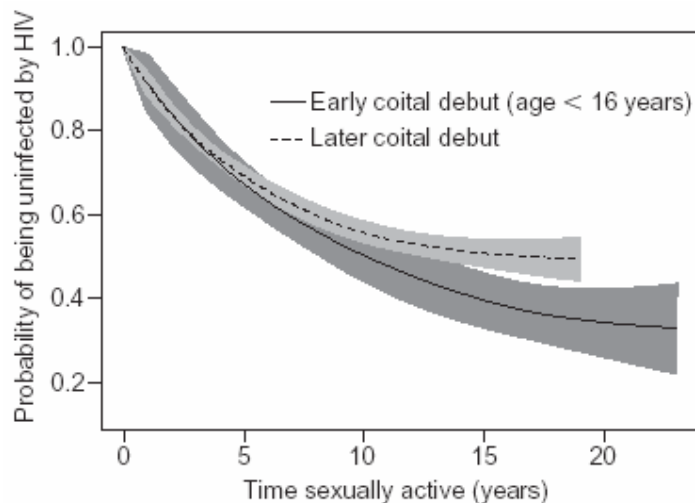
might be assumed that delaying debut for a year would only yield epidemiological benefit during the year in which debut is delayed. The following year the number of people commencing sex at the higher age would increase and cancel out most of the gains in the previous year. But if there were some influence of early debut on propensity to become infected later, such as use of condoms, there would be a stronger case for delaying debut.

A PSI VCT report³⁰ contains what seems to be a significant finding showing that HIV prevalence is directly related to earlier sexual debut. Logistic regression shows that age, sex, marital status, use of condoms, STD, and age at first sex are strong predictors of HIV prevalence. However, these results cannot be seen as significant for age at first sex, unless number of years of sexual experience is controlled for.

Further insight into the impact of early debut is derived from a study of 4393 sexually active women aged 18–35 years using family planning clinics in Harare from 1999 to 2002. A median age of coital debut of 18 years was found and 11.8% of women reported having experienced coital debut at age 15 or younger.³¹ Women who had their sexual debut at 15 years old or younger were also significantly more likely to be infected with HIV. However, it appears that much of the HIV infection risk attributable to early coital debut can be explained by other factors among women who have sex at an early age. Interestingly as can be seen in the figure below (modelled for sexual debut above and below 16), the difference in probability of HIV infection proves not to be very pronounced. It takes a few years of sexual activity to see the difference between the groups in terms of the probability of being uninfected.

Women with early coital debut were found in this study to have a significantly higher risk profile, including multiple lifetime partners, not completing high school and having engaged in commercial sex work. It is these factors that appear to make a difference to their lifetime probability of being HIV infected, rather than the fact of early debut *per se*, because the impact of early debut only becomes apparent after a few years.

Estimates of the probability of remaining HIV uninfected as a function of duration of sexual activity for women with early sexual debut (< 16 years) and later debut and their 95% confidence intervals. HC-HIV study, Zimbabwe November 1999 to September, 2002. Source: Pettifor et al. (2004)



Whilst prevention programs that aim to delay the age of first sex must have a role to play, the extent of their potential contribution is by no means clear, especially as compared to the importance of other less well addressed and potentially more effective prevention strategies. Prevailing beliefs that delaying sexual debut can make a major contribution to the course of the epidemic must be challenged, especially when it comes to the need to prioritise intervention efforts and considering the further relatively small gains that are likely to be made.

³⁰ PSI 2002

³¹ Pettifor et al. 2004

ii. Sexual activity

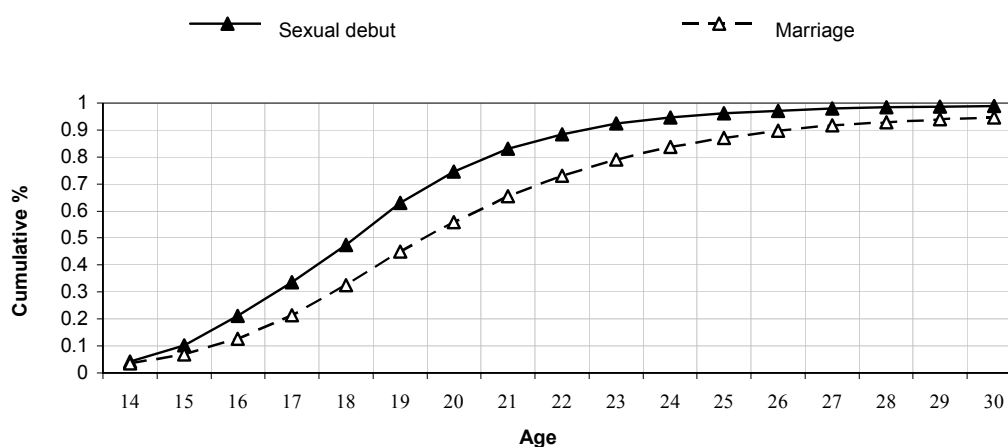
It should not be assumed that all young people who have had sex once are currently sexually active. Given the current and growing emphasis on sexual deferral³² or secondary abstinence one might expect to find young people in particular, who have had sex before but are not currently sexually active.

Data for females is available for all three DHS surveys and for males for the 1994 and 1999 surveys only. Consistent with a relatively stable median age at first sex, there was no significant change in the percentage of young (aged 15-24) people never married and having premarital sex in the last 12 months, although twice as many men as women reported it (34% for men and 15% for women respectively, in 1999).

A study in Manicaland³³ found that a greater number of lifetime partners is associated with an increased risk of HIV infection. The study found that young men report more partners than do women.

It would be interesting to note the relationship between sexual debut and marriage in Zimbabwe³⁴ over time and whether this is changing in response to HIV/AIDS. The following chart illustrates the situation in 1994, based on DHS data.

Rates of sexual debut and marriage: 1994



Adapted from Bakilana (2005), based on 1994 DHS data

It is evident that the percentage difference between having had sexual experience and marriage begins to narrow at about the age of 22, and between ages of 19 and 21 the data show the greatest difference between having had sex and being married.

Little is known in the Zimbabwean situation about the extent to which marriage serves as a protective factor³⁵ against HIV infection, although data from the 1999 DHS suggests that marriage may constitute a risk rather than a protective factor. The percent of young people (aged 15-24) who reported sex in the last 12 months and sex with more than one partner in the same period was 26% for males and 4% for females. Data for adults (25 years or older) only is not available for comparison, although data for 15-49 year-olds shows that 42% of males and 14% of females had had sex with a non-marital, non-cohabiting partner in the previous 12-month period. This suggests that the chance of multiple partnership increases beyond the age of 24. Although it

³² See Section 5.3.2

³³ Gregson et al. 2002

³⁴ Bakilana 2005, using a survival analysis method for censored data.

³⁵ This would mean that HIV incidence is lower for married versus unmarried people at different ages.

might have been assumed that marriage would curtail multiple partnering, this does not seem to be the case.

The above is of particular interest in light of current church intentions³⁶ to re-link sex to marriage, as a primary approach to HIV prevention in young people. It will be important to track this trend and to see if the strategy changes the rate of marriage among young people.

iii. Age mixing

A study of 4,429 young men and women in rural Zimbabwe (Manicaland) between 1998 and 2000 examined the contribution of age mixing patterns in teenage exposure to HIV infection.³⁶ It was found that older age of sexual partner was the major behavioural determinant of the more rapid rise in HIV prevalence in young women than in men. It was also found that young women form partnerships with men 5-10 years older than themselves, whereas young men more commonly have relationships with women of the same or a slightly younger age. This pattern appears to be underpinned by expectations that young women should marry earlier than men, and the tendency to seek employed partners.

Similar findings emerged from the Zimbabwe Young Adult Survey (YAS) (2001-2002) where it was found that more than half of all young women (15-29 years) have first sex with a man 5 years or more years older than themselves.

Age mixing is of interest not only at debut, but also in later sexual relationships. It may well be that early sexual experimentation and coitus happens in the context of relatively narrow age bands, but that after initial sexual experiences young people begin to have sexual relationships with older or younger partners. Here it is of interest to compare age differentials at first sex and age differentials of young people in current relationships. A Manicaland study (2002) found that the age difference between men and their younger partners is relatively narrow during the late teens but increases progressively with age. But even in their 20s it was found that nearly a quarter were in relationships with men 10 years older than themselves.

In Zimbabwean society there appears to be an acceptance of larger age differentials between early adult men and their younger women partners than is the case in at least some other societies in the region. This is also in contrast to Western norms, which see such high age differentials as inappropriate and predatory on the part of men.

Data on age differential at age of first sex is important for understanding how the HIV/AIDS epidemic bridges into youth populations. If young people only ever had sex with young people, presuming absence of non-sexual means of infection, there would be no infection bridge into the youth population. The bridging population in Zimbabwe is primarily young women who have sex with older boys and men.

4.2.4 Secondary abstinence

Secondary abstinence is abstinence after previous sexual experience. A suitable indicator for secondary abstinence is the proportion of people who have had sex before, but who have not had sex in the past year. Unfortunately there is little data on secondary abstinence, although survey data could be reanalysed to generate measures of it.

Death of a partner or the ending of relationships may account for secondary abstinence, but it is also expected that the risks of HIV infection may lead to abstinence, even after having had some previous sexual experience. Given that the emphasis on abstinence seems to be increasingly adopted³⁷ it may be important to track not only the impact of abstinence on sexual debut, but also on secondary abstinence

³⁶ See Section 5.3.3

³⁷ See Section 5.4.2

4.2.5 Patterns of sexual relationships

In the 1999 DHS, of all respondents reporting sex in the last 12 months, the percentage reporting sex with non-marital, non-cohabiting partners was 14% for females and 42% for males. Unfortunately there is no data available on the number of an individual's partners per year and no estimation of multiple partnerships, which is behaviour of crucial epidemiological significance.

Available data needs to be further disaggregated in order to understand the epidemiological significance of patterns of sexual relationships, because findings often do not distinguish between types of relationship which might vary in degree of risk. Regular long-standing concurrent partnerships, relationships with non-regular partners, and turnover rates of partners in monogamous relationships have differing epidemiological salience.

i. Concurrency

Concurrency refers to maintaining relationships with more than one sexual partner such that the partners overlap in time. Concurrent relationships include regular or non-regular partners in short or long-standing relationships. Long-standing concurrent relationships would include formal polygamous relationships and also 'small house'³⁸ relationships.

It has been convincingly shown that in two populations in which individuals have the same average number of partners in a given period, HIV spreads more rapidly in the population in which partnerships are concurrent than in the population in which partnerships occur sequentially.³⁹ "The rate of change of sexual partners – especially concurrent partners – is a crucial determinant in the spread of sexually transmitted infections, including HIV. Moreover, HIV viral load and therefore infectiousness is dramatically higher during the early (acute) stage of HIV infection, so transmission would be particularly heightened by partner change among newly infected people."⁴⁰

There is currently increasing interest in the influence of concurrency as a pattern of sexual mixing, with mounting evidence that the HIV/AIDS epidemic is so fuelled by new infections. The average probability of male–female transmission of HIV-1 per unprotected coital act has been estimated in a large number of observational studies to be between 1 in 2000 and 1 in 384 coital acts during established (non-acute) HIV-infection.⁴¹ It has been suggested that these rates of transmission could not sustain an epidemic.⁴² Given that viraemia (viral load) is related to infectivity, and given that in the period soon after initial infection viral load is particularly high, the likelihood of passing on the virus per sexual act is correspondingly high.

Individuals are hyper-infectious from before the onset of the acute retroviral syndrome⁴³ – which typically occurs three weeks after infection and precedes sero-conversion by 10 to 21 days. Hyper-infectiousness continues for approximately 6 weeks after the onset of acute retroviral syndrome. "Empirical biological data strongly support the hypothesis that sexual transmission by acutely infected individuals has a disproportionate effect on the spread of HIV-1 infection. Acute hyper-infectiousness may, in part, explain the current pandemic in heterosexual individuals."⁴⁴

Peak viraemia occurs at 20 days from infection. The likelihood of infection at this point is 1.6% at 4 coital acts a month and 6.2% at 16 acts per month. Compared to day 54 this represents an 8 to 10-fold greater likelihood of infection. Depending on the frequency of coitus, men with average semen HIV-1 loads and without sexually transmitted diseases (STDs) would be expected to infect 7%–24% of susceptible female sex partners during the first 2 months of infection.

³⁸ See Section 4.3.4

³⁹ Morris & Kretzschmar 1997

⁴⁰ Pilcher et al. 2004

⁴¹ Gray et al. 2001

⁴² Pilcher et al. 2004

⁴³ 50-90% of those acutely infected with HIV experience at least some symptoms of the acute retroviral syndrome, including fever, fatigue, rash, sore throat, aches or other symptoms.

⁴⁴ Pilcher et al. 2004

This being the case, contexts where there are high levels of concurrent partners are at special risk of rapid transmission. After this period passes the risk is relatively low⁴⁵, with estimates that in the absence of sexually transmitted infections, aggregated across sexes, the chances of becoming infected in an unprotected sexual act with an infected partner are 1 in 1000 per sexual act.

There is little data available on patterns of long-term concurrency and on short-term partner overlaps. It is vital to take stock of the impact of concurrency. The ‘small house’ phenomenon (see section 4.3.4 (ii)) has been widely spoken about but there has been almost no research on the topic. There is no survey data available on it and very little qualitative research.

ii. Non-regular partners

Indicators often used to measure non-regular partners are ‘the proportion of young people aged 15-24 having at least one sex partner other than a regular partner in the last 12 months’ and ‘the proportion of men with one or more casual partners.’

There are some problems in defining ‘casual partners’ and often the definition is not apparent in a survey report. ‘Non-regular’ is assumed to mean casual, but a non-regular partner can also be a known, repeat partner, albeit at irregular intervals. Perhaps the safest definition is ‘partners with whom there is not a regular relationship, who may or may not be well-known.’ The key vector is the other sexual contacts of the partner and the relative degree of knowledge of the same by the index person, which is likely to be less in the case of non-regular partners.

A recent review of data in this area concludes that there was a reduction in non-regular partnerships (reported for the previous 12 months) in respondents aged 15-29 between 1999 and 2003, particularly amongst men.^{46 47} Trends since then are not known.

iii. Serial monogamy

This refers to multiple partnerships in relationships which are essentially monogamous for their duration. The duration of sexual relationships may vary although it is assumed that these are not casual partnerships such as ‘one night stands’. These relationships are usually found in young people who have short-term monogamous relationships in succession.

The duration of partnerships in serial monogamy is of epidemiological interest, because in very short-term relationships, chain reactions of infection related to viraemia associated with new infections could fuel the epidemic. Given the increased epidemiological risk in newly infected people⁴⁸ patterns of turnover of more than 3 months in otherwise monogamous relationships pose a substantially lesser infection risk.

There has been little work done on developing an understanding of these patterns of monogamy. It would be worth testing whether patterns of serial monogamy such as typically occur in ‘closed systems’ (in small towns or boarding schools, for example), where unfaithfulness to one partner is easily detected. In such contexts multiple partnerships may be condoned, but only in contexts of essentially monogamous, if short-term relationships. Theoretically these patterns should pose less infection risk, but there has been little understanding of data from Zimbabwe in these terms.

4.2.6 Condom use

Condom use statistics are favourable in Zimbabwe as illustrated following:

- Between 1994 and 1999, the reported rate of condom use at last instance of higher-risk sex (with a non-marital, non-cohabiting partner) rose from 38% to 43% of women surveyed, respectively, and from 60% to 70% of men. It is significantly higher for men.

⁴⁵ Gray et al. 2001

⁴⁶ Gregson 2005

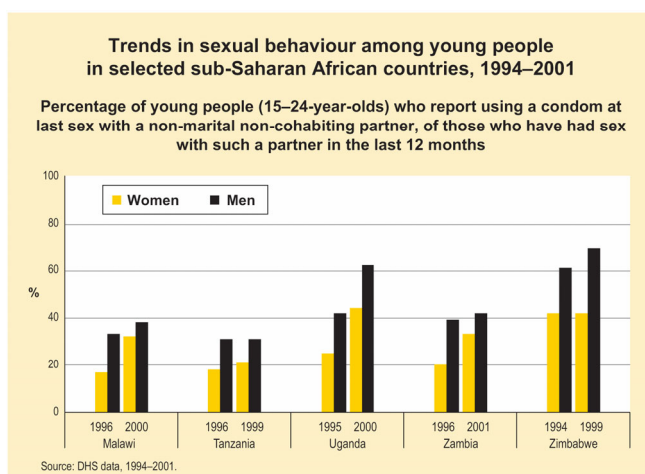
⁴⁷ Data in this area is often reported in less than ideal ways. It is not always clear for which population subgroup the proportion of non-regularity is calculated. For example, it could be ‘married people’, ‘all people with a current regular relationship lasting for a designated period of time’, etc.

⁴⁸ See Section 4.2.5

- The percent of young, never-married, sexually active people (aged 15-24) who used a condom at last sex with a non-marital, non-cohabiting partner was 42% of females in 1999, and 69% of males. The 2003 PSI survey reported 86% condom use with casual partners among 15 to 34 year olds.
- Between 1994 and 1999, the percentage of respondents reporting condom use at last sex with a spouse or cohabiting partner slightly decreased for both sexes. The PSI survey in 2003 found that 20% of respondents aged 15-34 who had sex with a spouse used a condom at last sex.
- Approval of condom use in male youths changed from 33% to 86% from 2001 to 2003 and in female youths from 21% to 80%. All indicators of condom use showed strong increases during this period.

Condoms have not been widely used in Zimbabwe for purposes of family planning⁴⁹ as measured in the 1988 and 1994 DHS surveys. This suggests that the increase in condom use with non-regular partners observed in the late 1990s may be attributed to STD or HIV-infection avoidance practices.

An analysis⁵⁰ of data on condom use with a non-regular sexual partner in the past 12 months, among persons who reported condom use at last sex, was conducted using data from the three most recent PSI surveys (1999, 2001, 2003), the 1999 DHS report, and the 2001/2002 Zimbabwe YAS. The results show high levels of condom use with non-regular partners. These levels were already high in 1999. There is no population level data earlier than 1999 and it is uncertain when condom use rose to these levels.



The chart alongside⁵¹ shows that as early as 2001 Zimbabwe compared favourably with a number of other sub-Saharan countries in respect to condom use at instance of last sex with a non-marital, non-cohabiting partner.

Clearly good progress has been made in promoting condom use and this has had particularly successful uptake in casual or non-regular sexual relationships. Less satisfactory results have been achieved with condom use in couples.

A study⁵² of the dynamics of condom use with various partner types used daily interviewer-administered questionnaires to track people's sexual behaviour and condom use for a period of six weeks. The study covered 9,324 person-days, during which 4,601 sexual contacts were reported on by the respondents. The results corroborate the findings of other surveys⁵³ which indicate that sexual encounters with casual partners tend to be protected, and condom use with these partners is more consistent than with regular partners, be they concurrent or monogamous. This study estimated that nearly half of all sexually active males had more than 85 unprotected sex acts per year. While the authors suggest that many of these were likely to be with spouses who pose comparatively low risk, they found that about one in five men would have 25 or more

⁴⁹ Mandishona et al. 1989 (1988 DHS survey); Parirenyatwa et al. 1995 (1994 DHS survey)

⁵⁰ Gregson 2005

⁵¹ UNAIDS 2004

⁵² Meekers & Richter 2003, based on a cohort of 222 workers in urban Zimbabwe.

⁵³ Gregson et al. 2002; YAS 2001-2003

unprotected sex acts with regular non-marital partners annually. They conclude that regular partners (men) are likely to be a major source of HIV transmission in Zimbabwe, especially because condom use is inconsistent and because regular partners account for a large share of all sex acts. Given that over one in four adults in the general population are HIV-positive, and considering that data from some studies show married persons have the highest HIV prevalence, there is clearly a need to focus on protection with regular partners.

4.2.7 Transactional sex

In 1989 about half of the commercial sex acts in Zimbabwe were not protected by a condom.⁵⁴ In the 1999 DHS survey, 5% of males (age 15-49 years) reported that they had paid for sex in the past 12 months. Of these 82% reported using a condom at their last sexual encounter with a commercial sex worker (CSW). Further evidence of adoption of condom use in commercial sex was found in a 2000 behavioural survey among truck drivers, miners, and female sex workers who reported almost universal condom use during commercial sex.⁵⁵ This suggests that although commercial sex workers certainly posed an epidemiological risk early in the epidemic this risk may have been largely curtailed.

Women in micro, small and medium enterprises in Mbare (a concentrated informal business centre in Harare) sometimes pay men with sex for concessions and services. Similar exchanges are reported in the cross-border sugar-smuggling trade in Mutare and also in the informal mining sector. Little is known about prevention practices in such forms of transactional sex.

4.2.8 Other infection risk behaviour

The literature refers to a number of risky sexual practices, described below.

i. Dry sex

Dry sex was more frequently spoken about in the early years of the epidemic in Zimbabwe, when the focus was on high-risk epidemiological vectors, rather than on a generalised epidemic. Early studies in Zimbabwe suggested that Zimbabwean women regularly inserted a wide variety of herbal and non-herbal preparations inside the vagina.⁵⁶ This is assumed to increase sexual pleasure for men, and the literature has tended to see the motivation for women as pleasing their partner with an added motivation of diminishing the possibility of him seeking sexual pleasure elsewhere.

It is not clear to what extent the practice of inserting drying and tightening reactants into the vagina prior to sex is currently practiced and whether this may constitute a behavioural infection vector. Users in a 2001 study were more likely than non-users to be of lower socio-economic status and in search of either a steady partner or marital stability.⁵⁷ Respondents were sexually active women between 18 and 45 years old, recruited from family-planning, primary care and postnatal clinics, in high-density suburbs of Harare. The majority of women (85%) said they had inserted substances inside the vagina to prepare for sex, but only 49% of the women reported to currently insert substances on a regular basis. The practice was found in all commercial sex workers in the cohort. Studies⁵⁸ that included men's opinions about dry sex revealed that dry sex is indeed preferred by Zimbabwean men.

There is evidence from a 10-year longitudinal study in Kenya that sex workers who perform internal vaginal washing are three to four times more likely to get HIV than those who do not. The study concludes that in populations where vaginal washing is common, this practice may be an important factor promoting the spread of HIV-1. The authors further suggest that intervention

⁵⁴ Wilson et al. 1989

⁵⁵ Unpublished report by Clinical Epidemiology Unit, University of Zimbabwe and FHI, cited by Decosas & Padian 2002.

⁵⁶ Runganga et al. 1992; Pitts et al. 1994; Runganga & Kasule 1995; Civic & Wilson 1996

⁵⁷ Van De Wijgert et al. 2001

⁵⁸ Pitts et al. 1994; Ray et al. 1996; van de Wijgert et al. 1999a

strategies aimed at modifying intravaginal practices should be evaluated as a possible female-controlled HIV-1 prevention strategy.

There has not been any study of the extent to which such practices may contribute to the unique dynamics of the Zimbabwean epidemic. There have been some concerns expressed about the efficacy of condoms in the presence of intra-vaginal drying practices, but little or no data has been published on this.

ii. Anal sex

There is little literature on the prevalence of anal sex in Zimbabwe, in either gay or heterosexual communities, and it is unclear to what extent this practice may be a vector fuelling the epidemic. Early data collected in an unpublished FHI study⁵⁹ suggests that the practice of anal sex is not as rare as one would assume based on the paucity of research in the area.

iii. Oral sex

Although oral sex is generally believed to present only small infection risk, it is nevertheless necessary to track the practice of oral sex, which in many countries in the developing world is increasing through global media exposure and possibly also as an alternative to sexual intercourse. There is little known about the prevalence of oral sex in Zimbabwe, and anecdotal evidence from interviews is that the practice is not common.

iv. Sex and alcohol

A cross-sectional survey of 324 men recruited at beer halls in Harare reported that 31% claimed having sex while intoxicated in the previous six months, likewise this was strongly associated with recent HIV sero-conversion (3.4%) as well as unprotected sex with casual partners and paying for sex.⁶⁰

4.3 Susceptibility: Contextual mediators of sexual risk

4.3.1 Women at risk

Reasons why women are more vulnerable to HIV/AIDS include:

- All other things being equal, the probability of male-to-female transmission is greater than the probability of female-to-male transmission for biological reasons.
- Lack of empowerment against prejudicial cultural and traditional practices in sexual and reproductive health matters and relationships that restrict their decision-making regarding risky situations.
- Low income among women makes them more vulnerable to unsafe sexual practices such as forced and unprotected sex and prostitution.
- Laws that do not give equal rights to women and men.

The 1997 Zimbabwe Human Development Report (ZHDR) states: “Poverty offers a fertile breeding ground for the AIDS spread and infection sets off a cascade of economic and social disintegration and impoverishment.”⁶¹ According to the 1995 Poverty Assessment Study Survey (PASS), female-headed households constitute the majority of households living in poverty.⁶² Their level of poverty is likely to make them more susceptible to livelihood strategies that open them to the risk of HIV infection and less able to respond effectively to its consequences.

Rural women generally have lower education levels than men and as a result they have limited capacity to access new technology and market/farming knowledge to enhance their productivity. Women are very often the main caregivers for those with AIDS and their dependants, a situation

⁵⁹ Personal communication, Martha Moon, Virginia Commonwealth University, formerly FHI/Zimbabwe

⁶⁰ Fritz et al. 2002

⁶¹ Poverty reduction Forum, IDS & UNDP (1997) Zimbabwe Human Development Report, p. 25

⁶² MPSLSW (1995) Poverty Assessment Study Survey, GoZ

that puts more pressure on women as dependency ratios increases because of the burgeoning numbers of sick people. Culturally too, women have limited means to protect themselves from being infected, and women who are infected die at an earlier average age.⁶³

In a study among women in Harare and South Africa, 66% reported having one lifetime partner, 79% had abstained from sex until at least their 17th birthday (roughly the average age of first sex in most countries in the world), and 79% said they used a condom. Yet 40% of the young women were HIV-positive.⁶⁴ More than four-fifths of new infections in women result from sex with their husband or primary partners.⁶⁵ Considering that there is no risk of infection in a monogamous relationship where both partners begin as HIV-negative, this implies that HIV was introduced either through previous sexual experience (of male partners) or through concurrent or casual sexual experiences of men.

Women are not only vulnerable because of male sexual behaviour but the relationship to male partners means that it is difficult to change the relationships that pose a risk to them. Lack of control in their relationships and exposure to risk is an important determinant of their risk. There is evidence of this being the case in each of the following areas.

- Entrenched gender roles and relations which afford women little authority in relationships and especially in sexual decision-making.
- Customary and traditional roles that expose them to forced relationships where there is little power to resist or manage their own risk exposure through abstinence or condom use.
- The role of men as decision-makers and women as subservient, gives women little opportunity to manage their own risk exposure. In the 1999 DHS, twice as many women (71%) as men (36%) believed that a woman was justified in either refusing to have sex with her husband or insisting on use of a condom. This is reinforced by female economic dependence which reduces decision-making capacity.
- Male-female age differentials in dating and marriage with younger women not in a position to create the terms of relationships with their older partners.
- Gender-based violence, which puts women who resist domination and coercion at risk.
- Sexual coercion and rape.
- Sexual abuse of minors. Whereas there is some belief⁶⁶ that sexual abuse is on the increase there does not appear to be empirical evidence of this.
- Lower levels of literacy and knowledge related to HIV/AIDS.

Clearly the status of women in the society is a fundamental determinant of their susceptibility and behaviour change initiatives cannot be divorced from the need to address this at a societal level.

4.3.2 High-risk populations

i. Orphans

The prevalence of orphanhood among children under 15 years whose mother or both parents are dead almost doubled – from 2.8% to 5%, from 1994 to 1999 (female orphans from 2.7% to 5.4%). The prevalence of having a father or both parents dead was 11.5% in 1999 (11.9% for females). This means that approximately 12 out of every 100 girls under the age of 15 are growing up either without both parents or without a father. The consequent lack of protection and guidance by any parent or a father must have an epidemiological significance in terms of risk of sexual exploitation of young girls in particular.⁶⁷

⁶³ UN (1999) Zimbabwe UN Common Country Assessment, UNDP

⁶⁴ Meehan et al. 2004

⁶⁵ WHO Factsheet No. 10. http://www.who.int/health-services-delivery/hiv_aids/English/fact-sheet-10/

⁶⁶ Asserted in interviews conducted for this review.

⁶⁷ DHS surveys

A population survey of 1,523 teenage children in eastern Zimbabwe, conducted between July 2001 and March 2003, provides strong evidence of heightened risks of adverse reproductive health outcomes including HIV infection among orphans and children made vulnerable because of parental HIV/AIDS (OVCs). Among women aged 15-18 years, OVCs had higher HIV prevalence than non-OVCs, plus more common experience of STI symptoms and teenage pregnancy. OVCs overall, maternal orphans, and young women with an infected parent were more likely to have received no secondary school education and to have started sex or to have married, which, in turn, were associated with poor reproductive health. Among men aged 17-18 years, OVC status was not associated with HIV infection or STI symptoms. This research effort concluded that high proportions of HIV infections, STIs and pregnancies among teenage girls in eastern Zimbabwe can be attributed to maternal orphanhood and parental HIV.⁶⁸

ii. Displaced or temporarily settled people

There is a high likelihood that the displacement of people through Operation Marambatsvina will increase the epidemiological risk. Although estimates of the scale of displacement of people vary, one independent source estimated that as many as 700,000 people⁶⁹ have been forcibly evicted from their homes. Many of the mainly urban displacements have resulted in temporary resettlements, although the dynamics of this appear not to have been systematically documented.

Not only is there some epidemiological risk raised by movement of people to new areas, but the disruption of access to services poses its own epidemiological risk. This may happen on two levels. First, the people involved in running programmes may have been displaced, leading to the collapse of programmes (especially community programmes such as peer education), but also through disruption of access to services. For example, disruption of ART services and access to condom supplies, SRH services and general health services are notable risk factors. Second, the displacement is also likely to lead to disruption of old and formation of new sexual relationships. Zimbabwe Association of Doctors for Human Rights (ZADHR) released a press statement stating the mass forced evictions and demolitions would result in “the exacerbation of the HIV/AIDS epidemic as community structures are fractured and dispersed.”⁷⁰ It is well-recognised that temporary accommodation and new informal settlements are accompanied by heightened epidemiological risk compared to established communities.

There appears to be little information available on the temporary settlements of people around, for example, the gold panning industry, and there is also little information on the development of quarrying and other developing industries in rural areas, especially around growth points. Growth points are of particular epidemiological significance since they are often accompanied by development of commercial sex work and other forms of transactional sex where salaried people come into contact with poor communities.

iii. Infants

Research done by Zvitambo⁸³ has provided insight into an important new area of sexual risk that was previously not recognized. Sexual transmission of HIV to breast-feeding mothers and during pregnancy poses an elevated risk of infection of the infant because of high viral load and infectiousness associated with acute infection of the mother. This has led to calls for pregnant women and breast-feeding mothers to be especially aware of the risks of infection at this time, and to use condoms, which may seem counter-intuitive to mothers who assume that if they are vulnerable they would already be HIV-positive.

iv. Other potentially high-risk groups

In 2003, relatively higher HIV prevalence was estimated in ‘other areas’ (35% compared to 24.6% national prevalence). These include areas associated with high risk, such as growth points,

⁶⁸ Gregson et al. 2005

⁶⁹ Human Rights Watch 2005

⁷⁰ SW Radio Africa, “Evictions disrupt HIV/AIDS treatment programmes,” 6 July 2005.

administrative centres and informal mining areas. It is widely reported⁷¹ that such areas spawn commercial sex work and pose a risk to nearby urban areas. Urban areas currently have the lowest infection levels, at 21% of the 15-49 year-old population.

There is negligible information available in the public domain regarding a number of population groups which are known in most other contexts to have higher risk of HIV infection, including: prison inmates; the male homosexual community; the military; and groups involved in illicit activities, such as cross-border smugglers.

In each of these groups the context of behavioural risk varies. The contribution of these groups to epidemic dynamics is unknown and needs to be understood.

4.3.3 Sexually transmitted infections

The percent of both males and females reporting symptoms suggestive of STI in the last 12 months, and who sought care at a clinic, hospital or doctor has dropped, from 79% to 66% of males, and 90% to 47% of females, between 1994 and 1999. It is assumed that this is because prevalence of STIs decreased.

Behavioural surveillance surveys have not typically reported knowledge of STIs or understanding of the relationship between STIs and HIV infection risk. Little is known of the extent to which the population is able to identify STIs as posing an HIV infection risk.

Little research has been done on the concurrence of STI and HIV infection in Zimbabwe, although many studies from other countries show that transmission of HIV is facilitated by the presence of other sexually transmitted infections, especially when there is ulceration of the genitals. It has been established in Uganda that genital ulceration raises the probability of HIV infection four-fold.⁷²

Data from Uganda and Tanzania⁷³ suggest that the proportion of new HIV infections preventable by syndromic STD management decreases during the natural evolution of generalized HIV epidemics. Consequently, STD treatment is likely to have its greatest impact in the first 10 years of an epidemic, and beyond this behavioural risk reduction is likely to have a relatively greater impact. In countries with mature AIDS epidemics, prevalence cannot be lowered substantially without changing behaviour among those with the most partners,⁷⁴ although STD management should be seen as an adjunct to expanded behavioural risk prevention programmes.

4.3.4 Cultural beliefs and practices

A number of cultural beliefs and practices that pose an epidemiological risk are described next.

i. Polygyny

The practice of men having more than one wife (polygyny)⁷⁵, with formal payment of *lobola* (bride price) and full social acknowledgement and support, is mostly found in the rural areas. Until recently polygyny has been practiced mostly by religious groups (the Apostolic and Zionist churches) and some traditional leaders. In this context, it is an open practice wherein a man and his wives live in one household. There is some risk of the otherwise closed marriage system being exposed to infection risk as men continue to take on new young wives as they grow older. Younger women not being fulfilled by such marriage arrangements may seek relationships outside of the polygynous one and this opens the entire polygynous system to the risks of infection.

In the 1999 DHS, 15.5 % of all currently married women and 9.4 % of all currently married men

⁷¹ Interviews conducted as part of this research

⁷² Gray et al. 2001

⁷³ Korenromp et al. 2002

⁷⁴ Korenromp et al. 2002, p231

⁷⁵ Polyandry refers to the practice of a women having more than one primary partner and polygamy is the generic term for both polygyny and polyandry.

reported living in a polygynous union. This was notably higher among married women with no education (30.2%) and in the 15-19 age group (54.6%) of currently married young people with no education. DHS data does not indicate changes in polygyny between 1988 and 1999.

Polygyny has long been recognised as posing an epidemiological risk in Zimbabwe. The Heads of Christian Denominations (HOCD) with full support of the 70 primary Apostolic and Zionist churches made a landmark resolution in September 2005 to abolish polygamy. This is a significant development considering that the Union for the Development of Apostolic Churches in Zimbabwe Africa (UDACIZA) represents an estimated 2.5 million people including 6% of the country's adults.

The recent rejection of polygynous relationships may have varying positive repercussions, not least a curtailment of social and religious justification for having multiple partners. But the tacit social endorsement of polygyny may persist through its risky urban derivative of 'small houses.'

*ii. 'Small houses'*⁷⁶

Polygyny has provided a cultural background for the 'small houses' phenomenon. The extent of this phenomenon has not been documented although it is widely spoken about.

Small houses are an evolution of formal polygynous arrangements and they may take a number of forms. A man, often a member of the urban elite, may pay *lobola* for a second wife, but because his elevated position in society does not accommodate being seen as a polygynist, the second wife may be kept a secret; she may live on her own and receive only occasional visits from him. His family and her family would usually know about this arrangement although the two women (wives) would usually never be seen together.

In another form, a 'small house' would be a long-term mistress whom a man supports and with whom he may or may not have children, and who may be known by the wife but never acknowledged. The relationship between the two is usually stable, although because the man is with his family most of the time, the woman not having the security and stability of a primary caring relationship may seek other relationships and may have the opportunities to do the same. Unlike the case of the traditionally polygamous family constellation the sexual network is not sealed from outside and the primary female partner is ultimately exposed to the risk behaviour of the female 'small house' partner.

In its extreme but apparently not uncommon form, a 'small house' is a series of relationships with different women who the man supports. Here the commitment on both sides tends to be tenuous and the infection risk for both parties is elevated. 'Small houses' are by nature limited to urban, middle- to higher-income groups, although low-income earners may also be involved. The risk to low-income earners is somewhat greater as the man may not afford to support two women fully, and this is more likely to result in infidelity on the part of the 'small house' female partner.

Thus, 'small houses' may involve a number of different forms of sexual association, with varying degrees of risk. They are generally an open secret, meaning that 'everyone knows, but no one mentions' it and for this reason they are frequently not discussed, which makes the risks difficult to address between the primary couple.

It would be useful to sketch out the scale of this phenomenon and the epidemiological risk it poses.

*iii. Wife replacement/inheritance*⁷⁷

This is the practice of a younger brother adopting his dead brother's wife. The cultural background to this was to provide shelter and support to the wife and to bring her and her children under the roof of a protective household. The HIV infection risk is to the man in question, in the case of the brother having died of an AIDS-related illness.

⁷⁶ Information on 'small houses' was gathered in the course of interviews conducted as part of this review.

⁷⁷ Literally means 'someone to run the kitchen.'

Chigara mapfiwa carries similar epidemiological risk, although for the women in question. It involves the practice of in-laws giving a man the younger sister of the man's dead wife as a replacement wife.

Both practices are not common but still occasionally practiced. The HOCD with widespread support of church leaders, has recently officially proclaimed it the duty of the Church to speak out against these practices.

iv. Chramu

Chramu (ukula muzana) refers to the practice of a man taking sexual advantage of his wives' younger sisters or cousins exposes affected girls to infection risk in a context where they have diminished power to choose or resist. Another practice which diminishes female sexual negotiation power is a chief or headman having the right to choose a young girl as partner. Neither of these practices is well documented in the AIDS literature and the risks have not been satisfactorily defined.

The HOCD has also taken a stand against these practices.

vi. Beliefs about sexuality after menopause

It is anecdotally reported⁷⁸ that it is appropriate for women to not be sexually active after menopause. Perceptions and practices relating to sexual disengagement after menopause, if widespread, may be a justification for men to seek sexual liaisons outside of monogamous relationships. This perception needs to be investigated further. Data on this does not appear to have been captured in any of the major behavioural surveillance surveys conducted in Zimbabwe.

4.3.5 Stigma, discrimination and denial

Research on stigma, discrimination and denial have generally been bedevilled by conceptual problems, and in Zimbabwe, like most other countries in the region, there has not developed a strong research agenda on AIDS and stigma. Existing research shows little consensus about how to best measure attitudes towards people with HIV/AIDS and what needs to be measured is subject to change as the epidemic and intervention programmes develop.⁷⁹

The following are selected findings from various research reports that have relevance to understanding behavioural prevention efforts:

- From the 1988 and 1999 DHS, the proportion of women who agreed that a teacher who is HIV-positive but not sick should be allowed to continue working with others increased from 8% to 42%. Whilst this represents an improvement it reflects stigmatising attitudes by a majority of women, at least in 1999.
- The 2000-2004 UNICEF survey shows that only 34% of adolescents reported that an HIV infected storekeeper should be permitted to continue to serve customers, and only 52% said that teachers should be allowed to continue with their work.

The above findings indicate what must be regarded as high levels of AIDS stigma in Zimbabwe. It has been well established in the literature that, "The absence of discrimination and stigmatization is essential for successful prevention efforts,"⁸⁰ and that stigma, discrimination and denial adversely affect behavioural prevention. The following scenarios illustrate how this might occur:

- Parents, teachers, siblings and peers may be disinclined to discuss HIV/AIDS prevention because of a failure to recognise it as 'our problem,' rather believing it to affect only other groups.
- HIV-positive people might not be open about their status even to their partners; as a result

⁷⁸ Interview with Ms Jambwa, Interfaith Network Against HIV/AIDS.

⁷⁹ cf. Herek & Mitnick 1996

⁸⁰ Laporte & Aggleton 1998 p. 7

they will not adopt appropriate prevention behaviours.

- The fear of stigma may result in people avoiding VCT, and hence perpetuate the situation of not knowing their HIV status and possibly not taking steps to avoid infecting others.

Levels of stigma must be regarded as a risk factor with regard to behavioural prevention programmes and must be systematically addressed in any expanded behaviour-change agenda.

4.3.6 Availability of ART

It is quite widely accepted that ART could help reduce incidence due to reduced transmission⁸¹ following reduction of an individual's viral load. Another positive prevention effect is that ART leads to a reduction in denial, stigma and discrimination as ARV treatment becomes available and renders HIV/AIDS a chronic and manageable disease rather than a fatal condition. This encourages individuals to come forward for voluntary counselling and testing, which in turn improves prospects for prevention.⁸² This effect would probably be compounded by the reduction of stigma and discrimination associated with more people knowing their status.

However, treatment optimism⁸³ can have a negative effect on the prevention behaviour of HIV positive people who may be more likely to engage in sexual risk behaviour because they believe treatment will make them or their partners less infectious or that HIV infection is a less serious condition than before. The evidence that treatment optimism has had a negative impact on prevention behaviour in the developed world is inconclusive and there has been little work done on understanding this issue in Africa, although this is likely to become an area of increasing interest. Currently research is at a hypothetical modelling stage.⁸⁴

The only available evidence from an African context regarding the sexual behaviour of HIV-infected patients who have access to ARV treatment is from a cross-sectional survey comparing the declared sexual behaviour of ARV-treated respondents, as opposed to non-ARV-treated respondents in Cote d'Ivoire.⁸⁵ That survey found nothing to support the hypothesis that ARV treatment results in increased risk-taking. Indeed, the study indicates that people on ARVs in this context may use condoms (with all sexual partners) more frequently than untreated HIV-positive people. In other words, a lack of ARV treatment was significantly associated with a higher likelihood of risky sexual behaviours among HIV-positive people.

However, this finding does not address the issue of general population motivation to prevent infection. The prevention behaviour of HIV-positive people aside, perceptions related to the availability of ART treatment may lead the general population to be less concerned about HIV infection because of the perception of reduced severity of risk. This may lead to 'behavioural disinhibition' at a population level.

Evidence to date varies on this issue. In some developed countries⁸⁶ condom use increased dramatically in the populations at highest risk prior to the introduction of ART, and then declined with ART, leading to increased HIV incidence. The likelihood and magnitude of reductions in condom use in sub-Saharan Africa are uncertain. Pre-ART behavioural prevention changes have not been as prominent as they have been, for example, in the epidemics among gay segments of the population in Europe and the US.⁸⁷ It is not yet apparent what the ART-induced behavioural effects are likely to be, where there has been only moderate pre-ART behavioural change. Where there has not been dramatic behavioural change, there is not much behavioural change to reverse. However, in Zimbabwe, where there appears to have been behaviour change to the point of

⁸¹ Blower & Farmer 2003

⁸² The relation between VCT and prevention is discussed in Section 5.4.8.

⁸³ Stein 2005 provides a review of this issue.

⁸⁴ Blower & Farmer 2003; Salomon et al. 2005.

⁸⁵ Stein 2005

⁸⁶ Stein 2005

⁸⁷ Salomon et al. 2005

reducing incidence⁸⁸, an ART prevention-inhibition risk should not be discounted. It seems important to study and track these effects as the ART programme expands and enters public awareness.

4.4 Research needs

4.4.1 Focus

The following are issues that have not been adequately addressed by existing research:

- The influence of concurrent sexual relations on HIV prevalence and decline, including the extent of the ‘small house’ phenomenon and its influence on HIV transmission trends.
- The prevalence of identified cultural practice risks.
- Understanding the dynamics of high prevalence in ‘other’ areas (i.e. not subsistence farming and not urban).
- Knowledge related to new interventions including PMTCT, PEP and ART.
- Factors related to consistent condom use.
- The impact of the roll-out of ART on HIV prevention behaviour.
- Behaviour change among HIV-positive people.
- Epidemiological risk posed by resettlement of people in rural and urban areas.

4.4.2 Indicators

The utility of HIV/AIDS behavioural data for comparison of findings (across time and study contexts) is strongly limited by use of different behavioural indicators. There needs to be some consensus on the most useful ways of measuring behavioural responses such as condom use, in order to better understand the development of the epidemic.

The district-level monitoring and evaluation system uses a small set of behavioural programme indicators, reviewed below, but these indicators are primarily used to monitor programme outputs and are of value at a programme management level rather than for understanding behavioural vectors of HIV transmission. There also needs to be more agreement about what indicators are primarily of value at an epidemiological level. Many agencies are conducting both small- and large-scale research programmes; it will be of great value to decide on a core set of indicators to be used for monitoring behaviour change and its effect on the development of the epidemic.

⁸⁸ Gregson 2005

5. RESPONSE ANALYSIS: BEHAVIOURAL PREVENTION INTERVENTIONS

5.1 Introduction

The response analysis is driven by the following questions:

How epidemiologically sensitive are interventions?

The extent to which responses are driven by understanding of the specific dynamics of the changing epidemic is a central theme of this review. The situation analysis has established that although Zimbabwean society is in the mature stage of a generalised HIV/AIDS epidemic, there is continuing need for differentiated approaches to behaviour change. This means that rather than 'cover' the entire population with messages and interventions in a general way there is a need to focus on those vectors of the epidemic which are most responsible for sustaining it. The response analysis is concerned with the specificity of prevention efforts and the extent to which they address the most epidemiologically significant behaviours.

How strategic are programmes?

The review questions the extent to which programmes are based on strategic thinking and models of behaviour change. A strategic approach necessarily involves a plan with various contributing activities and a programme for achieving desired ends. It should also take into account external factors that may present obstacles or opportunities.

An important and recurring theme in the response analysis is the impact of factors that lie outside the scope of programme activities. Among these contextual factors are ones concerning infrastructure and the need for various forms of collateral support for programmes. Also, programmes may interact in surprising and often not understood ways, either to the advantage or disadvantage of the overall prevention objectives.

How evidence-based are programmes?

Behaviour change programmes for HIV prevention in Zimbabwe have more than a 15-year history to learn from, but experience gained and research conducted in Zimbabwe and in sub-Saharan Africa, has not necessarily been used to develop programmes. The analysis examines the extent to which programmes are based on experience, research and evidence, versus assumptions. It is of particular interest to know whether programmes target groups and focus on behaviours that are strategically most important in containing the epidemic.

How effective are interventions?

The preceding situation analysis has outlined areas of vulnerability and the main dynamics of the epidemic as they currently exist. Here we examine the methods being employed to tackle these. It is valuable to distinguish between the 'efficacy' of a programme (its theoretical benefit when well implemented) and its 'effectiveness' (how well it works in practice). We know, for example that condoms have high efficacy with regard to HIV prevention but they are not as effective in practice because of inconsistent, incorrect use or because of social obstacles to their use.

An intervention's failure may point to poor efficacy or poor implementation, and hence poor effectiveness. The review explores the factors that help or hinder the translation of theoretically efficacious interventions into effective ones.

How secure are existing behaviour-change successes?

It is important to take into account the changes that have already occurred. Where behaviours have already changed or do not need to change, the *status quo* needs to be maintained and supported. Care is taken in this review to draw attention to various threats to types of behaviour where there has already been significant success or where new programmes may inadvertently create risks.

5.2 Strategy considerations

5.1.1 Behaviour change policies and strategies

There is no formally adopted national strategy for prevention through behaviour change. A draft was developed in 1998 but was never formally adopted. Among the recommendations in this draft is the need for prevention interventions to be related to services, and the need for support systems (including policy, legislation and women's empowerment initiatives) for key behaviour change initiatives. Other key elements of the 1998 draft are: developing leadership; including PWHAs (people with HIV/AIDS) in prevention programmes; involving communities; involving commercial sex workers; and involving women and men to address their own role in perpetuating circumstances leading to HIV transmission. The proposed strategy also called for broad-based involvement of media institutions, government ministries, the private sector and civil society.

Some of these elements were reflected in the guiding principles of the 1999 National AIDS Policy but this was oriented more towards providing a basic package of standard interventions. Although some behaviour change intentions were stated in that document, it did not go far towards recognising the complexities of achieving behaviour change and the forms of support this needs.

The National HIV/AIDS Strategic Framework (2000-2004) does address behavioural transmission of HIV although the key strategic objectives were not rationalised or prioritised. The implicit behaviour-change approaches are apparently not backed by an analysis of sexual behaviour vectors of infection. For example, the strategic objective of delaying sexual activity among youth is addressed by the strategy of involving peers and role models in making the delay of sexual debut normative and appealing. This does not account for the high likelihood that young women will lose their virginity to older men, and assumes that control of the factors that underlie early debut is within the behavioural and cultural repertoire of youth. The choice of peer education and role model approaches begs many questions: How was the strategy chosen? Are such approaches known or likely to be efficacious without other interventions, perhaps in the adult population? Do peers model themselves on and take advice from each other? Is there likely to be a multiplicative effect in such an approach? Strategies based on an understanding of epidemiological vectors and well rationalised interventions rather than assumptions, are necessary.

A 2005 national strategy on reproductive health behaviour-change communication has recently been developed by the MOHCW. The development of the strategy follows a situation analysis and it is based on a particular model for communication programming and a model of behaviour-change communication. The strategy document sets out expected outcomes, desired behaviours, identified barriers and possible key interventions for achieving a number of identified outcomes. It spells out key indicators of change and key roles and responsibilities for implementing the strategy. What is particularly encouraging about the document is that it recognises that behaviour change needs to be systematically developed and implemented.

Apart from these national policies and strategies there are others emerging from the efforts of a large number of organisations and consultants. The clients are private companies, government departments, economic sectors, churches and civil-society interest groups ranging from traditional leaders to labour organisations. An increasing number of small and large institutions now have comprehensive HIV/AIDS policies that presumably commit them to paths of action, including promotion of behaviour change. It is a pity that these developments have not occurred in the context of a nationally endorsed approach to HIV prevention through behaviour change. That likely would have led to a more coordinated approach and a national effort that is more strategic, synergistic and informed by the dynamics of the epidemic.

Perhaps of most concern regarding strategic frameworks is their lack of 'strategy'. The desired programme ends and the means used are often based on assumptions and convenience rather than a real understanding of the challenges of behaviour change. Some strategy documents reviewed do not spell out the means through which the desired ends are to be reached. For example, one

‘strategy’ is described as: ‘Promote and distribute condoms at the workplace through peer educators’. However, the means for promoting and distributing condoms needs to be spelt out, and an approach to developing a cadre of peer educators must be developed. Difficulties (sometimes not confronted) in implementing programmes consistently undermine programme effectiveness and strategies need to be based on an anticipation of the same.

A strongly promoted national behaviour prevention strategy is required, and existing strategies must be aligned with this. Also, the strategy must be promoted among persons who currently assist in developing strategies across the country, whether in NGOs, the private sector or Government.

There are behavioural prevention implications arising from implementation of policies and strategies which are the primary concern of ministries other than those directly concerned with HIV/AIDS. For example, the Sexual Offences Act seeks to: protect young persons and mentally handicapped persons from sexual predation; punish non-consensual sexual acts that do not amount to rape or sodomy; ‘combat’ acts of prostitution; punish the deliberate transmission of sexually transmitted infections and HIV/AIDS; and provide for compulsory testing of sexual offenders for HIV/AIDS. These aims are of direct interest with regard to behaviour change programmes. It is important to assess the implications of the full range of Government legislation, and to assess the risks and opportunities it offers for reducing HIV transmission.

5.1.2 Programme interactions

Programmes may have surprising positive side-effects; for example, condom promotion in commercial sex workers (CSWs) may lead to individuals leaving the practice of commercial sex work, and condom promotion may lead to a reduction in an individual’s number of casual partners.⁸⁹ There is also significant risk of negative interactions between programmes, for example the risk that treatment availability might decrease motivation to prevent infection.

Such potential programme interactions have not been sufficiently understood in Zimbabwe. Inasmuch as programmes should not undermine other programmes, they should be collaboratively shaped such that they contribute to meeting a general set of well-researched objectives.

The need to align policies around condom promotion and use should be an area of particular concern. The national HIV/AIDS policy states: “To limit HIV transmission through sexual intercourse, condoms should be made available, accessible and affordable to all sexually active individuals.” The Ministry of Education has actively discouraged promotion of condoms to school children as a means of HIV prevention, and it is understood by many teachers that the Ministry has forbade use of school facilities, including health facilities, to distribute condoms. It should be noted that the Ministry of Education does not have an explicit policy on this issue, and that the practice of disallowing condom promotion in schools is a consequence of parental influence. There is clearly need to reconcile the misalignment between national HIV/AIDS policy and practice of the Ministry of Education, and a viable compromise strategy needs to be found. For instance condom use education might be provided outside schools and arrangements made to accommodate this, specifically for sexually active young people.

In the non-governmental sector there is less pressure for alignment of policy and strategy, recognising that part of the strength of civil society responses to HIV/AIDS is that they cater for specific values and interests and suit the needs of particular groups; for example, representing commercial sex workers, the disabled or religious values. Nonetheless, there is some need to consider possible interactive effects of large-scale programme operations on other programmes. For example, the well-intended promotion of abstinence has been pursued in some contexts through the negative promotion of condoms. Statements and attempts to discredit the efficacy of condoms, based on poor scientific evidence and deceptively plausible ‘experiments’ showing the diffusion of coloured liquid out of a condom suspended in water, have been cited as evidence of

⁸⁹ Hearst & Chen 2003

the ineffectiveness of condoms. This may or may not have the intended effect of encouraging young people to abstain rather than use condoms, while this kind of approach has certainly raised doubts about condom efficacy.⁹⁰ For instance, it may jeopardise those who use condoms or consider using them in contexts where there is no other option or where there is little likelihood that abstinence will be the alternative.

It is important in developing a national behaviour prevention strategy to include a guiding principle of no negative promotion of other prevention approaches.

There are numerous opportunities for programmes to support each other. VCT, treatment and behaviour-change communication programmes overlap in various ways, as detailed below. A framework for ensuring synergy should be put in place, and strategies for integrated management must be included in a national behaviour-change strategy.

5.1.3 The growth and development of programmes

Importantly, developing a national behaviour-change strategy should include directives on how the constellation of prevention efforts should be supported to grow as a system.

There has been little documentation of the growth and features of Zimbabwe's HIV/AIDS response systems. HIV/AIDS-specific NGOs have existed as early as 1988 and it is apparent that district-level activity has proliferated in recent years, which appears to have led to a further round of growth involving local initiatives. In other countries the development of ART has led to further accelerated growth, but trends in Zimbabwe are not yet apparent.

Many interviewees remarked that they were experiencing difficulty obtaining resources for their prevention programmes. There was a prevailing view that treatment, impact mitigation and humanitarian assistance, and particularly programmes focused on orphans, enjoy strong funding priority, while behaviour-change programmes are relatively overlooked. There are several examples of underfunding of prevention programmes: for example, UNICEF's proposed prevention programmes for the past year were funded at less than 10% of proposed levels. However, this perception seems to reflect general underfunding of HIV and AIDS programmes rather than underfunding of prevention programmes relative to other areas. A breakdown of donor support in 2004⁹¹ shows that 47% of funding went to prevention, 26% to care (including ART), 11% to mitigation, 15% to 'other areas', and 1% to workplace programmes. While these categories may overlap, prevention is by far the largest area of support. Most projects listed in a 2004 UN directory of donor supported projects list prevention among other objectives, but the extent to which behaviour change efforts are a focus is not clear.

The growth of behaviour-change programmes has been largely unsystematic (described by some as 'organic'). Much expansion on the part of organisations seems to have been opportunistic rather than done through planned expansion strategies.

Comprehensivity vs. complementarity

It is essential to note what patterns of growth characterise the development of local response systems. Some programmes have maintained a very particular focus on one area of expertise and have striven to expand by disseminating communication products and programmes more widely or by developing projects in new areas, but essentially sticking to their core business. They have typically relied on other agencies to supply the basic services which must complement their outputs in order to generate successful outcomes. For instance, organisations such as Deseret have relied on the MOCHCW and New Start Clinics to provide VCT services; they have not sought to supply these services themselves. On the other hand, PSI promotes VCT and supplies the service itself. Other organisations such as ZAPSO and HOCD have used a mixed model, sometimes themselves providing the complementary services their programmes require and at

⁹⁰ See Section 5.3.5 on condom efficacy.

⁹¹ UNAIDS 2004

other times developing linkages with outside services that complement their own bundle of services, and thus making up a comprehensive set of services through partnership.

Complementarity: Many prevention programmes directly or indirectly rely on the successful implementation of other programmes for their own ultimate success. They may complement each other directly (e.g. social marketing of condoms complements condom education) or indirectly by reinforcement or creation of social and institutional support. Very often the success of communication campaigns requires services to be established and running and these services require communication campaigns to promote their use.

Many problems can and do arise in programmes which are not a result of their own shortcomings, but of failure of complementary inputs. Examples are peer education and workplace programmes where training is often not backed by adequate supplies and material support, or education materials effectively developed for a government department are not printed or distributed. Wherever there are split functions that together constitute a complete and comprehensive service there is risk of such failure. Failures of complementary systems are a particular problem to smaller organisations that are not able to ‘do it all’ themselves. This may become a special problem when up-scaling programmes as all elements of complementary systems need to be up-scaled in concert and all the necessary planning and investments need to be considered.

Comprehensivity: Whereas ‘complementarity’ involves the interconnectedness of different programme parts into the equivalent of a comprehensive system, ‘comprehensivity’ within programme development involves programmes expanding into new areas of service delivery to meet their own programme support needs. Comprehensivity may come at the cost of quality or specialisation. The risks of one organisation ‘doing it all’ are: difficulties in keeping up to date with new developments; risk of programme development not based on research and evidence, but rather on past practice; poorer contact with other organisations and what they have to offer; and cost inefficiency through poor economies of scale.

In some cases organisations become more comprehensive because of the need to ensure supply of particular commodities or services complementary to their core functions. But ideally organisations would develop in partnership with other organisations more specialised in a particular area.

Much more needs to be made of the specific strengths of particular organisations in informing and assisting programmes in other organisations. There needs to be greater rationalisation of continued expansion, and it is important when considering expansion to understand whether this should be through developing more comprehensive programmes or by improving complementarity.

In some areas there is clearly need for complementarity. Particular kinds of programmes are expensive to develop (for example, mass communication programmes), and since they tend to have wide coverage it is important that they look to supporting other initiatives without losing their own focus. A national behaviour change strategy needs to consider all the elements necessary for successful programmes and should strive for sustainable organisations competent in particular areas, and which in concert make up a comprehensive system.

A hybrid development strategy is well worth considering. To illustrate, CDC distributes a range of toolkits, training and communication materials and guides that have been specially selected because they are adaptable to different circumstances. This means that organisations would not have to develop their own materials and could relatively easily adapt materials for their use. The cost efficiency of this approach must be considerable and the risks inconsiderable as compared to the approach of an organisation developing its own materials and behaviour-change programmes from scratch. A national behaviour communication strategy would need to create an inventory of materials and training resources which would allow organisations to become more comprehensive in this kind of way.

Interactive effects of programmes

It is vital to recognise the interconnectedness of programmes and to keep track of the possible effects of new interventions, or up-scaled interventions, on other programmes. For example, the recently announced HOCD strategy of actively promoting VCT prior to marriage will increase demand for VCT services and HIV/AIDS support programmes that support sero-discordant couples. There are also less direct instances, such as the availability of ART services that have implications for the demand and supply of VCT services.⁹²

A promising behaviour-change strategy will need to take these issues into account and include principles for up-scaling behaviour-change programmes which recognise the interdependence of efforts and the risks and opportunities related to this.

What needs to be resourced is a carefully strategised national behaviour-change programme, where service providers would contribute elements according to their specific positioning and strengths. Multiple strategies can and should be used⁹³ to target specific outcomes, but standard economic thinking following the 'law of opportunity cost' is that money spent on one intervention cannot be spent on another and hence money should be spent on the intervention with the best cost-benefit ratio. In reality, money spent on one intervention may be money indirectly spent on another, under conditions of alignment.

With relatively little alignment of programmes under a behaviour-change framework, there has been little opportunity to maximise the 'collateral' effects of programmes. At relatively little cost, one programme can support and add to the value of other programmes. This area has been overlooked in programme development in the HIV/AIDS field,⁹⁴ yet it is one that should be considered while developing a more systematic behaviour-change agenda.

Tracking programme development

It is apparent that coverage offered by various programmes is unevenly distributed. Rural areas, which include 65% of the population, are difficult to reach and service, and with the population more spread out and transport a significant problem, it is not surprising to find that rural populations have less exposure to services and programmes than urban populations.

Programme expansion is being driven from the top by government and multi-site NGOs and from the bottom by small and emerging organisations. District AIDS Action Committees were designed to create a connection between these and District Co-ordinators appear to be well placed as a link between the centre and the periphery, although until now there has been no system for knowing 'who is doing what and where' or for assessing coverage of programmes.

A district monitoring-and-evaluation (M&E) system currently under development promises to provide ready access to data on programme activity at the provincial and district levels. Monitoring and evaluation will focus on programme activity and, once fully functioning, it will provide information that will assist in understanding the activities and development of behaviour-change programmes country-wide.

In addition, NAC, in collaboration with UNFPA, is developing a district atlas system which will be populated by district monitoring data. Mapping services in both rural and urban areas will contribute towards understanding service distribution and key issues about access and transport, which are important determinants of programme coverage and effectiveness. At a glance it will be possible to assess coverage in a district and the atlas will detail key information related to HIV/AIDS dynamics and responses for the area.

The district M&E system and atlas (both are in the operational research stage) will provide a much firmer foundation for planning at district, provincial and national levels, in allocating

⁹² See Section 4.3.8 for further discussion.

⁹³ Hearst & Chen 2003

⁹⁴ Hearst & Chen 2003

resources, and distributing materials. It should assist in avoiding duplication, increasing financial support co-ordination, and understanding coverage of high-risk areas and target populations. It will also help when doing inventory of research sites and projects.

It is essential to note what patterns of growth characterise the development of local response systems. Some programmes have maintained a very particular focus on one area of expertise and have striven to expand by disseminating communication products and programmes more widely or by developing projects in new areas, but essentially sticking to their core business. They have typically relied on other agencies to supply the basic services essential to their functioning. For instance, organisations such as Deseret have relied on the MOHCW and New Start Clinics to provide VCT services; they have not sought to supply these services themselves. On the other hand, PSI promotes VCT and supplies the service itself. Other organisations such as ZAPSO and HOCD have used a mixed model to develop some of the complementary services themselves and in this way offer a more comprehensive package of services under the umbrella of a single organisation. Much expansion seems to have been opportunistic rather than done in consideration of planned expansion strategies.

5.3 Key actors

National AIDS Council

The establishment of the National AIDS Council (NAC) was a strategy set out in the 1999 National HIV/AIDS Policy. NAC was set up primarily to coordinate HIV/AIDS interventions both within the government and across the various sectors. There are contrasting views on the role and capacities of the NAC structures and secretariat. Although it has created decentralized structures that stretch to the village level, most are resource poor and lacking in the capacity to effectively coordinate interventions, particularly at the lower levels. Although NAC regards itself as a purely coordinating body, some organisations interviewed argued that NAC has increasingly taken over some implementation functions at the expense of monitoring and coordination (e.g., NAC is involved in workplace programmes, its personnel regularly feature as a resource for training workshops, and it is heavily involved in sourcing and distribution of HBC kits and food packages). The NAC is under strong public scrutiny as it is responsible for managing funds derived from the 3% AIDS levy.

Government

The MOE has introduced HIV/AIDS awareness programmes into the school curriculum starting from grade 4 up to form 6, while HIV/AIDS became a compulsory subject in the school curriculum in 1993. However, in 1995 a review found that only a third of teachers had received in-service training in life-skills education, and a review in 2002⁹⁵ made a similar discovery.⁹⁶ The latter review found that teachers were not familiar with the new participatory techniques and that they found sex topics embarrassing and difficult to teach. The MOE programme is not consistently implemented across districts and there is an absence of appropriate materials at district level.

Because of lack of resources, materials approved in 2003 for grades 5, 6, 7 and form 1 have still not been printed and there are suggestions that some of them might now need to be upgraded to take cognizance of new developments.

The MOHCW appears to largely follow a medical model of HIV/AIDS intervention. Whereas this is not necessarily problematic, many questions were raised during interviews about the relationship between health facilities and the other facilities necessary for building a comprehensive multi-sectoral HIV/AIDS strategy. Linkages between government departments are reportedly not sufficiently institutionalised, and there do not appear to be strategies in place to maximize complementarity between programmes. The UNDP has also supported a series of

⁹⁵ HIV/AIDS in Education Assessment Team (2002) p. 31

⁹⁶ 34 000 trained out of 104 000

workshops for sector ministry focal persons, as a means of building their capacity to take leadership roles in mainstreaming HIV/AIDS into their areas of work, but the implications of this for behavioural prevention are not (yet) evident, at least to the extent of ministries participating in dialogue and planning with other agencies working in prevention.

It can be concluded that although HIV/AIDS is receiving attention in government (especially in health and education portfolios), there is limited progress in sectoral mobilisation, and there is need for better inter-governmental communication and co-ordination.

Civil society

The Zimbabwe AIDS Network (ZAN) comprises 400 organisations in civil society, most but not all of which are listed in its 2005 'Directory and Resource Provider's Profile.' Although the majority of these organisations are involved in care and mitigation activities, most of the programmes also have a behaviour-change component. Still, in our interviews it was apparent that whereas many organisations involved in HIV/AIDS consider themselves to be involved in promoting behaviour change, relatively few have specific behaviour-change objectives, measure programme performance using indicators of behaviour change, or systematically apply behaviour-change methods.

Among civil society organisations are a number of leading organisations involved in a behaviour-change programme which are active throughout the country. Among these are PSI (which targets mostly younger people), ZAPSO and Deseret (which focuses on workplace interventions and in supporting organisations that work with sex workers and programmes for in-school youths).

Faith-based organisations

There are two national co-ordinating bodies for faith-based organisations: Heads of Christian Denominations (HOCD) and Zimbabwe Interfaith Network against HIV/AIDS. The latter encompasses all religious creeds. It is a newly formed organisation and to this point does not have a substantial infrastructure. In addition there is the Union for the Development of Apostolic Churches in Zimbabwe (Udaciza) which unites the Apostolic and Zionist churches.

HOCD, which groups together Christian churches, is attempting to consolidate the many disparate efforts of church bodies across the country. It has recently adopted a policy having significant implications for national HIV/AIDS response, discussed below.

The recently adopted HOCD policy explicitly commits the churches to developing their own IEC materials and to conveying an HIV/AIDS awareness message from a Christian perspective. Believing that "information technology and the mass media have exposed young people to various negative influences that have a strong impact on their morals," the HOCD is committed to a peer-education approach that will maintain a strong Christian doctrine with a focus on youth. The HOCD has also committed itself to developing an inventory of existing youth movements and programmes within the Church.

The Apostolic and Zion churches have also become more involved in behaviour-change activities and have recently developed and adopted an HIV/AIDS policy that tries to address some of the practices within the church that are seen to fuel the spread of HIV/AIDS, such as polygyny, wife inheritance and the practice of marrying-off young girls into polygynous relationships with older men. Similar intentions are contained in the HOCD strategy.

An estimated 80% of Zimbabweans⁹⁷ are said to be affiliated to a Christian religious organisation, to the extent of at least occasionally attending church. This makes churches a potentially powerful conduit for communication with the populace. People gather at churches, they afford churches credibility and respect, and they allow churches to comment on cultural issues. Churches also have youth members, although, as yet, there is not much youth leadership in churches.

⁹⁷ HOCD interview.

The contribution of an organised church response should not be underestimated. It could have a significant positive impact, but it may also polarise and confuse. Elsewhere in this document the possible effects of some of the recently adopted strategies are discussed, with emphasis on the need to coordinate efforts and to understand their interaction with the activities of other key actors under a national behaviour-change strategy.

Private sector

The most significant initiative in the private sector is the membership base of the Zimbabwe Business Council on AIDS (ZBCA). This is made up of 21 organisations, led by a board of trustees representing 13 founding members.

Numerous smaller companies have engaged in processes of developing workplace policies and strategies and conducting periodic education events, sometimes including services such as VCT and condom distribution. These have usually been conducted by outside organisations such as Deseret and ZAPSO.

There have been few attempts to align approaches and strategies to this point and there is no body that has adopted the mandate of coordinating private-sector initiatives.

Traditional healers

Traditional healers have been recognised in many parts of the world as important contributors in the fight against HIV/AIDS. There are an estimated 55 000 traditional healers registered under the Zimbabwe Traditional Healer's Association (ZINHATA). Unfortunately, ZINHATA is not a very strongly institutionalised and cohesive organisation and there is very little formal involvement of this association in HIV/AIDS work, although the organisation is now involved in developing its own HIV/AIDS policy. There have been isolated initiatives in the past, but with little follow up or systematisation. The difficulties of communication between traditional healers is seen by one member of leadership, Professor Gordon Chavunduka, as the main reason that the association has not been able to develop a strong response to HIV/AIDS. However, the organisation has done relatively little to raise funds or to prioritise HIV/AIDS.

The most promising link with traditional healers is through DAACs. This would be the best way of developing the role of traditional healers in prevention, as it also overcomes the problem of traditional healers operating in isolation and not having access to essential information relating to behavioural prevention, and supplies such as condoms. Traditional healers have relatively high status as opinion leaders in rural communities and are an important information conduit to the most isolated and poorly informed portions of the population; once more, this is an overlooked area in developing prevention strategies.

Traditional leaders

Although traditional leaders – chiefs, headmen and kraal-heads – wield enormous influence in rural areas, outside the district AIDS action committees (DAACs) and ward AIDS action committees (WAACs) there have been few attempts to bring them actively into behaviour-change programmes. However, in some areas, notably Makoni District, chiefs have reintroduced virginity testing as a prevention strategy. However, human rights and gender activists are strongly opposed to the practice, which they see as demeaning to young girls and exposes them to older men seeking virgins.

Gender-oriented organisations

Women's NGOs have focused on interventions that target women, such as reproductive health, PMTCT and women's empowerment, as a strategy to reduce women's vulnerability to HIV/AIDS.⁹⁸ Organisations such as the Women and AIDS Support Network (WASN) has advocated strongly and with a degree of success for broader access of women to the female condom, while other organisations such as the Musasa Project and Zimbabwe Women's Lawyers'

⁹⁸ ZAPA report

Associations have advocated for stronger legislation against gender violence, which is seen as fuelling the spread of HIV. They have also achieved some success through the enactment of the Sexual Offences Act, and are currently lobbying for the enactment of the Domestic Violence Bill.

The Ministry of Gender has set out to understand vulnerability to HIV/AIDS connected to gender relations and is starting programmes wherein it will work with traditional leaders to reinforce traditional practices that delay sexual debut among young people and that seek to strengthen support structures for the youth, such as through the *tetes* and *sekurus* (aunts and uncles).

International aid

Under the joint UN response, UNAIDS has a role in coordination, resource mobilization, and resource-tracking. UNFPA is responsible for HIV prevention including behavioural change. UNICEF operates in-school and out-of-school programmes in 18 districts, while working closely with NAC structures. Other UN agencies including ILO, UNESCO and UNIFEM implement prevention programmes with components focusing on behavioural change.

In addition, many externally funded programmes directly provide HIV/AIDS services, including prevention programmes. These are mostly partnered with government and NGO agencies and linked to existing services, such as STI diagnosis and treatment programmes, and VCT services at hospitals. Government agencies also benefit from procurement support for commodities and equipment (e.g., male and female condoms, vehicles), as well as from staff training and public-private partnerships with internationally linked NGOs (like PSI who have introduced internationally tested methodologies such as social marketing). Numerous links also exist between NGOs and international programmes which support particular projects or promote particular approaches.

Several foreign universities and international health support programmes are supporting research and intervention programmes; examples are the University of California, Imperial College London and the Centers for Disease Control and Prevention (CDC). These programmes conduct epidemiological research and research relevant to prevention policy development, plus they supply capital goods and personnel. Some programmes work at the community level by providing peer education and behaviour-change programmes, advocacy and policy development initiatives, support groups and organisations for people living with HIV. Most of these programmes appear to be strongly aware of the need to adapt existing tools and approaches to local circumstances and to use local resources where appropriate.

The key point here is that programmes have numerous links with external intellectual and material resources. The great diversity of approaches evident in prevention activities and programmes is to a large extent a product of this exchange. While undeniably an asset, it also creates challenges of alignment and co-ordination, and sometimes sensitivities relating to external leadership or priority-setting.

5.3 Prevention activities and programmes

Although the review focuses on behaviour change for HIV prevention, its scope extends beyond the activities and programmes directly concerned with promoting behaviour change. Behaviour has a volitional (intentional) component and yet it is also influenced by external factors that can be regarded as partial determinants of behaviour.

It is widely believed that contextual factors may undermine behaviour-change intentions and so these need to be addressed at a contextual level, for example through shifting gender norms, addressing cultural practices or alleviating poverty. Programmes have been included in this review to the extent that they address the 'upstream' factors influencing behavioural prevention of HIV transmission through sex.

The scope of the review also extends to the behavioural components that make bio-medically oriented interventions successful or not. For example, gaining access to STD treatment and undergoing VCT as a couple requires not only special facilities and services but also behavioural preparedness to seek these out. However, since the review is focused specifically on sexual

transmission, only those elements specifically related to this are addressed.

While discussing the effectiveness of programmes, the direct contribution of specific programmes to key outcomes has been difficult to assess. Partly this is because behaviour-change programmes often do not have immediate demonstrable effects and because the observed effects are a result of the interaction of programmes. Consequently, we can only infer the possible contribution of individual programmes. Often the available evaluations (and there are few to speak of) are not able to claim benefits that have accrued because they do not control for the numerous unobserved influences by other programmes or for non-programmatic influences. This is especially true of the many programmes that offer specific services on a once-off basis, or ones that facilitate HIV/AIDS awareness events. Programme outcomes, in the sense of deliverables such as number of tests through VCT, are available, but their impacts on the epidemic are often not demonstrable.

5.3.1 Education and communication for behaviour change

Many of those interviewed were of the opinion that whereas awareness of HIV/AIDS is high, behaviour change is insufficient.⁹⁹ Given that there is now evidence of some behaviour-change success, there needs to be a reappraisal of the goals of behaviour-change communication (BCC) and a reorientation of those involved in education and communication for behaviour change to this reality. BCC now needs to focus not only on changing behaviour but also on maintaining those gains already achieved. New goals need to target those areas that have either been ignored or that have proved resistant to change.

The need to personalise and contextual perceptions of risk was widely seen as a solution to earlier perceptions that people were aware of HIV/AIDS but did not see the need to change their behaviour. Responses have included national multimedia programmes as well as more focused interventions, using specific models of behaviour change and methods for reaching out to small groups and individuals. This has involved more intensive and focused education and communication approaches including lifeskills education, peer education and contextual interventions, which are reviewed below. However, for many of the smaller and location-specific programmes ‘awareness’ remains the focus, for example, focusing on ‘community ‘AIDS days’ or health calendar events. Whereas there remains a need to create awareness and educate the public in a general way – especially about the changing shape of the epidemic, new interventions and unaddressed risks – the priority must be to ensure more wide-spread adoption of focused and systematic approaches.

i. Life-skills programmes

There are a number of tools and manuals being used for facilitating life-skills learning processes which are adapted to the Zimbabwean context.

These include:

- ‘Becoming HIV/AIDS free: A practical behaviour change approach to HIV/AIDS prevention and management for individuals, families and communities.’
- ‘Education for life: A behaviour change process’. This has been adapted for Zimbabwe from a Ugandan programme and there are plans for it to be readapted. This programme is implemented in a workshop setting. It has an explicitly Christian message and favours abstinence and ‘secondary virginity’ as a prevention of choice. It includes a behaviour change model strongly based on values clarification.
- Stepping stones: A thirteen-part lifeskills process specially developed for sexual and reproductive health enhancement. This programme has been evaluated in a number of African countries and has proved to be an effective intervention.
- Auntie Stella: Although not a lifeskills programme this packaged ‘briefcase’ of materials is a

⁹⁹ This echoes results of early behavioural surveillance reports; that is, whereas people were aware of HIV/AIDS only relatively few had changed their behaviour.

facilitation tool for use with groups of young people, consisting of a structured set of materials and a process for exploring developmental issues directly and indirectly related to HIV/AIDS. It is also available through online access.

Each of these programmes requires a trained facilitator. The processes involve multi-session attendance and hence a process of commitment on the part of participants. Most of these processes deal with issues such as self-assertiveness, self-esteem, communication, problem solving and they all include guided interactive exercises.

There is no strong reason to suggest that one programme is better than another. What probably matters most is that they require a specific commitment on the part of those attending and peer group interaction through a participatory learning process.

International literature has endorsed the concept of theory-led behaviour change interventions¹⁰⁰ and structured approaches. Programmes purporting to conduct behaviour change education processes should be required to use such structured life-skills programmes, which systematically engage participants in making decisions related to HIV prevention and learning implementation skills, based on an understanding of their circumstances and choice.

ii. Peer education

In the past fifteen years in Zimbabwe, many HIV and AIDS organisations have included elements of peer education in programme implementation. “Everyone is doing peer education” said one interviewee. Out of 362 organisations listed in the Zimbabwe AIDS Network Directory 20% (72) list peer education amongst their programme activities.¹⁰¹

Peer education programs in Zimbabwe vary widely in target populations, scope, methodologies, and effectiveness. Targeted populations include: in- and out-of-school youths; vocational, college and university students; people with HIV/AIDS; various age segments among urban and rural communities, commercial sex workers, individuals in industry and workplace settings and people with HIV/AIDS. The scope of programme coverage varies – some covering entire provinces or districts, others covering a number of cities or several workplaces.

The following illustrate the range of activities that peer-educators are involved in:

- Women making house-to-house calls to distribute leaflets and talk with home-makers;
- In and out-of-school youth organizing video and information shows for other youth;
- Military personnel counselling new recruits;
- Factory workers giving HIV prevention talks in cafeterias during lunch hours;
- One-to-one counselling at youth corners situated at clinic facilities;
- Young people staffing ‘youth corners’ at clinics, providing advice and basic counselling and acting as a problem filtering and referral agency.

Peer education has strong outreach and distribution possibilities, it does not require special facilities and must be regarded as having strong merit as a programme support mechanism. But, peer education is not in most cases a complete programme methodology, and often is one element of a larger programme.

¹⁰⁰ UNAIDS 1999

¹⁰¹ The range includes: Zimbabwe AIDS Prevention Project (ZAPP), Matabeleland AIDS Council (MAC), Empowerment through Peer Education project of The Girl Child Network (GCN), Zimbabwe Association of Church Hospitals (ZACH), Zimbabwe Peer Education Project, Peer Education and Counselling Project, Urban Youth Project (UYP), Church and Community Based Reproductive Health and HIV and AIDS Project, Expansion of Adolescent Sexual and Reproductive IEC & Services in Zimbabwe Project and Provision of HIV/AIDS/STI Voluntary Counselling, District Response Initiative and Testing Project by ZAPSO.

Peer education programmes appear to have been more effective in some contexts than others. Workplace, PWHA and CSW programmes appear to have greater success in sustaining peer education programmes, although there have been some successful youth peer education programmes such as that run by the Jesuit AIDS Project over a number of years.

Peer education programmes have consistently faced the following problems:

- High attrition rates with the burden often falling on a few committed individuals with need for continuous training cycles to ‘top up’.
- Peer education selection processes are sometimes contentious leading to reduction in their credibility and popularity. They may also be flawed by contrasting interpretations as to who would have appeal to intended beneficiaries.
- Once-off training and not enough ongoing mentoring, follow-up, supervision.
- Poor programme support for ongoing peer education implementation activities.
- Inadequate incentives and opportunities for advancement for peer educators and poor branding of the identity and status of peer educators.
- Peer educators are often not adequately trained in certain areas of programme management, particularly in record keeping and management information systems.
- IEC Materials (leaflets, posters and other support materials) are in short supply in many projects making it hard for peer educators to promote and reinforce their education with appealing and authoritative communication materials.
- Lack of institutional support. For instance in vocational training centres there is competition for curriculum time and HIV education programmes are afforded insufficient priority. In workplace programmes success is sometimes jeopardised by poor company commitment.
- In dealing with HIV/AIDS and sexual and reproductive health, peer educators cannot function separately from their community, other individuals and organizations in the same field. This may raise issues of confidentiality and neutrality.
- The scope of work of peer educators is often limited to providing information, skills, and counselling related to sexual and reproductive health. However, without access to additional services and commodities, their skills may not be fully utilized by the target population.

Well functioning peer education programmes are clearly more resource intensive than many project developers plan for. It seems that problems arise particularly when the peer education programme is the central component of a project rather than an implementation support mechanism. The most successful programmes have well circumscribed and limited goals and they seem to have highest gearing for success in poorly resourced settings or social environments where services are otherwise difficult to implement such as beer-halls, amongst marginalised youth (drug users, street children) or in isolated areas.

Peer education programmes are not necessarily a low cost, easy to implement option. There are some programmes that run very successful peer education programmes and these are clearly intensive in all respects. The Corridors of Hope programme targeting commercial sex workers conducts a two-week intensive training course for peer educators. Weekly five hour training courses follow which include quality assurance checklists to maintain high standards of practice and training in use of monitoring and evaluation forms. Trained peer educators conduct targeted condom distribution, STI symptom education and promotion of treatment. The programme has supervisors that follow-up peer educators and assess their work.

Peer education approaches are seldom stand-alone programmes and are often justified as a support or delivery mechanism rather than as a sole method of programme delivery. It is therefore not possible to review them on their own and their effectiveness is often tied into the efficacy of the broader programme. The most successful peer education programmes are supported by a training package, clear objectives and ongoing institutional support.

An evaluation report on the Magunje community-based youth reproductive health¹⁰² concerns a youth project that used adult ‘Sahwiras’ to promote youth friendly services. It had significantly better outcomes than another programme which employed youth peer-educators suggesting that youth might not be the best educators of youth.

In Ghana under World Education’s shape programme peer educators doing their national service are placed in NGOs away from their own communities and as outsiders coming into new communities they have been regarded with interest and the fact that they are unknown has given them some power to develop an image as authoritative.¹⁰³ As school leavers they are slightly older than those they work with and this seems to fuel interest in them as people. Research from Kenya and Uganda also suggests that young people would prefer to be counseled by young adults rather than their peers (i.e., “not their friend and not their mother”).¹⁰⁴

Successful peer education programmes require partnerships with service organizations and health facilities to ensure that peer educators are able to refer people such that they will be expected and well received at the receiving site. It also helps to build the credibility of the peer educators who sometimes are not sufficiently highly regarded as educators, because they have histories within their own communities. This helps to build the sense of being part of a system and being able to offer something quite concrete. Support for the integration of peer educators into referral systems can and have been effectively managed at district level in some instances.

iii. Tools for contextual interventions

There are a number of tools available for supporting programme development in different contexts. These include:

- Smartworks: An integrated package for developing workplace programmes. This well researched programme is adaptable to different contexts, specifically developed for Zimbabwe and offers all the tools and resources necessary to develop comprehensive workplace programmes suited to particular circumstances. This is being promoted and distributed by CDC.
- Communication for action: This manual, based partly on the work of Paulo Freire is particularly useful for developing community responses to HIV/AIDS.
- UNIFEM is in the process of developing a manual for dealing with gender and HIV/AIDS issues at community level. The manual details innovative community processes for initiating discussions around gender issues in a non-intrusive way.

CDC Zimbabwe has had as one of its main programme foci, the development, reproduction and distribution of programme support materials which can be readily adapted for use in different contexts. It recognises that different contexts and target groups require different approaches, but this does not necessarily mean different tools.

5.3.2 Sexual deferral

In this section we deal with the A of ABC, which refers to abstinence or delay of sexual activity.

i. Delayed sexual debut

Although it is encouraging that there is some evidence that sexual debut has risen over the past few years, possibly in response to ‘delayed debut’ campaigns, some doubt must be cast on delaying debut further and even more so on the possibility of delaying debut until marriage, given current ages of marriage trends (see Section 4.2.3). About half of Zimbabweans aged 18-20 have had one or more sexual intercourse experiences and it is unrealistic to delay debut until marriage considering that by the age of about 24 only 50% of Zimbabweans are married.

¹⁰² Phiri & Erulkar 2002

¹⁰³ Kelly & Mukwashi 2004

¹⁰⁴ Horizons 2001

In Section 4.2.3 some doubts were expressed about the epidemiological significance of delaying debut beyond present levels especially relative to the value of attending to overlooked priorities such as age differentials in early relationships and poor condom use in established non-monogamous relationships.

These doubts about the epidemiological significance of delaying debut are in contrast to 'delayed debut' having been the most prominent focus in both secular and religious prevention efforts. Delayed debut has been seen as the most appropriate intervention for young people, and the exclusivity of the approach has been sustained by the lack of condom promotion in schools.

A 2005 international research review¹⁰⁵ found no evaluated abstinence-only program has resulted in delayed intercourse among program participants over longer periods of time compared to control groups or groups receiving broadly based sexual health education. A review of evaluations of abstinence-only programmes¹⁰⁶ concluded that abstinence-only programs show little evidence of sustained (long-term) impact on attitudes and intentions. There appears to be no peer-reviewed literature that abstinence-only-until marriage has worked as a stand-alone strategy in any context. Worse, they show some negative impacts on youth's willingness to use contraception, including condoms, to prevent negative sexual health outcomes related to sexual intercourse.

This is particularly notable given the exclusive focus of school- and church-based programmes on delaying debut, and the lack of discussion of condom use as an option. This is a serious oversight. The value of abstinence-only programmes must be directly challenged. Not only are they not justified by research, but they may be a risk. Supporting the message to reduce the number of sexual partners and to delay the age of first sex should remain an important but not exclusive emphasis of prevention campaigns.¹⁰⁷

Some churches have tried to promote delay of sexual debut through encouraging "take time to know him". The multimedia delayed debut campaign conducted by PSI has similarly tried to provide reasons for delaying debut which might be of support to people for whom delaying debut is the most viable prevention option. The campaign has branded the characteristics of a 'real man' as someone who refuses to have sex until he is married, who is respectful of women, who can 'wait' to have sex, and who doesn't coerce women into sex. A 'real women' is seen as someone who 'waits', who doesn't bow to pressure, who 'values' her virginity and doesn't trade this value for material gifts. Delay of debut is connected to planning for the future and resisting peer pressure. These promotional (if value-laden) approaches are surely a support for young people who are inclined to want to delay debut in the face of pressure to involve themselves in sexual relations before they are ready. They stand in contrast to the uncompromising focus of other sexual abstinence programmes, which try to achieve success by spreading misconceptions about the efficacy of condoms or argue that provision of SRH to young people is counterproductive to the 'real solution' of abstinence.

In Zimbabwe¹⁰⁸, virginity testing is being used as a way to generate income for chiefs, whom families must pay to have their daughters publicly declared as 'clean'. An additional fine is paid in the event that a girl fails her test.⁷⁰ There are some reports that virginity testing is growing, but it seems to be limited to a few geographical areas only. The growth of this trend should be monitored and possibly researched. Its efficacy as a long-term prevention strategy has not been tested and it is strongly opposed by many of the women's rights organisations in Zimbabwe. There is a risk that debates around such issues as virginity testing become a distraction from the more important issues which need to be resolved, most importantly the need to offer prevention options to those who are and choose to be sexually active. This issue needs to be discussed at a policy level and specific recommendations made about whether virginity testing is acceptable and

¹⁰⁵ Bennett & Assefi 2005

¹⁰⁶ Hauser 2004

¹⁰⁷ Pettifor et al. 2004

¹⁰⁸ Leclerc-Madlala 2004

under what conditions; and whether it is worthy of being supported or should be banned under a national behavioural prevention strategy. Alignment with principles of consent and gender equality needs to be considered.

ii. Reducing age differentials

As much as Zimbabwe has one of the most favourable ages of debut in the region, it has amongst the highest age differentials between partners at first sex.

There has been surprisingly little development of programmes specifically for reducing age differentials, although there have been a number of campaigns for avoidance of ‘sugar daddy’ and ‘sugar mummy’ relationships. These campaigns appear to be mainly oriented to young people by way of awareness-raising, so that they might recognise such relationships and be in a position to avoid them. Campaigns to make such relationships socially unacceptable would need also to be conducted amongst the adult participants in such relationships.

There has been surprisingly little development of programme emphasis on the specific issue of age differences between partners at first sex and it would be a challenging programme area indeed. High age differentials in relationships tend to be culturally accepted and relationships of young girls with older men tend to be condoned, and reinforced by older partners having greater financial resources. There may be less tolerance of high age differentials at first sex than high age differentials between partners in a more general sense, and this may provide a cultural foothold for intervention programmes.

This area of risk must be prioritised. The evidence is unequivocal. The dream of an HIV/AIDS free generation is not likely to be attained in a context that has such a high degree of cross-generational sex. There are few voices advocating for addressing this issue. A review of international work in this area should be conducted and the socio-cultural issues at play in Zimbabwe should be investigated as a prelude to a concerted effort to develop an intervention agenda.

5.3.3 Reduction in number of partners

Although the ‘B’ in ABC refers to ‘be faithful’ it is usually taken to refer also to reductions in casual sex and multiple sexual partnerships. It has been termed the neglected middle child of ‘ABC.’¹⁰⁹ This neglect is surprising considering that multiple sexual partnerships are the fuel of HIV epidemics and partner reduction has proved to be highly effective as a prevention measure, especially if driven from a community level.¹¹⁰ This has been the case in the gay epidemic in the US, and in Uganda and Thailand. A review of the contribution of condoms to preventing HIV infection in the developing world has suggested that “in countries like Uganda that have curbed generalised epidemics, reducing numbers of partners appears to have been more important than condoms.”¹¹¹

There are a number of ways in which partner reduction may be achieved: promotion of sex exclusively in monogamous marriage relationships, reduction in partner concurrency and avoidance of casual sexual relationships.

i. Sex exclusively in monogamous marriage relationships

Although in some countries marriage is considered a protective factor because it limits concurrent sexual partners, the situation analysis has shown that this is not the case in Zimbabwe. ‘Small houses’ and previous cultural tolerance of polygyny¹¹² have meant that marriages are often not monogamous. Condom use in marriage is uncommon and this makes married women in non-monogamous relationships particularly vulnerable. .

¹⁰⁹ Shelton et al. 2004

¹¹⁰ Wilson 2004

¹¹¹ Hearst 2003, p. 1

¹¹² Polygyny refers to a man with more than one partner. Polyandry refers to a woman with more than one partner. Polygamy refers in general to polygyny and polyandry.

The primary behavioural prevention message from HOCD is that church members should practice sex exclusively within a monogamous marriage. Church groups aligned with HOCD have specifically endorsed monogamy as a response to HIV/AIDS. Although polygynous marriages have been tolerated by some Christian churches,¹¹³ even those churches have now aligned themselves with a policy of only conducting and endorsing monogamous marriages. Traditional leaders have also declared themselves in support of this, as an HIV prevention measure.

However, non-approval of polygynous marriages may have a limited effect in curtailing the risk of HIV infection in marriage. The greater risk may stem from concurrent casual or ‘small house’ partners, which fall outside any traditional definitions of marriage. Marital infidelity of this type has never been condoned by the Church and might not yield to the Church speaking out against polygyny.

This is an important and largely unaddressed prevention issue. It is particularly challenging because there is a tacit cultural acceptance of such relationships although they are not openly acknowledged. Any intervention in this area should closely examine the meaning of fidelity in relationships for both men and women, and the changing patterns of sexual expression in marriage over time, including beliefs about sexuality after menopause, and would require a close examination of barriers and opportunities related to faithfulness to one partner.

ii. Concurrency and serial monogamy

There has been no prominent secular campaign for partner reduction, equivalent to the ‘zero-grazing’ campaign (sticking to one regular partner) that is often seen as one of the key elements of success in Uganda.¹¹⁴

Promotion of ‘one partner at a time’ is an important area of intervention that needs to be discussed independently of marital fidelity. It is relevant to those who are sexually active and have never been married, are divorced, or whose partner has died. In Section 4.2.5 attention was drawn to the strong epidemiological risks of concurrent sexual partnerships as compared to patterns of serial monogamy. The latter refers to a pattern of partner ‘turnover’ where partners do not overlap and from an epidemiological standpoint the comparative advantage of serial monogamy over concurrency would require serial monogamous partnerships of at least 90 days.

As has been discussed above, the particular risk of concurrency is related to the impact of viraemia on infectivity.¹¹⁵ This fact ought to be part of the stock of public knowledge. Greater knowledge of the dynamics of acute infection may prove a useful aid in reducing partner concurrency. Concerning serial monogamy it would lead to an appreciation of the need to ‘space’ relationships and to delay commencement of sexual relations within relationships to a point which would ensure that high viral loads in an infective partner would have subsided by the time of commencement. This is not an absolute solution and does not detract from the need to use condoms in all contexts where partners are not confirmed HIV negative. But in the absence of condom use it would make a difference and it provides a strong motivation for avoiding concurrent relationships and rapid turnover in serial relationships.

iii. Reduction in casual sexual encounters

There has been a strong emphasis on use of condoms in casual or non-regular sexual encounters and this seems to have been a major area of success as discussed previously. There is also some evidence¹¹⁶ of reduction in number of casual partners. However, reduction in casual partnerships has received less direct attention at a communication campaign level than has delay of debut or use of condoms. There must have been some spill-over from delayed debut campaigns which have emphasised waiting until you are ready, but casual partnerships are often conducted by those

¹¹³ Notably Apostolic and Zionist churches.

¹¹⁴ Wilson 2004

¹¹⁵ See Section 4.2.5

¹¹⁶ See Section 4.2.5

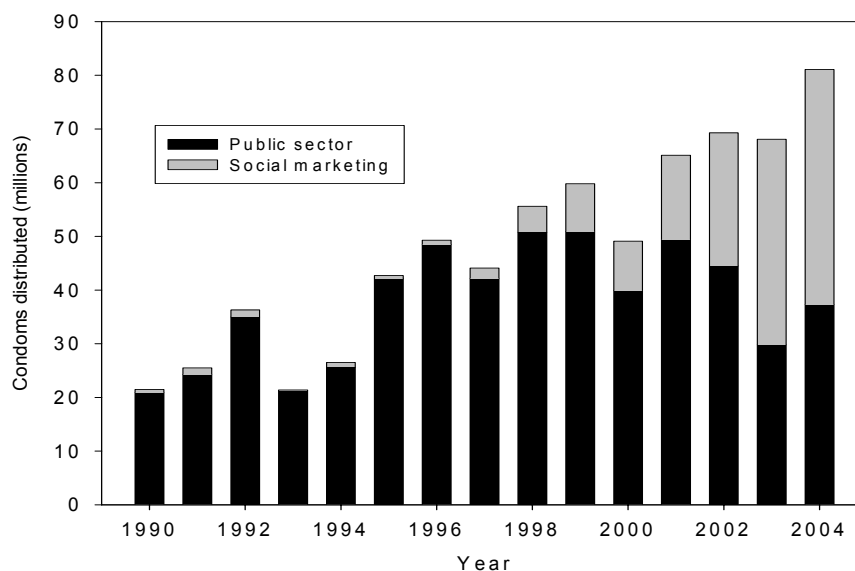
who are already highly sexually active, in which case delayed debut campaigns are likely to have a limited effect. Increased condom use in casual sex should be recognised as a success and efforts made to sustain or increase gains, perhaps with a niche focus on environments where casual sexual relationships are most likely to be initiated.

In addition to increased condom use in casual sexual relationships, the prevalence of casual sexual relationships amongst 15 to 29 year olds, has diminished.¹¹⁷ This has happened as a response to general HIV prevention communication rather than focused communication and it suggests that the behaviour is subject to change. This tendency might be built upon with a focus on casual sex. This would need to commence with research on patterns of casual sexual relationships, and on which sub-populations are particularly engaged in such relationships.

5.3.4 Condom use

Availability and use of condoms

The following chart¹¹⁸ shows how condom distribution in Zimbabwe has grown between 1990 and 2004.



The chart illustrates the proportion of condoms distributed free of charge in the public sector and the proportions that were purchased at a nominal rate through social marketing. It is apparent that the relative contribution of social marketing condoms has grown to the point that it now exceeds the public sector contribution. The social marketing of condoms has been shown in numerous studies¹¹⁹ as one of the most successful strategies for promotion and distribution, and there seems to be no reason to deviate from the current trend to rely most heavily on this. This contention is further supported by a review¹²⁰ that suggests that distribution of free condoms is most effective in concentrated epidemics, for high-risk groups such as sex workers, and that condoms freely distributed to the general public in a generalised epidemic often go unused. Under the PSI programme subsidized condoms are sold at affordable prices under a brand name and promoted using advertising strategies as would be used for other consumer products. PSI/Zimbabwe has used mass-media social marketing as well as niche marketing methods to promote branded Protector Plus male condoms and Care female condoms over the past several years. Condoms are widely available at retail outlets throughout the country at a nominal cost.

¹¹⁷ Gregson 2005

¹¹⁸ UNFPA 2005

¹¹⁹ Hearst & Chen 2003

¹²⁰ Hearst & Chen 2003

An interview with a 21-year-old in the remote community of Chawera reported that condoms are easily available¹²¹ although they are not freely distributed to young people in contexts where they may be confidentially collected. PSI has also promoted condoms through workplace social marketing initiatives, has a programme for social marketing of condoms them on key transport routes and among commercial sex workers, promotes female condom distribution in hair salons, and is active in condom promotion in still other contexts.

The data on condoms presented in section 4.2.6 suggests that condoms are more likely to be used in casual relationships and with non-regular partners. They are also more likely to be used in relationships between younger people. Further progress in promoting condom use involves understanding who is using condoms and in what kind of relationships. Unfortunately many behavioural surveillance surveys have not addressed questions about who uses condoms, with what partners, in what kinds of sexual acts, how consistently and how correctly.

There is some reason to believe that it is those who are less at risk that tend to use condoms. In a study of 730 in-school youth who were sexually active (out of 4,018 surveyed), boys who used condoms were older, more likely to report that their parents were available when needed, spent more time in extracurricular activities, and reported a lower dropout likelihood. Girls who engaged in safe sex worried about HIV/AIDS more than those who engaged in unsafe sex. The other factors did not distinguish between those who did and did not practice safe sex.¹²² This means that it is important, in relation to this study population at least, to reach those who do not have good social support, who have higher dropout rates and who do not worry as much about becoming infected.

Using Uganda as a benchmark, a review of the role of condoms in reducing HIV infection suggests that “Other countries continue with high HIV transmission despite high condom use. Impact of condoms may be limited by inconsistent use, which provides little protection, low use among those at highest risk, and negative interactions with other strategies, such as partner reduction.”¹²³ This review recommends more condom promotion for groups at high risk, more rigorous measurement of the impact of condom promotion, and more research on how best to integrate condom promotion with other prevention strategies.

The impact of condom promotion on abstinence

Traditional and Christian leaders promote abstinence as the exclusive strategy for all young people, whereas NGOs and the private sector tend to promote condom use. It is believed by the former group that the availability of condoms promotes sexual activity among young people.

A 2002 survey¹²⁴ of teachers found that 75% of secondary and 84% of primary school teachers did not believe that condoms should be made easily available for sexually active learners. This is also the view of church leaders¹²⁵ who do not support the use of condoms in prevention for youth, believing that by making condoms available to young people one encourages sexual activity. There is, however, little peer-reviewed literature to support the view that condom availability is an incentive to have sex; meanwhile, there is ample evidence that many Zimbabwean youth are currently sexually active.¹²⁶ In this context it is of concern that condom use among young people in some settings, notably school, is overlooked or advocated against.

“Research has clearly and consistently shown that the promotion and distribution of condoms to adolescents does not result in earlier or more frequent sexual activity, but condom distribution programs can significantly increase condom use among teens who are sexually active.... Neither provision of information nor access to contraception and condoms increases sexual activity

¹²¹ “If youths want them they can get them.”

¹²² Betts et al. 2003

¹²³ Hearst & Chen 2003, p. 1

¹²⁴ HIV/AIDS In Education Assessment Team 2002, p. 28

¹²⁵ Interview with HOCD team.

¹²⁶ See Section 4.2.2

among youth.”¹²⁷ Promotion of condoms is not a risk to abstinence programmes when conducted specifically in sexual reproductive health education contexts.

“The denial of youth sexuality by Zimbabwean adults is a big hindrance to advocacy programmes targeted at the youth and should itself be a major advocacy issue for organisations involved with youths and HIV/AIDS.”¹²⁸ This issue needs to be addressed directly, with agreement still not reached regarding tolerance of apparently conflicting messages. The principle of preventing HIV infection along all vectors of transmission needs to prevail and it needs to be made clear that education about condom use does not necessarily promote sex.

Evidence from focus group discussions indicates that adolescents are aware of the moral dimensions involved in using condoms before marriage and they sometimes conceal their condom use in order to pretend to meet adult expectations.¹²⁹ This is not a good context for promoting communication about management of HIV infection risk. It needs to be recognised that the promotion of abstinence as a sole method of prevention is based on religious grounds rather than epidemiological evidence or insight, and its promotion should be exclusively promoted on those grounds.

Concerns about condom effectiveness

The view that condoms are not safe appears to have much support in Zimbabwe, even among leaders in the field.¹³⁰ The assertion has gained popularity in churches¹³¹ and is used as a way of promoting abstinence, monogamy and faithfulness. An HOCD-supported behaviour-change programme explicitly advocates against the use of condoms in favour of abstinence. It does so by presenting information on condom failure rates and the risks associated with condom use (breakage, slippage, defects). The view that condoms are porous and allow the passage of HIV has also been promoted.

It would be worthwhile to assess the pervasiveness of the view that condoms have poor protective properties, particularly amongst leaders. This assertion needs to be strongly refuted, because there is a risk that its further promotion could decrease condom use motivation amongst the sexually active population.

While condoms may occasionally be permeable to virus-size particles, most condom failure results not from leakage through latex but ‘flow’ factors, such as breakage, slippage, and improper use. The efficacy of condoms as a barrier method is assumed to be close to 100% under ideal conditions of manufacture and use. This closely matches their effectiveness for contraception. There is ample evidence that consistent condom use provides protection from HIV and STDs, whereas inconsistent or incorrect use is not protective. Programmes must emphasise consistent and correct condom use for HIV and STD prevention.¹³²

Through its 2004 ‘Mr. Smart’ campaign, PSI has focused on promoting perceptions about condom effectiveness. The campaign was able to improve the proportion of young people who strongly agree that condoms are highly effective against HIV infection, from 76% to 92%.¹³³ Breakages were cited as the main risk factor. Therefore, it seems that notwithstanding negative promotion of the efficacy of condoms, public perceptions have likely been swayed towards recognition of condom efficacy. Understanding that the regularity and correctness of condom use are essential for effective use appears not to have been as well established, however.

Condom use in relationships

¹²⁷ Alford et al. 2005, p. 6

¹²⁸ ZAPA review 2002.

¹²⁹ Tapela & Mavenka 2004

¹³⁰ Interview with ZAPSO

¹³¹ Interview with HOCD

¹³² Ahmed et al. 2001

¹³³ PSI research department 2004

A 1999 study revealed that among adult respondents who reported not using a condom with their regular partner at last sex act, 77% of females and 59% of males reported not using condoms because they trust their partner.¹³⁴ Studies from both developed and developing countries find that youth are less likely to use condoms with partners they deem trustworthy.¹³⁵ This works against the use of condoms in long-term relationships.

It has been suggested above that marriage is not a strong 'protective' factor against infection and that condom use in marriage is low. In terms of intervention priorities it makes sense to suggest that for people in long-term relationships, knowing one's status is an important first step in prevention, and that condoms are only necessary in the case of discordant couples and the case of marital infidelity. In the latter case the most important prevention step is use of a condom with the extra-marital partner. Understanding the need for condom use in marriage requires an understanding of the risk factors involved and this is beset by problems of communication, secrecy and concerns about trust. This is an important area yet to be addressed and strategies for it should be formulated.

It is well established that condoms are an important tool in preventing infection in marital relationships. One study of 124 sero-discordant couples who used condoms consistently in approximately 15,000 acts of sexual intercourse, found not one case of an uninfected partner becoming infected with HIV.¹³⁶ The Centre in Harare¹³⁷ reports that HIV-positive women largely favour use of female condoms and their partners tend to prefer them to male condoms. Promotion of female condoms in sero-discordant relationships should be explored as a long-term strategy.

It is relatively easy to promote condom use with known sero-discordant couples, but difficult to address the need for condoms when sero-status is not known. It therefore holds that promotion of condom use in marriage should be connected to the VCT process.

Other issues of relevance in considering national condom-use promotion:

- A number of international studies have found inconsistent users of condoms to be at higher risk than non-users.¹³⁸ Correct and consistent use of condoms must be put in focus and there needs to be further investigation of the factors driving inconsistent and incorrect use.
- Research into the impact of 'new infections' (viraemia) on the spread of HIV¹³⁹ has important implications for programmes promoting condom use. It is most important that couples either abstain or use barrier methods under conditions of possible exposure to a newly infected partner.
- There are some concerns about a current impasse relating to condom availability, due to condom testing standards that threaten the supply and which could pose an epidemiological risk if not resolved.

5.3.5 Voluntary counselling and testing (VCT)

i. VCT as a prevention measure

In Zimbabwe, VCT is widely considered a primary HIV prevention activity. However, reviews of the efficacy of VCT for prevention¹⁴⁰ are equivocal about its value in prevention.

VCT is more effective for prevention with sero-positive than with sero-negative people. HIV-infected persons who are aware of their HIV sero-status tend to reduce behaviours that might

¹³⁴ Agha et al. 2002

¹³⁵ Longfeld et al. 2002

¹³⁶ De Vincenzi 1994

¹³⁷ Interview with Lynde Frances, The Centre in Harare, September 2005.

¹³⁸ Hearst & Chen 2003

¹³⁹ See Section 4.2.5 (j)

¹⁴⁰ Dube et al. 2005; Glick 2005; Solomon et al., 2004. The latter review suggests that studies on the efficacy of VCT as a prevention measure should be treated with caution as the literature contains numerous methodological and conceptual limitations that undermine conclusions.

transmit HIV to others. Sero-negative people are more likely to continue to engage in unsafe sexual practices after they discover their status.

Another common finding is that VCT for couples is more effective at altering risk behaviour, than is individual testing and counselling. This is particularly the case for sero-discordant partners (one HIV-positive, the other HIV-negative) who test together and thereafter tend to adopt prevention measures. A somewhat weaker finding is that VCT significantly reduces unprotected sex with non-primary partners.

Evaluations of VCT in Africa to date have not produced evidence of the impact of VCT on HIV incidence rates, once services have become widely available. Accordingly, it is somewhat surprising that there have been international calls for the massive scaling-up of VCT services as an attempt to change behaviour and reduce HIV transmission.

Reviews of VCT research suggest that VCT will have significant epidemiological impacts on the epidemic only if it is able to attract large numbers of sexually active HIV-positive individuals.¹⁴¹ Sexually active women are generally easier to target as they use reproductive health services, but it is important also to target men, especially in male-dominated relationships where men may have more influence on a couple's subsequent behaviour. Concerning couples, it is interesting to note a Zimbabwe study of factory workers, where only 7% of the men who tested also brought their partners for testing, despite efforts to make this convenient for them.

It is interesting to note, that in contrast to the above, data from the 2003 PSI survey in Zimbabwe shows that those who know their HIV status are significantly more likely to have used condoms at last regular and casual sexual contact and were less sexually active than those who don't know their status. But this does not necessarily mean that people are more prevention oriented because they know their status. Perhaps they know their status because they are more prevention oriented in the first place, and undergoing VCT is an outcome rather than a cause of a general prevention orientation. This possibility is supported by the fact that HIV-positive results from stand-alone VCT centres in Zimbabwe in 2002 were somewhat below (this is expanded on below) what might have been expected when compared to population prevalence *per* age-group.

The rationale for VCT as a prevention approach hinges on the prevention efficacy of the counselling process. There is no strong reason to believe that simply knowing one's status (the testing component) is likely to have a positive prevention outcome. The successes attributed to VCT may be largely due to skills-based counselling, rather than VCT itself.¹⁴² In the absence of an adequate counselling process, VCT could conceivably pose a risk for people who test HIV-negative and assume that they are not vulnerable. If VCT is to have prevention functions for HIV-negative individuals and couples, it should purposefully aim to help them maintain their negative status and provide them with information to anticipate future risks that they may have not yet encountered.

Without knowing why people go for VCT, we are limited in understanding the potential impacts of programme expansion. PSI VCT records show that of 8 027 youths (15-24 years old) who sought VCT during a particular period, 76.9% did so because they were worried or curious about their HIV status, 11.2% did so for retesting, 4.3% did so because they planned to marry, and 7.7% did so for other non-disclosed reasons.¹⁴³

The value of this data is limited without fuller enquiry into, for example, why people were 'worried or curious', how this group differed from those who were worried but did not get tested, and why they opted for testing at that point. There are no definitive Zimbabwean studies considering such aspects, although it is important to better understand the profile of people seeking services at the stand-alone facilities in particular. The prevention outcomes of VCT may largely depend on what they bring to the experience of VCT by way of pre-existing prevention

¹⁴¹ Glick 2005

¹⁴² Dube et al. 2005

¹⁴³ Dube et al. 2005

resolve and their expectations regarding the outcomes of VCT. It is also important that the outcomes of VCT be tracked for HIV positive and negative results and different ways of providing services. This is an under-researched area that is important for the optimization of VCT as a prevention tool.

Analysis of data from eight VCT sites¹⁴⁴ shows that, since 2002, the percentage of those tested because they want to get married has increased. This is likely to be a growing trend. One of the most significant recent developments regarding VCT has been the adoption by the HOCD of a strategy to promote VCT generally, while more specifically it aims to provide pre-marital VCT and to promote one's right to know a partner's status. HOCD also aims to promote VCT among ministers, and has encouraged them to testify about VCT and HIV status. These initiatives have potentially very important implications, but success at an epidemiological level requires considerable work to connect VCT and prevention. Perhaps most significant is promoting VCT prior to marriage. The epidemiological value of this will depend on the development of prevention elements in the VCT process, particularly services tailored to couples, and it will involve the need to scale-up VCT services across the country.

The data from since 2002 also show that attendance by those who came for VCT because they or their partner was ill, increased from 7% to 24%. This may have been prompted by increasing awareness of the possibilities of ART. There is also anecdotal evidence¹⁴⁵ that the advent of ART, even if not yet widely available, has changed health workers' attitudes to counselling in Zimbabwe. It is easier to deal with and talk about a condition that is potentially manageable, albeit serious and chronic, than it was to talk about 'a death sentence.' This may be the beginning of a sea change in attitudes towards HIV/AIDS and may dramatically improve levels of interest in engaging with knowledge of HIV/AIDS. However, it may also pose some behavioural risk.

ii. Promotion of VCT

The existence of VCT services appears to be widely known. PSI surveys have found that young people aged 15-34 had high levels of awareness of VCT services, with 93% of respondents in 2001 able to name at least one site, and 96% in 2003. This is probably largely a result of the efforts of PSI Zimbabwe, which has been social-marketing VCT since 2000.

PSI has promoted VCT through a systematic multimedia campaign involving television and radio slots, posters, calendars, banners and utility items such as t-shirts. The 'Trusted partner'¹⁴⁶ marketing campaign has been led by the slogan 'Get real! Find out your HIV status today.' In keeping with a social-marketing strategy, VCT is offered at a nominal price. The campaign also has special promotion periods when it is offered for free and when particular groups are targeted, for instance couples, prospective parents and mothers. But much of the campaign imagery suggests a youth target audience.

A number of other smaller VCT campaigns have been conducted, and notably one conducted by PPAAT (Public Personalities Against AIDS Trust) which has promoted public personalities undergoing VCT in the eye of the media.

¹⁴⁴ Gregson 2005

¹⁴⁵ This was claimed by a number of interviewees.

¹⁴⁶ The 'Trusted partner' campaign has emphasised that all people are vulnerable, irrespective of family of origin, manner of dress, physical appearance, personality, religious commitment, personal characteristics and history of relationship. Campaigns against stigma have been run in parallel and have used real personalities and stories to illustrate the possibilities of leading a fruitful life after becoming HIV-positive. The campaign has also associated VCT with marriage, love and commitment, success in education and career, care for others, taking control of one's life, parental responsibility, not being a victim, and making choices; it has promoted VCT as part of living a healthier life, and has implied the possibility of longevity for HIV-positive people.

iii. Provision of VCT

The MOHCW has a registry for VCT services across the country¹⁴⁷. Four types of facilities are used: those integrated into general health-care facilities (hospital-associated), stand-alone VCT clinics (PSI urban, FACT and ZAPSO), mobile rural outreach facilities (PSI), and ‘other sources’, including private doctors, workplaces and research programmes. Concerning coverage, while the proximity of services is much better in urban areas,¹⁴⁸ given transport difficulties the use of services is limited if it requires a special trip ‘across town.’ A young person interviewed in Mutoko district confirmed that though he was aware of a VCT site he was unlikely to access it because of the special and concerted effort required to do so.

MOHCW has recently adopted an ‘opt-out’ regimen (routine testing for medical purposes) and as this is implemented it should be expected to lead to a significant increase in the number of people who know their HIV status.

iv. Users of VCT

Thus, it is likely that those who suspect they are HIV-positive are more likely to avoid VCT than those who are less inclined to expect that they may be HIV-positive.

A study of facility use¹⁴⁹ shows that stand-alone VCT facilities, where use is client-initiated, were equally attended by men and women, whereas the other types of facilities, including outreach facilities were predominantly used by women. PMTCT-related VCT services are obviously dominated by women, although inclusion of men in the service is being promoted by most actors involved and particularly emphasised by Zvitambo. Young people under age 25 comprise half the users at stand-alone clinics, and about half the users have never been married.

The chart below¹⁵⁰, when compared to the chart modelling population estimates for men and women of similar age in 2003¹⁵¹, strongly suggests that users of PSI VCT services at the time were a lower risk group.¹⁵² The modelled estimates for the general population of 20-24-year-olds in this year were 30% prevalence among women and 7.7% among men¹⁵³. The VCT-user group had lower prevalence in this age range during 2002. The picture may, however, have changed and more recent evidence¹⁵⁴ suggests that HIV prevalence amongst male attendees at PSI centres rose significantly between 2000 and 2004, as did female prevalence, to the point where VCT attendees appear to have higher HIV prevalence than the general population. It has been suggested¹⁵⁵ that this rise may be largely due to increases in awareness of ART and a corresponding rise in numbers testing due to sickness and their partner’s being unwell.

¹⁴⁷ VCT services are directly provided by a number of NGOs working in collaboration with public institutions; additionally, a number of organisations work to promote and support NGO services. A national network of 20 VCT centres has been established by PSI in collaboration with MOHCW, beginning in 2000, which significantly increased capacity and coverage of services. MOHCW records indicate that a total of 292 941 clients received HIV testing in 2004, or 24 911 people per month. Of these, 57% received VCT services through PSI, 26% through PMTCT services, 16% through public institutions, and 1% through FACT Mutare. The contribution of ZAPSO appears to have been omitted. In 2002 alone ZAPSO conducted 4 300 tests. Some workplace programmes have promoted VCT and conducted VCT campaigns (usually on a once-off basis or as part of workplace prevalence studies), using services of external VCT providers.

¹⁴⁸ Interview with SHAPE (Gweru).

¹⁴⁹ Data from Dube et al. 2005, based on 2004 MOHCW data.

¹⁵⁰ PSI 2002

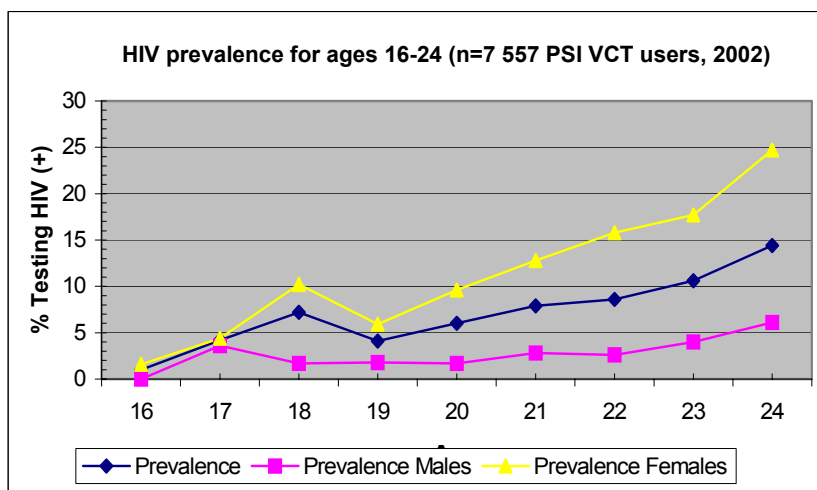
¹⁵¹ See Section 4.1.1

¹⁵² The 2003 PSI survey found that fear of dealing with an HIV-positive result is the most common inhibiting factor in seeking testing.

¹⁵³ MOHCW 2004

¹⁵⁴ UNAIDS 2002

¹⁵⁵ Gregson 2005



Source: PSI (2002)

v. Further development of VCT services

The following suggestions need to be taken into account in further developing VCT services in the interest of prevention.

- Epidemiological benefits are greater through engaging HIV-positive people and sero-discordant couples in HIV prevention, than from confirming people's HIV-negative status and they should be prioritised in scaling-up of VCT.
- VCT for prevention in cases of HIV-positive results needs to have a different focus to VCT for negative results¹⁵⁶, namely preventing transmission rather than preventing being infected. It taps into different motives, related to the well-being of others, including partners and children. This prioritises the population (others), whereas in other respects VCT prioritises the well-being and health status of HIV-positive individuals.¹⁵⁷
- Ultimately, every HIV-positive Zimbabwean needs to know their own and their partner/s' HIV status if the spread of the epidemic is to be halted. They then need to be specifically counselled in developing appropriate and sustainable prevention choices. Targeting the one-in-five adult Zimbabweans that are HIV-positive may be achieved by a significantly scaled-up and population-wide campaign, but this may be an expensive way of getting to HIV-positive people. It may be more productive for prevention purposes to scale-up VCT prevention services in contexts where a higher proportion of HIV-positive persons are likely to be included, for example in medical settings.
- If prevention objectives are to be attained, behaviour change and behaviour maintenance counselling needs to be attached by referral or integrated with facilities for VCT medically oriented VCT. Counselling processes related to disclosure of status to partners, in cases where individuals test separately, need to be developed. Principles for partner notification in cases of medically referred testing must also be developed, especially in the context of scaled-up testing likely to arise from the 'opt-out regimen' adopted by the MOHCW.
- Different behaviour-change needs may be faced by those discovering their status after routine medical testing as compared to those who are self-referred to stand-alone clinics and services should be tailored accordingly.

¹⁵⁶ If HIV incidence is to be curbed through VCT that targets HIV-negative people, it requires methodologies for maintaining as well as initiating behaviour change. This requires anticipation of future risk scenarios.

¹⁵⁷ Glick 2005

- The promotion of VCT before marriage which is proposed by HOCD will pose a new set of challenges for which there will need to be programme development and support.
- Evidence from pilot ART sites in other countries indicates that availability of ART has led to a surge in the uptake of VCT in both developed and developing countries¹⁵⁸ and there is already some evidence for this in Zimbabwe.¹⁵⁹ It can be expected that as the ART programme gathers momentum, uptake of VCT will increase, and the programme is increasingly likely to attract HIV-positive people and so will need to cater to their complex prevention needs. This will require more protracted counselling services, support and follow-up or referral.
- VCT in itself is not a powerful prevention method. It needs to be honed and designed to meet prevention objectives. Counselling processes specifically oriented to prevention must be developed, beyond the post-test counselling session. Behaviour change and maintenance of risk-avoidance behaviour requires a systematic approach. HIV-negative outcomes should be associated with a process of future risk assessment and behaviour-change planning, with follow-up if necessary.
- Mobile VCT services are typically not in a position to provide the kind of follow-up and support that is necessary if prevention objectives are to be attained. Links to other agencies that can provide such follow-up need to be established, for example reproductive health programmes.
- Post-test clubs¹⁶⁰ should be considered as a viable context for post-VCT support.
- VCT should be more widely promoted and discussed in behaviour-change programmes and peer education programmes. VCT is not yet included in some behaviour-change programme packages as a strategy amongst other prevention strategies.

5.3.6 Post-exposure prophylaxis (PEP) after rape

It appears little has been done to support the availability of post-exposure prophylaxis (PEP) after rape. The need to address this was noted by a national stakeholders meeting of ‘youth practitioners’ in 2005.¹⁶¹ There is a 30% higher risk of HIV transmission after rape as compared to non-rape sexual encounters.

To date, no definitive proof about the efficacy of PEP after rape has been published, although the efficacy of PEP after occupational injury is well established. However, data from ongoing observational cohort studies¹⁶² have shown that very few cases of HIV transmission have occurred after PEP. In areas of high HIV prevalence (in South Africa where more than 1 in 5 adult males infected) only one of 500 sexual assault victims who were treated within 72 hours of the assault subsequently developed HIV infection, and the exception seems to have been due to non-compliance with the 28-day regimen.

It is important that knowledge of the value of PEP after coercive sexual relations be widely disseminated such that when a person is raped either they will know or a close associate will advise them to seek PEP within 72 hours. There is little information available on public understanding of PEP or knowledge of its availability, but this is likely to be low considering that

¹⁵⁸ Glick (2005) suggests that the Khayelitsha antiretroviral therapy programme in South Africa provides evidence that ARV provision creates an incentive for people to be tested. After the commencement of ARV provision in a pilot community health facility, the uptake of VCT in Khayelitsha rose from less than 1 000 HIV tests in 1998 to more than 12 000 in 2002. Such increases in VCT uptake have not been seen in surrounding areas where ARVs are not provided.

¹⁵⁹ Gregson 2005

¹⁶⁰ Post-test clubs are being promoted by PSI, PPAAT and a number of agencies involved in supporting HIV-positive people. There are also some ‘AIDS clubs’ in schools that aim to help uninfected youth remain HIV-negative.

¹⁶¹ Hungwe 2005b

¹⁶² Wulfsohn 2003

there has been little educational effort in this area. According to a number of interviewees who participated in this review, it is unlikely that rape survivors across Zimbabwe would readily be able to access such services.

The Zimbabwe 2004 HIV/AIDS conference identified a need for the better distribution of guidelines on PEP for occupational injury and rape. It might also be expected that PEP should routinely be advised by investigating officers after rape, and referral networks ought to be established between agencies involved in assisting rape victims, with facilities provided for administering PEP.

This is clearly an area that should be included in a new behaviour change strategy, noting that not only must services be available but people need to know about the value of access and be inclined to refer themselves or others to such services.

5.3.7 Sexual and reproductive health services (SRH) and HIV prevention

Much literature has accrued on the value of integrating HIV prevention with sexual and reproductive health services (SRH), including family planning. There have been various efforts in Zimbabwe to achieve this. These include provision of youth-friendly SRH services and making services more oriented to men's needs.

Not all adults are in favour of SRH services for young people and one Zimbabwean study found that 70% of the adult men interviewed did not support the establishment of family planning clinics dedicated to youth.¹⁶³ In focus group discussions, participants revealed that they believed access to family planning services was likely to encourage promiscuity among youths.¹⁶⁴ Easy access to family planning services among youth was also viewed by most adult men as a challenge to their traditional role of moderating and controlling male and female youth sexuality.¹⁶⁵ Access to services is also limited by the age of consent to have sexual intercourse, which is 16 years. As a result of legislation, youth below the age of 16 years cannot access SRH services without parental consent.

A Technical Review of Zimbabwe's reproductive health and advocacy programmes¹⁶⁶ in 2002 showed that there was "increasing inaccessibility to reproductive health services, including for youth and adolescents" and increased teenage pregnancies, abortions and early marriages.¹⁶⁷

Some key developments aimed at improving access to SRH services and their integration with HIV prevention are:

- Zimbabwe National Family Planning Council (ZNFPC) has developed a large project for community-based distribution (CBD) of contraceptives, which is active in all 57 districts. Community-based distributors endeavour to integrate traditional family planning activities with HIV/AIDS programming, such as voluntary counselling and testing (VCT) and preventing mother-to-child transmission. ZNFPC also has an adolescent reproductive health programme in 16 of 57 districts and it is attempting to integrate adolescent SRH services into vocational training centres.
- Population Services of Zimbabwe (PSZ) provides essential youth-friendly services and outreach activities in rural areas. PSZ currently maintains nine clinics, which each serve 20,000-30,000 women per month. All nine clinics offer separate youth services, focused on the prevention of unplanned pregnancy and sexually transmitted infections (STIs), to approximately 10,000-15,000 young adults each year.
- Advance Africa provides technical and financial support to family planning organisations in order to facilitate expansion activities and the integration of HIV/AIDS programmes with

¹⁶³ Chiroro et al. 2002

¹⁶⁴ See the discussion on youth sex education, which shows that such concerns are without foundation.

¹⁶⁵ Chiroro et al. 2002, p. 29

¹⁶⁶ ZNFPC 2002

¹⁶⁷ ZNFPC 2002

existing family planning programmes. It has partnered with PSI to increase access to services within family planning programmes.

The above organisations have lost significant financial monetary support due to the funding cutbacks those organisations suffered as a result of international funding policies.¹⁶⁸ Critical youth programmes aimed at increasing youth access to reproductive health services and contraceptives have been curtailed or scaled back. Fewer funding resources have reportedly led to weakening the integration of family planning and HIV prevention programmes, limiting the ability of key organisations to use the opportunity of having well-established community family planning programmes to conduct prevention programmes.

5.3.8 Developing the continuum of prevention and support/care/treatment

Prevention efforts have been almost exclusively targeted towards those at risk of being infected rather than those at risk of infecting others. With more people undergoing VCT¹⁶⁹ and the recent adoption of a policy of routine testing by the MOHCW, it may be assumed that there will be a continuing rise in the number of people who know their HIV status. This is likely to increase further as ART becomes more accessible.

It is important to expand prevention efforts alongside treatment scale-up in order to avoid possible population-level ‘prevention-inhibition’ effects associated with treatment optimism,¹⁷⁰ and as an accompaniment to ART in particular.

But it is also important to seize opportunities to directly target HIV-positive people as part of a primary prevention strategy. “ARVs should be considered as a prevention tool and not simply as a therapeutic tool.”¹⁷¹ Much more attention needs to be paid to “integrating expanded care activities with prevention activities if there are to be long-term reductions in the number of new HIV infections and significant declines in AIDS mortality.”¹⁷²

Prevention targeted at HIV-positive people is designed to benefit uninfected individuals rather than those already HIV-positive, and this makes it necessary to re-conceptualise the motives for prevention. Although targeting HIV-positive people does not lead to any ‘loss of benefit’ to those people, the benefits of taking preventive action need to be highlighted because they may not be apparent. Some of the more obvious benefits are protection of children from infection and from possible loss of both parents, protection of loved ones, and pride in participating in the fight against HIV/AIDS.¹⁷³

A number of organisations are developing or are involved with post-test clubs and support groups for HIV-positive people. These include PSI, PPAAT and organisations under ZNNP+, which is a network of HIV/AIDS support groups countrywide. PPAAT provides a unique contribution by providing support for prominent public figures who are perceived as being particularly vulnerable to stigmatisation.

Support groups provide opportunities to promote prevention, alongside the usual health, nutrition, self-care and psycho-social support functions they usually serve. Better documentation of the responses of HIV-positive people to prevention challenges and of their motivations for prevention is needed. For example, at The Centre in Harare, it has been reported that female condoms tend to be a preferred method of prevention for HIV-positive people. If this is strongly the case, it must be promoted in prevention programmes for HIV-positive individuals. Oddly enough, working with HIV-positive people is a new prevention area. A task group could be established to develop guidelines and a research agenda in this area.

¹⁶⁸ Notably the US administration gag rule which restricts funding to organisations which advocate abortion rights.

¹⁶⁹ This is discussed further in Section 4.3.7

¹⁷⁰ See Section 4.3.7

¹⁷¹ Blower & Farmer 2003

¹⁷² Salomon et al. 2005, p. 16

¹⁷³ Interview with Lynde Francis, The Centre in Harare.

Work with HIV-positive people is strongly contingent on overcoming stigma which prevents people from knowing and communicating their status. If the increasing numbers of people who know their status are to be recruited in prevention services, it is critical that the costs of acknowledging one's HIV status and engaging in prevention be limited. Stigma reduction at a population level needs to be an ongoing accompaniment to all programmes targeting HIV positive people.

5.3.9 New intervention areas

i. Sexual prevention during breastfeeding

Data from the Zvitambo study group suggests that the risk of mother-to-child infection through breastfeeding is significantly increased in cases where the mother sero-converts while breastfeeding.¹⁷⁴¹⁷⁵ The risk of a mother becoming HIV-positive in late pregnancy or during breastfeeding poses an especially high risk for infants, compared to the case of infants whose mothers were HIV-positive prior to birth.

This leads to the recommendation that mother should take special precautions not to become HIV-positive during pregnancy or while breastfeeding. The use of condoms during pregnancy is difficult to promote because mothers may assume that if they were likely to be infected by their partner they would already be infected. At the very least mothers need to be warned of this risk, and it should be recommended that condoms be used in pregnancy when there may be such risk. Guidelines for PMTCT should be supplemented with advice on this matter.

ii. Circumcision

There is mounting evidence that male circumcision is a protective factor against HIV acquisition¹⁷⁶ and that circumcision may be a protective factor for HIV transmission. This has led to increasing interest in the possibilities of using circumcision as an intervention method. A randomized control intervention trial conducted in South Africa has shown that voluntary circumcision in adulthood provides high but partial protection (66%) against HIV infection over a short period.¹⁷⁷ This amounted to a reduction in incidence by 50% in a context where there was 2% incidence per year.

However, it is notable that cross-sectional studies¹⁷⁸ have not all provided evidence of the protective influence of circumcision, suggesting that lifetime exposure to HIV may erase whatever protective influence circumcision may have. In the Eastern Cape Province of South Africa where almost the entire adult male Xhosa population is circumcised, and where Xhosa people comprise 83% of the provincial population, there was 28% HIV prevalence among antenatal clinic attendees in 2004. This suggests that protective properties of circumcision are alone not likely to hold back the tide of the epidemic.¹⁷⁹

Nonetheless, there is need to consider the possibility of circumcision as an HIV prevention measure in the future.

In a representative sample of men attending Harare beer halls in 2000, it was found that 14% were circumcised, representing a more educated and younger portion of the sample. In response to the question "If you are uncircumcised, would you like to be circumcised if this practice is confirmed to reduce the risk of contracting HIV or STIs and if it is performed safely and affordably?" 45% answered yes. Younger and unmarried men were more likely to respond yes. These responses were given in the absence of specific educational or promotional efforts and

¹⁷⁴ Sero-converting mothers were those who were HIV-positive according to a PCR test for HIV, but not according to an Elisa test for HIV antibodies.

¹⁷⁵ See 4.2.5 for further on infection risks associated with viraemia.

¹⁷⁶ Halperin 2005

¹⁷⁷ Auvert 2005

¹⁷⁸ Halperin & Bailey 1999; Weiss et al. 2000.

¹⁷⁹ Department of Health 2004

before knowing the results of current clinical trials concerning circumcision's efficacy in preventing HIV.

This means that if circumcision were unequivocally proved to be a strong protective factor, it may be favourably received, notwithstanding the fact that in Zimbabwe circumcision is rare among the dominant Shona population, and is only practiced among some minority groups, the Tonga being an example. Therefore, it should be explored as a useful addition to existing prevention approaches.

There would be some risks involved in such an intervention. Even if circumcision were to decrease the likelihood of HIV infection, there are undoubted risks in introducing a prevention measure that has relatively low protective benefits, when there are methods such as correct and consistent condom use with very high proven benefits. There may be considerable epidemiological risk as a result of circumcised men feeling they are protected from risk.

Until the weight of international evidence falls unequivocally on the side of promoting circumcision as a prevention method, and pending development of methods for doing this based on an understanding of possible risks, it would seem advisable to bear circumcision in mind as a possible future intervention, but one which it would be premature to currently promote and support.

5.3.10 Changing traditional cultural practices

The churches have taken the strongest stand on traditional practices associated with HIV transmission.

Specifically, the recently adopted HOCD HIV and AIDS draft policy commits the church to safeguard people from cultural traditions that expose them to increased risk of contracting HIV. The policy explicitly discourages: wife inheritance; forced marriages as reparation in cases where families wrong each other; *chiramu (ukul muzana)*, where men may take sexual advantage of their wives' younger sisters or cousins; and polygyny. The policy also promotes rejection of the belief that sleeping with a virgin can cure AIDS¹⁸⁰, and that HIV and AIDS are a consequence of bewitchment.

The 'small house' phenomenon¹⁸¹ is not strictly speaking a culturally endorsed phenomenon, although it is socially tolerated. This phenomenon has surprisingly not been the subject of attention.

Intra-vaginal practices are at least partially based on traditional beliefs about spiritual and reproductive health.¹⁸² Decision-making about use of vaginally inserted substances is almost always made by women and women tended to hear about these practices from other women rather than traditional healers and herbalists.¹⁸³ The practice appears to be embedded in local knowledge and information sharing in ways which are not fully understood, and any behaviour change programme in this area will need to be preceded by research. Given recent findings on the HIV infection risks of such practices¹⁸⁴ and what seems to be quite high prevalence of the practice, it is suggested that this would be an important area of intervention.

5.3.11 Additional foci

Programme outcomes reflect that much of the behavioural prevention focus has been on young people. Half of those receiving VCT are young people, much of the life-skills work is focused on young people and the delaying of sexual debut of young people occupies high priority amongst other interventions.

¹⁸⁰ There is little information relating to the prevalence of this belief in Zimbabwe.

¹⁸¹ See Section 4.2.5

¹⁸² Runganga & Kasule 1995

¹⁸³ Van De Wiggert et al. 2001

¹⁸⁴ See Section 4.2.8

Whilst this is appropriate in a generalised epidemic, it may be problematic in two respects. Firstly, the general focus on youth people has led to a neglect of other important groups, namely married women and men aged 25-34 years, where difficult intervention challenges lie ahead. The non-differentiated focus on 'young people' also does not recognise that the bulk of new infections among those under 25 is amongst women.

Because young people account for a high proportion of new cases it doesn't mean that the epidemic can be contained by focusing mainly on them. As has been pointed out the risk of young people being infected by each other is relatively low in the absence of older men. It must be recognised that sexual risk is as much created by the behaviour of the infective person as the person at risk. Young girls have been well targeted by interventions, but the adult males that infect them have been relatively neglected as a group.

A number of new foci for intervention have been mentioned above, notably HIV positive people and married people. In addition a number of other important foci are discussed below.

i. Gender oriented interventions

Although men have been widely recognized as responsible for fuelling the epidemic there is not much emphasis on male gender in intervention programmes.

A 2002 study on the Zimbabwean male psyche suggests that men have an antagonistic attitude towards women's organisations. According to the study, "The majority of male participants argued that women's rights organisations are responsible for the breakdown of many marriages because they encourage the woman to challenge her husband or partner, with dire consequences for 'order in the family'". The equal rights movement is perceived by most men and male youths as a Western notion that has no place in an African context, a view which was also supported by elderly women who participated in the study.¹⁸⁵ As the authors point out, the Zimbabwean culture and legal system provide a "congenial environment for the propagation and perpetuation of beliefs, stereotypes, and sexual behaviour among men and male youths that not only puts their partners' lives at risk, but compromise women's human and reproductive rights."¹⁸⁶

Beerhalls present an environment associated with high-risk sexual behaviour and concomitantly high rates of HIV sero-conversion. Beerhalls are appropriate and feasible venues for delivering HIV prevention programs targeted at men¹⁸⁷ and are being used as an intervention site. Whilst this would seem to be an important context in which to promote male prevention involvement what is needed is for the entire national agenda for prevention to recognise and deal with the obvious fact that it is men's behaviour that fuels the HIV/AIDS epidemic and that needs to change.

The SHAPE university-based programme in GWERU focuses on 'rebranding' the image of "what it means to be a man". It has developed a concept of 'toxic masculinity' to describe the coercive and aggressive elements of men's behaviour and has a programme for a 'men's movement' on campus which has become popular amongst both men and women. The focus of the movement is largely on HIV prevention and the methodology is centred on reconfiguring male self-images. The interest of students has been promising and it would be of value to document the reception of this programme and its effects.

Considering the role of women-oriented interventions it is worth considering whether the ABC approach addresses the needs of women adequately. The risk factors addressed by the ABC model may be, and for the large part are created by male attitudes and behaviour. Many commentators have argued that women are jeopardised by exhortations for them to 'negotiate' relationships based on abstinence, faithfulness, or condom use.

¹⁸⁵ Chiroro et al. 2002, p16

¹⁸⁶ Ibid. pg. 29

¹⁸⁷ Fritz et al. 2002

Between 1995 and 2001, the gender empowerment index which is comprised of measures of political participation and decision making, economic participation, and power over economic resources declined in Zimbabwe by two percent.¹⁸⁸ The proportion of women holding legislative positions, or acting as senior officials and managers, declined in Zimbabwe by nine percent between 1995 and 2001. The society is clearly male-dominated and prevention for women needs to include strong advocacy and support elements, including legislation in support of women's rights. Existing women-oriented interventions tend to blend advocacy, support and prevention. These need to be prioritised. At the community level there is some evidence that community group membership can support young women in their efforts to avoid HIV infection in areas of high HIV prevalence.¹⁸⁹

In summary, a new behaviour change strategy must recognise that it is largely men's behaviour that needs to change and focus on developing strategies for men.

ii. Orphans¹⁹⁰

In 2002 already the number of double orphans was estimated to be 27,000 and it was estimated that by 2010 this would reach 770,000. Given the higher risk of infection experienced by orphans there is a need to ameliorate the heightened risks of infection. Programmes for orphans do focus on this as well as on providing life-skills to orphaned children. But orphans are vulnerable to risks which cannot be contained by their efforts alone. This area needs to be prioritised and not only should all orphans undergo a programme for containing behavioural risk, but local leaders and others who are in a position to advocate for orphans should be made aware of the special risks they face and protect them. Orphans lack the protection of parents and in this area more than any other there needs to be linkages between 'care and support' interventions and prevention.

iii. People with disabilities

A report on prevention programmes for people with disabilities¹⁹¹ says that very little has been done to cater for people with mental or physical disabilities. Zimbabwe has 1,2million people living with disabilities¹⁹² which include the visually impaired / blind; the mentally challenged; the physically challenged; the hearing impaired / deaf; and those with conditions like epilepsy. Many disabled people are sexually active but education materials and processes have not been targeted to meeting their specific needs and very little is known about the risks they face or their needs. They may be especially vulnerable and are said to suffer relatively high levels of sexual abuse and higher levels of partner turnover due to social sanctions against marriage. But there has not been any significant research in this area.

The National Association of Societies for the Care of the handicapped (NASCOH)¹⁹³ and the National Council of Disabled Persons of Zimbabwe (NCPDZ) have a strong interest in developing a strategy for prevention for disabled people. It has already developed some Braille materials and a sign language film on prevention with a vocabulary developed specifically for HIV/AIDS issues, but it feels that its efforts need to be developed as part of a national agenda. A special effort needs to be made to look to these needs and to resource programmes under a comprehensive behavioural prevention strategy which should include access to VCT, STI services and PPTCT. There are a number of programmes in Zimbabwe working in this area¹⁹⁴ on a small scale and a core group looking to develop strategy in this area should be formed.

¹⁸⁸ UNDP 2005

¹⁸⁹ Gregson et al 2004

¹⁹⁰ See Section 4.3.2

¹⁹¹ Hungwe 2005a

¹⁹² Hungwe 2005a

¹⁹³ The official umbrella body of 59 organisations for people with disabilities in Zimbabwe.

¹⁹⁴ Hungwe 2005a

iv. Gay community

There is very little known about the male homosexual community in Zimbabwe, and there are no organisations representing gay people registered in the ZAN directory. Gays and Lesbians of Zimbabwe (GALZ) was formed in 1989 but has largely operated as an underground movement due to persecution. GALZ represents 400 members, and unless Zimbabwe differs substantially from other countries, there are likely to be at least one hundred thousand male gay Zimbabweans.¹⁹⁵ This may be a group at risk that receives little official support. Websites for gay contacts show that there is a sexually active gay community. Assessment of the risk posed to gay people and support for prevention programmes in the gay community are overdue. In 2000 GALZ received some financial support from the NAC, but not since then. GALZ was one of the first organisations in Zimbabwe to provide counselling services and HIV/AIDS prevention campaigns as well as one of the country's first treatment programmes. Although sodomy is prohibited in Zimbabwe, homosexuality itself is not.

Support for HIV prevention in gay communities is internationally recognised, and it is a failure that the possible epidemiological risks of a gay epidemic are overlooked and the prevention needs of this population have not been adequately addressed.

v. Leadership

The knowledge, attitudes, beliefs and practices of political, religious, community, traditional, cultural and business leaders and their opinions about HIV/AIDS have not been assessed, and little is known about the influence of this on public behavioural prevention response. However, a 2004 UNDP report¹⁹⁶ states: "Most respondents reaffirmed this trend among political leaders and indicated that compared with a few years ago, most political leaders, including government ministers, members of parliament, church leaders, school headmasters and others, are now placing HIV and AIDS on their agendas when addressing audiences."

However, those interviewed in the course of this review were strongly of the view that leaders have not been prominent in the fight against HIV and AIDS. It is widely recognised that leadership is a critical element in HIV/AIDS response, and although there are more than 400 agencies allied in campaigns against HIV/AIDS these do not appear to be strongly united under prominent political or civil-society leadership.

Public Personalities Against AIDS Trust (PPAAT) is an NGO committed specifically to working with public personalities concerned with mitigating the impact of HIV/AIDS. One of its major objectives is to provide support and networks for public personalities in a way that assists them to undergo VCT, in being open about their sero-status and in dealing with stigmatisation about their openness. In 2004, instigated by PPAAT, a group of MPs (from both political parties) from the Portfolio Committee on Health and Child Welfare publicly visited VCT centres for testing, in a bid to encourage more people to attend voluntary testing and counselling. The event received intensive media coverage, but its overall impact is not certain, especially given the context of secrecy about cause of death when politicians and officials die of AIDS-related illnesses. PPAAT also lobbies leaders and prominent public figures to get involved with HIV/AIDS issues through letter writing, programme involvement and by securing endorsement of HIV/AIDS programmes by public figures.

The PPAAT programme rationale has another interesting element. It is often assumed that public personalities have access to information and services, but their lifestyles and reluctance to risk losing popularity once they are associated with HIV/AIDS put them at risk. So the PPAAT programme both uses such personalities as vehicles in public campaigns and tries to assist them as beneficiaries.

¹⁹⁵ If the estimate that 1 in 20 adult males are homosexual pertains, it can be assumed that there are in excess of 100 000, although many may not be practising.

¹⁹⁶ UNDP 2004

Plans are materialising to research the programme by examining its media presence. Working with public personalities, it is important not only to gain their commitment, but also to put that into public view.

PPAAT also conducts a project promoting the role of appealing popular cultural icons in HIV/AIDS education. Zimbabwean society, like all modernising societies, faces the challenges of recreating new norms and mores in the face of the gradual breakdown of traditional social norms. In such circumstances young people in particular will be faced with choices in areas of their private and public life where previously there existed much stronger social expectations to guide their decision-making. The importance of role models for young people – in the adoption of pro-social attitudes in contexts of rapid social change – is a widely recognised approach that does not appear to have been given sufficient attention in Zimbabwe.

The PPAAT programme is affiliated with a number of other prevention programmes with which it works to involve public personalities, but more could be done to align itself with larger programmes. The extent to which it meets its objectives to guide, coordinate and collaborate is uncertain. The organisation is poorly funded and staffed by only two enthusiastic people. It could assume stronger and more formal alliances with larger behaviour change organisations to fulfil its promise.

vi. Displaced communities

Reports¹⁹⁷ suggest that recent community removals have disrupted AIDS programmes. It is also the view of many of those interviewed that this poses a risk, but it is not as yet quantified. Mobility is well known as one of the primary vectors for HIV infection risk and forced mobility is a cause of vulnerability. The NAC should examine these developments from a prevention perspective in the interest of correcting any disruption and identifying risks that may have resulted

5.4 Theoretical models and implementation approaches

In this section we discuss the use of theoretical models of BC and models of programme implementation.

BC programmes in Zimbabwe draw on a range of theoretical models. Most commonly encountered models are social learning theory, the health belief model, the transtheoretical model, social identity theory, social marketing, steps to behaviour change and education for life¹⁹⁸. Other models which are explicitly and implicitly being drawn on are on participatory communication models, cascade models of training and approaches of contextual empowerment and capacity building. The latter are strictly speaking models of delivery rather than models of behaviour change, although they may contain unarticulated assumptions about how change is enabled.

Most of the models are not incompatible, although they use different terminology. There is broad agreement in the field that although there is no one ‘best model’ of behaviour change, systematic application of any one of a number of models is likely to lead to equally satisfactory programme outcomes.¹⁹⁹ Behaviour change models almost all require a sequenced process of interventions requiring a number of workshop-type activities. On the other hand, once-off events, workplace open-days, community meetings and the like should not be called behaviour change interventions on their own. There is agreement in the literature that unless behaviour change strategies tackle individual, contextual (including cultural) and structural (services and environmental) factors they are unlikely to be effective.

- Given the importance of a systematic approach it is of some concern that implementation of

¹⁹⁷ See Section 4.3.2

¹⁹⁸ The latter is a behaviour change model designed in Uganda and adapted by Deseret for use in Zimbabwe.

¹⁹⁹ UNAIDS 1999

behaviour change models tends to weaken along the chain of delivery from programme conception to implementation. There is a need to ensure that the integrity of models is sustained through cascade training programmes and that implementers understand the rationale on which their activities are based.

- It is suggested that programmes should not be counted as behaviour change interventions unless they are systematic in application of adequately rationalised behaviour change programmes, that take into account the complexity and challenges of sustainable behaviour change.

5.5 Research

Throughout this review a number of areas for further investigation, documentation and research have been suggested. In addition to these the following areas are suggested as needs in developing programme support for prevention responses.

- The need for a standing research advisory group to be tasked with identifying national research and monitoring priorities relating to behavioural prevention. Such a group should also advocate for strategies to disseminate research findings and reviews of research in particular areas.
- The need to establish programme of research on new interventions and their repercussions: e.g. the impact of ART on VCT provision and uptake; knowledge of PEP; understanding of diffusion of new innovations.
- Behavioural factors that influence service demand, access and provision.
- Influence of social policies, strategies and practices on prevention behaviour and use of services.
- Operational research on development of integrated systems of prevention programmes with care and support, most importantly for HIV-positive people.

BIBLIOGRAPHY

The following list of references contains all references cited in the text as well as references which have not been specifically cited, but are relevant to the issues discussed.

.Agha, S., Kusanthan, T., Longfield, K., Klein, M., & Berman, J. (2002). Reasons for non-use of condoms in eight countries in sub-Saharan Africa. Washington, DC: Population Services International.

Ahmed S, Lutalo T, Wawer M, Serwadda D, Sewankambo NK, Nalugoda F, Makumbi F, Wabwire-Mangen F, Kiwanuka N, Kigozi G, Kiddugavu M, Gray R. (2001). HIV incidence and sexually transmitted disease prevalence associated with condom use: a population study in Rakai, Uganda. *AIDS*, 15(16), 2171-9.

Alford S, Cheetham N & Hauser D (2005). Science & Success in Developing Countries: Holistic Programs that Work to Prevent Teen Pregnancy, HIV & Sexually Transmitted Infections. Washington DC, Advocates for Youth. <http://www.comminit.com/strategicthinking/st2005/thinking-1237.html>

Aral S (2000) Behavioral Aspects of Sexually Transmitted Diseases: Core Groups and Bridge Populations. *Sexually Transmitted Diseases*. 27(6):327-328.

Asamoah-Odei E, Garcia Calleja JM, Boerma JT. HIV prevalence and trends in sub-Saharan Africa: no decline and large subregional differences. *The Lancet* 2004;364:35-40.

Auvert B, Adrian A, Taljaard D, Lagarde E, Tambekou-Sobngwi J & Sitta R (2005). The impact of male circumcision on the female-to-male transmission of HIV : Results of the intervention trial. Presentation to International AIDS Society, 27 July 2005

Bakilana A.(2005). Age at sexual debut in South Africa. *African Journal of AIDS Research*, 4(1), In press.

Bandura, A. (1994). Social cognitive theory and exercise of control over HIV infection. In R.J. DiClemente & J. L. Peterson (Eds.), *Preventing AIDS: Theories and methods of behavioural interventions* (pp.25-54). New York and London: Plenum Press.

Bassett MT, Mhloyi M. Women and AIDS in Zimbabwe: the making of an epidemic. *International Journal of Health Services* 1991;21(1):143-156.

Bennett SE & Assefi NP (2005). School-based pregnancy prevention programs: a systematic review of randomized controlled trials. *Journal of Adolescent Health*, 36, 72-81.

Best K (2004). Family Planning and the Prevention of Mother-to-Child Transmission of HIV: A Review of the Literature. FHI Working Paper Series WP04-01. Research Triangle Park NC, FHI. <http://www.fhi.org/en/RH/Pubs/booksReports/fpmtct.htm>

Betts, S C., Peterson, D J., Huebner, A J. (2003). Zimbabwean Adolescents' Condom Use: What Makes a Difference? Implications for Intervention. *Journal of Adolescent Health*, 33, 165–171.

Bloor, M. (1995). *The sociology of HIV transmission* (1st ed.). London: Sage.

Blower S & Farmer P. (2003). Predicting the public health impact of antiretrovirals: preventing HIV in developing countries. *AIDScience* Vol. 3, No. 11, 2003

Boerma JT, Nyamupaka CA, Urassa M, Gregson S. Understanding the uneven spread of HIV within Africa: comparative study of biological, behavioral and contextual factors in rural populations in Tanzania and Zimbabwe. *Sexually Transmitted Diseases* 2003, 30, 779-787.

Boily M-C, Lowndes C & Alary M (2002). The impact of HIV epidemic phases on the effectiveness of core group interventions: insights from mathematical models. *Sexually Transmitted Infections*, 78:i55-i63.

Boily M-C, Lowndes C & Alary M (2002). The impact of HIV epidemic phases on the effectiveness of core group interventions: insights from mathematical models. *Sexually Transmitted Infections*, 78, 78-90.

Boily M-C, Lowndes CM, Gregson S. Population-level risk factors for HIV transmission and 'the 4 Cities Study': temporal dynamics and the significance of sexual mixing patterns. *AIDS* 2002;16(15):2101-2102.

Boonstra H (2004) .Issues in brief series: The Role of Reproductive Health Providers in Preventing HIV. The Allan Gutmacher Institute/ UNAIDS. http://www.unaids.org/html/pub/publications/factsheets04/fs_isb-reproductive-health_en_pdf.pdf

Boswell, D and Baggaley, R Voluntary Counselling and Testing (VCT) and young people. (2002) Family Health International (FHI).

- Chifunyise T, Benoy H & Mukiibi B (2002). An impact evaluation of student teacher training in HIV/AIDS education in Zimbabwe. *Evaluation and Program Planning*, 25(4), 377-385.
- Chiroro P et al. (2002). The Zimbabwean male psyche with respect to reproductive health, HIV/AIDS and gender issues. University of Zimbabwe, Harare.
- Chitsungo, SE (2003). Strengthening RH IEC and services and integrating them into male youth vocational training programmes. Population Services Zimbabwe/UNFPA. ZIM/00/P05
- Civic, D. and Wilson, D. (1996) Dry sex in Zimbabwe and implications for condom use. *Social Science and Medicine*, 42, 91±98.
- Coffee MP, Garnett GP, Mlilo M, Voeten HACM, Chandiwana SK, Gregson S. Patterns of movement and the risk of HIV in rural Zimbabwe. *Journal of Infectious Disease* 2005, 191, Supplement I, S159-S167.
- Cohen DJ & Katherine E. Bruce KE 1997. Sex and mortality: real risk and perceived vulnerability. *Journal of Sex Research*, Summer issue. http://www.findarticles.com/p/articles/mi_m2372/is_n3_v34/ai_20444910
- De Vincenzi I (1994). A longitudinal study of human immunodeficiency virus transmission by heterosexual partners. *New England Journal of Medicine*, 331, 341- 346.
- Decosas J & Padian N (2002). The profile and context of the epidemics of sexually transmitted infections including HIV in Zimbabwe. *Sexually Transmitted Infections*. 78,40-46.
- Department of Health (2004). National HIV and syphilis antenatal sero-prevalence survey in south africa - 2004. Pretoria, National Department of Health.
- Dube S, Hallett TB, Gregson S & Garnett G (2005). Optimising the Population Level Impact of Voluntary Counselling and Testing in Zimbabwe: Insights from Mathematical Models. Report of the Harare mathematical modelling workshop, Bronte Hotel, June 13-17, 2005
- Elford J, Bolding G, Sherr L. (2001) HIV optimism: fact or fiction? *FOCUS*. 8,1-3.
- Erulkar A. (2002). 'Bulawayo youth centre-based peer education reproductive health project: Results of an impact evaluation'. Accra, Population Council.
- Feldman R & Maposhere C (2003). Safer sex and reproductive choice: findings from "Positive Women: Voices and Choices" in Zimbabwe. *Reproductive Health Matters*, 11(22), 162-173(12).
- Fritz KE, Woelk GB, Bassett MT, et al. (2002). The association between alcohol use, sexual risk behavior and HIV infection among men attending beerhalls in Harare, Zimbabwe. *AIDS and Behavior*, 6, 221–228.
- Fylkesnes K, Ndhlovu Z, Kasumba K, Mubanga Musonda R, Sichone M, Garnett GP, Gregson S, Stanecki KA. (2005). Criteria for detecting and understanding changes in the risk of HIV infection at a national level in generalised epidemics. *Sexually Transmitted Infections*, In press.
- Gerrard M., Gibbons, F. X., & Bushman, B. J. (1996). Relation between perceive vulnerability to HIV and precautionary sexual behavior. *Psychological Bulletin*, 119, 390-409.
- Glick P (2005). Scaling up HIV Voluntary Counseling and Testing in Africa: What Can Evaluation Studies Tell Us About Potential Prevention Impacts? SAGA Working Paper. Cornell University 3M02 MVR Hall Ithaca, NY 14853 USA
- Gray RH, Wawer MJ, Brookmeyer R, Sewankambo NK, Serwadda D, Wabwire-Mangen F, Lutalo T, Li X, vanCott T, Quinn TC. (2001) Probability of HIV-1 transmission per coital act in monogamous, heterosexual, HIV-1-discordant couples in Rakai, Uganda. *Lancet*. 357(9263), 1149-53.
- Gregson S, Anderson RM, Ndlovu J, Zhuwau T, Chandiwana SK. Recent upturn in mortality in rural Zimbabwe: evidence for an early demographic impact of HIV-1 infections? *AIDS* 1997, 11, 10, 1269-1280.
- Gregson S, Chandiwana SK. The Manicaland HIV/STD Prevention Project: studies on HIV transmission, impact and control in rural Zimbabwe. *Zimbabwe Science News* 2001, 35, 1, 27-42.
- Gregson S, Garnett GP, Nyamukapa CA, et al. n.d. HIV decline associated with behaviour change in eastern Zimbabwe. Submitted 2005.
- Gregson S, Garnett, GP. Contrasting gender differentials in HIV-1 prevalence and associated mortality increase in eastern and southern Africa: artefact of data or natural course of epidemics? *AIDS* 2000, 14, Supplement 3, S85-S99.

- Gregson S, Mason PR, Garnett GP, Zhuwau T, Nyamukapa C, Anderson RM, Chandiwana SK. A rural epidemic in Zimbabwe? Findings from a population-based Survey. *International Journal of STD and AIDS*. 2001, 12, 189-196.
- Gregson S, Mushati P, White P, Mlilo M, Mundandi C, Nyamukapa CA. (2004) Informal Confidential Voting Interview (ICVI) methods and temporal changes in reported sexual risk behaviour for HIV transmission in sub-Saharan Africa. *Sexually Transmitted Infections*, 80, Supplement II, 36-42.
- Gregson S, Ndlovu J, Mlilo M, Dauka E. (2001) Fluctuations in sexual activity, the validity of sexual behaviour estimates for short time-intervals, and HIV intervention evaluation in rural Zimbabwe. *Journal of Sex Research*, 180-181.
- Gregson S, Nyamukapa C, Garnett GP, Mason PR, Zhuwau T, Careal M, Chandiwana, SK, Anderson, RM. (2002) Sexual mixing patterns and sex-differentials in teenage exposure to HIV infection in rural Zimbabwe. *The Lancet*, 359 (June 1, 2002), 1896-1903.
- Gregson S, Nyamukapa CA, Garnett GP, Wambe M, Lewis JJ, Mason PR, Chandiwana SK, Anderson RM (2005). HIV infection and reproductive health in teenage women orphaned and made vulnerable by AIDS in Zimbabwe. *AIDS Care*. 17(7), 785-94.
- Gregson S, Nyamukapa CA, Garnett GP, Mason PR, Zhuwau T, Caraël M, Chandiwana SK, & Anderson RM (2002). Sexual mixing patterns and sex-differentials in teenage exposure to HIV infection in rural Zimbabwe. *The Lancet*, 359, 1896-1903.
- Gregson S, Terceira N, Kakowa M, Mason PR, Anderson RM, Chandiwana SK, Carael M. Study of Bias in Antenatal Clinic HIV-1 Surveillance Data in a High Contraceptive Prevalence Population in sub-Saharan Africa. *AIDS* 2002, 16, 4, 643-652.
- Gregson S, Terceira N, Mushati P, Nyamupaka CA, Campbell C. Community group participation: can it help young women to avoid HIV? An exploratory study of social capital and school education in rural Zimbabwe, *Social Science & Medicine* 2004, 58, 2119-2132.
- Gregson S, Waddell H, Chandiwana SK. School education and HIV control in sub-Saharan Africa: from discord to harmony? *Journal of International Development* 2001;13:467-485.
- Gregson S, Waddell H, Chandiwana SK. School education and HIV control in sub-Saharan Africa: From discord to harmony? *Journal of International Development* 2001, 13, 467-485.
- Gregson S, Zhuwau T, Anderson R, Chandiwana S. (1998) Is there evidence for behaviour change in response to AIDS in rural Zimbabwe? *Social Science and Medicine*, 46, 3, 321-330.
- Gregson S, Zhuwau T, Anderson R.M, Chandiwana S.K. (1998) Is there evidence for behaviour change in response to AIDS in rural Zimbabwe? *Social Science and Medicine*, 46(3), 321-330.
- Gregson S, Zhuwau T, Anderson RM, Chandiwana SK. (1996) The early socio-demographic impact of the HIV-1 Epidemic in rural Zimbabwe: Blair Research Institute and Oxford University, 1996.
- Gregson S, Zhuwau T, Anderson RM, Chandiwana SK. (1999) Apostles and Zionists: the influence of religion on demographic change in rural Zimbabwe. *Population Studies* 1999, 53, 2, 179-193.
- Gregson S, Zhuwau T, Anderson RM, Chimbadzwa T, Chandiwana SK. (1995) Age and religion selection biases in HIV-1 prevalence data from antenatal clinics in Manicaland, Zimbabwe. *Central African Journal of Medicine*, 41, 11, 339-345.
- Gregson S, Zhuwau T, Ndlovu J, Nyamukapa CA. (2002) Methods to reduce social desirability bias in sex surveys in low-development settings: experience from Zimbabwe. *Sexually Transmitted Diseases* 2002, 10, 568-575.
- Gregson S. (2005) Evidence for HIV decline in Zimbabwe: A comprehensive review of the epidemiological data. Geneva, UNAIDS.
- Gumbie R (2003). A report of an independent evaluation of adolescent sexual reproductive health, information, education and communication and services project in Zimbabwe. UZNFPC/UNFPA
- Halperin DT, Bailey RC. Male circumcision and HIV infection: 10 years and counting. *Lancet* 1999; 354:1813–1815.

- Halperin, D, Fritz K, McFarland W, Woelk G. (2005) Acceptability of Adult Male Circumcision for Sexually Transmitted Disease and HIV Prevention in Zimbabwe. *Sexually Transmitted Diseases*. 32(4), 238–239.
- Hargrove JW, Mahomva A, McNaghten AD, et al. n.d. Declining HIV prevalence and incidence in women attending maternity clinics in greater Harare, Zimbabwe. Submitted 2005.
- Hauser D (2004). *Five Years of Abstinence-Only-Until- Marriage Education: Assessing the Impact*. Washington, DC: Advocates for Youth.
- Hearst N, Chen S. (2003). *Condoms for AIDS prevention in the developing world: a review of the scientific literature*. Geneva: UNAIDS, 2003. www.usp.br/nepaids/condom.pdf.
- Herek, G.M. & Mitnick, L. (1996). *AIDS and stigma: A conceptual framework and a research agenda*. Final report from a research workshop sponsored by the National Institute of Mental Health.
- HIV/AIDS in Education Assessment Team (2002). *The Impact of HIV/AIDS on Education in Zimbabwe*, Ministry of Education, Sports and Culture, pg. 31
- Holmes KK, Levine R & Weaver M (2004). Effectiveness of condoms in preventing sexually transmitted infections. *Bulletin of the World Health Organization*, 82:454-461.
- Horizons (2001). *HIV Voluntary Counseling and Testing Among Youth Ages 14-21: Results from an Exploratory Study in Nairobi, Kenya, and Kampala and Masaka, Uganda*.
- Human Rights Watch (2005). “Clear the Filth”: Mass Evictions and Demolitions in Zimbabwe. A Human Rights Watch Briefing Paper, September 11, 2005. <http://www.hrw.org/backgrounder/africa/zimbabwe0905/zimbabwe0905.pdf>
- Humphrey J, Iliff P, Nathoo K, et al. Rationale and design of the ZVITAMBO trial (Zimbabwe vitamin a for mothers and babies). XIII International AIDS Conference. Durban, South Africa, 2000.
- Hungwe L (2005a). Report on the HIV and AIDS youth and adolescents stakeholders meeting held on 24th February 2005, New Ambassador Hotel, Harare.
- Hungwe L (2005b). Report on the HIV and AIDS youth and adolescents stakeholders meeting for young people living with disabilities. 23 June 2005, Holiday Inn Hotel, Harare.
- It is I who am going to build my community
- Jackson H (2001). Technical review of ZIM/00/PO2: Provision of HIV/AIDS/STI voluntary counseling and testing. ZAPS VCT Project. CST/UNFPA.
- Janneke Van De Wijgert, Michael Mbizvo, Sabada Dube, Magdalene Mwale, Prisca Nyamapfeni, Nancy Padian (2001) *Intravaginal practises in Zimbabwe: which women engage in them and why?* *Culture, Health & Sexuality*, 3 (2), 133 – 148.
- Jijide J & Ndlovu R (2002) *Monitoring visit report: Expansion of adolescent sexual and reproductive IEC and services in Zimbabwe*. ZIM/00/P06
- Kesby M. (2000) *Participatory diagramming as a means to improve communication about sex in rural Zimbabwe: a pilot study*. *Social Science and Medicine*, 50(12), 1723-1741.
- Kim YM, Kols A, Nyakauru R, Marangwanda C & Chibatamoto P. (2001). Promoting sexual responsibility among young people in Zimbabwe. *International Family Planning Perspectives*, 27:11-19.
- Korenromp EL, Bakker R, Vlas SJ, Gray RH, Wawer MJ, Serwadda D, Sewankambo NK, Habbema JD (2002). HIV dynamics and behaviour change as determinants of the impact of sexually transmitted disease treatment on HIV transmission in the context of the Rakai trial. *AIDS*. 16(16):2209-2218.
- Laporte A, Aggleton P. (1998) *HIV/AIDS prevention in the context of new therapies: Report of a meeting organised by UNAIDS and the AIDS Research Institute of the University at San Francisco*. UNAIDS, Geneva, February 1998.
- Leclerc-Madlala S (2004) *On the virgin cleansing myth: gendered bodies, AIDS and ethno-medicine*. *African Journal of AIDS Research*, 1, 87 – 95.
- Lewis JJC, Garnett GP, Nyamukapa CA, Donnelly CA, Mason PR, Gregson S. (2005) *Patterns of uptake of treatment for self-reported sexually transmitted infection symptoms in rural Zimbabwe*. *Sexually Transmitted Infections*, 81(4): 326-332.

- Lewis JJC, Garnett GP, Nyamukapa CA, Mlilo M, Donnelly CA, Gregson S. Beer halls as a focus for HIV prevention activities in rural Zimbabwe. *Sexually Transmitted Diseases* 2005; 32(6): 364-369.
- Longfield, K., Klein, M and Berman, J. (2002). Multi-Country Study on Trusted Partners among Youth: Eritrea, Tanzania, Zambia, and Zimbabwe: Washington DC, AIDSMark/PSI.
- Lopman B, Garnett GP, Mason PR, Gregson S. (2005). Individual level infection history: a lack of association with HIV incidence in rural Zimbabwe. *Public Library of Science*, 2(2), 142-146.
- Machekano R., W. McFarland, E. Hudes, M.T. Bassett, M.T. Mbizvo, D. Katzenstein (2000). Correlates of HIV Test Results Seeking and Utilization of Partner Counseling Services in a Cohort of Male Factory Workers in Zimbabwe. *AIDS and Behavior* 41: 63-70.
- Machekano, McFarland, Mbizvo, Bassett, Katzenstein & Latif, 1998, ID168
- Machirovi LM. (2000) Zimbabwe Demographic and Health Survey, 1999. Harare: Zimbabwe Central Statistical Office and Macro International.
- Mandishona GM (1989). Zimbabwe Demographic and Health Survey, 1988: Zimbabwe Central Statistical Office..
- Marindo, R., Pearson, S. Casterline, J B. (2003) Condom Use and Abstinence Among Unmarried Young people in Zimbabwe: Which Strategy, Whose Agenda? Policy Research Division, Population Council, New York.
- Mason PR, Fiori PL, Cappuccinelli P, Rapelli P, Gregson S. Seroepidemiology of *Trichomonas vaginalis* in rural women in Zimbabwe and patterns of association with HIV infection. *Epidemiology & Infection* 2005, 133, 315-323.
- Mason PR, Gwanzura L, Latif AS, et al. Antimicrobial resistance in gonococci isolated from patients and from commercial sex workers in Harare, Zimbabwe. *Int J Antimicrob Agents* 1998;9:175-9.
- Matangadura, G. 2001. Women and AIDS in Southern Africa: The Case of Zimbabwe and Its Policy Implications. *Journal of Culture and African Women Studies*, 1 (2), 255-275.
- Mate R, Mangezvo P, Nyathi-Jokomo Z & Mhlanga-Gunda R. (2005). Final report of the Mid-Term Review of the District Response Initiative (DRI) in Zimbabwe. Business Values Development Consortium.
- Mbizvo M, Kasule J, Mahomed K, Nathoo K. HIV-1 seroconversion incidence following pregnancy and delivery among women seronegative at recruitment in Harare, Zimbabwe. *Central African Journal of Medicine* 2001;47(5):115-118.
- Mbizvo MT, Machekano R, McFarland W, et al. (1996). HIV seroincidence and correlates of seroconversion in a cohort of male factory workers in Harare, Zimbabwe. *AIDS*, 10, 895-901.
- McKay A (2004). Sexual health education in the schools: Questions and answers. *The Canadian Journal of Human Sexuality*, 13 (3-4), 129-141.
- McClelland, RS, Lavreys L, Hassan WM, Mandaliya K, Ndinya-Achola JO, Baeten JM. (2006) Vaginal washing and increased risk of HIV-1 acquisition among African women: a 10-year prospective study. *AIDS*. 20(2), 269-273,
- Meekers D & Richter K (2005) Factors Associated with Use of the Female Condom in Zimbabwe. *International Family Planning Perspectives*, 31(1), 30-37
- Meekers D (2003). Patterns of condom use in urban males in Zimbabwe: evidence from 4,600 sexual contacts. *AIDS Care*, 15(3)
- Meekers D, Calves A. 'Main' girlfriends, marriage, and money: The social context of HIV risk behaviour in sub-Saharan Africa. *Health Transit Rev* 1997;7(Suppl):361-75.
- Meekers D, Van Rossem R. Explaining inconsistencies between data on condom use and condom sales. *BMC Health Services Research* 2005;5(5):<http://www.biomedcentral.com/1472-6963-5-5>.
- Meekers, D. (2001). Patterns of Condom Use in Urban Males in Zimbabwe: Evidence from 4,600 Sexual Contacts. Washington, DC: PSI.
- Mhloyi PM (2003). Church and community based reproductive health and HIV/AIDS: An independent evaluation. Centre for Population Studies, University of Zimbabwe. ZIM/00/P04

- Mlingo M (2003). Involving the Men Involving the Men: Condom Promotion among Groups of Men vs. Couples: Condom Promotion among Groups of Men vs. Couples. A Randomized Study in Zimbabwe. Powerpoint presentation September 2003. UZ-UCSF Research Programme UZ-UCSF Research Programme
- MOHCW (2000) ANC Surveillance Report 2000. Harare: Zimbabwe Ministry of Health and Child Welfare.
- MOHCW (2003) Zimbabwe National HIV and AIDS Estimates 2003. Harare: Zimbabwe Ministry of Health and Child Welfare.
- MOHCW (2004) ANC Surveillance Report (2002) Harare: Zimbabwe Ministry of Health and Child Welfare, 2004.
- MOHCW (2005a) ANC Surveillance Report 2004. Harare: Zimbabwe Ministry of Health and Child Welfare.
- MOHCW (2005b). Zimbabwe national HIV/AIDS estimates, 2005. Preliminary report. Harare, Zimbabwe Ministry of Health and Child Welfare.
- Morris A 1997. Sexual Networks and HIV. *AIDS* , 11(suppl A),S209-S216.
- Morris M & M Kretzschmar M (1997) Concurrent partnerships and the spread of HIV. *AIDS*, 11, 641-8.
- Morris M., Podhisita C, Wawer M & Handcock M 1996. Bridge populations in the spread of HIV/AIDS in Thailand. *AIDS* 10(11),1265-1271.
- MPSLSW (1995) Poverty Assessment Study Survey, GoZ
- Muhwava, W (n.d.).Condom Use within Marriage and Consensual Unions in the Era of HIV/AIDS in Zimbabwe Zimbabwe for World Health Organization Project No.97908 "Family Planning in the Era of HIV/AIDS".
- Mundandi C, Garnett GP, Voeten HACM, Nyamukapa CA, Habbema JDF, Gregson S. Sexual behaviour change, spatial mobility and stabilisation of the HIV epidemic in eastern Zimbabwe. XV International HIV/AIDS Conference 2004, Bangkok.
- Nyamukapa CA, Foster G, Gregson S. Orphans' household circumstances and access to education in a maturing HIV epidemic in eastern Zimbabwe. *Journal of Social Development in Africa* 2003, 18, 2, 7-32.
- Nyamukapa CA, Gregson S. Contrasting primary school outcomes of paternal and maternal orphans in Manicaland, Zimbabwe: HIV/AIDS and weaknesses in the extended family system. *Social Science and Medicine* 2005, 60, 10, 2155-2167.
- Parirenyatwa CN.(1995) Zimbabwe Demographic Health Survey, 1994: Zimbabwe Central Statistical Office.
- Parkin S & McKeganey N (2000). "The rise and rise of peer education approaches," *Drugs: education, prevention and policy*, 7(3):293-310.
- Peltzer K.1; Mpofu E.2; Baguma P.3; Lawal B.(2003) 4 Attitudes Towards HIV-Antibody Testing Among University Students in Four African Countries. *International Journal for the Advancement of Counselling*, Volume 24(3),193-203
- Perez F.; Mukotekwa T.1; Miller A.; Orne-Gliemann J.1; Glenshaw M.; Chitsike I.2; Dabis F.3
Implementing a rural programme of prevention of mother-to-child transmission of HIV in Zimbabwe: first 18 months of experience. Source: *Tropical Medicine & International Health*, Volume 9, Number 7, July 2004, pp. 774-783(10)
- Pettifor, AE van der Stratena, A., Dunbara,A., Shiboskia, S C,and Padiana,N S. (2004).Early age of first sex: a risk factor for HIV infection among women in Zimbabwe. *AIDS*, 18:1435–1442
- Phiri A & Erulkar A (2002). Magunje community-based youth reproductive health project: Results of an impact evaluation. Population Council.
- Pilcher CD, Tien HC, Eron JJ, Vernazza PL, Leu SY, Stewart PM, Goh L & Cohen MS. (2004). Brief but efficient: Acute HIV infection and the sexual transmission of HIV. *The Journal of Infectious Diseases*, 189(10), 1785-92.

- Piotrow, P., Kincaid, D., Rimon, J. & Rinehart, W. (1997). Health communication. London: Praeger Publishers
- Pitts, M., Magunje, N. and McMaster, J. (1994) Students' knowledge of the use of herbs and other agents as preparation for sexual intercourse. *Health Care for Women International*, 15, 91-99.
- Population Services International. (1999) Knowledge, Attitudes, Beliefs and Practices on HIV/AIDS in Zimbabwe, 1997. Harare: Population Services International, 1997.
- Population Services International. (1999) Knowledge, Attitudes, Beliefs and Practices on HIV/AIDS in Zimbabwe. Harare: Population Services International, 1999.
- Population Services International. (1999) Knowledge, Attitudes, Beliefs and Practices on HIV/AIDS in Zimbabwe, 2001. Harare: Population Services International, 2001.
- Population Services International. (2003) Knowledge, Attitudes, Beliefs and Practices on HIV/AIDS in Zimbabwe, 2003. Harare: University of Zimbabwe, 2003.
- PSI Research Department (2004). An event impact assessment report for Condom efficacy, Harare, PSI.
- PSI Research Division (2005). VCT Campaigns: Behavior Change and Campaign Exposure Among Urban Youths, Ages 15-24 Years in Zimbabwe. Washington D.C., PSI International.
- Public Service Commission of Zimbabwe (2003) HIV/AIDS policy for the public service: HIV/AIDS situation and response in the public service of Zimbabwe. Harare, Troparg Consultancy Services.
- Ray S.; Latif A.; Machezano R.; Katzenstein D. (1998) Sexual behaviour and risk assessment of HIV seroconvertors among urban male factory workers in Zimbabwe. *Social Science and Medicine*, Volume 47(10), 1431-1443.
- Runganga, A. and Kasule, J. (1995) The vaginal use of herbs/substances: an HIV transmission facilitatory factor? *AIDS Care*, 7, 639-645.
- Runganga, A., Pitts, M. and McMaster, J. (1992) The use of herbal and other agents to enhance sexual experience. *Social Science and Medicine*, 35, 1037-1042.
- Safer Sex and Reproductive Choice: Findings from "Positive Women: Voices and Choices" in Zimbabwe
- Salomon JA, Hogan DR, Stover J, Stanecki KA, Walker N, et al. (2005). Integrating HIV Prevention and Treatment: From Slogans to Impact. *PLoS Medicine*, 2(1), e16
- Schatz P (2001). The adolescent sexual world and AIDS prevention: a democratic approach to programme design in Zimbabwe. *Health Promotion International*, 16(2), 127-136.
- Schneeberger A, Mercer CH, Gregson S, Ferguson NM, Nyamukapa CA, Anderson RM, Johnson AM, Garnett GP. (2004) Scale-free networks and sexually transmitted diseases: a description of observed patterns of sexual contacts in Britain and Zimbabwe. *Sexually Transmitted Diseases*, 31, 380-387.
- Shelton, J., Halperin, D., Nantulya, V., Potts, M., Gayle, H. & Holmes, K. (2004). Partner reduction is crucial for balanced 'ABC' approach to HIV prevention. *British Medical Journal*, 328: 891-4.
- Sherman J, Magwere L, Davies N, Zimunya R. "It is I who am going to build my community" – Young People We Care: Making a
- Solomon V, van Rooyen H, Griesel R, Gray D, Stein J, Nott V. (2004). Critical Review and Analysis of Voluntary Counselling and Testing -Literature in Africa. Durban, South Africa: Health Systems Trust. Available at <http://www.hst.org.za>
- Spark-du Preez N, Zaba B, Nyamukapa CA, Mlilo M, Gregson S. "Kusvika taparadzani swa nerufu" (Until death do us part). *African Journal of AIDS Research* 2004, 3, 1, 81-91.
- Stein J (2005). The impact of antiretroviral (ARV) provision on HIV/AIDS prevention. *AIDS BULLETIN*, 14(1), <http://www.mrc.ac.za/aids/march2005/impact.htm>
- Studies from Manicaland HIV/STD Prevention Project
- The Global Gag Rule Impact Project (2005). Access denied: The impact of the global gag rule in Zimbabwe – 2005. The Global Gag Rule Impact Project, www.globalgagrule.org
- UNAIDS (1998) AIDS and the military: UNAIDS point of view. UNAIDS best practice collection. Geneva, UNAIDS.

- UNAIDS (1999) Sexual behavioural change for HIV: Where have theories taken us? Geneva: UNAIDS.
- UNAIDS (2002). Epidemiological fact sheet on HIV/AIDS and sexually transmitted diseases. Geneva, UNAIDS/WHO Working Group.
- UNAIDS (2004). 2004 Report on the global AIDS epidemic. Geneva, UNAIDS.
- UNAIDS (2004). Donor report. . . . Zimbabwe, UNAIDS.
- UNAIDS/UNICEF, Children on the brink 2002: A joint report on orphan estimates and program strategies, 2002. FACT, A report on the situation of the street children and youth in Mutare, unpublished paper, Family AIDS Caring Trust/Scripture Union, 2000, p 31.
- UNAIDS/UNICEF/USAID, Children on the brink 2004: A joint report of new orphan estimates and a framework for action, 2004.
- UNDP (2005). UNDP Outcome Evaluation Final Report. Harare, UNDP.
- UNDP. (2004) Zimbabwe Human Development Report 2003. Harare: University of Zimbabwe.
- UNFPA (2004) Zimbabwe, Country Profile: Indicators. Available at <http://www.unfpa.org/profile/zimbabwe.cfm>.
- UNFPA (2005). Report on meeting to review peer education processes, Harare 12-15 April 2005. Harare, UNFPA.
- UNICEF (2004). Girls, HIV/AIDS and Education (With data gathered from YAS 2000-2001), Harare, UNICEF.
- UNICEF, Zimbabwe Ministry of Public Service Labour and Social Welfare. (2005) Orphans and Vulnerable Children Baseline Survey, November-December 2004. Harare, UNICEF. Draft report.
- Van Vliet C, Holmes K, Singer B & Habbema J (1997). Chapter 11: The effectiveness of HIV prevention strategies under alternative scenarios: Evaluation with the STDSIM model. In M Ainsworth, L Franssen & M Over (Eds), *Confronting AIDS: Public Priorities in a Global epidemic*. New York: Oxford University Press. Accessed 30 August 2005 at <http://www.iaen.org/limelette/html/limcontents.htm>
- Venier J.L.; Ross M.W.1; Akande A. (1998) HIV/AIDS-related social anxieties in adolescents in three African countries *Social Science and Medicine*, 46(3), 313-320.
- Vos T (1994). Attitudes to sex and sexual behaviour in rural Matabeland, Zimbabwe. *AIDS Care*, 6,193–203.
- Watts H, Lopman B, Nyamukapa C, Gregson S. (2005) Rising incidence and prevalence of orphanhood in Manicaland, Zimbabwe, 1998 to 2003. *AIDS*. 19(7):717-725.
- Watts H, Lopman B, Nyamukapa CA, Gregson S. (2005) Rising incidence and prevalence of orphanhood in Manicaland, Zimbabwe, 1998 to 2003. *AIDS*, 19(7): 717-725.
- Weiss H, Quigley M, Hayes R. (2000) Male circumcision and risk of HIV infection in sub-Saharan Africa: A systematic review and metaanalysis. *AIDS* 2000; 14:2361–2370.
- Weller S & Davis K. (2004). *Condom effectiveness in reducing heterosexual HIV transmission*. Issue 1. Oxford: Update Software (Cochrane Review)
- Wilson D, Lavelle S. (1992) Psychosocial predictors of intended condom use among Zimbabwean adolescents. *Health Educ Res* 1992;7:55–68.
- Wilson D, Manual A, Lavelle S. (1992) Personality characteristics of Zimbabwean men who visit prostitutes: implications for AIDS prevention programmes. *Personality Individual Diff* 1992;13:275–9.
- Wilson D, Mutero C, Lavelle S, et al. (1989). Sex worker, client sex behaviour, and condom use in Harare, Zimbabwe. *AIDS Care*, 1, 269–80.
- Wilson D. (2004). Partner reduction and the prevention of HIV/AIDS: The most effective strategies come from within communities. *British Medical Journal*. 328. 848–9
- Woelk GB, Fritz KE, Bassett MT, Todd C & Chingono A (2001). A rapid assessment in relation to alcohol and other substance use and sexual behaviour in Zimbabwe: Final report. Department of Community Medicine, University of Zimbabwe.

- Wulfsohn A (2003) Post-exposure prophylaxis after sexual assault in South Africa. Tenth Conference on Retroviruses and Opportunistic Infections, Boston, abstract 42, 2003.
- Zaba B, Boerma T, White R (2000) Monitoring the AIDS epidemic using HIV prevalence data among young women attending antenatal clinics: prospects and problems. *AIDS*. 14(11):1633-1645.
- Zaba B, Pisani E, Slaymaker E, Boerma JT. (2005) Age at first sex: understanding recent trends in African demographic surveys. *Sexually Transmitted Infections*. 80(Supplement II):28-35.
- Zimbabwe Community Health Intervention Research Project (2003). Zimbabwe Phase 1 Results: Summary Report. Harare: ZiCHIRE, 2003.
- Zimbabwe Ministry of Health and Child Welfare. (2004). Zimbabwe National Family Planning Council, National AIDS Council Zimbabwe, Centers for Disease Control and Prevention Zimbabwe. The Zimbabwe Young Adult Survey 2001-2002. Harare, Zimbabwe: Zimbabwe Ministry of Health and Child Welfare and Centers for Disease Control and Prevention, Zimbabwe, 2004.
- Zimbabwe National Blood Transfusion Service (2003) Annual Report 2002/2003. Harare, Zimbabwe National Blood Transfusion Service.
- ZNFPC (2002) Initial Assessment of the Expanded CBD Programme. Harare, ZNFPC.
- ZNFPC, PSI, UNFPA, Expanded Theme Group/Partnership Forum on HIV and AIDS. Overview of Condom Programming in Zimbabwe (working draft). Harare: ZNFPC, 2005.

Appendix 1 - List of Acronyms

ART	Anti-retroviral therapy
ARV	Anti-retroviral
BCC	Behaviour Change Communication
CSW	Commercial sex worker
DHS	Demographic and Health Surveys
FCTZ	Farm Community Trust of Zimbabwe
FP	Family Planning
IEC	Information, education and communication
KAP	Knowledge, attitude and practice
KAPB	Knowledge, Attitudes, Practices and Beliefs
MOHCW	Ministry of Health and Child Welfare
MOESC	Ministry of Education, Sports and Culture
MTCT	Mother to Child Transmission
NAC	National AIDS Council
OVC	Orphans and vulnerable children
PPTCT	Prevention of Parent to Child Transmission
PSI	Population Services International
SAFAIDS	Southern Africa HIV/AIDS Dissemination Service
SRH	Adolescent Sexual and Reproductive Health
STD	Sexually transmitted disease
STI	sexually transmitted infection
UDACIZA	Union for the Development of Apostolic Churches in Zimbabwe and Africa
UNAIDS	United Nations Joint Programme on HIV/AIDS
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
VCT	Voluntary Counselling and Testing
VTC	Vocation Training Centre
WHO	World Health Organisation
YAS	Young Adult Survey
ZADHR	Zimbabwe Association of Doctors for Human Rights
ZAPSO	Zimbabwe AIDS Prevention and Support Organization
ZHDR	Zimbabwe Human Development Report
ZNFPC	Zimbabwe National Family Planning Council
ZNFPC	Zimbabwe National Family Planning Council
HOCD	Heads of Christian Denominations
DAAC	District AIDS Action Committee
PAC	Provincial AIDS Council

Appendix 2 - List of people interviewed

Organisation	Person(s) interviewed	Position
Centre for Disease Control and Prevention (CDC)	Shannon Hader	Director
	Kim Richards	BC Technical Advisor
	Sue Laver	Senior Technical Advisor, M&E
Independent consultant	Elijah Munetsi	Consultant on peer approaches
DAAC, Motoko	Gift Kakomwe	DAAC Co-ordinator, Motoko District
Deseret	Florence Mbidzo	Prog. Officer FBOs
	Humphrey Murasiramwa	Prog. Officer, Schools
	Irene Kasere	Prog. Officer FBOs
	Gwendolyn Gumbo	Prog. Co-ordinator, Workplace
District AIDS Action Committee, Mutoko	Gift Kakomwe	Co-ordinator, Mutoko
Futures Group	Godfrey Tinarwo	Senior HIV and AIDS Policy Specialist
Gweru Women AIDS Prevention Association (GWAPA)	Chrispen Hahlani	Acting Project Co-ordinator
Heads of Christian Denominations	Charakupa Ngwerume	HIV/AIDS Programme Co-ordinator
	Sister Gaudiosa	AIDS Education Co-ordinator for ZBC Education Commission
	Pastor Peterson Simbotwe	Mashonaland West Regional AIDS Co-ordinator
London Imperial College	Simon Gregson	Epidemiologist
Ministry of Education and Culture	Moud Beni	Education Officer, Special Needs
Ministry of Health and Child Welfare	S Tsoka	Health Education Officer
National AIDS Council	Lawrence Maboreke	M&E
	Vimbai Mdege	National Co-ordinator – workplace
	Oscar Mundida	National Advocacy Co-ordinator
Ntengwe for Community Development Trust, Binga	Juliana Muskwe	Progr. Officer
PAAC Harare Province	Mr Muzondiona	Co-ordinator
Plan International	Herbert Chimhowa	Programme Co-ordinator (Mutoko)
Population Services International (PSI)	Yasmin Madan	Director, Technical Services
	Kumbirai Chatora	Deputy Director, Technical Services

Private Consultant	Boniface Manyame	HIV & AIDS Policy Consultant
Private Consultant	Alex Zinanga	Strategic Framework Consultant
Public Personalities Against AIDS Trust	Tendayi Westerhof Eve Gadzikwa	National Director Programme Officer
Regai Dzive Shiri	Frances Cowan	Project Director
Rural Libraries and Resources Development Programme	Obadiah T Moyo	Secretary General
SHAPE	Leo Wamwanduka	Project Co-ordinator, Midlands State U.
The Centre	Lynde Francis	Prog. Co-ordinator
UNFPA	Bruce Campbell Clemens Benedikt Gift Malunga Ratidzai Ndluvu	Res. Representative, UN HIV and AIDS Theme Group Chair Associate Programme Officer Assistant Representative, Reproductive Health Deputy Res Rep., Mozambique
UNICEF	Nicolette Moodie Dingizulu Dube Bula Senzanje Bernard Batidzirai	Project Officer HIV/AIDS Project Officer, Programme Communication Project Officer, Social Mobilisation Project Officer, Life Skills Education
UNIFEM		
USAID	Peter J Halpert Janis Timberlake	Director, Office of Health Senior HIV/AIDS Advisor
Youth beneficiary	Caroline Jeremani	Chawera, Mutoko District
Youth beneficiary	Josephat Ndengoma	Chawera, Mutoko District
Youth Corner, Epworth	Lovemore Chibanda	Peer Educator
ZAPSO	Elisha Chidombwe	Chairman of Board
Zimbabwe AIDS Network	Sheila Dotoro Judith Chakumba	Operations Manager Capacity Building Advisor
Zimbabwe Business Council on AIDS	Lovemore Kadenge	Programme Co-ordinator
Zimbabwe Interfaith Network on HIV/AIDS	Matilda Jambga	Acting co-ordinator
Zimbabwe National Traditional Healers Association	Gordon Chavunduka	President ZINATHA

Zimbabwe National Family Planning Council	Fatima Mhuriro	Assistant Director, IEC
Project Support Group	Paida Matongoti	Accountant
Training and Research Support Centre	Barbara Kaim	Programme Manager
Southern Africa HIV and AIDS Information Dissemination Service	Lois Lunga	Executive Director
John Snow International	Judith Sherman	Director
Ministry of Health and Child Welfare	Ledwina Hungwe	Reproductive Health Officer AIDS & TB Unit
Ministry of Higher Education, AIDS Focal Point	Ignatius Kajengo	Deputy Director, Human Resources
Ministry of Education and Culture	Japhate Muchovo	Acting National Co-ordinator for HIV & AIDS and Life Skills Education
Ministry of Women Affairs, Gender and Community Development	Jane Juru	Director, Women Affairs
Ministry of Youth, Sports and Culture	Mandla Makuyana	District Head
Women's Action Group	Edinah Masiyiwa	Director,
UNAIDS Youth Project (under NAC)	Luke Manyamasi	Coordinator
Padare	Edington Mhonda:	Advocacy Officer
Farm Community Trust of Zimbabwe	Godfrey Magaramombe,	Executive Director
	Taurai Malunga	HIV and AIDS Programme Advisor
ZVITAMBO	Jean Humphrey	Director
	John Hargrove	Consultant Statistician
	Alison Jenkins	Deputy Director
	Peter Iliff	Medical Director

Appendix 3 - Behavioural surveillance surveys

Primary sources of data on behavioural risk (large surveys)			
Study	Year	Type	Sample
DHS	1988	National population-based	4,107 households in the household sample, and 4,021 of all women aged 15-49. Survey results are representative at the national level, by urban and rural residence, and for ten provinces.
DHS	1994	National population-based	5,984 households in the household sample. All women aged 15-49 comprised a sample size of 6,128, and all men aged 15-54 comprised a sample size of 2,141. Survey results are representative at the national level, by urban and rural residence, and for ten provinces.
PSI	1997	Knowledge, Attitudes, Beliefs and Practices on HIV/AIDS	
ZNFPC	1997	Nationally representative cross-sectional survey	5,449 people aged 10-24 years
DHS	1999	National population-based	6,369 households in the household sample. All women age 15-49 comprised a sample size of 5,907, and all men aged 15-54 comprised a sample size of 2,609. 8,516 people aged 15-54. Survey results are representative at the national level, by urban and rural residence, and for ten provinces.
PSI	1999	Knowledge, Attitudes, Beliefs and Practices on HIV/AIDS	
PSI	2001	Nationally representative sample	
Marindo et al.	2002	Cross-sectional survey	1,795 young people aged 12-20 in urban schools
YAS	2002-2003	National Young Adult Survey	
PSI	2003	Nationally representative sample	3,552 people aged 15-34
UNICEF	2003	National youth survey	
MOHCW	2004	Application of the AIDS Impact Model to the Zimbabwe national HIV and AIDS estimates 2003	National antenatal surveillance data for 2003