ZIMBABWE
Analysis of HIV Epidemic, Response and Modes of Transmission

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ACRONYMS

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<th>Description</th>
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<td>Acquired Immunodeficiency Syndrome</td>
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<tr>
<td>ANC</td>
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<tr>
<td>KAP</td>
<td>Knowledge, Attitudes and Practice</td>
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<td>KYE</td>
<td>Know Your Epidemic</td>
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<td>Know Your Response</td>
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<td>M&amp;E</td>
<td>Monitoring and Evaluation</td>
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<td>MSM</td>
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<td>PLHIV</td>
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<td>PMTCT</td>
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<td>Acronym</td>
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<tr>
<td>STI</td>
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<td>ZVITAMBO</td>
<td>Zimbabwe Vitamin A for Mothers and Babies</td>
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FOREWORD

This 2010 HIV synthesis report is the first of its kind in Zimbabwe. It lays an important foundation for understanding the HIV epidemic in the country and importantly serves as a source of much required information for directing the development and formulation of strategic directions to effectively respond to the epidemic in Zimbabwe. While significant strides have been made in reversing the trends in the HIV epidemic, it is evident that without critical information most of these gains remain scantily understood. With this effort the country aimed to establish a source of comprehensively and critically reviewed data to help highlight and explain the nuances in the prognosis of the HIV epidemic and importantly assessing the corresponding responses that the country designs and implements. In this light, the report highlights the challenges the country faces with regards to availability of good quality data and related information to inform the fight against the HIV scourge.

Zimbabwe is confident of developing and sustaining a mechanism that will ensure the generation and utilization of relevant data and strategic information on a regular basis. As a country we envisage a situation where structures at all levels will be in a position to confidently explain the character of and respond effectively to challenges posed by the HIV epidemic, using available evidence. If done right, subsequent exercises will mean that planning and implementing appropriately tailored responses will and should be the norm rather than exception.

Let me take this opportunity to thank the bi-lateral and multi-lateral partners that supported this important effort. In the same breadth I would like to thank the Zimbabwean entities and individuals for their expert leadership in making sure that the exercise was completed successfully.

Hon. Henry Madzorera
Minister of Health and Child Welfare
EXECUTIVE SUMMARY

This epidemic and response synthesis work was commissioned in order to update Zimbabwe’s evidence base for the formulation of the Zimbabwe National AIDS Strategic Plan (ZNASP) 2011-2015, and to look back and learn from what has been achieved. The work builds on existing reviews, in particular those by Gregson et al. (2005, 2010) and the mid-term review of the implementation of the ZNASP 2006-2010.

The synthesis has four objectives:
1. Describe and understand the epidemiological situation in Zimbabwe (“Know your epidemic”)
2. Describe and understand the HIV prevention response in Zimbabwe (“Know your response”)
3. Synthesise and link the epidemic and response data to understand scope, relevance and comprehensiveness of HIV prevention policies and programmes, the alignment of prevention resources to strategic priorities, and gaps in strategic information about HIV prevention
4. Recommend improvements to ensure greater success in prevention programmes, and fewer new HIV infections in Zimbabwe.

The epidemiological and response reviews were carried out through desk study of existing published and unpublished data and documentation about Zimbabwe, and relevant studies from other countries. Some secondary data analysis of the 2005 Zimbabwe Demographic and Health Survey (ZDHS) was carried out.

"Know Your Epidemic"

Zimbabwe has a generalized heterosexually driven HIV epidemic, with exceptionally high levels of HIV prevalence in the past and significantly lower levels at present. It is estimated that over the 12 years from 1997 to 2009, adult HIV prevalence nearly halved from 26.5% to 14.3%. This suggests that Zimbabwe’s epidemic has contracted more steeply and dramatically than any other epidemic in Eastern and Southern Africa. As a legacy of the very high HIV prevalence levels in the past, the country had in 2009 with an estimated 1.2 million people living with HIV still the third largest HIV burden in Southern Africa after South Africa and Mozambique. AIDS-related mortality and HIV incidence have been on a modestly decreasing trend for several years, with an estimated 84,000 AIDS-related deaths and an estimated 62,000 new HIV infections in 2009. ART coverage by end of 2009 is estimated at 38% (approximately 215,000 people on ART of 570,000 people with CD4 count<350).

Geographically, the Zimbabwean HIV epidemic is relatively homogenous - HIV prevalence is overall similar across provinces and rural-urban zones. But there can be considerable variation in HIV prevalence at local level. For instance, HIV prevalence in antenatal clinic sentinel sites in 2009 ranged from 8.3% in Binga in Matabeleland North Province to 26.4% in Victoria Falls in the same province. In the Manicaland HIV/STD Prevention Project in eastern Zimbabwe, it was found that HIV prevalence in females living in community centers was twice as high as in females living in the least-developed subsistence-farming areas.

HIV prevalence assumes the typical age and gender pattern found in Southern African epidemics with females having a younger age distribution of risk. It has been shown that age-disparate relationships are associated with increased HIV prevalence levels, and been concluded that choosing age disparate partners is the main behavioural determinant of the more rapid rise in HIV prevalence in young women than in men.

In contrast to the early years of the HIV epidemic, more educated populations are now relatively less likely to be HIV positive. This indicates a positive effect of education on HIV risk.
Zimbabwe has high rates of marriage, compared to other countries in the southern African region. People marry comparatively early, and this shortens overall the period of pre-marital sex. Another consequence of early marriage is that the majority of PLHIV are in union (about three quarters of male PLHIV and over half of female PLHIV). Of all infected couples with at least one of the partners HIV-infected, 47% are sero-discordant, representing an important opportunity for prevention in couples. Reported sex with high-risk partners and multiple partners continues to be strongly associated with risk of HIV infection among women.

HIV infection is also clustered in people with a history of STIs, especially genital ulcer disease. There has been a decline of STI episodes recorded at public health facilities, but there are recent reports of STI increases in certain population groups like youth in Harare and mine workers in Mhondoro.

The prevalence of male circumcision is very low in Zimbabwe, in the 2005 ZDHS, 11% of men said that they are circumcised. Such a low level is unlikely to affect overall HIV transmission to any important degree. Circumcision is traditionally practiced in a few ethnic groups only like the Tonga, but there is evidence that many Zimbabwean men are interested and willing to get circumcised if the procedure is performed safely and affordably.

In Zimbabwe, there is a scarcity of HIV prevalence data of the traditional most-at-risk populations like sex workers, men having sex with men, and injecting drug users. No systematic size estimations of these populations have been conducted to date. Commercial and transactional sex are a continuum and accurate data on both types of sex are scarce because of definitional and measurement problems as well as underreporting in local studies. It is however clear that Zimbabwe has a sex work industry and that transactional relationships are common place.

**HIV incidence in 2009 has been estimated at 0.85% (0.56% - 1.17%).** It is projected that there are about 47,300 new HIV infections in adults aged 15+ years in 2010, the lowest level since the mid-1980s. New HIV infections in children up to 15 years of age have been declining due to lower levels of HIV infection in women at child-bearing age and prevention of mother-to-child transmission (projected 14,100 new infections in 2010). Infant nutrition behaviours may pose a considerable risk: After gains in exclusive breastfeeding in the late 1990, progress stalled and less than 40% of mothers reported exclusive breastfeeding in 2005. A recent cohort study showed that female HIV incidence was very high during the first nine months after childbirth (5.7/100 women-years-at-risk), and that those women who knew that their partners had other sexual partners were about four times more likely to acquire HIV. HIV infection levels in young ANC clients suggest that HIV incidence may be comparatively high in growth points and around resettlement and other farming areas.

The UNAIDS HIV incidence model estimated that 55% of incidence occurs among people in union in the general community who report being faithful to one partner in the last 12 months. The literature review also looked at recent data on modes of HIV transmission. There is no clear evidence that HIV transmission occurs through use of unsafe (unclean) medical injections in Zimbabwe, but data is limited. According to official Government statistics, all transfusion blood used in Zimbabwe is HIV screened and considered safe. HIV prevalence in blood donors is very low, indicating a functional donor selection and retention system.

Several internationally important studies on data validity and behavioural survey methodology have been conducted in Zimbabwe, demonstrating that self-reported data have poor validity and that interview methodology matters:

- Using biomarkers to validate reported condom use, it was found that at least half of unprotected contacts in discordant couples were not reported (Allen et al., 2003). Another biomarker study found that of all women who tested positive for recent unprotected sexual intercourse, only 52% reported having had unprotected sex in the previous two days (Minnis et al., 2009).
- Comparing two interview methods in which the responses were kept secret from the interviewer in one of the methods yielded strikingly different results (Gregson et al., 2002b). For example, women were
over five times more likely to report concurrent sexual partners with the “secret” method, and the only reporting of extramarital partners among married women was through that method. Men were also significantly more likely to report concurrent partners and multiple partners when the “secret” method was used.

According to reported behaviours by adults, sexual debut occurs relatively late in Zimbabwe, and there are no signs that the temporal trend of sexual debut has changed significantly. In youth aged 15-24 years, the frequency of reported premarital sex showed a modest decline over the four ZDHS. Reported secondary abstinence – sexually experienced individuals reporting no sexual activity in the past 12 months - has increased between 1999 and 2005 and is much more frequent among women than men. Both men and women have reported reductions in risky and multiple partner sex in population-based surveys, and this is corroborated by qualitative data from focus groups. Although condom usage rates are relatively high during high-risk sex, condom usage with regular partners remains low. Widowhood is associated with high HIV infection levels, high partner acquisition rates but also higher condom use.

The evidence on the behavioural consequences of HIV testing and counselling (HCT) is mixed: In some studies, HCT seems to be associated with subsequent behaviour change, while in other studies HCT seems to lack such consequences. According to the 2005 ZDHS, couples are generally uninformed about whether their partners have other partners. When tested, most couples do not seem to share the results of the test, and disagreement about whether each partner has disclosed the status is common.

The review also looked at contextual factors of the epidemic such as violence in relationships, alcohol abuse, sexual and cultural practises and norms, mobility and migration. It appears that sexual and physical violence occur in intimate and other relationships, but wealthier and more empowered women and those in monogamous relationships experience it less often. Men often have sex in a drunken state, and alcohol use is associated with higher numbers of lifetime, recent and concurrent partners, as well as with prevalent and incident HIV infection. Migration and mobility very likely has had an effect on the spread of HIV infection in Zimbabwe, whether through geographic heterogeneity in HIV prevalence, or through associated risk behaviors. For example, among migrant agricultural workers in Manicaland, prevalence was 39% for women and 26% for men, compared with 30% and 21% for other sexually active women and men in the locality.

"Know Your Response"

Policy context for HIV prevention

Zimbabwe has over the last 25 years developed a policy environment for HIV prevention culminating in a multi-sectoral approach lead by a national coordination authority and guided by evidence-informed strategic frameworks. In 1999, the National Policy on HIV and AIDS was adopted, followed by creation of the National AIDS Council through an Act of Parliament. There is a large number of policy instruments relevant to HIV prevention at national and sectoral level. The latest additions are the 2009 Policy on Safe and Voluntary Male Circumcision, the 2010 National Adolescent Sexual and Reproductive Health Strategy 2010-2015 and the Ministry of Higher & Tertiary Education’s HIV and AIDS Workplace Policy. Issues of human rights are covered within the constitution as well as within the ZNASP.

The country has crafted and passed bills that help uphold rights of vulnerable people. Among them are the 1997 Criminal Procedure and Evidence Amendment Act No. 8 (leading to the creation of Victim Friendly Courts), the Criminal Procedure and Evidence Amendment Act and the Sexual Offences Act of 2000, the Sexual Offences Act of 2000, the 2006 Child Adoption Act, and the 2007 Domestic Violence Act.

There are policy barriers to HIV prevention (illegal status of sex work and MSM, prohibition of condom promotion in school settings), and policies which are not effectively implemented (the 2007 Prevention, Control and PEP Policy, the 2007 Domestic Violence Act, the Sexual Offences Act, among others). The
primacy of customary law over the Bill of Rights specifically affects women’s and girls’ constitutional rights on protection and gender equality. While the Constitution includes a clause that promotes gender equality, it nonetheless maintains a “claw back clause” that undercuts fundamental values by recognising the primacy of customary law over the Bill of Rights.

Several structures at national and decentralized levels have a mandate to coordinate the complex multisectoral HIV response. There is acknowledgement of NAC as the overall coordinating body while the Zimbabwe AIDS Network coordinates the civil society response. Also of importance is the role of faith and community based networks and organizations, some of whom have developed their own prevention strategies. The contribution of community level organisations is well recognised, but the community response is poorly defined, not sufficiently prioritised, and affected by the economic crisis.

Prevention of new infections is the first of four key strategies within the 2006-2010 National HIV and AIDS Strategic Plan, which promotes “refocusing and intensifying behavior change approaches and programmes”. The National Behaviour Change Strategy 2006-2010 is a multi sectoral framework to reduce sexual transmission of HIV by promoting responsible sexual behavior. The strategy has a number of guiding principles, which range from the key role community leaders play, to the importance of clear and consistent messaging and provision of adequate services for PLHIV.

**Strategic information for HIV prevention**

The National AIDS Council coordinates and maintains the national M&E system, and most national programmes and partner projects are linked to the national system. A national M&E plan was developed in 2009 and a multisectoral and multi-disciplinary National M&E Advisory Group facilitates participation of all stakeholders in M&E issues. The national M&E system is operational with respect to the 12 components that define a functional M&E system, but it is not optimally functional. There is still a need to harmonise monitoring systems to ensure uniformity in data collection and presentation, and data verification at decentralized level needs to be strengthened. The National AIDS Reporting Form collects routine programme monitoring data and provides information about outputs of prevention activities. In 2009, 70% of implementers complied with this reporting system. Routine monitoring activities are complemented by behavioural research studies, and periodic reviews compile these data to “take stock” and inform future prevention programming.

**Sentinel surveillance of pregnant women** has been implemented every 2-3 years since 1989 and this is a valuable source of data on HIV prevalence trends and for HIV-related estimations and projections. The use of PMTCT programme data for HIV surveillance is being evaluated. Population level data on HIV prevalence were collected through the ZDHS 2005/06 for the first time. This survey does not provide HIV prevalence information on children or on adults aged 50 or older.

The Manicaland HIV/STD Prevention Project is a major collaborative scientific research initiative that has been underway in rural areas of eastern Zimbabwe since 1998. It is the longest ever followed study cohort in Zimbabwe. The study was initiated through the establishment and follow-up of a general population cohort of more than 10,000 adults and parallel surveillance of women attending ANC clinics in Manicaland.

**HIV prevention programmes**

The National Behaviour Change Programme has been rolled out to all 62 districts of the country after operating in 26 districts first. National coordination is done by UNFPA in collaboration with the NAC, which is responsible for the NBCP and implemented at district level by 8 NGOs contracted by UNFPA. The involvement of traditional, opinion and political leadership and FBOs promotes open dialogue on risky behaviours and negative cultural practices that fuel HIV transmission. By end 2009, a total of 357,176 people had been reached during sensitization activities, 5.2 million person exposures of behaviour change activities had been reported, 799 wards had gone through community action panning, 3,897 behaviour change facilitators had been trained, and 6,752 community leaders had been trained. Interim survey results suggest that
the NCBP may positively influence partner reduction, communication between partners, condom use, and community norms on concurrency. The Regai Dzive Shiri cluster randomised trial - testing a community-based, multi-component HIV and reproductive health intervention aimed at changing social norms for adolescents in rural Zimbabwe - found no impact on self-reported sexual behaviour, prevalence of HIV, HSV-2 or current pregnancy.

Male condom distribution almost doubled from 2000 to 2008 and shown some decline in 2009. In 2008, 95.5 million male condoms were distributed - the annual target in ZNASP of 150 million has not been achieved to date. The increase is being attributed to the strong condom social marketing initiatives and distribution infrastructure from national to village level. Recent declines have been explained by the contraction of the retail and wholesale sector during the economic crisis. Female condoms are sold through pharmacies and hair salons, but also through barber shops, commercial sex worker networks, and support groups for PLHIV. From 2004-2007, Care female condom distribution increased 150% and public sector distribution tripled. In the MIRA trial (Methods for Improving Reproductive Health in Africa), it was found that high condom use levels achieved during the trial were not sustained post trial in the condom group.

Since 1993, all schools must provide life skills based HIV and AIDS education to pupils, but there is neither an approved strategy nor a recent evaluation of the HIV education in schools. Condoms and contraceptives are not part of the in-school education. A UNESCO review of the Education Sector Response to HIV in Southern Africa concluded that Zimbabwe has a weak education sector response. A study on HIV knowledge concluded that only 4% of grade six students in Zimbabwe had desirable HIV and AIDS related knowledge levels against 93% of teachers who reportedly had desirable knowledge.

The Adolescent Sexual and Reproductive Health Strategy guides the service provision for out of school youth. Youth friendly services are available but have their funding and human resource challenges. The health education programme for tertiary level students focuses on aspects like condoms, partner reduction, HIV testing and disclosure, and age mixing. Monitoring and coordination are weak and actual implementation is not systematic.

The male circumcision intervention has started in pilot sites, after a preparation process which included formative research, the creation of the policy framework and preparation of service delivery capacity. Community mobilization is scheduled to begin when MC services are widely available.

STI prevention is now part of all HIV prevention programmes and has been linked to other services like HIV testing and counselling, PMTCT, ART and condom promotion. In reality, STI activities are under-resourced and have lost visibility and support compared to the time of the vertical STI control programme.

The coverage of PMTCT services continues to improve – in 2009, 46 of 100 HIV positive pregnant women in Zimbabwe benefitted from antiretroviral prophylaxis of MTCT. As at December 2009, a total of 940 facilities were registered to offer comprehensive PMTCT services and the rest were providing a minimum package of PMTCT services. In 2009, over 195,000 pregnant women were tested for HIV within the PMTCT programme, and ARV uptake among those testing HIV positive was 83%. More efficacious treatment regimens were successfully piloted and the PMTCT treatment guidelines amended accordingly in 2010. Early HIV infant diagnosis using HIV DNA PCR testing had already been added to the service package in 2007. By 2010, the more efficacious treatment regimen and the PCR infant testing are offered in eight of 62 districts in Zimbabwe.

HIV testing and counselling has evolved from largely urban-based voluntary counseling and testing to nationwide provider-initiated testing and counselling. Estimates of centres providing HTC by the end of 2009 were as follows: 27 VCT centers managed by NGOs, 502 HTC service delivery points integrated with health services, and approximately 1,000 counselling and referral-only service delivery points. There were also HTC services provided through mobile outreach, workplace programmes, and family planning clinics. As a
consequence, the number of individuals and couples who have tested increased sharply, but a local research trial did not find an effect of HIV testing experience on HIV incidence.

The incidence of tuberculosis has sharply risen in the context of a mature HIV epidemic. An increasing number of TB patients are commenced on Cotrimoxazole prophylaxis and referred for ART, but there are still major screening, testing and treatment shortfalls. Post Exposure Prophylaxis services have been trialled and await scaling-up. There are efforts to build capacity among home-based care givers on infection control. The national blood services are working according to best practice standards and stringent donor selection procedures are in place, but donor notification needs to be improved.

In 2009, a total of 396,626 PLHIV received food assistance. With an estimated 1.2 million PLHIV in Zimbabwe, this represents about 33% access to food assistance. There are over 1,000 support groups of PLHIV and they carry out prevention activities. PLHIV increasingly access treatment services, but key prevention challenges remain, especially for discordant couples.

Sex Workers and to a lesser extent MSM have benefitted from specifically targeted interventions. The 2008 sex work situation analysis highlighted that programmes for sex workers were limited and underfunded. Current sex worker interventions comprise of HIV prevention education, condom distribution, STI treatment, peer education, micro-credit and other measures that facilitate exit from sex work. The Military has an HIV policy and focuses on condom promotion and distribution, uptake of HTC and male circumcision.

HIV/ADS expenditure from 2006 to 2009 varied between USD 86.0 million in 2006 to a low of USD 26.5 million in 2008. The increase in 2009 to USD 54.1 million was attributed to the relative stabilisation of the economy, as well as the introduction of the multicurrency system which halted hyperinflation. The proportion of total HIV/AIDS spending for prevention has decreased from 39% in 2006 to 22% in 2009. In 2009, over 40% of all prevention expenditure was for PMTCT activities. About 17% was spent on communication for social and behaviour change programmes and about 15% was spent on VCT activities. According to the data, out-of-school you activities obtained almost 9% of funding, and in-school activities just below 4%. Another 7% was spent on community mobilisation, and 2% on workplace interventions. Less than 1% was spent on prevention for positives.

Do HIV prevention policies and programmes respond to the key drivers of the epidemic?

1. Multiple and concurrent sexual partners
Findings from several studies confirm that multiple partnerships, especially long-term concurrent partnerships, remain a key driver (and are frequently underestimated based on self-reported behaviour in surveys). According to the NBCS baseline survey of 2007/08, 28% of men and 9% of women reported having two or more sexual partners in past 12 months, and 10% of men and 3% of women reported having had a concurrent sexual partnership.

The Zimbabwe National AIDS Strategic Plan 2006-2010 addressed the topic of multiple and multiple parallel partnerships in the proposed intervention strategies on sexual behaviour and norm change as well as in the research priorities. In the National Behaviour Change Strategy 2006-2010, three of the six key themes touching upon multiple and concurrent partnerships and partner reduction is a key aim. The National Behaviour Change Programme has as its main thrust to promote HIV testing and sexual risk reduction, in which partner reduction and faithfulness are key elements. Several national BCC campaigns and activities focus on multiple partner behaviours, such as the mass media campaigns “Loving carefully/ Kudanana Kune Hungwaru” and “Be faithful”, the films “I want a wedding dress” and “Big House Small House”, the “Love and respect course”, and the interpersonal communication activities with behaviour change facilitators. Remaining weaknesses and gaps are: Higher-risk populations including PLHIV are not specifically targeted; Some community leaders fail to be role models; Youth participation in BC meetings is relatively low; and
Interventions in tertiary institutions need strengthening.

2. Male circumcision level
Zimbabwe is a low-circumcision country with none of the provinces having MC prevalence above 19%. WHO has recommended scale-up of MC in high HIV prevalence countries as an additional HIV prevention strategy. New modelling data, generated by using Zimbabwe data, suggests that communities, and especially women, may benefit even more from MC interventions than previously thought – the study predicted a large effect on reducing male-to-female HIV transmission, increasing by 40% the infections averted by the intervention overall and doubling the number of infections averted among women. The Zimbabwe MC situation analysis on feasibility and acceptability concluded that MC is an appropriate intervention for both circumcising and non-circumcising communities.

The Zimbabwe National AIDS Strategic Plan 2006-2010 already identified MC as a potential service-based HIV prevention intervention and paved the way for the acceptability and feasibility study. The Male Circumcision Policy was launched in 2009 with the goal “to provide a framework for the provision of safe, accessible, voluntary, and sustainable male circumcision services in a way that safeguards the human rights of individuals and communities”. A National Male Circumcision Strategy has been drafted, and the MC intervention has started in four pilot sites. By August 2010, it was reported that approximately 10,000 MC procedures had been performed. According to Government documents, all plans, systems and tools are now in place to allow rapid scale-up of MC. Between 2010 and 2015, 1.2 million adult and adolescent males are to be circumcised to reach 80% coverage of 15-29 year old HIV negative males. Funds from US Government, Gates Foundation, UNFPA and the government are projected to cover 785,000 MCs leaving a gap of 415,000 MC procedures. The scale-up of MC activities is envisaged to combine MC provision through integrated sites and mobile outreach services as well as a comprehensive communication campaign. Service delivery will leverage human resources from the private sector through public/private partnerships proven to be an effective model of service delivery in the pilot phase and also rely on the Uniformed Forces of Zimbabwe health delivery system.

3. Condom use in longer-term relationships
Several contemporaneous studies and reviews try to gauge the importance of condom promotion and distribution in the Zimbabwean epidemic. They generally conclude that condoms are likely to have had an effect on the course of the Zimbabwean epidemic. While condoms were a family planning tool in the early 1990, they became a risk reduction tool in casual and commercial relationships as the AIDS epidemic unfolded, and there are reports of more consistent condom use in recent years. Unfortunately, there is no robust trend data on condom use in longer-term relationships.

The Zimbabwe National AIDS Strategic Plan 2006-2010 has as a main objective under condom distribution to make more widely available both re-branded public sector and socially marketed condoms, particularly in rural and remote areas. It envisages condom promotion through mass media, print and interpersonal means, ensuring targeting those adults and couples that are either not faithful, do not know their status, or are HIV test discordant. The plan is not explicit on longer-term sexual relationships. The National Behaviour Change Strategy 2006-2010 is cognizant of the high importance of consistency of condom use, condom promotion among youth, and condom use in regular relationships. It also remarks that international literature provides little reason to believe that the promotion of condom use among sexually active young people promotes sex. The strategy is however not explicit on targeting those in longer-term sexual relationships. The National Female Condom Strategy 2006-2010 is being implemented, and Zimbabwe’s distribution of female condoms far exceeds what most countries have been able to accomplish. The distribution of socially-marketed condoms has in recent times been affected by the effect of the economic crisis on the wholesale and retail system. Other identified weaknesses and gaps - especially regarding condom use in longer-term relationships – are: The overall weak condom targeting; Social norms that create barriers to negotiation of safer sex particularly within marriage and among discordant couples; and Inadequate qualitative data to understand condom use decisions with different types of partners and sex acts.
Zimbabwe appears to have several positive factors exerting a containment effect on the epidemic, for instance the high rates of marriage; the high levels of educational attainment; the relatively late sexual debut of young Zimbabweans; the comparatively short period of post-partum abstinence; and the comparatively more equal society in terms of income. It has been said that the high levels of secondary education and marriage, especially among urban men, helped facilitate a clearer understanding and acceptance of how HIV is sexually transmitted, once such information became widely available, and a greater ability to act upon “be faithful” messages, given the stronger marriage pattern than in neighbouring countries.

Are Zimbabwe’s HIV prevention policies and strategies based on the latest available evidence and global best practice?

Strengths

- The target populations of the current Strategic Plan (2006-2010) are based on a 2005 needs assessment, and the cross-cutting issues in the plan are informed by the local and regional understanding of the determinants and risk contexts of the epidemic.
- Guidelines for biomedical interventions such as PMTCT, HCT and HIV/TB co-infection are based on local evidence as well as international standards. This applies for instance to the National PMTCT Protocols/ treatment Guidelines (2010), the National TB-HIV Guidelines (2009), the National Community and Home based Care Guidelines (2009), the National Guidelines for HIV in Children (2008), the National TB Control Guidelines (2007), and the National Guidelines for HIV Testing and Counseling (2005).
- Zimbabwe’s strategic direction of the HIV response has been guided by 5-year frameworks which were based on data and lessons learnt from previous implementation. They are also informed by best practice from elsewhere and aligned to international commitments.
- Zimbabwe has a multi-sectoral approach to prevention, care, support and mitigation, evidenced by the National HIV and AIDS Strategic Plan 2006-2010.
- Universal HIV screening of blood before transfusion was introduced early and is being done according to global best practice.

Weaknesses

- Although policy and strategy documents support universal access, user fees have rendered some HIV services less accessible for the poor. Consultation fees at Zimbabwe’s public health institutions represent a big impediment to access to treatment by PLHIVs. While free maternal and child health care is a policy objective, in reality, mothers have to pay fees to access services like PMTCT. Suspected TB patients are asked to pay for the screening costs, in a country WHO has designated a high TB burden country. User charges have also reduced the actual demand for screened blood units. A system of exemption from user fees has been created, but its implementation is not successful.
- Sex work and homosexuality is illegal in Zimbabwe, as a consequence, sex workers and men who have sex with men lack legal status and protection. Zimbabwe has laws that present obstacles to effective HIV prevention, treatment, care and support for sex workers, MSM, IDUs and prison inmates. There is no mechanism to record, document and address cases of discrimination experienced by PLHIV or any other vulnerable populations, and there is no independent national institutions for the promotion and protection of human rights who consider HIV related issues within their work, or any focal points within government departments to monitor HIV related human rights abuses and discrimination. Despite the current lack of legal frameworks for prevention activities with sex workers, prisoners, MSM and IDU, Zimbabwe has allowed the existence of informal lobby groups for these populations.
- While stakeholder participation is high in these strategic planning processes, current use of M&E data is not optimal. Since Zimbabwe does not publish a HIV M&E report on an annual basis, strategic information does not appear to be readily available.
This synthesis process also aimed to understand if funding for HIV prevention is allocated to where it is most needed. There were challenges in making any firm conclusions, due to methodological issues in HIV resource tracking through National AIDS Spending Assessments. For instance, there are overlaps in how expenditure is classified, and with increasing service integration and packaging of services into combined prevention interventions, the provision of expenditure break-downs by intervention type within a thematic area can be difficult. Nevertheless, the main findings of **substantially decreased absolute and relative expenditure on HIV prevention** over the assessment period, is cause of concern. Furthermore, research expenditure was very low across the four years of NASA data.

An analysis of HIV expenditure across countries shows that **Zimbabwe has been having comparatively little HIV funding available**. For instance, in 2006 Zimbabwe spent about USD7 per head, and in 2007, about USD4.50 (against average annual per person spending of about USD39 in Lesotho, USD104 in Botswana, USD139 in Swaziland, USD190 in Zambia, and USD192 in Mozambique, and USD250 in South Africa). Taking this into consideration, Zimbabwe has achieved **respectable levels in HIV service coverage**:

- HIV counselling and testing in adults: 18.3% in 2009
- Behaviour change interventions: All 62 districts covered by the National Programme in 2010
- Prevention of Mother-to-Child Transmission: 46% of mothers in need in December 2009
- Antiretroviral treatment for infected people with DC4 count<350: 38% in December 2009

**Recommendations**

The global financial crisis has sent a stark reminder that countries - in order to avert an AIDS treatment crisis – need to **prevent the maximum of new infections at minimum expense**. The cost of treating someone with HIV for life means it makes financial as well as ethical sense to minimise new infections. Zimbabwe needs to commit to **adequately resourced high-impact HIV prevention**, despite the resource needs in other thematic areas, where there may be possibilities to leverage additional funding from other sources (for instance in impact mitigation and through health sector strengthening). The estimates on the cost-benefit of male circumcision illustrate this point well: Scaling up male circumcision to reach 80% of adult and newborn males in Zimbabwe by 2015 has been modelled to potentially avert almost 750,000 adult HIV infections between 2009 and 2025 and yield **total net savings** of more than US$3.8 billion between 2009 and 2025 in Zimbabwe.¹

In the previous chapter, evidence was presented on the roles **AIDS mortality and the economic decline** are believed to have played in sexual behaviour change, in particular partner reduction. With AIDS mortality decreasing (due to the advanced stage of the epidemic and to ARV treatment), and the economy showing signs of recovery, these two stimulators of partner reduction may weaken in the future and not exert the same effect on the sexually active. This represents a real risk, and a potential for the HIV epidemic trend to reverse. The country needs to keep focus on **reducing HIV transmission and therefore acquisition to even lower levels** and prevent any complacency which may set in after Zimbabwe has been hailed a prevention success.

The recommended future objectives to reduce transmission and acquisition of HIV in Zimbabwe are to:

- Reduce **acute stage transmission and acquisition** by changing the structure of sexual networks and concurrency, condom use during concurrent relationships, and male circumcision with risk reduction counseling;

¹ USAID MC Factsheet, cited in GFATM Round 10 proposal
• Reduce **vertical transmission** through the 4-pronged PMTCT approach: only planned pregnancies amongst HIV positive women, screening of all pregnant women, early antiretroviral treatment for all HIV-positive pregnant women, and ARV prophylaxis for the infant;
• Reduce **acquisition from or transmission to a long-term sexual partner** through couple HTC, consistent male & female condom use, male circumcision with risk reduction counseling if the female is the HIV-positive partner and ART;
• Reduce **transmission from PLHIV** through ART at CD4 count of 350 combined with risk reduction counselling and condom promotion; and
• Reduce **transmission from and acquisition during casual heterosexual sex** through male circumcision, condom use, and a comprehensive HIV prevention programme for sex workers.

Given these HIV prevention objectives, the **priority HIV prevention interventions** for implementation in Zimbabwe are: male circumcision programmes, PMTCT programmes, earlier ARVs, condom promotion and distribution, couples HIV counselling and testing and a comprehensive HIV prevention programme for sex workers. Each of these interventions require, embedded within them, comprehensive risk reduction counselling, compulsory condom distribution, and a comprehensive HIV prevention programme for sex workers.

These objectives are in line with Zimbabwe’s new HIV strategy and the GFATM round 10 proposed HIV prevention activities. Given the country’s success in reducing HIV to lower levels already and the fact that there is consensus in Zimbabwe on what to do to arrest HIV, the next wave of focus in HIV prevention in Zimbabwe needs to focus on (a) allocating more dedicated HIV resources for priority interventions and fewer dedicated HIV resources for non-priority interventions; (b) setting quality standards for these priority interventions; (c) getting coverage to levels where it will make a difference; (d) planning all aspects of implementation, monitoring of implementation and coordination thereof; and (e) better performance management of those priority interventions that are being implemented to as to improve efficiency and effectiveness.

With an uncertain funding base for the HIV response in the future, and increasing treatment, care, support and mitigation costs, prevention funding, as all other aspects of HIV prevention funding, will need to do “more with less”. Above all, there is a great necessity for **vigilance to prevent secondary increases in the epidemic curve with lower levels of funding**. The recommendations below were developed with this premise and priorities in mind.

**Programmatic recommendations**

1. **Rapidly scale up male circumcision using WHO’s implementation standards and guidelines to 80% coverage by 2015.** If there are funding gaps for MC, other prevention activities that have less/no proof of efficacy (such as VCT, STI management as part of HIV prevention) should be downscaled so as to be able to fully execute the male circumcision intervention as planned by the Government of Zimbabwe.

2. **Scale up comprehensive HIV prevention programmes for sex workers, both by creating the specific context for facilitating behaviour change, and by funding targeted and tailored services for these populations.** Such a comprehensive programme for sex workers consist of the following components: HIV and STI testing and treatment, condom promotion programmes, solidarity programmes, violence and abuse support, and protective policing.

3. **Identify opportunities for and scale up a couples HIV prevention programme so that 60% of**

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2 Such a comprehensive programme for sex workers consist of the following components: HIV and STI testing and treatment, condom promotion programmes, solidarity programmes, violence and abuse support, and protective policing.
couples are reached with such a programme by 2015. Such a programme should focus on concordant negative and discordant couples, and the faith-based community should be widely involved in such an intervention. Components of it should include regular mutual HIV testing and disclosure of status, counselling and support services, earlier ARVs for those discordant couples who choose to have it, family planning services for discordant couples, and relationship and family skills building.

4. **Regulate and rapidly distribute self test kits for HIV at a subsidised cost** so as to add an additional vehicle through which persons could know their HIV status, and to rapidly reduce the cost of such implementation.

5. **Integrate social norm and behaviour change interventions into the delivery of social and HIV-related services, as opposed to stand-alone services, whilst continuing with an agreed minimum package of HIV prevention public health messaging at lower cost.** In spite of normative changes, positive behavioural changes and decreased HIV transmission, high-risk behaviours, particularly multiple sexual partnerships, continue to fuel HIV transmission. Partner reduction must remain a primary message, and the advantages of mutual faithfulness need to be communicated (less stress and mistrust, less STIs, less cost, less jealousy and domestic violence, etc). Condom promotion should emphasize the lack of benefit provided by inconsistent use, especially if additional sexual risks are taken. Social norm and behaviour change interventions must aim at reducing the likelihood of girls to acquire HIV. Communication among couples about HIV testing and disclosure of results must be stimulated. These messages need to be integrated into the delivery of all social services, whilst a minimum standard of public health communication is retained. Expensive mass media campaigns should be discouraged. It will entail mainstreaming prevention messages into treatment, care, support, and impact mitigation. These thematic intervention areas must all contain HIV prevention components in order to stem the tide of additional people in need of these services in the future. In treatment, individuals in the pre-ART and the ART cohort represent key targets for partner reduction, consistent condom use, IEC on sexual networks and risk perception, and treatment adherence. In care and support, providers including home based carers need to be empowered to practice universal precautions and support the patient in positive living. In impact mitigation, OVCs and widowed people represent major targets for BCC, counselling and protection.

**Policy recommendations**

6. **Initiate legal and policy reforms that ensure that:**
   a) Legislation and traditional practices are non-discriminatory, gender-sensitive and empowering to women;
   b) All protections afforded to women are strengthened and fully compliant with Zimbabwe’s obligations under the Convention on the Elimination of All forms of Discrimination Against Women (CEDAW) and are implemented as a matter of urgency

7. **Translate the HIV policy into laws and regulations, in order to promote and protect human rights, and deploy the required efforts to enforce the existing policies, laws and regulations.** Aim for a National Composite Policy Index rating of at least 7 out of 10, up from a current 4 out of 10 rating in the 2010 UNGASS report.

**Research, monitoring & evaluation**

8. **Conduct operational research in order to identify potential efficiency gains.** Such research should focus on the “how” to implement, and not necessarily on the “what” to implement. In an economic
climate of uncertainties and limitations, to make the money go further has become important to National AIDS Responses. This analysis showed two areas where operational research is needed:

a) Although integration and linkage of HIV prevention with other service areas is being promoted, very little is known about whether these service integrations work and achieve the anticipated synergies and impact. The linking and integration includes the strengthening of links with school health services, the integration of sexual and reproductive health, STI and HIV/AIDS services, an expand integration of PMTCT with antenatal, family planning and other MCH related activities, and the integration of couple HCT in family planning and male reproductive health services. This is an area where operational and even process-related research is needed.

b) User fees in MCH and TB services contradict policy and have been reported to affect access to services. Operational research needs to assess the exemption system run by social welfare officers, how it works and how such a system can be implemented without impacting equity.

9. **Make HIV incidence monitoring a focus, use all the measurement tools available, and triangulate data obtained from different sources and through different methodologies.** The policy makers, M&E specialists, and implementers at the front line need to remain alert to any early warning signs that the epidemic trend may reverse. This includes the monitoring of maternal HIV prevalence in young women, in-depth analysis of population level and cohort data, and keeping a close eye on other clues and proxies potentially indicating changes in HIV/STI transmission dynamics (such as, for instance, reported number of partners, statistics on STI episodes).

10. **Conduct impact evaluations.** Impact evaluations estimate the effect of a programme and provide information on the net change that can be attributed to a specific programme. Such evaluations help inform policy as to what works, what does not, and why. Like most countries, Zimbabwe has in the past conducted more often descriptive rather than causal evaluations. But impact evaluations are urgently required in order to make decisions on high-impact priority programmes and interventions. They may need more complex designs, but are more likely to deliver the information policy makers really need. One obvious area where programme effects need to be understood is the PMTCT programme. This intervention is the single largest spending item in Zimbabwe’s HIV prevention, and evidence on each of the four prongs of the PMCT package is required in order to be able to justify the large expenditure for PMCT while other prevention interventions are seriously under-resourced.

**Resources for HIV prevention**

11. **Advocate for resources for HIV prevention, including from domestic sources and the AIDS levy.** The case of Zimbabwe is special: It has one of the most dramatic HIV epidemic declines of any country, and the epidemic has unfolded in a context of multiple other hardships, including recurring droughts, food shortages, and a wide range of political and economic problems. Just like Uganda, Zimbabwe is mentioned among the few countries where HIV prevalence has significantly reduced. There is evidence that HIV prevention programmes, in conjunction with contextual changes like the economic crisis, have contributed to this success. Sufficient resources must be made available in order to fund proven interventions, and prevent the epidemic from reversing at a time when AIDS mortality and economic hardship may be less present.
CHAPTER 1. INTRODUCTION

“Universal access is our shared passion and the beacon of hope - not only to protect millions of people at risk of HIV and in need of treatment today, but also to foster more just and healthy societies tomorrow. I know that there are some pessimists, but we cannot allow them to deflect us from this goal”.

(‘Delivering Results in Transformative Times’, speech by Michel Sidibé at the 26th Meeting of the Programme Coordinating Board, 22 June 2010)

1.1 Background

Zimbabwe has endured multiple hardships in the recent past, including recurring droughts and a wide range of political and economic problems. Zimbabwe’s economy, once robust and posting positive growth rates, has faced numerous challenges since early 2000. Over several years, the national economy has suffered from severe budget deficits and hyperinflation. Since the advent of the power-sharing government formed February 2009 however, there seems to be some economic improvements, including the cessation of hyperinflation by eliminating the use of the Zimbabwean dollar and removing price controls.

In parallel with these developments, Zimbabwe has also been ravaged by AIDS. The country is one of the Southern African countries most heavily affected by the HIV epidemic. Although the country has seen the steepest fall of HIV prevalence levels any country has ever experienced\(^3\), HIV remains a priority challenge to human development. AIDS has scarred the population, killed an estimated 1.9 million people to date\(^4\), and continues to cost tens of thousands of lives every year. The sustainable treatment of existing AIDS cases and the prevention of new HIV infections (each leading to a long term commitment of treatment) are therefore equally pressing issues.

There have been some economic improvements recently, and the Zimbabwean economy is registering its first growth in a decade. The three year economic recovery plan 2010-2012 (STERP II) seeks to achieve sustainable, balanced and robust economic growth and development, oriented towards poverty reduction and the integration of marginalized populations (GOZ, 2009). This strategy also looks at ways of revitalizing the health sector in order for Zimbabwe to meet its regional and global targets, especially those related to reduction of the burden and impact of HIV and AIDS. Zimbabwe’s population, estimated at about 12.6 million\(^5\), is expected to show positive population growth at a projected 1.5% in 2010 after years of stagnation\(^6\).

A number of international commitments and national policies and strategies provide the context to Zimbabwe’s HIV response. As an UNGASS signatory, the country tracks and reports on the UNGASS indicators on a biennial basis. Zimbabwe signed the Abuja Declaration of 1998, in which governments committed that a minimum of 15% of total government budget should go towards health care for the nation. In connection with this, the Government introduced the National AIDS Trust Fund (“AIDS Levy”) which collects 3% of all taxable individual and corporate income to fund HIV programmes. The AIDS Levy contributed USD 2,588 in 2007, USD 8,148 in 2008 and 5,143,108 in 2009 (UNGASS report 2010). In total, the Government of Zimbabwe contributed USD 10,596,393 in 2007, USD 354,661 in 2008 and USD 7,700,453 in 2009 towards HIV programmes.\(^7\)

\(^3\) It is estimated that over the last 12 years, adult HIV prevalence fell from 26.5% to 14.3% (Spectrum/EPP software, 2010)

\(^4\) Cumulative AIDS deaths estimated by Spectrum/EPP software in 2010


support of the government’s efforts, bilateral and multilateral partners as well as international foundations contributed USD 35,351.862 in 2007, USD 24,987,127 in 2008 and USD 37,796,697 in 2009 towards HIV programmes. The national HIV response is therefore heavily dependent on multilateral and bilateral partners and international foundations.8

In the last five years, the Government has continued to scale up the multi-sectoral response to HIV and AIDS based on the Zimbabwe National and HIV AIDS Strategic Plan (ZNASP) 2006-2010. The plan highlights the HIV epidemic as an emergency that requires Government and all stakeholders to urgently mobilize the required resources. Zimbabwe has sought to improve coordination in HIV and AIDS responses at all levels by strengthening the “Three Ones”, namely, one strategic plan, one monitoring and evaluation system and one coordinating authority. The National AIDS Council (NAC), established by an Act of Parliament in 1999, has a broad-based mandate to provide for measures to combat HIV and AIDS. In 2008, changes were made to the inclusive 14-member NAC Board to include representation from labour, business sector and People Living with HIV (PLHIV) and increase representation of women (UNGASS report 2010).

The Zimbabwean Government recently conducted a Mid-Term Review (MTR) of the ZNASP 2006-2010, and has completed two rounds of National AIDS Spending Assessments (NASA) covering the years 2006/2007 and 2008/2009. The findings of both the MTR and the NASA represent key data sources for this analysis.

This synthesis work was commissioned in order to update Zimbabwe’s evidence base for the formulation of the new national strategic plan for HIV and AIDS 2011-2015, and to look back and learn from what has been achieved. The work builds on existing reviews, in particular those by Gregson et al. (2005, 2010) and the mid-term review of the implementation of the ZNASP 2006-2010, but provides a more complete analysis of the HIV situation by also looking at the HIV response.

1.2 Purpose and Objectives of the Epidemic and Response Synthesis

The purpose of this synthesis is to help Zimbabwe improve its HIV prevention response by allocating funding and effort to those actions that would avert the most number of new infections over the shortest period of time. The research questions asked were:

- Do HIV prevention policies & programmes respond to the key drivers of the changing epidemic in Zimbabwe?
- Are HIV prevention policies & programmes based on the latest available evidence and global best practice?
- Is funding for HIV prevention allocated to where it is most needed?

So as to answer these questions, this synthesis has four objectives:

1. Describe and understand the epidemiological situation in Zimbabwe (“Know your epidemic”, KYE) – the national and sub national epidemiologic magnitude, phase and temporal trends over the past 20 years, the heterogeneity of the epidemic in different sub populations and in different geographic areas, the modes of transmission and distribution of new infections by modes of transmission, and changes in risk factors that have given rise to the changes in epidemic trends.

2. Describe and understand the HIV prevention response in Zimbabwe (“Know your response”, KYR) – the policy environment for HIV prevention; the availability of strategic information to inform prevention programming; the scope, coverage and content of implemented HIV prevention efforts in the

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8 Based on data collected by the time of compiling the UNGASS report 2010.
country; the stakeholders involved in HIV prevention, and the expenditure for different types of prevention programmes.

3. **Synthesise and link the epidemic and response data** to understand the scope, relevance and comprehensiveness of HIV prevention policies and programmes in Zimbabwe, the alignment of prevention programme resources to strategic prevention priorities, and gaps in strategic information about HIV prevention.

4. **Recommend improvements in HIV prevention policies, programmatic action, and resource allocation** to ensure greater success in prevention programmes, and fewer new HIV infections in Zimbabwe.

Effective prevention is critical to achieving and maintaining high coverage of ART treatment we need. With the global financing for HIV flatlining, it will be tougher for countries to receive the assistance they need to fund their HIV response; the stakes are high for HIV prevention to work. Zimbabwe, like all other AIDS affected countries, needs to keep her “eyes on the prize”.

### 1.3 Structure of the Synthesis Report

The synthesis report starts with an introductory section to provide the background to this study and the purpose and objectives of the synthesis effort.

**Chapter 2** details the methodology that was used for this study. It also describes the organisational and coordination aspects of the study and the approval mechanisms.

**Chapter 3** summarizes the findings of the KYE analysis. It presents the outcomes of the review of the epidemiologic data and the findings of some secondary analyses of ZDHS 2005 data.

**Chapter 4** is devoted to the findings of the KYR study. It summarizes the findings on the policy, programme and expenditure aspects of Zimbabwe’s HIV response.

**Chapter 5** presents key conclusions coming out from the linking of the epidemiological and the response data. These conclusions are based on the Zimbabwean evidence, but also take into account data, evidence and lessons learnt from the sub-region, especially from countries equally confronted with a hyperendemic situation.

**Chapter 6** presents recommendations for the policy level, the programme level and for monitoring & evaluation.
CHAPTER 2. SYNTHESIS METHODOLOGY

The methodology of the study was largely based on the “Guidelines for modes of transmission review” (UNAIDS/World Bank, version 12) and on the “How to write an HIV epidemiological, response and policy synthesis: a practical guide” (World Bank, 2009, version 3.0).

2.1. Methods for the KYE review

The epidemiological review was a desk study of existing published and unpublished data and documentation about Zimbabwe, and relevant studies from other countries in Sub-Saharan Africa (SSA). Some secondary data analysis of the Zimbabwe Demographic and Health Surveys (ZDHS) of 2005 data was also carried out. The review brought together available epidemiological data on HIV and STIs, and data about sexual and reproductive behaviours, beliefs and attitudes, culture, gender and women’s status, social norms, poverty, inequality, economy, mobility, migration and other relevant contextual factors. Where possible, data were triangulated. No new data were collected, but there was some weighting of frequencies from the ZDHS 2005. The secondary data analysis was on the communication between couples about HIV testing, disclosure of results, and concurrent partnerships; whether couples’ reports on these things agreed; and whether women who were not informed about their partners’ concurrent partnerships or HIV status were at greater risk of HIV infection.

Literature search and cataloguing: The study team used several approaches to identify as much published and unpublished data and literature relevant to this study as possible. Four strategies were used:
1. **Searches on organisations’ websites** – National, regional and international organizations websites were searched.
2. **Searches of large online databases and through search engines** - Searches were conducted using Journal storage, PubMed, Medline, Google Scholar, and Google. The searches looked for publications over the 15 years from 1995 to 2010, using Medical Subject Heading terms to identify relevant papers.
3. **Search based on citation lists in publications** - The team searched the references of the identified publications to find further relevant documents and web sites.
4. **Solicitation of documents from contacts** - The study contacted in-country colleagues, asking for specific documents which were not available in the public domain.

For the first and second strategies (searching partners’ websites, online databases and search engines), the following search terms were used alone and in combination:
- **Zimbabwe, Sub-Saharan Africa, HIV, AIDS, prevalence, incidence, modelling, review, HIV prevention, HIV infection, mobility, migration, sexual behaviour, behaviour change, behaviour adaptation, sexual network, surveillance, DHS, reproductive health, STD/STI, herpes, violence, substance use/abuse, heroin, alcohol, sex work, anal sex, MSM, homosexual, prison, iatrogenic, medical injection, blood transfusion, gender and others.**

A total of 301 documents considered relevant to the study were found. All documents were first checked for duplicates and then listed in a matrix to create a document catalogue, containing the Document title, File name, Institution/author, Year, Key words, Main results, and Source.

The data used included measured and projected/modelled data and looked at all transmission pathways (heterosexual sex, male-to-male, medical injections, blood transfusion, mother-to-child transmission, sharps and blades, and injecting drug use). In general, preference was given to recent data (last 2 years) and to measures indicating recent risk behaviours rather than lifetime exposures, since this analysis is more relevant to current transmission intensity and incident (new) HIV infections. However, older data were also considered, particularly when assessing trends over time. Probability (p) values and 95% exact binomial confidence intervals were calculated using Stata version 10. p values <0.05 were considered statistically significant. The analysis did not include tuberculosis or any other opportunistic infection (OI), and did not focus on other STIs. Risk factors and
socio-cultural drivers were retained as presented in the original literature. The adult population was split into male and female, and into the age groups 15-24 and 25 and above, or 25-49.

**Methodology – Modes of Transmission (Incidence) Modelling:** The UNAIDS MoT Model was used to model sources of new infections, and overall incidence (model, accompanying CD and manual available from UNAIDS). The modelling inputs and outputs were discussed in a workshop in Harare on September 6-7, 2010 and the model outputs concerned new infections in 2010 in different exposure groups of adults aged 15-49 years. The study team did an extensive data and literature review to find the best recent data to populate the model. If local estimates were not available, default values were used as recommended by UNAIDS in the manual for the model application. If a recommended default was a range of values (min-max), an informed guess was made by the workshop participants as to which value should be used in the model.

The MoT model allocates each person aged 15-49 to one exposure group based on self-reported behaviour during the last 12 months: No risk (reporting sexual abstinence), low risk heterosexual (reporting having been faithful to one sexual partner), casual heterosexual sex (CHS, reporting having had more than one sexual partner), homosexual sex (men having sex with another man, MSM), commercial sex (men reporting having paid for sex), injecting drugs (reporting injecting drug use, IDU). In addition, based on sex work surveys, a certain percentage of women and men are classified as sex workers. Other individuals, based on available data and estimations, are classified as partners of CHS, female partners of MSM, female partners of sex worker clients, and sexual partners of IDUs. In addition, a probability of having had medical injections and blood transfusions is applied to all adults.

2.3. Methodology for the KYR synthesis

**Prevention policy context:** This assessment was based on a literature review including some key documents like the Zimbabwe National HIV and AIDS Strategic Plan 2006-2010, the National Behaviour Change Strategy (NBCS) 2006-2010, the Zimbabwe Health Sector HIV Prevention Strategic Framework (ZHSHPF) (2007-2010), the MTR 2009, and the Biennial UNGASS Report 2010, covering the years 2008 and 2009.

**Strategic information for prevention:** This assessment aimed at understanding the availability of strategic information on HIV prevention in Zimbabwe. Key data sources for this analysis were the HIV and AIDS National M&E Plan 2008-2010, the MTR 2009, the NAC Annual Report 2009, the Zimbabwe Country Harmonization and Alignment Tool Report 2009, the NASA report (for 2006/7 expenditure), the UNGASS 2010 report (including 2008/9 AIDS spending), publications from the Manicaland site, and other data sources which give insight into M&E, surveillance, research and resource tracking.

**Prevention activities and services:** This review was based on a desk study of the relevant published and unpublished data and reports. It included HIV data from the NAC National Activity Reporting Forms (NARF) and national reporting framework, routine data from national programmes, publications by the NAC and Ministry of Health and others, the mid-term review related to the implementation of the ZNASP, and summary reports such as the NAC Annual Report 2009 and the UNGASS Report 2010.

**HIV prevention resources review:** The main data source was the NASA exercise that covered 2006/7 expenditures and the AIDS spending matrix, covering expenditure periods 2008/9, that is part of the UNGASS reporting process (i.e. UNGASS indicator # 1). NASA is a comprehensive resource tracking system to measure the flow of HIV and AIDS expenditure. The assessment aims at describing the allocation of funds, from their origin down to the point of service delivery, among the various institutions implementing the response to the epidemic. The system is designed to collect data in various categories, including Financing Sources, Financing Agents, Service Providers, Beneficiary Populations, AIDS spending categories, and Production Factors. Zimbabwe collected all this data except expenditure from private individuals (out-of-pocket expenditure). The standard NASA classification of types of HIV programmes was used to present expenditure. Target population
and age groups were also standardised within the NASA. The detailed methodology is described in the 2006-2007 NASA report by NAC and UNAIDS.

Zimbabwe’s approach differed from other countries in that the country sought to institutionalise the NASA as opposed to engaging consultants. The NAC used its existing structures to carry out the survey and took advantage of its mandate of coordinating the national HIV and AIDS response. The four main objectives of the assessment were: (a) To measure public and private expenditure on HIV and AIDS in Zimbabwe for the reporting period; (b) To assess expenditure by thematic area, beneficiary population and funding source on HIV and AIDS; (c) To compare public and private expenditure on HIV and AIDS; and (d) To develop an institutionalised system within NAC for tracking of HIV and AIDS resources for all implementers on a routine basis. The assessment was implemented nationally in all the 85 Districts in the 10 Provinces. Every service provider operating at district level was included in the survey. For the spending period 2008/9, NAC sent requests to relevant HIV/AIDS funders and implementers based in Zimbabwe. An AIDS spending matrix containing the above-mentioned spending classifications was to be filled in by each entity and returned to NAC for collation and analysis. Given a response rate of about 50%, the outputs of this aspect should be analysed with caution.

2.4. Methods for the KYE - KYR synthesis

This step was largely based on the methodology described in “How to write an HIV epidemic, response and policy synthesis: a practical guide” (World Bank, version 3.0). The key areas of enquiry were:

- To understand the socio-cultural context in which HIV prevention policies and programmes are implemented
- To understand whether HIV prevention policies and programmes are based on the latest available evidence and global best practice
- To understand whether HIV prevention policies and programmes respond to the key drivers of Zimbabwe’s HIV epidemic
- To understand whether HIV prevention programmes are in line with the country’s HIV prevention policies.
- To understand whether the funding allocated for HIV prevention is directed where it is most needed

For the joint analysis of the “know your epidemic” and “know your response” parts, data about risk factors for HIV transmission and drivers of the HIV epidemic were synthesized at several levels i.e. individual level, couple level, community level, and structural/macro level:

1. **Individual and couple level analysis**: Included biological, demographic and behavioural factors that may influence a person’s risk of HIV acquisition, such as education status, circumcision status, number of sexual partners, or may influence the transmission risk and partnership dynamics in a couple;
2. **Community level analysis**: This analysis summarized drivers of HIV transmission that are outside the direct influence of individuals and couples. Conceptually, such drivers include social and cultural norms, marriage patterns, acceptance of alcohol use and violence.
3. **Structural (macro) level analysis**: This analysis summarized drivers of the Zimbabwean HIV epidemic which are socio-political and at a level above the control of individual communities or sub-populations, such as income inequality, gender inequality, mobility and migration.

2.5. Study limitations

This study had several limitations in the different components of the analysis.

Limitations of the epidemiological review: Large population-based surveys were conducted with a cross sectional study design, so when interpreting the results, it is not possible to determine the temporal sequence of HIV acquisition and risk behaviour. Results presented only as bi-variate analyses should be interpreted cautiously due to potential confounding. Confounding factors may not be equally distributed between the groups being
compared, leading to potentially biased results. Not all confounding variables were collected in the population based surveys. As many variables were self-reported, an inability to recall correctly an exposure, for example, could have resulted in participant recall bias, or there may be reporting bias, for example, if some respondents report what they think are “correct” or socially approved answers. Analysis of HIV prevalence trends was largely confined to data from pregnant women using ANC services.

**Limitations in the application the UNAIDS HIV incidence model (by exposure groups):** The allocation had several limitations with the major issue being a lack of recent, local data or, in some instances, a complete absence of local data. The ZDHS 2005, which was a source of a substantial proportion of data used, was completed in 2006. With the declining prevalence of HIV and shifting behaviour patterns, the ZDHS may not be representative of current patterns and trends. There was a lack of local data on higher-risk populations such as MSM, IDUs, clients of sex workers and others. Instead, regional data or estimated values had to be used, but it is not possible to determine how accurate these data were for Zimbabwe. Another limitation to the model is the lack of clarity around certain definitions such as what constitutes a prevalent STI. Some studies use self-reporting of STI-like symptoms whereas others are based on laboratory diagnoses of a variable number of causative agents. Some reviewers have concerns about the models inability to estimate the impact of concurrency on transmission. Furthermore, the incidence model does not take into account the distribution of sexual behaviours within exposure groups and certain sexual mixing patterns. There is insufficient data available to be able to determine the impact of age disparate sexual mixing on HIV incidence. The same limitations of the survey data used to populate the model apply to the model outputs.

**Limitations in the analysis of prevention activities:** Some prevention response key stakeholders were not involved at the beginning of the process and resultantly were not well versed with the methodology and expected outputs. There were challenges in getting key supporting documentation such as prevention strategies and response reports of faith based organizations. Although some interviews were conducted with private sector representatives, the information on the private sector response remained insufficient. The information on higher-risk groups such as MSM and the military were scarce.

**Limitations in the prevention resources review:** The NASA has a number of limitations which are described in detailed in the NASA report. Although the study targeted all implementers, financing sources and agents countrywide, it was not possible to obtain responses from all of them within the study period. Some organizations who may have incurred costs in HIV&AIDS activities in 2006 and 2007 were no longer available at the time of carrying out the survey. Retrieving data for 2006 proved difficult due to the time that had elapsed from time of implementation to time of the study in 2009. Analysis of time trends of expenditure was constrained by the lack of disaggregated data for 2008 and lack of willingness to respond by some of the key implementers.
CHAPTER 3. CHARACTERISTICS OF THE HIV EPIDEMIC IN ZIMBABWE

The Story of Zimbabwe’s HIV epidemic

In the mid-1990s, Zimbabwe had the highest national HIV prevalence in the world. Since then, the epidemic has contracted more steeply and dramatically than any other epidemic in Eastern and Southern Africa based on estimated HIV prevalence curves. Over the 12 years from 1997 to 2009, it is estimated that adult HIV prevalence has almost halved from 26.5% to 14.3%. As a legacy of the exceptionally high HIV prevalence in the past, Zimbabwe still has the third largest HIV burden in Southern Africa with about 1.2 million people living with HIV. Life-prolonging antiretroviral treatment (ART) helps to maintain the number of positive people at a high level in Zimbabwe despite about 84,000 AIDS deaths annually (2009 est.) and decreased numbers of new HIV infections. In addition, an estimated 2% annual growth rate after several years of stagnant growth means that even with a steady population prevalence, the number of people infected will rise. In contrast to other countries in the region, the Zimbabwean HIV epidemic is geographically quite homogenous with similar HIV prevalence levels across provinces and e-urban zones. There may however be significant heterogeneity in HIV prevalence at a local level, as seen in very different levels of HIV prevalence among ANC clients, with particularly high HIV prevalence levels among those resident in resettlement farms and growth points.

Mathematical model simulations by Hallett et al. (2009) indicated that the pace of the decline in HIV prevalence in Zimbabwe could not have occurred without changes in behaviour or other determinants of the epidemic. Qualitative research suggests that in the later 1990s, partner reduction occurred, with friends sanctioning each other, and a sense of panic setting in due to AIDS sickness and mortality (Muchini et al., 2010). A partial shift in social norms towards reduced acceptability of casual and commercial sex, and reduced ability of men to attend bars and afford multiple partnerships due to the economic crisis, are further explanations for the decrease in HIV transmission.

There are positive advances concerning HIV prevalence levels: Urban epidemics continue to contract according to ANC surveillance data; New HIV infections in children up to 15 years of age are slowly declining due to lower levels of both HIV infection in women at child-bearing age and mother-to-child transmission; In contrast to the early years of the HIV epidemic, more educated populations are now relatively less likely to be HIV positive (the benefit of education is also evident among young ANC clients aged 15-24, where those with tertiary education are far less likely to be infected compared to those with secondary or primary education).

However, several recent studies confirm that multiple partnerships, especially long-term concurrent partnerships, remain a key driver (and are frequently underestimated based on self-reported behaviour in surveys). According to the NBCS baseline survey of 2007/08, 28% of men and 9% of women reported having two or more partners in past 12 months, and 10% of men and 3% of women reported having had a concurrent partnership. HIV prevalence in young pregnant women aged 15-24 – sometimes used as a proxy for HIV incidence - was very high in those residing around growth points and farms (around 15% HIV prevalence) – indicating areas of high HIV transmission. Although public health facilities recorded a decreasing number of STI episodes, there are reports of local rises in STIs.

Zimbabwe’s HIV epidemic lies in the balance: Stable HIV incidence at around 1% is not sufficient to prevent an ever increasing number of annual new infections which each results in a long-term commitment to ARV treatment, care and support. The currently very low levels of male circumcision have little potential in slowing down HIV or STI transmission.

In Zimbabwe, there are important achievements, strengths and opportunities to consolidate and build on:
1. Self-reported data from several sources suggest that there has been a reduction of non-regular (casual) sexual partners and an increase in condom use with non-marital, non-regular and commercial sex partners;
2. Condom use in casual and commercial relationships has increased and there is evidence of more consistent condom use;
3. Sexual debut occurs relatively late in Zimbabwe, and there are no signs that age of debut has changed significantly for men or women;
4. Zimbabwe has high rates of marriage, compared to other countries in the southern African region - people marry comparatively early, and this shortens the average period of pre-marital sex;
5. In almost half of couples in which one or both partners are HIV-infected, the couple is sero-discordant (only one partner is infected)– this represents important opportunities for prevention in couples;
6. Secondary abstinence has increased in men and women;
7. Although there are few areas with a tradition of male circumcision, many men say they are interested to undergo the procedure;
8. Experience about VCT provision has been accumulated and there is some data demonstrating sustained partner reduction in people who tested HIV positive.

Zimbabwe has a spectrum of biological and behavioural data available to help us understand the epidemic phase, potential and trends. Among these are HIV surveillance data from antenatal clinic (ANC) attendees from 1990 to 2009, data from in-depth studies among ANC clients in Harare from 1991 to 2002, and data from rural Manicaland from 1998 onwards (see map in
Annex A provides a description of the three main sources of HIV prevalence data in Zimbabwe. An important body of biological, behavioural and socio-demographic data of the general population comes from the 1988, 1994, 1999, and 2005 ZDHS. There are no longitudinal HIV prevalence data on national trends in the general population, but the community studies in Manicaland have provided such data. HIV prevalence data over time are also collected by the national prevention of mother-to-child transmission (PMTCT) programme, the voluntary counselling and testing (VCT) centres, and the Zimbabwe National Blood Transfusion Service. However, trends in these data are often distorted by changes in the programmes such as scale-up, and change of catchment population or service access. To understand trends in HIV incidence, different types of data can be consulted and compared – mathematically modelled data based on HIV prevalence changes, data from young pregnant women with presumed recent HIV infections, and data from research cohorts in rural Manicaland and urban Harare (post-natal women in a Vitamin A trial and male factory workers). Trends in self-reported sexual behaviours can be assessed from the DHS data of 1988, 1994, 1999 and 2005, the Manicaland cohort, and other smaller scale studies.

The purpose of this chapter is to characterise the present Zimbabwean HIV epidemic, elucidate both its historical trends and the potential future magnitude, and uncover factors that have -- and may continue to -- contribute to temporal changes in the epidemic’s character. In doing so, the chapter analyses information about HIV prevalence trends, heterogeneity and homogeneity in different population strata, HIV incidence trends, changes in higher risk sexual behaviours, and community and macro level factors that may possibly have influenced the course of the Zimbabwean HIV epidemic. This information is provided so as to fulfil, in part, the overarching purpose of this report: to strategically address the drivers of the epidemic with better HIV prevention programmes and a more focused allocation of HIV resources to avert the most number of new infections.
Figure 1: Map of Zimbabwe
**HIV PREVALENCE - PATTERNS AND TRENDS**

1. Zimbabwe has a generalized HIV epidemic, with exceptionally high level of HIV prevalence in the past and significantly lower levels at present - it is estimated that over the 12 years from 1997 to 2009, adult HIV prevalence has almost halved from 26.5% to 14.3%. Comparison with other Eastern and Southern African countries shows that in the mid-1990s, Zimbabwe probably had the highest HIV prevalence in the world (Figure 2). Since then, the epidemic has contracted faster than any other HIV epidemic in Eastern and Southern Africa. In 2005, according to the 2005/6 DHS, 18.1% of adults aged 15 – 49 years were HIV positive. In 2009, the Spectrum estimate for HIV prevalence in adults aged 15 and above was 14.3%⁹ (using DHS and ANC surveillance data, as well as population growth projections) and in children 0-14 years it was 2.1%.

**Figure 2: Estimated adult HIV prevalence by country, eastern and southern Africa (1990-2008)**

![HIV prevalence by country](chart.png)

*Source:* Spectrum/EPP estimates for East and Southern Africa, UNAIDS 2009. For Mozambique, the data were extracted from national estimates (age group 15-49 year only, and three time points only).

Figure 3 illustrates the dramatic decrease in HIV prevalence in Zimbabwe compared to other countries in the region. The figure is drawn by centring the HIV prevalence peak of each country in the middle of the graph, in order to be able to compare the trajectories of the epidemic curves.

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⁹This figure of 14.3 % is lower than the 18.1% from the DHS for 3 reasons: (a) the modeling was done 3 years after the last population-based survey and would therefore reflect newer trends in prevalence; (b) the 2009 estimates is 4 years after the DHS, and uses new information about programme coverage and implementation, as well as new ANC data; and (c) the national population-based survey is subject to bias, because persons randomly selected have the right to refuse HIV counseling and testing. Since those who already know their status are more likely to refuse counseling and testing, this might bias the national level HIV prevalence result. The modeling efforts take these biases into account when estimating trends in national prevalence.
2. Zimbabwe has an estimated 1.2 million people living with HIV, still representing the third largest HIV burden in Southern Africa
(Spectrum/EPP estimates for ESA, UNAIDS 2009 and 2010; HIV burdens of South Africa and Mozambique higher).
In Zimbabwe, the highest number of PLHIV ever reached was an estimated 1.8 million (ranging from 1.6 - 1.9 million) at the end of the 1990s (figure 4). In 2009, there were an estimated 1 million adults aged 15 and above and 150,000 children under 15 living with HIV (UNAIDS, 2010). An estimated 62% of adult PLHIV aged 15+ are female (2009, based on latest Spectrum estimate June 2010). It is also estimated that since this peak, well over 100,000 people have died every year due to AIDS-related causes up to 2007. Estimates and projections of adult mortality show that in 2010, Zimbabwe had one of the highest rates of pre-mature adult mortality in the world, largely due to AIDS. Annual mortality increased from 244 per 100,000 in 1990 to 577 per 100,000 among adult women 15-49, while mortality among adult men was even higher, increasing from 344 per 100,000 in 1990 to 725 per 100,000 (Rajaratnam et al. 2010). However, AIDS-related mortality is following a decreasing trend (Figure 4).

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These HIV prevalence and incidence estimates are produced by the National HIV and AIDS Estimates Working Group using UNAIDS’ Estimation and Projection Package (EPP) and Spectrum software. In 2009 the projections were adjusted to account for the shift in behaviour that had been seen in Zimbabwe, and for the use of antiretrovirals in ART and PMTCT. Estimates produced by EPP and Spectrum are not directly comparable to other data on HIV prevalence, such as those obtained from the 2005/6 DHS.
3. AIDS-related mortality and reduced HIV incidence keep HIV prevalence ‘in check’, but population growth and life-prolonging antiretroviral treatment maintain the actual number of positive people at a high level in Zimbabwe. As of 2009, the estimated number of annual AIDS deaths (70,000) exceeded the number of annual new HIV infections (48,000), and the percent of HIV positive Zimbabwean adults is slowly declining. However, the absolute number of positive people has recently stabilised instead of declined. The main two reasons for this is the prevailing population growth rate and ART.

- The population growth rate is projected at 2.1% (2010-2015)\textsuperscript{11}. Urban population growth has come down from over 6% in the 1980s to an estimated 1.7% in 2005, whereas rural population growth has reduced from over 3% in the 1980s to a negative growth rate of -0.1 by 2005\textsuperscript{12}. While Zimbabwe’s current fertility rate (of 3.4 children per woman) would translate into population growth, out-migration and deaths due to AIDS seem to have caused population growth to stagnate during the late 1990s and early 2000s.\textsuperscript{13} So it is in urban areas where PLHIV numbers are expected to rise year on year simply due to the positive population growth rate.

- Concerning ART, the number of people currently on ART increased from 85,000 to 215,000 between December 2008 and December 2009. The increase was a result of programme decentralization as well as expansion of outreach programmes particularly in Global Fund supported districts\textsuperscript{14}. Based on the 2009 WHO recommendation of initiating ART at a CD4 count of 350, an estimated 570,000 adults were eligible for ART in 2009 (this translates into ART coverage by end 2009 of 38\%). Data from 2008 show that more females than males are on treatment. Of the estimated 135,761 people who received ART in 2008 through the public sector programme, 85,861 were women and 49,900 were men (Zimbabwe National HIV/AIDS Estimates, 2009 AIDS and TB Programme, MoHCW). One of the reasons that more women than men are on ART is that prevention of vertical transmission is a primary entry point to ART in Zimbabwe. Pregnant women are initiated on ART if their CD4 count is below 350.

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\textsuperscript{12} UN data cited on http://www.nationmaster.com/time.php?stat=peo_urb_pop_ero_ann&country=zi

\textsuperscript{13} An analysis by Gregson et al. (2010) examined the question of whether out-migration could account for Zimbabwe’s declining HIV prevalence and found that it could not.

\textsuperscript{14} NAC Annual Report 2009
4. The Zimbabwean HIV epidemic is geographically homogenous - HIV prevalence is similar across provinces and rural-urban zones.

HIV prevalence shows little variation across the ten provinces, ranging from 15.1% prevalence (Masvingo) to 20.8% prevalence (Matabeleland South) – Figure 5 (2005/6 DHS data). Geographical homogeneity also applies when HIV prevalence in rural and urban zones is compared. Rural and urban residents have similar odds of being HIV infected (17.6% in rural vs. 18.9% in urban areas, p= 0.063). Compared to other countries in the region, HIV is therefore remarkably evenly spread across the country.

**Figure 5: Adult HIV prevalence by province in Zimbabwe (2005/6)**

![HIV prevalence by province](image)

Source: 2005/6 ZDHS, Table 14.4

5. There may be considerable heterogeneity in HIV prevalence at local level, as described for rural Manicaland and for ANC sentinel sites.

The Manicaland HIV/STD Prevention Project in eastern Zimbabwe is a population-based open cohort study. Participants recruited from 12 predominantly rural sites consisting of four subsistence farming areas, two small towns, two roadside trading areas and four forestry, coffee and tea estates. Men aged 17–54 years and women aged 15–44 years are included. Baseline bio-behavioural data were collected from 1998 to 2000 and follow-ups were done in 2001-2003 and in 2003-2005.

- In the 2001-03 survey, it was found that **HIV prevalence was much higher in the small towns (33%) and also increased in the estates (21%)** compared to the rural business centres and villages (16%) (Mugurungi et al., 2006).
- Coffee et al. (2005) reported that HIV prevalence was at 50% in females living in community centers, and at 25% in females living in the least-developed subsistence-farming areas. Among migrant agricultural workers, prevalence was 39% for women and 26% for men, compared with 30% and 21% for other sexually active women and men, respectively.

Some spatial heterogeneity also applies when the HIV prevalence estimates of the different ANC sentinel surveillance sites are compared (Figure 6). The 2009 ANC Surveillance Report classified sentinel sites as urban,
rural, and “other” (non-urban, non-rural areas including growth points\textsuperscript{15}, mining areas, resettlement and other farms), and found the following HIV prevalence levels: 14.5% rural, 15.5% urban (town or city), 20.5% “other”. Some of the spatial heterogeneity appears to come from areas which don’t fit into the traditional classification of urban and rural – mining areas have often been found to have very high HIV prevalence levels in Southern Africa, and so have commercial farms (e.g. Hargrove, 2007; Zuma, 2003; IOM, 2009). In a study involving male workers from five commercial farms and two mines in Mashonaland West, 27% of men tested HIV positive (Cowan et al., 2005). The following figure depicts 2009 ANC prevalence levels by site type, with urban and rural sites mostly at the lower end of the spectrum of HIV prevalence, and the varied group of “other” sites at the higher end.

\textbf{Figure 6: HIV prevalence among ANC attendees aged 15-49 by sentinel sites (2009)}

\textsuperscript{15} A Growth Point is a rural village or small town in Zimbabwe. The term is applied by the Government for certain designated villages or small towns. Growth Points are almost always located in a communal land (formerly Tribal Trust Lands), and the Growth Point could be considered to be the capital and service center of the communal land. Growth Points are generally underdeveloped, and receive additional resources and incentives from Government to encourage their development to proper towns in their own right. The long term aim is to also reduce rural-urban migration. Examples of Growth Points in Zimbabwe include; Magunje, Murambinda, Murombedzi, Sadza, Domboshawa and Gwengwerere. Source: http://en.wikipedia.org/wiki/Growth_point, accessed 16 Sept 2010.
HIV prevalence has steeply declined in all areas of the country.

The steep decline of HIV prevalence in the past decade occurred in all areas of the country (Figure 7). HIV prevalence declined among 15-49 year old pregnant women nationally from 32% to 24% over the period 2000-2004, and continued to decline in subsequent surveys for women up to age 40 (Gregson et al. 2010:6). According to the 2009 ANC Sentinel Surveillance Report, HIV prevalence among pregnant women 15-49 years declined from 17.7% in 2006 to 16.1% in 2009 (p <0.001). Prevalence at urban sites declined from 26.5% in 2002 to 15.5% in 2009, while prevalence in rural sites declined from 22.4% in 2002 to 14.5% in 2009. Prevalence in sites classified as “other” was higher than prevalence in urban or rural sites but also declined, from 28.9% in 2002 to 20.5% in 2009.

In 2009 compared to 2006, two ANC sites were found to have substantially higher HIV prevalence – Murambinda Hospital (10% increase) and Chiredzi District Hospital (5% increase):
- **Murambinda Hospital** is a known high performing ART site and the health services see more positive women due to the services offered for them, explaining the significant prevalence differential between the two surveys.

- **Chiredzi Hospital**, a site in a commercial farming area, also showed an increase in HIV prevalence in 2009, but it was not statistically significant. The increase is unlikely to be due to ART, but may partly be associated with commercial sex work in the catchment area of the site as a result of the dollarization of the economy. This site has consistently had a high HIV prevalence rate.

**Figure 7: Trends in HIV prevalence among women 15-49 at ANC sentinel sites, by sentinel site (2002-2009)**

![HIV Prevalence Bar Chart](chart.png)

**Source:** ANC Sentinel Surveillance Reports, Ministry of Health and Child Welfare

Figure 8 illustrates the HIV prevalence decline for the Manicaland site.
7. HIV prevalence assumes the typical age and gender pattern found in Southern African epidemics with females having a younger age distribution of risk.

- Overall, HIV prevalence in adult women aged 15-49 is 21.1%, significantly higher than prevalence in men aged 15-49 (14.5%, p<0.0001) – Figure 9.
- HIV prevalence in females is significantly higher than in men at younger ages, and significantly lower at older ages.
- Females aged 15-19 years already have significantly higher HIV prevalence than their male age peers (p<0.0001). The differential between female and male prevalence is large also in the age groups 20-24, 25-29 and 30-34 years.
- In the older age groups of 40-44 and 45-49, men have significantly higher HIV prevalence than women.
- No data were available for HIV prevalence among adults ages 50 and older. Older adults are often considered to not be at high risk for HIV infection, but many are still sexually active, and may also transmit HIV to younger age cohorts (particularly patterns of older men having sex with younger women).

The review could not find any Zimbabwean data on whether the life-prolonging effect of ART has started to impact age-specific HIV prevalence levels in adults. In South Africa, it was found that ART has started to substantially impact HIV prevalence in women aged 25-44 and in men aged 30-44 (excess HIV prevalence of 2% or more due to ART) (Rehle et al., 2010).
Gregson *et al.* (2000) argue, based on the Manicaland cohort data, that while young women are four times as likely to be infected as their male counterparts, from a lifetime perspective, men and women have very similar odds of becoming infected with HIV sometime between the ages of 15 and 55 years. Older HIV-infected individuals experience faster mortality and also age beyond the age intervals most commonly used for HIV statistics (44 or 49 years), which makes them appear in the “HIV prevalent” category for less time. HIV-infected men were also found to have had a greater probability of dying in the Manicaland cohort, compared to HIV-infected women.

The ANC data provide some insight into trends of HIV prevalence in different age groups. HIV prevalence declined most dramatically among younger cohorts of women attending ANC sentinel sites, and declines were not seen among women 40 years and older (who were a small minority of all women) – see Figure 10.
Figure 10: Trends in HIV prevalence among ANC clients aged 15-49, by age cohort (2002-2009)

Source: ANC Sentinel Surveillance Reports, Ministry of Health and Child Welfare

8. In contrast to the early years of the HIV epidemic, more educated populations are now relatively less likely to be HIV positive.

Early in the HIV epidemic, educational status was positively associated with HIV infection: those with higher education levels had more access to disposable income, were more likely to live in urban areas and be employed (De Walque et al, 2006). Data collected in Harare in the period 1999-2001 corroborates this: HIV incidence among pregnant women increased with educational attainment, with the odds for HIV infection being highest among women who had more than secondary education (Kumwenda et al. 2006). However, this pattern changed over time - in the past decade HIV prevalence among ANC clients declined most rapidly among women with secondary or tertiary education, to the extent where those with higher education levels were least likely to be HIV positive.

These results are consistent with those of Hargreaves et al. (2008) and De Walque al al. (2006), who examined time trends in the association between educational attainment and risk of HIV infection in African populations. Overall, HIV prevalence were initially higher among more educated populations, but fell more rapidly among populations with higher than lower education levels, in whom HIV prevalence sometimes rose while overall population prevalence was falling. Jukes et al. (2008) also examined the association between education and HIV infection over time, among women in southern Africa, and concluded that there is increasing evidence that keeping girls in school reduces their risk of contracting HIV, and that education is now more likely to be associated with lower risk of HIV infection than earlier in the epidemic.

The 2005/6 DHS reflects this changing pattern as well, in 2005/6, there was only a marginal relationship between HIV status and education levels (Figure 11).
ANC data show that HIV prevalence declined steadily from 2002 to 2009 for women with secondary or tertiary education, but declined less for women with primary education, and declined and then increased for women with no education.
Figure 12). (It should be noted that fewer than 0.5% of women had no education, so trends for this group should be interpreted with caution due to the small number of women.) Trends were similar for women aged 15-24.
9. There is no clear relationship between current wealth level and HIV status.
Data collected by the 2005/6 DHS show no clear relationship between wealth and HIV status (Figure 13). Although HIV prevalence appears to increase with wealth for women, this may be due to other factors related to wealth, such as residence. The wealth – HIV prevalence relationship is likely to suffer from the cross-sectional design - individuals might have been in a different wealth quintile at time of HIV acquisition than they are today. Also, the relationship is likely to be prone to confounding by age and other factors which are associated with both wealth and probability of HIV infection.

Source: 2009 ANC Sentinel Surveillance Report

Source: 2005/6 ZDHS, Table 14.4
10. People “married or living together” are the largest group of adults in Zimbabwe, with the most HIV infected people – about three quarters of male PLHIV and over half of female PLHIV are in a union. According to the ZDHS 2005/6, 57% of women are already married by age 20. The median age at first marriage (AFM) among women aged 25-49 was 19.3 years and it was 24.3 years for men. Urban women marry on average one year later than rural women (20.1 and 18.8 years, respectively). The AFM of women with no education was 17.7 years compared to 22.7 years for women with higher than a secondary education. Cohabitation (nonmarital couples living together) is rare – in the ZDHS, 1.4% of women and 2.6% of men were cohabiting (Table 1). Overall, 11.4% of all women in a union and 4.2% of all men in a union are in a polygynous union.

Table 1: Marital status of adults (2005/6)

<table>
<thead>
<tr>
<th>Marital Status</th>
<th>Women</th>
<th>Men</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never married</td>
<td>27.0%</td>
<td>47.5%</td>
</tr>
<tr>
<td>Married</td>
<td>56.3%</td>
<td>45.1%</td>
</tr>
<tr>
<td>Living together</td>
<td>1.4%</td>
<td>2.6%</td>
</tr>
<tr>
<td>Divorced/separated</td>
<td>7.7%</td>
<td>3.5%</td>
</tr>
<tr>
<td>Widowed</td>
<td>7.5%</td>
<td>1.4%</td>
</tr>
</tbody>
</table>

Source: ZDHS 2005/6

- HIV prevalence in married/cohabiting women was 20.2% (lower than the 23.2% among the sexually experienced never married women), and this demographic group of women contains the most female HIV infections. Note that among the population aged 25-49, the median age at first sex is 18.6 years for women, and 20.2 years for men.
- Overall about two-thirds of HIV-positive adults were currently in a union, with men more likely than women to be in union (74% of men versus 58% of women, p<0.05).
- HIV prevalence of divorced, separated, or widowed men and women was much higher than among other men and women. Widowed men had an HIV prevalence of 66.7%, and widowed women had an HIV prevalence of 57.7%.
- Being in a polygynous union increases the likelihood of a positive HIV status, especially for men, but since polygynous unions are more frequent in older people, this increased HIV prevalence is likely to be due to an age effect.
- It is important to remind that never married people are on average younger than those married, i.e. any bivariate analysis of HIV prevalence by marital status group will be confounded by age. The majority of people in the age cohorts with high HIV prevalence are married, but that does not mean that they are HIV positive because they are married.

Figure 14 illustrates HIV prevalence as measured in the ZDHS 2005/6 in group with different marital status.
11. In more than one in four couples, either one or both partners are HIV positive. Furthermore, 47% of couples in which one or both partners are HIV positive are sero-discordant (only one of the two partners is HIV positive), representing an important opportunity for prevention in couples.\(^\text{16}\)

In the 2005/6 ZDHS, among couples who were married or cohabiting:

- 14.7% of couples were concordant positive (M+ F+)
- 13.3% of couples were discordant (8.1% discordant male M+/ F-, 5.2% discordant female F+/M-)
- 72.1% of couples were concordant negative (M- F-)

In Zimbabwe, 29% of all couples in which one or both partners are infected are discordant male (M+), and 19% are discordant female (F+). This suggests that males are more often the link between higher risk populations and the couple than females. This was even more extreme in couples resident in Manicaland, where three quarters of all discordant couples were discordant male (N=218). In contrast, in Bulawayo, three quarters of all discordant couples were discordant female, but the sample size was small (N=84). Figure 15 presents the geographical variation in patterns of infection and discordance in couples across Zimbabwe’s provinces.

\(^{16}\) The term “HIV positive couples” is used to include concordant (both partners HIV positive) and discordant (one of the two partners HIV positive) couples.
Comparison across several countries with HIV infection data in couples shows the following (Figure 16):

- Proportions of male and female discordance vary to some extent across countries: Highest male discordance (M+) in Lesotho and Rwanda, highest female discordance (F+) in Kenya and Swaziland, Zimbabwe showing an average pattern of discordance.

- There is a linear relationship between the adult HIV prevalence and the proportion of concordant couples among infected couples (Rwanda data don’t fit this trend) – this intuitively makes sense since higher HIV prevalence increases the probability that two positive people meet in a relationship. Alternatively, there could be intentional sero-sorting taking place (people purposefully forming relationships with same sero-status), but there is no evidence of this occurring.
Figure 16: HIV infection among married and cohabiting couples in selected countries (2004-2009)
Countries are presented by increasing adult HIV prevalence, ranging from 3% in Rwanda (2005) to 26% in Swaziland (2007)

Sources: Demographic and Health Surveys for years indicated in figure.

12. There is a scarcity of local HIV prevalence data of the traditional most-at-risk populations, and no systematic size estimations of MARPs have been conducted in Zimbabwe.

**Sex workers:** HIV prevalence data come from Harare in 1995 (86% positive) (Ray et al., 2001); Mutorashanga, a small ferrochrome mining town in Mashonaland West, in 2001 (50% positive); and a site in rural Mashonaland West in 2005 (57% positive) (both data from WHO/UNAIDS, 2008).

**Sex worker clients:** In the ZDHS, 4% of men reported having paid for sex in the last 12 months, and their HIV prevalence was at 12.5% lower than the HIV prevalence of the men not reporting paying for sex (19.2% positive). This may be due to condom use in commercial sex acts which are generally perceived as high-risk. Sex worker clients in Mashonaland West had a HIV prevalence of 34% (Cowan et al., 2005).

**Men having sex with men (MSM):** no data on HIV prevalence or population size identified.

**Injecting drug users (IDU):** no data on HIV prevalence or population size identified.

**Orphans and Vulnerable Children (OVC):** Data from the Manicaland cohort showed that among females aged 15-18 years, those classified as OVC were more likely to be HIV positive (3.2% positive) and to report STI symptoms (5.9%). Among males aged 17-18 years, OVC status was not associated with increase prevalence of HIV or STI symptoms (Gregson et al. 2005).
SEXUALLY TRANSMITTED INFECTIONS

13. The number of STI episodes recorded at public health facilities is declining, but information on STI trends are mixed.

While the MoHCW reported almost 624,000 STI episodes in 2005, the figure for 2009 was at only 268,000 (Figure 17). A review report published in 2007 by on STI services at public health facilities by Nyathi & Madhina provides the following explanation of the decline, as seen in 2006:

- Concerted STI programming efforts centred on strengthening and scaling up of STI prevention, improvement in STI treatment, training of staff in syndromic management, and the strategic deployment of such staff in health centers.
- Sexual behaviour change influenced by the various HIV prevention programmes and activities implemented in Zimbabwe over those years.

This analysis did not enquire about the current interpretations within the MoHCW for the continuing falling trend observed in recorded STI episodes.

This decline is contrasted by some evidence that STIs are possibly increasing in certain population groups or sites: A new report by the NAC shows a dramatic rise in STIs among people aged 15-24 in Harare, and a recent newspaper headline read “STIs hit mining giant”.

Figure 17: Number of STI cases reported in health institutions per year (2000-2009)

![Graph showing number of STI cases reported in health institutions per year (2000-2009)]

Source: Ministry of Health and Child Welfare NT5 2009

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18 The Herald, 29 September 2010, by Walter Nyamukondiwa. ‘Health officials in Ngezi have expressed concern at the high number of sexually-transmitted infections being reported at health centres around Turf Growth Point in Mhondoro’.
The STI review report also highlights the fact that STI incidence may vary considerably across the country. Bulawayo and Mbare in Harare are mentioned as places which did not show the decline in numbers of STI episodes, and this may be due to migrants’ risk behaviours (Bulawayo) and to poor living conditions and high levels of deprivation (Mbare).

Despite the decline in case numbers and proportions, STI consistently ranked among the top 10 causes of morbidity in the country (Nyathi & Madhina, 2007). According to 2004 and 2005 data, the age groups with most STI cases were the 20-29 year and 30-49 year groups, but even the 15-19 year old group showed an unexpectedly high case number. For the same period more women attended STI care than men.

According to the 2005/6 DHS, among women, 4% had an STI, 7% had a bad-smelling, abnormal discharge; and 5 percent had a genital sore or ulcer, all in the past 12 months. Among men, in the 12 months prior to the survey, 3% reported that they had an STI, 4% had a bad-smelling, abnormal discharge; and 5% had a genital sore or ulcer. Taken together, 11 percent of women and 8 percent of men age 15-49 reported having had either had an STI or symptoms of an STI during the 12-months prior to the survey.

14. The causes of genital ulcers have dramatically changed -- herpes now constitutes more than 90% of genital ulcers with chancroid and syphilis together now constituting less than 10% (Nyathi & Madhina, 2007).

Overall, ulcerative STIs have declined and after 2004 increased again. This change of etiology of genital ulcers has also been reported from other countries in the region.

Syphilis has been screened for in the ANC surveillance surveys since 2002. In 2009, syphilis prevalence in sentinel sites ranged from 0% in several sites to 2.3% in Victoria Falls. There were no clear trends over time across sites, and in most sites syphilis prevalence varied widely across surveys. Syphilis prevalence was higher among young women 15-24 (0.8%) than among women 25-49 (0.3%), and higher among the unmarried (1.4%) than the married (0.5%).

Trichomonas - data from the Manicaland cohort found that 10% of women tested positive for trichomonas, with rates being higher among divorced, widowed, and single women (Mason et al. 2005). Having multiple sex partners, having a partner who had multiple sex partners, and having a new sex partner in the past year were risk factors for infection with trichomonas. Women infected with trichomonas were also much more likely to be HIV-infected (40.3% HIV prevalence compared to 23.5% HIV prevalence among women not trichomonas-infected), an association that remained significant even after controlling for various demographic factors.

Herpes simplex virus type 2 (HSV-2) – In a prospective cohort study involving sexually active, HIV-uninfected women aged 18-35 years, HSV-2 seroprevalence at enrollment was 53% and seroincidence during follow-up was 8.8/100 person-years (Brown, 2007). The hazard ratio for HIV was 4.4 (95% CI, 2.7-7.2) among women with seroprevalent HSV-2, and 8.6 (95% CI, 4.3-17.1) among women with seroincident HSV-2, adjusted for confounding. The population attributable risk percent for HIV due to prevalent and incident HSV-2 infection was 65% in Zimbabwe. This study demonstrated the important role HSV-2 plays in the acquisition of HIV among women.

Cowan (2006) studied the interaction between genital shedding of HIV-1 and HSV-2 among Zimbabwean sex workers and concluded that the rate and quantity of HIV-1 genital shedding do not appear to be altered by presence of HSV-2 genital shedding.

A study of male factory workers in Harare (including data from the period 1993 to 1997) found a prevalence of HSV-2 of 39.8%, with an incidence of HSV-2 of 6.2 per 100 person-years (McFarland et al. 1999). HSV-2 prevalence was positively associated with HIV infection, history of STI infections, older age, and higher income,
while HSV-2 incidence was associated with STI infection and number of sex partners. The researchers concluded that there was no evidence that HSV-2 infection was more likely to precede HIV infection, or vice-versa.

15. People with a history of STIs, especially genital ulcer disease, are more likely to be HIV infected
   - The 2009 ANC Sentinel Surveillance Report showed that women with current or past genital ulcer disease (GUD) had nearly three times the HIV prevalence of women without a history of GUD. Among young ANCs aged 15-24, those with GUD had a HIV prevalence of 31%.
   - Women attending ANC clinics in Harare for the period 1999-2001 who had STIs or genital lesions also had higher HIV levels, although prevalence of laboratory-confirmed STIs was low: gonorrhea 1%, chlamydia and syphilis 2%, trichomoniasis 6% (Kumwenda et al. 2006).
   - Men and women who reported a recent STI were significantly more likely to be HIV positive, according to the 2005/6 DHS. Forty percent of women who reported having had an STI or STI symptoms in the previous 12 months were HIV-infected, compared to 24% who did not report an STI or STI symptom. For men, the corresponding HIV prevalence figures were 32% and 18%.
   - In a 2001 analysis of the Manicaland cohort, Gregson et al. found that a third of sexually-active adults had experienced STD-associated symptoms, and treatment seeking was often delayed. HSV-2 and trichomonas were more common than syphilis, gonorrhoea, and chlamydia, and were strongly associated with HIV infection.
   - Among sex workers, 95% of HIV positive study participants were co-infected with HSV-2 (Cowan et al., 2006)

HIV INCIDENCE

16. It is projected that there are about 47,300 new HIV infections in adults aged 15+ years in 2010, the lowest level since the mid1980s – the estimate of 47,309 has wide plausibility bounds from 31,316 to 65,552, indicating the level of uncertainty of the value (EPP/Spectrum estimates of June 2010). According to the same estimation report, adult HIV incidence peaked in 1992 at 5.5% (of 1000 HIV negative adults aged 15-49, 55 would get infected during the year of 1992) and fell thereafter to below 1% in 2008 and 2009 (the 2009 estimate is 0.85, ranging from 0.56 – 1.17).

Some projection of incidence into the future - based on current HIV prevalence, population growth and ART use - suggest that the number of new infection may rise again (Figure 18). A chief reason for such an increase would be a positive population growth rate, naturally leading to higher numbers of new infections even if the HIV incidence rate (%) is stable.

HIV prevalence in young ANC clients is sometimes used as a proxy for trends in the HIV incidence rate ¹⁹. In ANC clients aged 15-24, HIV prevalence was at 12.5% in 2006 and at 11.6% in 2009 (p<0.001) (ANC Sentinel Surveillance Report 2009). It will be very important to track the changes in HIV prevalence in young pregnant women aged 15-24 in the coming surveys, in order to add to the evidence base on trends in new HIV infections.

¹⁹ HIV prevalence among young women aged 15-24 is used as a proxy for HIV incidence because infections in this age cohort where sexual debut occurs, would mostly be new infections.
17. It is estimated that new HIV infections in children up to 15 years of age are slowly declining due to lower levels of HIV infection in women at child-bearing age and prevention of mother-to-child transmission.

In 2009, an estimated 14,957 children <15 years were newly infected, whereas it was about 2,300 children more in 2007 (est. 17,300). In absolute terms, the number of children <15 living with HIV was highest about five years ago at an estimated 170,000. Even if PMTCT is scaled-up to reach high coverage, the number of positive children will take time to decrease because of slow progressors of vertically infected children. Based on South African and Zimbabwean data, Ferrand et al. (2009) estimated that about 36% of HIV-infected infants are slow progressors with median survival of 16 years (and 64% fast progressors with median survival of 0.6 years).

18. HIV incidence declined in all strata of the general population, but some data suggest that HIV incidence is now high in growth points and around resettlement and other farming areas.

Using HIV prevalence in young pregnant women aged 15-24 as a proxy for HIV incidence (2002-2009 data), it appears that HIV incidence declined significantly from 2002 to 2004 and again to 2006, and leveled off afterwards – confidence intervals around the 2006 and the 2009 estimate of HIV prevalence in ANCs 15-24 are overlapping, see Figure 19.
Again using HIV prevalence in young pregnant women aged 15-24 as a proxy for HIV incidence, the following can be deduced from the 2009 ANC surveillance data:

- **Current HIV incidence may be much lower in more educated women** – HIV prevalence in young ANCs with tertiary education is much lower than in those with secondary or primary education (4%, 11%, 16%, respectively) (ANC 2009 survey)

- **Current HIV incidence may be particularly high in women living around growth points and farms** – HIV prevalence in young ANCs living in these zones was very high, suggesting that HIV incidence might be high as well (see Figure 20). Unfortunately the confidence estimates of the estimates in residents of growth points and around farms are large due to small sample sizes.
Historical falls in HIV incidence, leading to a contracting HIV epidemic, are documented by the following data:

- HIV incidence measured in women attending for check-ups at postnatal clinics in Harare fell from 4.8% in 1992 to 3.4% in 1999 (ZIMPACT Study, Biomedical Research and Training Institute).
- HIV incidence in male factory workers in the same city fell from 3.0% in 1994-1995 to 1.3% in 2002-2003 (ZIMPACT Study, Biomedical Research and Training Institute).
- Vital registration data from Harare indicated that HIV incidence may have peaked in the early 1990s and fallen during the 1990s (UNAIDS 2005).
- Among young people aged 15-24, HIV prevalence fell from 5.4% to 3.3% in men aged 17-24 years, and from 16.5% to 8.8% for women aged 15-24 years, in the three year inter-survey interval between 1998-2000 and 2001-2003 survey rounds (Gregson et al. 2010:7). The greatest measured declines in HIV prevalence were seen among young men aged 17 to 29 years (10.6% to 8.1%, p < 0.01), and women aged 15 to 24 years (15.9% to 8.0%, p <0.001).
- Single point estimates are available from the study in Manicaland which put HIV incidence at 1.9 per 100 person-years (95 cases/5062 person-years) in men initially aged 17-24 years and 1.7 per 100 person-years (123/7057) in women initially aged 15–44 years, over the period 1998–2003 (Gregson et al. 2006).
- According to data collected from 1998 to 2003 in Manicaland, the reproductive number was less than 1 in all socioeconomic strata (the highest estimate being 0.73 in the estates), meaning that every new infection generated less than one secondary infection (Gregson et al. 2006).
- Humphrey et al. (2006) measured very high HIV incidence post-partum – a cumulative incidence of 3.4% at 12 months post-partum and 6.5% at 24 months post-partum among pregnant women; anaemia was associated with higher HIV incidence.
- Munjoma et al. (2010) determined HIV incidence among women enrolled late in pregnancy and followed for six years after childbirth. HIV-uninfected ANC clients were enrolled around 36 weeks gestation at three clinics around Harare between April 2002 and September 2004 and followed up until August 2008. Total IV incidence was 2.3/100 woman-years-at-risk, and incidence over the first nine months post-partum was
5.7/100 (similar to incidence levels found in the earlier study by Humphrey et al, 2006). In multivariate analysis, lower education remained significantly associated with HIV acquisition.

The UNAIDS HIV incidence by exposure group model – run as part of this KYE/KYR process - provided the following observations, outputs and conclusions (see Annex B for Modelling report):

a) The model application was impaired by a lack of recent, local data or, in some instances, a complete absence of local data. With the declining prevalence of HIV and shifting behaviour patterns, the ZDHS of 2005/6 may not be representative of current patterns and trends. In particular, there was a lack of local data on MSM, IDUs, and clients of sex workers. Instead, regional data or estimate values had to be used (see details in annexed Modelling Report), but it was not possible to determine how appropriate this was for use in Zimbabwe. Underreporting of certain sexual behaviours was another factor limiting the conclusiveness of the model outputs.

b) The model estimated that the bulk of new HIV infections occurs among people in the general community who are, according to self-reported behaviours, not engaging in high risk sexual activities. An estimated 54.8% of all incident HIV infections in 2010 occurred in this “low-risk” population (see Table 2). In sensitivity analysis (see Annex B), the estimated value ranged from a low of 50.4% to a high of 68.1%. Individuals in this exposure category are presumed to be in monogamous, HIV discordant relationships of at least one year duration but often longer. Transmission of HIV among those engaged in low risk heterosexual sex occurs either within couples with long-term discordancy or among couples where HIV has been introduced into the relationship by occasional extra-marital sexual intercourse.

c) The model estimated that people reporting having had more than one sexual partner in the past year and their partners contribute about 29% of new infections. This is an expected finding given previous research showing that multiple sexual partnerships are directly associated with risk of being HIV positive. Individuals engaged in concurrent sexual relationships would also fall into this category.

d) This modelling study suggested that MARPs such as SWs, MSM and IDUs do not contribute substantially towards national HIV incidence figures. In the setting of a generalised, mature epidemic, the role of “high-risk” and bridging groups probably becomes a less important driver than earlier on in the epidemic. However, regardless of actual contribution of MARPs to overall transmission, the fact remains that the HIV incidence rate in these groups is high. For this reason, prevention interventions are likely to be more efficient and cost effective than those aimed at the general population as more cases of HIV will be averted per unit of effort. The fact that these groups are stigmatised and hence hard to reach means that prevention programmes for MARPs need to be customised and targeted to their needs. Also, previous research has reported that up to 19.6% of HIV infections among men living on mines and farms may be attributed to contact with sex workers (Cowan, 2005) so the impact of sex work may not be evenly spread indicating the need to manage “hot spots”.

Table 2: Main outputs from the application of the UNAIDS HIV incidence by exposure group model

<table>
<thead>
<tr>
<th>Exposure group (by risk behaviour)</th>
<th>Proportion of total adult population aged 15-49</th>
<th>Estimated HIV prevalence in group</th>
<th>Model outputs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Prevalence of HIV (%)</td>
</tr>
<tr>
<td>Injecting Drug Use (IDU)</td>
<td>0.14%</td>
<td>0.05%</td>
<td>12.40%</td>
</tr>
<tr>
<td>Partners IDU</td>
<td>0.03%</td>
<td>0.07%</td>
<td>14.30%</td>
</tr>
<tr>
<td>Sex workers</td>
<td>0.00%</td>
<td>1.44%</td>
<td>54.32%</td>
</tr>
<tr>
<td>Clients</td>
<td>4.00%</td>
<td></td>
<td>19.30%</td>
</tr>
<tr>
<td>Partners of Clients</td>
<td></td>
<td></td>
<td>20.90%</td>
</tr>
<tr>
<td>MSM</td>
<td>3.00%</td>
<td>0.00%</td>
<td>16.80%</td>
</tr>
<tr>
<td>Female partners of MSM</td>
<td>0.00%</td>
<td>2.00%</td>
<td>20.00%</td>
</tr>
<tr>
<td>Casual heterosexual sex</td>
<td>15.00%</td>
<td>6.00%</td>
<td>17.00%</td>
</tr>
</tbody>
</table>
### Exposure group (by risk behaviour) | Proportion of total adult population aged 15-49 | Estimated HIV prevalence in group | Model outputs |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male (%)</td>
<td>Female (%)</td>
<td>Prevalence of HIV (%)</td>
</tr>
<tr>
<td>Partners CHS</td>
<td>5.00%</td>
<td>12.00%</td>
<td>14.30%</td>
</tr>
<tr>
<td>Low-risk heterosexual</td>
<td>37.83%</td>
<td>44.04%</td>
<td>14.30%</td>
</tr>
<tr>
<td>No risk</td>
<td>35.00%</td>
<td>32.40%</td>
<td>10.00%</td>
</tr>
<tr>
<td>Medical injections</td>
<td>12.80%</td>
<td>28.20%</td>
<td>14.30%</td>
</tr>
<tr>
<td>Blood transfusions</td>
<td>1.00%</td>
<td>1.00%</td>
<td>14.30%</td>
</tr>
<tr>
<td>Total Adult Population</td>
<td>100%</td>
<td>100%</td>
<td>13.68%</td>
</tr>
</tbody>
</table>

**FACTORS AT THE INDIVIDUAL LEVEL THAT IMPACT SEXUAL HIV TRANSMISSION**

Significant changes in sexual behaviour appear to have contributed to an approximately 50% decline in HIV prevalence in Zimbabwe. Household survey data show reductions in numbers reporting casual partners from the 1990s and high condom use in non-regular partnerships from the late 1990s through the 2000s. Mathematical modeling conducted by Gregson et al. (2010) concluded that the pace of decline in HIV prevalence could not have occurred without changes in behavior or other risk factors, probably between 1999 and 2004. Existing available data, particularly about partner reduction among men, back up this conclusion (Gregson et al. 2010).

A qualitative study by Munchini et al. (2010) adds to the knowledge base on behaviour change. The findings suggest that behaviour change has happened, especially regarding partner reduction, and that exposure to relatives and close friends dying of AIDS - leading to increased perceived HIV risk - was the principal explanation for behavior change. In addition, growing poverty, which reduced men’s ability to afford multiple partners, was also commonly cited by research participants as contributing to reductions in casual, commercial and extra-marital sex. HIV prevention programmes and services were secondarily mentioned as having contributed but no specific activities were consistently indicated. Therefore, behaviour change may have resulted primarily from increased interpersonal communication about HIV due to high personal exposure to AIDS mortality and a correct understanding of sexual HIV transmission, due to relatively high education levels and probably also to information provided by HIV programmes.

Short-term changes in behaviours are depicted in Figure 21 comparing reported behaviours from the 1999 and the 2005/6 DHS. The figure shows partner reduction and increase of secondary abstinence, particularly in females.
All of these data on sexual behaviour changes, should be viewed in light of the fact that these have been self-reported sexual behaviour. Data support that there is a problem of validity of self-reported condom use, which may be due to recall bias, over-reporting in the context of a survey, or reluctance to declare a risky unprotected sexual intercourse. Please see Annex C for further discussion of the validity of self-reported data.

19. Sexual debut occurs relatively late in Zimbabwe, and there are no signs that age of debut has changed significantly for men or women, although the percent of youth reporting premarital sex has declined somewhat over the four DHS surveys (1988, 1994, 1999, 2005/6 – see Figure 22). In the 2005/6 DHS, median age of sexual debut was 19.0 for women and 19.5 for men. Gregson et al. (2010) analyzed data on median age at first sex from 12 national surveys for women (1988-2007) and 11 national surveys for men (1994-2007) and did not find any clear trends, with median age at first sex fluctuating within the range 17-20 years (Gregson et al. 2010).
Figure 22: Trends in the median reported age of sexual debut among Zimbabwean youth 15-24 (1988-2006)

- There was a statistically significant change in the proportion of males aged 15-19 who reported ever having sex, between the 1994 DHS (33%) and the 2005/6 DHS (27%) (p=0.005). There was no such change for females.
- In 2006, a very small percentage of young men and women aged 15-24 reported having had sex by age 15 (F5.3%, M4.5%), and even by age 18, a minority of young people report having had sex (F36.7%, M 28.0%) (ZDHS 2005/6).
- In 2006, rural youth – especially females - was more likely to report early sexual debut than urban youth, and the percentage of young men and women reporting sexual debut by age 15 and age 18 varied widely across provinces (ZDHS 2005/6).
- Age of sexual debut increased with level of education and with increasing wealth, especially for women (ZDHS 2005/6).
- For never-married youth aged 15-24, 12.9% of women and 28.1% of men reported having had sex in the past 12 months (ZDHS 2005/6). Prevalence of premarital sex was nearly identical between unmarried urban and rural youth, and quite similar across education and wealth brackets. This suggests that the earlier sexual debut seen among rural youth and less educated and less wealthy youth may primarily be a result of (or linked to) earlier marriage for these groups, as earlier sexual debut among rural and less educated youth (compared to urban and more educated youth) does not result in increased premarital sex in these groups.
- Concerning trends in reported premarital sex, the four available data points for females aged 15-24 show the highest prevalence in the first survey (DHS 1988) and the lowest prevalence in the fourth survey (DHS 2005/6) – 18.3% and 12.9%, respectively. For males aged 15-24 (three data points available), the first survey (1994) shows the highest prevalence and the third survey (2005/6) the lowest – 37.8% and 28.1%, respectively.
- In 2006, there was no clear relationship between age of sexual debut and HIV prevalence among adults aged 15-49 (ZDHS 2005/6).

In Manicaland, data did show an increase in reported abstinence among both young men and young women. Between the survey rounds of 1998-2000 and 2001-2003, the proportion of males 17-19 years reporting ever having had sex fell from 45% to 27%, and for females 15-17 years from 21% to 9% (both significant at p<.001) (Gregson et al. 2010:9). Hallett et al. (2007) concluded based on data collected 1998 to 2000 in
Manicaland that age at first sex had declined among males over the previous 30 years but recently increased among females.

Cremin et al. (2009) analyzed responses from individuals included in three rounds of the Manicaland cohort (1998 to 2005) and found that women initiate sex and enter marriage at younger ages than men, but spend much less time between first sex and marriage. Among those surveyed between 1998 and 2005, median ages at first sex and first marriage were 18.5 years and 21.4 years for men and 18.2 years and 18.5 years, respectively, for women aged 15–54 years. However, high levels of reports of both age at first sex and age at marriage were found to be unreliable, although excluding these responses did not alter the trends observed. Comparisons by birth cohorts, which spanned a period of more than 40 years, indicated that median age at first sex has remained constant over time for women but has declined gradually for men.

Hallett et al. (2007) concluded, also based on data from the Manicaland cohort, that early sexual debut before marriage precedes a lifetime of greater sexual activity but with more consistent condom use, and that women who initiate sex earlier are more likely to be infected with HIV (due to the fact that they have a greater lifetime number of sexual partners than women who initiate sex later). Sexual debut was found to be earlier among those in unskilled employment, those not associated with a church, and women without a primary education.

20. Secondary abstinence has increased, is much more frequent among women than men, and in women mostly not related to abstinence after childbirth (‘postpartum’).

Figure 21 showed that secondary abstinence has, according to reports by DHS participants, increased between 1999 and 2005/6 in both men and women. In the 2005/6 DHS, about 5% of men aged 30-49 reported secondary abstinence (had sex, but not in the last 12 months). In women aged 30-49, this frequency was much higher at about 21%. The reasons for this secondary abstinence were not assessed. However, postpartum abstinence is relatively short at 2.3 months (median value) compared to other countries (Figure 23), and therefore not a major contributor to female secondary abstinence. While there is some evidence that postpartum abstinence may be one of the determinants of HIV prevalence, and while we see a clear correlation between high levels of both in a country like Lesotho, Zimbabwe does not fit this trend so well. The plotted data suggest a certain degree of positive correlation between length of postpartum abstinence and female HIV prevalence – this may in part be due to men having secondary partners during their wife’s postpartum abstinence. Humphrey et al. (2006) found in Zimbabwe that prolonging postpartum sexual abstinence increased the hazard of HIV infection by 4% per 4 weeks (univariate analysis, p=0.006). Once sexual frequency and its interaction with marital status were adjusted for, duration of postpartum abstinence was not independently predictive of incident HIV.
Figure 23: Median duration of postpartum abstinence and female HIV prevalence in several countries

21. Men and women have reported reductions in risky and multiple partner sex, although sex with high-risk partners and multiple partners continues to be strongly associated with risk of HIV infection among women.

Data from DHS as well as PSI surveys show declines in the proportion of young men and women 15-29 reporting one or more high-risk partners (non-marital, non-cohabiting partners). Between the 1999 and 2005 ZDHS, the proportion of adults 15-49 reporting non-regular partners declined from 57% to 47% for men and from 15.5% to 14% for women (Gregson et al. 2010:9). The proportion of young men reporting having paid for sex also fell in this period from 7.2% to 3.6%, among sexually experienced men aged 15-29. PSI surveys conducted in 2001, 2003, 2005, 2006, and 2007 also showed substantial reductions in non-regular partners (Gregson et al. 2010). For men 15-29, the proportion reporting non-regular partners fell from 32% in 2001 to 21% in 2003, and remained near that level through later PSI surveys. For women 15-29, the estimates were for a reduction from 17% to 8% in the same period.

An interesting result comes from the HIV incidence study in Harare ANC clients by Munjoma et al. (2010). Women were followed up for six years after childbirth. Women that knew that their partners had other sexual partners were about four times more likely to acquire HIV (RR 3.8, 95%CI 1.3-11.2).

In Manicaland, reporting of recent casual partners fell from 25.9% to 13.2% among men aged 17-54 in the period 1998 to 2003, and from 7.5% to 5.9% of women aged 15-44 years in the same period (Gregson et al. 2010).

Among adults 15-49, the percentage of men and women reporting higher-risk sex (sex with a non-marital, non-cohabiting partner) in the past year declined from the 1999 DHS to the 2005/6 DHS, for men and women. In 1999, 42.2% of men and 13.6% of women reported higher-risk sex, while in 2005/6 35.7% of men and 11.2% of women reported higher-risk sex (p<.0001 for both men and women).

In a qualitative study conducted in 2007, many male focus group participants said that, in the early 1990s, most urban men had at least two or three sexual partners per year. In addition, many of them “caught” up to three or four sex workers a week, while most rural men were said to have had at least two sexual partners a year (Muchini...
et al., 2010). A variety of practices were described, including various forms of transactional sex that included group practices such as male students pooling funds for sex workers.

**Having had a higher-risk partner (a non-marital, non-cohabiting partner) in the past 12 months was strongly associated with higher HIV prevalence for women, although not for men.** Men who had a higher-risk partner in the past year had an HIV prevalence of 12.4% compared to an HIV prevalence of 23.9% among men who did not have a higher-risk partner. Among women, 38.7% of women who had had a higher-risk partner in the past year were HIV-infected, compared to 20.6% of women who had not had a higher-risk partner in the past year. A possible explanation for the paradoxical result for men is that younger men are likely to have “higher-risk” partners (as any pre-marital partner is considered higher-risk), but have lower HIV prevalence.

**HIV incidence has also been found to be correlated with reported multiple partnerships and other risky sexual behaviours.** In the Manicaland cohort, having multiple partnerships was associated with higher HIV incidence over three years of follow-up (1998-2000 to 2001-2003) for men (RR = 2.4) and women (RR = 3.2). Having multiple partners in the last month (compared to having only one partner) was an even stronger predictor of incident HIV infection for women (RR = 8.8), even after controlling for number of sexual partners (Lopman et al. 2008).

Although they do not provide data on changes in behaviour over time, two national surveys suggest levels of multiple and concurrent partnerships that are higher than those reported by the DHS. In a National Behaviour Change Strategy (NBCS) baseline survey conducted in 2007/08, among adults ages 18-44, 28% of men and 9% of women reported having two or more partners in past 12 months (NBCS 2009). In the same survey, 9.6% of men and 2.5% of women reported having had a concurrent partnership in the past 12 months, with younger males (ages 20-24) being the most likely to report concurrency. Furthermore, 21% of married men reported having had more than 2 partners in the past 6 months, suggesting concurrency.

A 2008 PSI survey measured a number of indicators for concurrency and found that 15.0% of sexually active men and 6.3% of sexually active women reported more than one sexual partner in the past month, while among persons cohabiting, married, or in a regular relationship, 23.0% of men and 9.5% of women reported having more than one sexual partner in the past month (PSI, 2008).

**22. Although condom usage rates are relatively high during high-risk sex, condom usage with regular partners remains low, and there is no clear correlation between condom usage and lower HIV risk**

Reported condom use with non-regular partners was already high by the late 1990s and data for the period 1999 to 2006 do not show a clear trend (Gregson et al. 2010). DHS, PSI surveys, and the 2002 Young Adult Survey show condom usage rates (at last sex with non-regular partner) of between 60% and 90% for males aged 15-29 and from 40% to 85% for women aged 15-29 (Gregson et al. 2010).

In Manicaland, the proportion of men reporting condom use with recent casual partners was stable for men aged 17-54 between the 1998-2000 survey (41.6%) and 2001-3 survey (42.2%) but increased for women aged 15-44 from 26.2% to 36.5%.

In an analysis of national surveys from 13 sub-Saharan African countries, de Walque and Kline (2009) found that condom use was generally low, men reported condom use more frequently than women, and unmarried individuals reported that they use condoms more frequently than married individuals with their spouses.

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20 Note that these data are not directly comparable to the DHS, as the age range used by DHS is 15-49 and the age range used by the NBCS is 18-44. In addition, DHS data reported are among sexually active adults who had sex in past year, whereas NBCS data are among all men and women regardless of whether they have had sex in past year. PSI data also use the age range 15-49.
While married men from most countries report using condoms with extramarital partners about as frequently as unmarried men, married women from most countries analyzed use condoms with extramarital partners less frequently than unmarried women. Condom use in marriage remains low for men and women. As seen in Table 3, these trends hold true in Zimbabwe.

Table 3: Condom use with different types of sexual intercourse & partners, Zimbabwe

<table>
<thead>
<tr>
<th>Category</th>
<th>Females</th>
<th>Males</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FIRST SEXUAL INTERCOURSE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Among youth aged 15-24 yrs who had ever had sex, condom use at first sexual intercourse</td>
<td>16.4%</td>
<td>43.7%</td>
<td>DHS 2005/6, Table 13.16</td>
</tr>
<tr>
<td><strong>PREMARITAL SEXUAL INTERCOURSE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Among never-married youth aged 15-24 yrs who had sex in past 12 months, condom use at last sexual intercourse</td>
<td>40.4%</td>
<td>67.3%</td>
<td>DHS 2005/6, Table 13.17</td>
</tr>
<tr>
<td><strong>LAST SEX WITH REGULAR PARTNER</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adults (F 15-49 yrs, M 15-54 years) who say they used a condom the last time they had sex with a spouse or cohabiting partner, of those who have had sex with such a partner in the last 12 months</td>
<td>3.6%</td>
<td>7.7%</td>
<td>DHS 2005/6, StatCompiler</td>
</tr>
<tr>
<td><strong>LAST HIGHER-RISK SEX</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adults (F 15-49 yrs, M 15-54 years) who say they used a condom the last time they had sex with a non-marital, non-cohabiting partner, of those who have had sex with such a partner in the last 12 months</td>
<td>46.7%</td>
<td>70.9%</td>
<td>DHS 2005/6, Tables 13.8.1 &amp; 13.8.2</td>
</tr>
<tr>
<td>Youth (15-24 yrs) who say they used a condom the last time they had sex with a non-marital, non-cohabiting partner, of those who have had sex with such a partner in the last 12 months</td>
<td>42.4%</td>
<td>68.0%</td>
<td>DHS 2005/6, Tables 13.18.1 &amp; 13.18.2</td>
</tr>
<tr>
<td><strong>LAST SEX AMONG THOSE WITH MULTIPLE PARTNERS</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adults (F 15-49 yrs, M 15-54 years) who had more than one partner in the past 12 months reporting the use of a condom during their last sexual intercourse with anyone</td>
<td>40.8%</td>
<td>35.6%</td>
<td>DHS 2005/6, StatCompiler</td>
</tr>
<tr>
<td>Youth (15-24 yrs) who had more than one partner in the past 12 months reporting the use of a condom during their last sexual intercourse with anyone</td>
<td>37.9%*</td>
<td>59.4%</td>
<td>DHS 2005/6, StatCompiler</td>
</tr>
<tr>
<td><strong>LAST SEX WITH SEX WORKER (PAID SEX)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Men (15-54 yrs.) reporting condom use the last time they had sex with a sex worker, of those who report having had sex with a sex worker in the last 12 months</td>
<td>n/a</td>
<td>73.1%</td>
<td>DHS 2005/6, Table 13.9</td>
</tr>
<tr>
<td><strong>LAST SEX WITH ANYONE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adults (F 15-49 yrs, M 15-54 years) who they used a condom the last time they had sex of those who have had sex in the last 12 months</td>
<td>8.2%</td>
<td>24.4%</td>
<td>DHS 2005/6, StatCompiler</td>
</tr>
<tr>
<td>Youth (15-24 yrs) who say they used a condom the last time they had sex of those who have had sex in the last 12 months</td>
<td>8.6%</td>
<td>51.6%</td>
<td>DHS 2005/6, StatCompiler</td>
</tr>
</tbody>
</table>

* = figure based on small denominator (<50 cases)

The table demonstrates that **condom use is higher with pre-marital, non-regular and commercial sex partners than with marital or regular partners.** As can be seen in
Figure 24, while condom use at last higher-risk sex has risen somewhat since 1994, condom use at last sex with anyone has fallen slightly, due to the fact that fewer Zimbabwean men and women are reporting higher-risk sex.
Figure 24: Trends in reported condom use at last sex and last higher-risk sex among adults 15-49 (1994-2006)

Note: For 1994 data, condom use at last higher-risk sex is among men and women who reported having had higher-risk sex in past 4 weeks, and condom use at last sex is for men and women who reported having had sex in past 4 weeks. For 1999 and 2005/6 data, condom use at last higher-risk sex is among men and women who reported having had higher-risk sex in past 12 months, and condom use at last sex is for men and women who reported having had sex in past 12 months. Higher-risk sex is sex with a non-marital or non-cohabiting partner.

Many studies of the association between use of condoms and acquisition of sexually transmitted infections have yielded apparently paradoxical results. This applies to the data from the Zimbabwe DHS 2005/6, in which higher HIV prevalence was sometimes (although not always) associated with condom use. Aral & Peterman (2002) explain this as follows: “People who use condoms are found to be at least as likely to acquire infections as people who do not use condoms. People tend to use condoms with partners who they think are risky but not with partners who they consider to be safe. Consequently, increased condom use may be a marker either of increased likelihood of HIV/STI exposure, or decreased HIV/STI transmission risk”. Another reason for the paradox may be that HIV infection may have been acquired prior to the previous year, whereas condom use was only measured in previous year.

The 2005/6 DHS also showed that women who reported condom use at last sex had higher HIV prevalence than those who did not, while men who reported condom use at last sex had lower HIV prevalence than those who did not. Men and women who used a condom at last higher-risk sex did not have significantly lower HIV prevalence than men and women who did not, and the same was true for men who used a condom at last sex with a sex worker.

- Among men and women who had ever had sex, 50% of men and 20% of women reported ever using a condom, and ever-users had higher HIV prevalence than men and women who had never used a condom (20.9% versus 14.6% for men, OR = 1.5, 95% CI=1.3-1.8; 32.1% versus 23.1% for women, OR = 1.6, 95% CI=1.4-1.8).

- Among men and women who had sex in the past year, 25% of men and 8% of women reported using a condom at last sex. Using a condom at last was associated with lower HIV prevalence for men (15.1% HIV prevalence among condom users compared to 21.3% for non-users for men, OR = 0.7, 95% CI = 0.5-0.8). Using a condom at last sex was not protective for women, with 39.1% HIV prevalence among condom users compared to 21.3% prevalence among non-users (OR = 2.4, 95% CI = 1.9-3.0).

- Among men and women who reported higher-risk sex in past year, 71% of men and 47% of women reported using a condom at last higher-risk sex. Using a condom was protective for neither men nor women, with HIV
prevalence among condom users and non-users virtually identical (12.9% versus 11.8% for men, OR = 1.1, 95% CI = 0.8-1.6; and 39.9% versus 37.9% for women. OR = 1.1, 95% CI = 0.8-1.5).

- Among men who reported having sex with a sex worker in past year, 74% reported using a condom at last sex with a sex worker. Men who used a condom had a lower HIV prevalence than those who did not, although not significantly so (10.2% versus 18.6%, OR = 0.5, 95% CI = 0.2-1.1).

**Other studies of condom use in Zimbabwe:**

Betts et al. (2003) found in a survey of secondary school students that boys who reported always using condoms were more likely to report their parents were there when needed, spent more time in extracurricular activities, and reported a lower drop out likelihood. The only variable associated with girls reporting always using condoms was worrying about HIV/AIDS, which was positively associated.

Padian et al. (2007) found significantly lower condom use (compared to the control) in the intervention group of a randomized controlled trial of a diaphragm and microbial gel for HIV prevention. However, this lower condom use did not result in higher HIV incidence. HIV incidence was 4.1 infections per 100 person-years in the intervention group compared to 3.9 infections per 100 person-years in the control (among sexually active women aged 18-49), a difference that was not statistically significant.

**23. Male circumcision prevalence varies somewhat across Zimbabwe, but is very low in all provinces.**

There is strong evidence that medical male circumcision reduces the acquisition of HIV by heterosexual men by between 38% and 66% over 24 months (Siegfried et al., 2009). Male circumcision rates are low in Zimbabwe, with 10.5% of men aged 15-54 reporting being circumcised in the 2005/6 DHS. Such a low level is unlikely to affect overall HIV transmission to any important degree. Circumcision is traditionally practiced in only a few small populations such as the Tonga and is reportedly rare among the dominant Shona ethnic group (Halperin et al. 2005). In a 2000 survey of 200 men in Harare, 45% answered that they would like to be circumcised if circumcision would lead a reduced risk of contracting HIV or STIs and was performed safely and affordably (Halperin et al. 2005).

Circumcision rates vary little by demographic factors including education, wealth status, or urban/rural residence, but do vary somewhat between provinces, as seen in Figure 25.

**Figure 25: Male circumcision by province in Zimbabwe (2005/6)**
HIV prevalence is slightly higher among circumcised men compared to uncircumcised. According to the 2005/6 DHS, the 10.5% of men who report being circumcised have an HIV prevalence of 16.6% while the 89.5% of men who reported not being circumcised had an HIV prevalence of 14.2%. Among rural residents, HIV prevalence was higher among circumcised men (17.0%) than uncircumcised men (13.4%) ($p = 0.052$). Among young men ages 15-24, HIV prevalence was lower among circumcised men (2.8%) than among uncircumcised men (4.4%), although not significantly so ($p = 0.38$). The relationship between MC and HIV infection data from cross-sectional surveys is difficult to interpret, since it is not known if infection occurred prior to MC or afterwards. In addition, it has been found that self-reported male circumcision status is not always accurate.\footnote{Taljard et al. (2009) found in the Orange Farm trial that self-reported MC status is a very unreliable indicator: physical examination by a male nurse found that 45% of men who said they were circumcised had intact foreskin and possible explanations for this were confusion between MC and initiation, confusion with words, and lack of knowledge what MC is. Similar data come from a Zambian study showing that self-reported male circumcision status is not always accurate: In the Ndola study described by Auvert et al. (2001), only 73% of men who reported being circumcised were confirmed circumcised on clinical examination. Reports of not being circumcised were more accurate – 99% of men who said that they were not circumcised were confirmed on clinical examination.}

24. **In some cases HIV counselling and testing seems to bring about safer sexual behaviour, while in other cases it does not.** In Zimbabwe, there is conflicting evidence about changes in sexual behaviour subsequent to individual HIV counselling and testing. According to the 2005/6 DHS, 26.1% of women who had ever been tested were HIV infected compared to 25.4% of women who had never been tested. Men were also slightly less like to be HIV infected if they had never been tested (18.7%) compared to men who had been tested (20.0%) (2005/05 DHS, Table 14.7). Differences were not statistically significant for either women ($p=0.58$) or men ($p=0.36$).

Several studies conducted in Zimbabwe to test the effectiveness of HIV counseling and testing (HCT) as an HIV prevention intervention have failed to show an effect on sexual behaviour of those who are HIV negative and/or HIV transmission, while data from the Manicaland cohort have shown reported behaviour change subsequent to VCT.
- **Corbett et al. (2007)** conducted a cluster-randomized trial among predominantly male employees of 22 businesses in Harare which showed much greater uptake of VCT when available onsite (intensive VCT, uptake 70.7%) compared to pre-paid vouchers to an external provider (standard VCT, uptake 5.2%). However, **HIV incidence was non-significantly higher in the intensive VCT arm** (1.37 compared to 0.95 per 100 person-years).

- **Sherr et al. (2007)** examined determinants of uptake of VCT in Manicaland to assess changes in sexual risk behavior following VCT, and found that while lifetime uptake of VCT increases from the 1998-2000 to 2001-2003 survey round (3 years of follow up), **HIV incidence did not differ between testers and non-testers. Sexual behaviour was also not independently associated with VCT uptake.** Age, increasing education, and knowledge of HIV were associated with VCT uptake. Women who took a test were more likely to be HIV positive, have greater HIV knowledge, and have fewer lifetime sexual partners, and women who tested positive reported increased consistent condom use in their regular partnerships. However, **men and women who tested negative were more likely to adopt riskier behaviours in terms of number of partnerships in last month, last year, and current (concurrent) partnerships.**

- **Turner et al. (2009)** used data from a prospective study of hormonal contraception and HIV acquisition among Zimbabwean and Ugandan women (1999–2004) to analyze changes in unprotected sex after testing. The proportion of HIV-infected women (data not broken down by country) reporting any unprotected acts in a typical month declined from 74% (pre-infection) to 56% (12–16 months after HIV diagnosis), and they reduced their number of unprotected acts by 38%. HIV-infected women were twice as likely to report that all sex acts were protected after diagnosis (adjusted odds ratio = 1.99, 95% CI = 1.12–3.53) while uninfected women were somewhat less likely to report that all acts were protected (adjusted odds ratio = 0.82, 95% CI = 0.64–1.04). **HIV-infected women also reduced their number of unprotected sex acts. However, their proportion of unprotected acts changed little** (7% reduction, 95% CI = -18% to +6%), suggesting that their total number of sex acts may have changed without the proportion which were protected increasing. **Uninfected women reported little change in number or proportion of unprotected acts over the same time period.**

- **Cremin et al. (2010)** used generalized linear models with random effects to analyze uptake of VCT and subsequent behavior change in the Manicaland cohort. At the 2003-2005 survey round, 8.6% of participants had previously received VCT. **Women who received VCT reduced their reported number of new partners more than those who did not test regardless of the result of the test, although HIV-positive women reduced their number of new partners more.** Consistent condom use increased among men and women who tested positive, although the changes were not statistically significant. **Among men and women testing positive, reduced levels of concurrent partnerships were reported and maintained for 2-3 years following testing.** No other changes were observed among men.

**FACTORS AT THE COUPLE LEVEL THAT IMPACT SEXUAL HIV TRANSMISSION**

Transmission within HIV discordant steady couples is increasingly implicated as being a major contributor to HIV transmission within southern Africa. As discussed in Section 3.2.6, in more than one in four Zimbabwean couples, either one or both partners are HIV positive, and 13.3% of all couples are HIV discordant (8.1% male discordant and 5.2% female discordant). **Transmission within couples cannot “drive” Zimbabwe’s epidemic as an infection within the pair must first be introduced from outside, but preventing transmission among discordant couples is a crucial area of prevention.**

**25. Couples are generally uninformed about whether their partners have other partners, but for women, having a partner who has other partners is associated with clear risk of HIV infection.** Data collected from women seen in family planning or primary care clinics in Harare showed that **35% of**
women were certain that their steady partner had other partners (Decosas & Padian 2002). Women may also have extramarital partners; data from the Manicaland cohort found that 14% of married women in Manicaland reported that their last extramarital sexual partner was married to someone else (Lopman et al. 2009).

New secondary analysis of the 2005/6 DHS showed that spouses were generally uninformed about whether their partners had other partners. The 2005/6 DHS asked married women (or women who replied that they were living together as if married) the question: “Besides yourself, does your husband/partner have other wives, does he live with other women as if married, or does he maintain a small house?” Most women answered “no” to this question, but 9.3% answered yes, and 3.6% answered that they did not know. Women who answered “yes” to this question were more likely to report that they believed themselves to be at high risk of getting AIDS (14.5% vs. 8.8%, p=0.02). **Women who believed their husband had another partner or small house were less likely to report that they could refuse sex with their husbands (58% vs. 66%, p<0.001) or insist that their husband used a condom (53% vs. 66%, p<0.001), compared to women who reported that their husbands did not have another partner or small house. Women who believed their husband had another partner were also less likely to report having ever been tested for HIV (19% vs. 33%, p<0.01) or to have told their husband their HIV test result if they had (83% vs. 94% p=0.186). However, women who believed their husband had another partner were not significantly more likely to be HIV-positive (21%) than women who did not believe their husband had another partner (19%) (p=0.716).**

When men were asked if they had a second wife or live-in partner, 10.2% responded that they did. In fact, there was poor correspondence between couples’ reports, with 22.5% of women who said their husband had another partner having their husbands report that they did not have another partner. Furthermore, only 51.2% of women whose husbands actually did report a second partner, reported that they thought this was so. (In other words, nearly half of women whose husbands had a second partner answered “no” when asked if their husbands had another wife, lived with another woman, or had a small house). **Women whose husbands reported additional partners were more likely to be HIV infected (28.7%) compared to 18.1% among women whose husbands reported only 1 partner (p<0.001). Among women whose husbands reported additional partners, women who reported knowing about these partners had lower HIV prevalence than women who did not think their husband had an additional partner (20.2% vs. 36.5%) (p=0.012).**

The 2005/6 DHS asked wives and husbands questions about whether they had been tested, received the results of their HIV tests, and shared the results with their spouses. New analysis of these data show that correspondence between men’s and women’s responses about sharing of testing results was very poor. For men, 14.2% of men reported having had an HIV test, but only 40.6% of their wives knew about the test. **Nearly half (49.7%) of women who thought their husband had had an HIV test were wrong**, according to the husband’s report. In only 8.1% of couples did both the husband and wife report that the husband had been tested, while 71.9% of couples agreed that the husband had not been tested.

**26. When tested, most couples do not seem to share the results of the test, and disagreement about whether each partner has disclosed status is common.** The 2005/6 DHS asked wives and husbands questions about whether they had been tested, received the results of their HIV tests, and shared the results with their spouses. New analysis of these data shows that correspondence between men’s and women’s responses about sharing of testing results was very poor. For men, 14.2% of men reported having had an HIV test, but only 40.6% of their wives knew about the test. **Nearly half (49.7%) of women who thought their husband had had an HIV test were wrong**, according to the husband’s report. In only 8.1% of couples did both the husband and wife report that the husband had been tested, while 71.9% of couples agreed that the husband had not been tested.

Correspondence between husbands and wives’ responses was slightly higher when it came to wives’ testing. When asked if they had been tested, 37.2% of women replied that they had, and 48.0% of husbands reported knowing about the test. Forty percent of husbands who thought their wives had gotten tested were wrong.
(39.9%). In **17.9%** of couples the husband and wife both reported that the wife had been tested, while in 50.9% of couples they agreed that the wife had not been tested.

In approximately **90%** of couples in which one spouse had been tested and both partners knew about the test, both partners agreed that the tested spouse had disclosed the result. Of course, couples in which both partners agreed a test had been done were in the minority (8.1% of couples agreed the husband had been tested, 17.9% agreed the wife had been tested). The infrequent sharing of information about testing and HIV status between spouses, even when a test is performed, should be taken into consideration when testing (either individually or for couples) is promoted.

**FACTORS AT THE COMMUNITY LEVEL THAT IMPACT SEXUAL HIV TRANSMISSION**

27. **Zimbabwe has high rates of marriage, compared to other countries in the southern African region.** People marry comparatively early, and this shortens overall the period of pre-marital sex. In contrast to some other countries in Southern Africa (Botswana, Namibia, South Africa, Swaziland), people marry relatively early in Zimbabwe. According to the 2005/6 DHS, 57.7% of women aged 15-49 and 47.7% of men aged 15-54 were married or living together as if married. The proportion of adults who were married reached 75.3% among women aged 30-34 and 87.2% among men aged 50-54, while only 1% of men and women in the oldest age cohorts (45-49 for women and 50-54 for men) had never been married (ZDHS 2005/6). As seen in Figure 26, having ever been married is more common in Manicaland than in other cohort studies across Africa, particularly for men.

**Figure 26: Percent of men and women aged 15-59 who have ever been married in cohort studies in Sub-Saharan Africa**

<table>
<thead>
<tr>
<th>Location</th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rakai (Uganda) 2005/6</td>
<td>51.5</td>
<td>74.3</td>
</tr>
<tr>
<td>Kisesa (Tanzania) 2003/4</td>
<td>56.3</td>
<td>83.2</td>
</tr>
<tr>
<td>Karonga (Malawi) 2007/8</td>
<td>61.9</td>
<td>81.8</td>
</tr>
<tr>
<td>Manicaland (Zimbabwe) 2003/5*</td>
<td>76.5</td>
<td>85.5</td>
</tr>
<tr>
<td>Umkhanyakude (South Africa) 2006**</td>
<td>17.2</td>
<td>21.9</td>
</tr>
</tbody>
</table>

* = Manicaland: men and women aged 15–54 years  
** = Umkhanyakude: men aged 18–59 years, women aged 18–59 years

Source: Marston et al. 2009
Associated with the high rate of marriage is the information that most Zimbabweans report that their last sexual encounter was with a spouse (Figure 27). With the exception of relationships with boyfriends or girlfriends, other sexual partnerships (at least when measured by relationship with last sexual partner) were quite rare.

**Figure 27: Relationship with last sexual partner (2005/6)**

![Graph showing relationship with last sexual partner](image)

Source: 2005/6 ZDHS

**28. Widowhood is associated with high HIV infection levels, high partner acquisition rates but also higher condom use.** HIV prevalence among men and women who are widowed is very high according to DHS data. In the 2001-2003 survey in Manicaland:

- HIV prevalence was 61% among the widows, and 54% among the widowers (proportions of widowhood calculated among sexually experienced men and women aged 15-54 years) (Lopman et al. 2009)
- Widows were more likely to have high rates of partner change (10 or more reported partners over 3 years) and engage in transactional sex than were married women
- Widows reported comparatively higher condom use and did not have higher HIV incidence over three years of follow-up (suggesting that the very high prevalence among widows is primarily due to infection by the deceased spouse and not due to behavior after the spouse’s death).
- Only 35% of widows reported sexual activity in the past year, compared to 77% of widowers.
- Among sexually active widows, 69% reported that their last partner was married to someone else.
- Widowers were also more likely to report 10 or more partners over the three years of follow-up, and took partners who were a median of 10 years younger than themselves.
- Based on mathematical modeling, it was estimated that the sexual activity of widow(er)s may be responsible for 8–17% of new HIV infections over a 20-year period.

**29. Age-disparate relationships are associated with increased HIV prevalence levels.** Choosing age disparate partners is the main behavioural determinant of the more rapid rise in HIV prevalence in young women than in men. According to the 2005/6 DHS, 16% of women reported that
their first sexual partner was 10 years or more older, and these women were more likely to be HIV-infected (Figure 28).

**Figure 28: HIV prevalence by age of first partner, Zimbabwean women (2005/6)**

<table>
<thead>
<tr>
<th>HIV prevalence (%)</th>
<th>younger or same age (N=67)</th>
<th>&lt;10 years older (N=1755)</th>
<th>&gt;10 yrs older (N=360)</th>
<th>Don't know (N=14)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV prevalence</td>
<td>15.7</td>
<td>14.8</td>
<td>24.9</td>
<td>10.0</td>
</tr>
</tbody>
</table>

Source: ZDHS 2005/6

Gregson *et al.* (2002a) conclude based on Manicaland cohort data that the **substantial age difference between female and male sexual partners is the behaviour responsible for the more rapid rise in HIV prevalence in young women than in men.** Even at young ages, men typically form sexual relationships with younger women, and the age difference is narrow during the late teens but increases progressively with age. For young women, the age difference reduces with age, but even in the 20s, nearly a quarter are in relationships with men 10 years older than themselves. Over the full age-range of 15–24 years, the median age difference with partners is 3 years for men and 6 years for women. Older age of sexual partner was associated with increased risk of HIV-1 infection in men (OR 1.13) and women (OR 1.04) (both changes significant at p<.05). A strong gender effect remains after factors that affect exposure to infected partners are controlled for (Gregson *et al.* 2002a).

According to qualitative research conducted by Gregson *et al.* (2002a), **sexual relationships between age disparate partners are tolerated and allow young people to gain experience, try out potential spouses, satisfy curiosity and peer pressure, and may result in monetary and other gains. Condoms are used selectively and strategically, and STIs are a problem.**

*Reasons given for young women starting sex were marriage or to attract a husband, enjoyment, money, gifts, peer-pressure. Some young women mentioned pressure from their parents to have casual relationships as a means of getting money and household necessities such as soap and cooking oil and to marry and bring in lobola (brideprice) for the family. With one exception, all groups maintained that girls’ first sexual experiences were usually consensual. Nowadays, few waited until marriage before having sex.** Having started, most young women continued to have sex on a regular basis. Young women often have two types of partners: one, an older boyfriend, who has accumulated assets and is able to provide money and gifts; the other, slightly younger, being cultivated as a potential husband...

In a survey of 1,313 men reporting on 2,465 partnerships recruited at beer halls in Harare, 2.5% met a definition of ‘‘sugar daddy’’: men with a nonmarital partner at least 10 years younger and under 20 years old, and
exchanged cash or goods for sex (Wyrod et al., 2010). Men engaging in intergenerational sex with a teenage woman had similar HIV prevalence, incomes, and condom use as men in other partnerships. The study demonstrated that the most common form of intergenerational sex, with the widest age gap and lowest condom use, occurs within marriages and steady partnerships. The authors concluded that such “conventional” intergenerational sex may play the pivotal role in sustaining a generalized epidemic.

30. Commercial and transactional sex are a continuum and accurate data on both types of sex are few because of definitional and measurement problems as well as underreporting of these practices. It is however clear that Zimbabwe has a sex work industry and that transactional relationships are common place.

According to the 2005/6 DHS, 3.8% of men aged 15-54 reported having paid for sex in the past year, and 0.8% of men reported that their last sexual encounter was with a sex worker.

Valid estimates of the number of sex workers in Zimbabwe, their behaviours, or their HIV risk were not identified. A 2008 situation and response analysis (performed by NAC, the International Organization for Migration, UNAIDS, and UNFPA), based on qualitative research in 12 sites, found that sex workers included girls from the age of 12 up to women in their 60s. Sex workers are highly mobile, and may work along trucking routes or from entertainment establishments. Sex workers typically have 1 to 12 clients per day, who could include men from all over southern Africa and from a variety of professions. Condom use was reported to be inconsistent. This report also noted the fluid nature of sex work and the identity of sex workers, noting that:

“a variety of relationships and arrangements may be defined as sex work if underlined by the exchange of sex or sexual pleasure inducing behaviours for cash or in kind. This fluidity underlines the cultural variability of the meaning of buying and selling sex and how sex work is organized. Although there is an increase in the number of women who make a living from selling sex... some transactions are hidden under the guise of “marriage” or mimic it in terms of how the sex workers relate to their clients in many African contexts including Zimbabwe (Magaisa 1999). Consequently, not all women (and men) involved in sex work define themselves as “sex workers” (Magaisa 1999)... Many women are discreet about their activities and engage in sex work under the guise of being mistresses, girlfriends and other arrangements (Magaisa 1999).” (p. 12)

According to Decosos & Padian 2002:

“In 1992, Wilson et al estimated that approximately 10% of the female population in Bulawayo, Zimbabwe’s second largest city, had engaged in full or part time sex work at some time in their lives (Wilson et al. 1992). However, most studies of sex work in Zimbabwe report that sex workers have low average numbers of clients (Clinical Epidemiology Unit [unpublished]; van de Wijgert 1997; Wilson et al. 1989). There is evidence that worsening economic conditions are making sex in exchange for money or material goods more common (Vos 1994).

Thus there is considerable gray area between what may be considered sex work and what may be considered transactional sex, or sex in exchange for money or goods. Data collected from women seen in family planning or primary care clinics in Harare showed that 17% reported ever having received a gift in exchange for sex (Decosas & Padian 2002).

In a study on food insecurity Maringira notes that due to the migration of men to neighbouring countries in search of improved political and economic circumstances some women have faced food insecurity problems have resorted to informal trade and risky behaviour, including trading sex for food. The National Behaviour Change

22 Godfrey Maringira Women and Food Insecurity in Zimbabwe: Stuck between Gender Norms, the Economic Downturn and Climate Change Africa Intelligence’s Gender Issues Unit
31. Sexual and physical violence occur in intimate and other relationships, but wealthier and more empowered women and those in monogamous relationships experience it less often. Some data suggest an association between physical violence and HIV infection, but whether physical violence is a cause or a consequence of a positive HIV status is not clear.

Sexual violence\(^{24}\) and gender based violence (GBV)\(^{25}\) disproportionately affect women and girls of all ages, and take many forms, including rape, domestic violence, forced marriage, exploitation and harassment, sexual slavery, forced prostitution, human trafficking, and genital cutting. In many societies, women are socialised to accept, tolerate, and rationalise such experiences and to remain silent about them. Refusing sex, inquiring about other partners, or suggesting condom use have all been described as triggers for intimate partner violence; yet all are intimately connected to the behavioural cornerstones of HIV prevention (e.g. Maman et al., 2000). Gender-based violence has resulted in women seeking solace, support and sex from additional partners, while maintaining a relationship with their ‘steady’ partner (ten country report Soul City, 2008). Andersson et al. (2007) found that having multiple partners was the most consistent risk factor for domestic physical violence across eight countries analysed.\(^{26}\)

In Zimbabwe, 3 in 10 women reported experiencing physical or sexual violence in the past year, according to the 2005/6 DHS, and nearly 6 in 10 reported having experienced some type of violence—emotional, physical, or sexual—in their lifetime. Among currently married women, 28% reported physical violence and 18% reported sexual violence from their husband. DHS data also show that educated women and women who do not work experience less violence, and young age at marriage and living in a cohabiting union (rather than being married) is a risk factor for violence (Hindin et al. 2008). Data collected from women seen in family planning or primary care clinics in Harare showed that 22% of women reported ever having been forced to have sex with a steady partner, and 5% reported ever having been forced to have sex with a non-steady partner (Decosas & Padian 2002).

Another analysis of data of the 2005/6 DHS by Nyamayemombe et al. (2010) found that religion was a protective factor for gender-based violence, although the difference in spousal violence between religious and non-religious women was significant only for Protestant women (OR 0.64, p=0.015). Women in polygynous unions were significantly more likely to have experienced spousal violence than those in monogamous relationships (OR 1.58, p<0.001), and being married more than once was associated with significantly reduced odds of reporting spousal violence (OR 0.76, p=0.024). Spousal violence also decreased with increased wealth for the third, fourth, and fifth (highest) wealth quintiles, and women who reported that they were involved in all household decisions were significantly less likely to experience violence. Number of children ever born, and accepting attitudes toward violence were strongly (positively) associated with spousal violence among currently married women.

In Nyamayemombe et al.’s analysis, the relationship between gender-based violence and HIV infection was somewhat unclear. There was no difference in the prevalence of spousal violence among HIV-positive and HIV-negative women in monogamous relationships. Currently married women who had experienced physical violence only, or both physical and sexual violence, were significantly more likely to be HIV-positive than

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\(^{23}\) National AIDS Council and UNFPA The National Behaviour Change Strategy Baseline Survey 2009

\(^{24}\) Person has been physically forced to have sexual intercourse; had sexual intercourse because of being afraid of what the partner might do; or been forced to do something sexual found degrading or humiliating

\(^{25}\) Any type of violence directed at groups or individuals on the basis of their gender

\(^{26}\) Other associations included the income gap within households, negative attitudes about sexuality (for example, men have the right to sex with their girlfriends if they buy them gifts) and negative attitudes about sexual violence (for example, forcing your partner to have sex is not rape).
those who had not experienced any physical or sexual violence (OR 1.35, p=0.020 for physical violence only; and OR 1.38, p=0.029 for both forms of violence) (Nyamayemombe et al. 2010).

32. Men often have sex in a drunken state, and alcohol use is associated with higher numbers of lifetime, recent and concurrent partners, as well as with HIV infection and new acquisition of HIV.

A recent systematic review of alcohol use and sexual risks for HIV in SSA showed a consistent association between alcohol use and sexual risk taking (Kalichman et al., 2007). Among people who drink, greater quantities of alcohol consumption were associated with greater sexual risks, frequency of drinking less so. The review also showed a clear gender difference in alcohol use and sexual risks; men were more likely to drink and engage in higher risk behavior whereas women's risks were often associated with their male sex partners' drinking.

The 2005/6 DHS found that 4.5% of both young men and women aged 15-24 reported having had sex in the past 12 months while they or their partner were drunk, although only 0.5% of young women reported being drunk themselves during sex in the past 12 months (DHS 2005/6). Data collected from women seen in family planning or primary care clinics in Harare showed that 24% of women reported that their partner was intoxicated during sexual intercourse more than half the time (Decosas & Padian 2002). Qualitative research conducted by Kesby (2000) with Zimbabwean women in two communal farming areas also found that forced sexual activity with drunken husbands was perceived to be common.

In rural Zimbabwe, alcohol is sold in beer halls and bottle stores, both of which serve as drinking venues and are therefore referred to together as beer halls. A study of the role of beer halls in the Zimbabwean epidemic found that 50% of men, but only 4% of women, had been to a beer hall in the last month. Men and women who had visited a beer hall reported higher numbers of lifetime sexual partners, partners in the last year, and new partners in the past year. Attendance at beer halls was also associated with concurrent sexual partnerships; 60.7% of men and 41.1% of women who reported more than one current sexual relationship had been to a beer hall in the past month (Lewis et al. 2005). Amongst females, widows and divorcees were especially likely to have visited beer halls, with 9% of widows and 10% of divorcees reporting having visited a bar or beer hall in the past month, compared to 2% of women in their first marriage (Spark-du Preez et al. 2004).

A study of male beer hall attenders in Harare during 2000 found that 30% were HIV positive (Fritz et al., 2000). They also had high rates of recent seroconversion (3.4%, 95%CI 1.5 - 6.6, estimated using a detuned ELISA). Recent seroconverters were overall younger and more likely to report sex while drunk. Men reporting sex while drunk were more likely to report unprotected sex with casual partners and paying for sex in the previous 6 months.

In the Manicaland cohort, men and women who attended beer halls had increased odds of being infected with HIV and with reporting STI symptoms, associations that remained significant even when marital status and age were accounted for (Lewis et al. 2005). In addition, the 29% of women who had a regular partner who had visited a beer hall in the last month also had an increased risk of HIV infection. Men were no more or less likely to report being monogamous if they had recently visited a beer hall, while women were less likely to report being monogamous if they had visited a beer hall in the last month. Men and women were more likely to report condom use if they had recently visited a beer hall. Only 1.2% of respondents said they were avoiding beer halls as an HIV prevention strategy, and only 1.0% said their partners were doing so.

33. Several cultural co-factors appear to undergo change – sex education by grandparents is now less common, transactional relationships may be more frequent due to economic...
necessities, dry sex practices are possibly declining, and the polygynous tradition legitimises multiple concurrent sexual partners. Shona and Ndebele societies remain both patriarchal and patrilineal.

Some qualitative research studies have explored cultural factors related to Zimbabwe’s HIV epidemic. Vos (1994) conducted over a hundred interviews with informants in rural Matabeleland. Respondents reported that traditional sex education no longer takes place, and that communication between sexual partners is limited. While large scale migrant labor migration and men’s perceived “need” for multiple partners drives multiple partnerships, women expect rewards for sex outside of marriage, and are often motivated by economic necessity.

Decosas & Padian (2002) discuss the cultural context of marriage and sexual relationships in Zimbabwe:

Shona and Ndebele societies are both patriarchal and patrilineal. Like all patrilineal societies, they impose strict controls on female sexual behaviour because this is the only way to assure the continuity of the male lineage. There is a much more liberal attitude towards male sexual behaviour (Ncube et al. 1997). Formal polygyny, although legal in Zimbabwe, is rare (Weinrich 1983). Nevertheless, many Zimbabwean men report having a second wife. Presumably these are informal unions, and in many cases the “second wife” may actually be a euphemism for a series of casual sexual relationships. The institution of polygamy thereby provides an environment of tolerance for men to engage in multiple parallel sexual relationships.

Indirectly related to the institution of polygamy is the tolerance by traditional Shona society of intimacy between married men and their wife's younger sisters (Bourdillon 1987). This tolerance extends to the relation between male members of the husband's household and unmarried female members of the wife’s household. It is not a licence for sexual intercourse, but allows for a level of sexual playfulness and innuendo. In traditional rural society, the tolerance can be understood in the context that the wife's younger female relatives were the first to be considered for marriage as a second wife, or as a “replacement” wife should the first marriage be infertile. In modern urban society, this tolerance has become a risk factor for sexual harassment and abuse of young girls. …

Women usually start looking for husbands in their late teens. Men, on the other hand, are not considered to be ready for marriage before their mid to late twenties, and are expected to have had several sexual partners before marriage (Gregson et al. 2000, Singh et al. 2000). This explains the discrepancies in numbers of sexual partners among men and women. In the majority of studies in Zimbabwe, 30–50% of men reported having several concurrent sexual partnerships, compared with less than 5% of women. …

Traditionally, grandmothers and aunts discussed sexual matters with adolescent girls while grandfathers and uncles discussed these matter with teenage boys. Such traditional sex education has become rare, in part because there is the assumption that it occurs in the schools (Vos 1994). In fact, most teenagers hear about sex from peers or from the media. In the male sexual behaviour and STD risk awareness study (Olayinka et al. 2000) more than 75% of men in the 27 to 39 year age group reported that they discussed sex with their wives. These discussions were much less common among men older than 40 or younger than 27.

Penetrative penile-vaginal sex is most common, while oral and anal sex are rarely practised (Vos 1994). A recent review of traditional intravaginal practices (Brown & Brown 2000) cited six studies from Zimbabwe. Most reported that the insertion of herbs to tighten or dry the vagina or other practices of vaginal cleaning and wiping were almost universal. In a prospective study in Harare, women who used vaginal desiccants or who inserted herbs before sex were more likely to have STD symptoms and abnormal cervical cytology (van de Wijgert 1997). Several studies report that men encourage and prefer their partners to use vaginal drying agents, yet this preference is expressed primarily by older men (Olayinka et al. 2000; Ray et al. 1996). Concurring with

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27 Informants were hospital patients, students, and teachers. Focus group discussions were conducted with traditional healers, midwives, village community workers, secondary school students, teachers, and commercial sex workers.
this finding is a 1994 report from rural Matabeleland showing that **all older women knew about vaginal drying agents, but none of the younger girls did** (Vos 1994).

In addition, research from Zimbabwe and elsewhere has revealed that lack of sexual satisfaction may contribute to extramarital affairs (Tawfik & Watkins 2007). A qualitative study of concurrent sexual partnerships conducted by PSI Zimbabwe (Taruberekera 2008) found that a desire for sexual satisfaction motivated both men and women to seek concurrent sexual partnerships. Qualitative research conducted in 26 districts of Zimbabwe in 2007 found that the reasons most commonly mentioned for engaging in multiple partnerships were relationship problems (28%), social expectations (17%), sexual drive or attraction (15%), economic pressures (12%), and engaging in transactional sex (9%). Two focus groups conducted by Kesby (2000) with Zimbabwean women in rural communal farming areas produced the following insights:

> All but one of the participants indicated dissatisfaction with their marital sex lives, citing a lack of mutually negotiated sex and a frequent absence of sexual pleasure. Wives' attempts to initiate pleasurable lovemaking were commonly met with suspicion that only infidelity could explain their new found enthusiasm. Meanwhile wives often rejected their husbands' attempts to introduce or impose “new styles” (e.g. new sexual positions or practices). Reportedly husbands cited these refusals as justification for seeking 'more loving' partners outside marriage… Both groups believed that married women are also increasingly seeking lovers to satisfy their sexual and emotional needs and to provide material tokens of appreciation. (p. 1728-1729)

### FACTORS AT THE STRUCTURAL LEVEL THAT IMPACT SEXUAL HIV TRANSMISSION

Structural or macro-level factors are within the control of policy makers or market forces, but are outside the control of individuals, families or community groups. This section briefly discusses the roles of mobility and migration, gender differences, and income inequality in Zimbabwe’s HIV epidemic.

34. Migration and mobility very likely had an effect on the spread of HIV infection in Zimbabwe, whether through geographic heterogeneity in HIV prevalence, or through associated risk behaviors. One explanation for the extraordinary growth of the prevalence of HIV in Zimbabwe in the 1990s has been the country’s relatively high-quality transportation infrastructure.

Migration can influence risk either through exposure to differential prevalence of HIV at various locations or through the alteration of risk behaviors. High HIV prevalence at border crossings has been associated with international travel and trade (Mupemba, 1999; Wilson, 2001). The use of migrant labor has been suggested to contribute to the behaviors leading to the spread of infection (Bwayo et al., 1994; Decosas & Padian, 2002). Migration between rural and urban areas has been associated with marital separation and skewed sex ratios that possibly increase rates of partner change (Bassett & Mhloyi, 1991; Vos, 1994). Such separation is common in order to have urban employment and a rural home (Potts & Mutambirwa, 1990; Moyo & Ray 1993) and is associated with risk. In a study of male factory workers in Harare, those living apart from their wives were found to have higher rates of HIV infection (Mbizvo MT et al. (1996 and 2001).

Analysis of HIV prevalence and incidence data in the Manicaland cohort found:

- No significant differences in HIV incidence or sexual behaviour between rural-to-urban out-migrants and residents (Mundandi et al. 2006, data of 1998-2003)
- Living outside the study site for more than one month was associated with non-significantly increased incidence for men but not for women (Lopman et al. 2008)
- Individuals who had spent less than five years in their household having nearly twice the HIV prevalence (age-adjusted odds ratio = 2.0 for men, 1.4 for women) of those who had lived in their household for 15 or
more years (Boerma et al. 2003, data of 1998-2000).

- The pattern and timing of movement determined the likelihood of being HIV infected: When someone moved mattered (those who had moved as adults or in the last 10 years had more risk); Why someone moved mattered (those who had moved to work on agricultural estates had more risk); and Where someone had traveled and with whom mattered (those who had traveled to Harare without their spouse had an elevated risk) (Coffee et al., 2005).

In addition, data have shown that many couples do not cohabit, presumably largely due to work-related migration. In the 1998-2000 Manicaland survey round, 11% of husbands and a full 53% of wives said they were not cohabiting with their spouse. Most absent husbands are believed to live in cities, towns, mines, and commercial farming estates (Boerma et al. 2003). Data collected from women seen in family planning or primary care clinics in Harare showed that 26% of women replied that their steady partner lived with them half the time or less (Decosas & Padian 2002).

35. Patriarchal societies such as Zimbabwe that socialise men to be dominant and women submissive create enormous power imbalances within a relationship. Women can be aware of HIV prevention, but still have little control over unsafe sexual behaviours of their male partners and hence their very own risks.

Gender-based discrimination means that girls and women do not have the same opportunities as boys and men for education, meaningful careers, political influence, and economic advancement. Many other aspects of daily life can be affected by gender-based discrimination, such as access to health care, and decision power at family and community level.

There is consensus that inequalities between males and females are a critical factor influencing the high rates of HIV in Sub-Saharan Africa (e.g. Gupta 2002, Shisana 2004). Sub-Saharan Africa is the only region in the world where more women are HIV positive than men, highlighting the vast gender disparities of the epidemic. There are important differences between women and men in the underlying mechanisms of HIV infection and in the social and economic consequences of HIV and AIDS.

These originate from biological and socially constructed gender differences between women and men. Patriarchal societies such as Zimbabwe that socialise men to be dominant and women submissive create enormous power imbalances within a relationship (Fox et al., 2007, Jewkes et al., 2006a). This inequality influences, among many other things, the extent to which a woman is able to negotiate safe sexual practices with her partner (Zierler & Krieger, 1997, Pettifor et al., 2004, Jewkes et al., 2006b). Fox et al. (2007) showed that even when women were aware of HIV prevention, they identified unsafe sexual behaviour of their partners (i.e. multiple partners and minimal condom use) as a risk factor for HIV over which they had limited control.

36. Income inequality has been shown regionally to be a correlate of national HIV prevalence. The global financial crisis has had a more severe impact on poor and vulnerable populations, and is likely to reduce budgetary revenues from taxes, as well as donor assistance.

Income inequality among individuals can be expressed by the Gini coefficient and aims to quantify the income gap between those not earning at all and those earning the most. The higher – or closer to 100 - the Gini coefficient, the larger income inequality. The most recent value for Zimbabwe’s Gini coefficient is 50.1 (2007). This means that Zimbabwe’s income inequality is worse than Tanzania’s (34.6), Malawi’s (39.0), Mozambique’s (47.3), almost equal to that in Zambia (50.8), but less severe than income inequality in South Africa (57.8), Botswana (60.5) and Namibia (74.3).

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28 http://www.acdi-cida.gc.ca/CIDAWEB/acdicida.nsf/En/REN-218125542-Q37#1
Fortson (2008), Mishra et al. (2007) and Drain et al. (2004) could not find any clear link between HIV and wealth or HIV and poverty in multi-country analyses. Other researchers have argued that income inequality is a correlate of population HIV prevalence (Stillwaggon, 2002; Bonnel, 2007). Figure 29 illustrates this relationship for East and Southern African countries, using the Gini coefficient to express inequality.

The global financial crisis has wide-ranging impacts especially affecting the poor and vulnerable. For most developing countries, the crisis is likely to reduce budgetary revenues from taxes and/or donor assistance (UNAIDS/World Bank, 2009, p5). There is already evidence that future international support to HIV programmes will be stable or decrease.

Figure 29: Income inequality and HIV prevalence in Sub-Saharan Africa (2008)


Note: No Gini coefficient was available for Eritrea and Mauritius.

Inequality in wealth or income can lead to spread of HIV through producing situations in which wealthy individuals “buy sex” – via transactional or commercial relationships with multiple partners – and poor or needy individuals “sell sex.”

Lopman et al. (2007) analyzed household wealth and its association with HIV incidence and mortality, sexual risk behavior, and sexual mixing patterns in Manicaland. Over the three years between the 1998-2000 study round and the 2001-2003 study round, HIV incidence was higher among poorer men (27.4 infections per 1000 person-years compared to 15.4 infections per 1000 person-years among the richest men), an association that was even stronger among younger men and which persisted when age and geographical location were controlled for. There was no clear association between HIV incidence and wealth for women. Wealthier men reported riskier sexual behavior (more casual and multiple sex partners), but were also more likely to report consistent condom usage in their casual relationships. Wealthier women reported less risky sexual behavior: later sexual debut, fewer casual or multiple sexual partners, and were less likely to engage in transactional sex. Condom use was not associated with wealth for women.
Transmission other than heterosexual

37. There is almost no local data on men who are having sex with men – population size and HIV prevalence are unknown.

The transmission efficiency of unprotected anal sex (especially for the receptive partner) is much higher than vaginal sex (receptive anal intercourse: Boily et al., 2009; male-to-male: De Gruttola et al., 1989, Vittinghoff et al., 1999). Many MSM experience high levels of violence, especially sexual violence (Auvert et al. 2005, Onyango-Ouma et al., 2005).

Data on men having sex with men (MSM) are scarce in Southern Africa in general, and there is no HIV infection data of MSM in Zimbabwe. Some behavioural data from a small convenience sample of Zimbabwean MSM, conducted by Gays and Lesbians of Zimbabwe (GALZ, 2009), found that 19 of 34 men identified as single, while the rest identified as married, committed or dating. Most men reported being sexually active. Many gave inconsistent answers about condom use, suggesting that their condom use was irregular. Most (79%) reported that they had received an HIV test at least once, yet less than half said that they would tell a sexual partner that they were HIV-infected before having sex, or that they would not have sex without protection.

38. Declining maternal HIV prevalence in conjunction with the PMTCT programme has lead to decreasing proportions of infants who are HIV infected. After gains in exclusive breastfeeding in the late 1990, progress stalled and less than 40% of mothers reported exclusive breastfeeding in 2005.

Mother-to-child transmission (MTCT) of HIV peaked at 9.8% (range: 7.4% to 12.1%) in the mid-1990s, and decreased from 8.2% (range: 6.0% to 10.7%) in 2000 to 6.2% (range: 4.9% to 8.9%) in 2005, predominantly attributable to declining maternal HIV prevalence rather than to the PMTCT program (Dube et al. 2008). Of the approximately 10 million children born in Zimbabwe between 1980 and 2005, approximately 5% were vertically infected with HIV (504,000, with a range of 362,000 to 665,000) (Dube et al. 2008). Among HIV-positive mothers, mother to child transmission was approximately 26% in 2008, and had not declined since 2004 (Figure 30).

Figure 30: Mother to child transmission rates (among HIV+ mothers) at PMTCT sites (2004-2008)

![Figure 30](image-url)
In 2005, an estimated 32% of infant infections were attributable to breast-feeding (Dube et al. 2008). The 2006 WHO Consensus Statement on HIV and Infant Feeding\(^{29}\) recommends “exclusive breastfeeding for HIV-infected women for the first 6 months of life unless replacement feeding is acceptable, feasible, affordable, sustainable and safe for them and their infants”. As shown in Figure 31, Zimbabwe has seen some increases in the proportion of infants who are exclusively breastfed in the late 1990, but reported levels of exclusive breastfeeding subsequently decreased.

**Figure 31: Exclusive breast-feeding by age of infant in Zimbabwe (1988-2006)**

![Bar chart showing exclusive breast-feeding by age of infant in Zimbabwe from 1988 to 2006.](chart)

*Source: ZDHS 1988, 1994, 1999, 2005/6*

39. **Transmission through needle sharing during injecting drug use has not been assessed to date in Zimbabwe**

The use of contaminated drug injecting equipment bears a high risk to transmit HIV, and injecting drug use (IDU) is often linked to sex work and multiple partners. Data on IDU are scarce in Southern Africa, and there is no situation analysis on IDU in Zimbabwe.

40. **There is no clear evidence that HIV transmission occurs through use of unsafe (unclean) medical injections, but data is limited. It is possible that there is a link in women between a history of injections from non-health professionals and a positive HIV status.**

Unsafe medical injections can lead to infection with HIV, Hepatitis B and C virus and other blood-borne pathogens. The large uncertainty on the risk of HIV transmission from HIV-contaminated injections makes quantification of the proportion of transmission caused by contaminated injections difficult (White *et al.*, 2007, p. 9794).

The following local data could be identified:

- Among women and men aged 15-49 who received any medical injections in the recent past, 95% reported that the last injection was received with a new needle (ZDHS 2005/6).

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HIV prevalence in women and men who reported recent medical injections is significantly higher than HIV prevalence in those without reported injections (Mishra et al., 2008 based on ZDHS 2005/6 data). Since this is cross-sectional data, it cannot be known whether medical injections are a consequence or a cause of HIV infection (HIV infected people may be more likely to need injections). The HIV prevalence differential was even larger between those having 3 or more medical injections recently versus less than 3. But the difference disappeared when only injections given by a health professional were included (restricted to women’s data). Therefore women may be exposed to HIV during injections given by non-health professionals, or alternatively, HIV infected (sick) women specifically go to non-health professionals for injections (in cross-sectional data, the sequence of events is not clear).

Lopman et al. (2005) analyzed the history of medical injections and HIV incidence in the Manicaland cohort and found that injections were not associated with HIV incidence in males nor in females.

41. According to official Government statistics, all transfusion blood used in Zimbabwe is HIV screened and considered safe. HIV prevalence in blood donors is very low, indicating a functional donor selection and retention system. Infectivity estimates for transfusions of infected blood or blood products are much higher than for other modes of HIV transmission due to the far larger viral dose per exposure than for other routes (Baggaley et al., 2006). According to the 2010 report to UNGASS, all blood used in Zimbabwe is provided by the National Blood Services of Zimbabwe (NBSZ), which attained International Organization for Standardization (ISO) certification in 2007. All blood units received by the NBSZ were screened for HIV and other blood-borne pathogens in a quality-assured manner in 2009. The NBSZ reported a sero-positivity rate of 0.50% (0.60 in females and 0.43 in males) in donated blood in 2008.

KYE Synthesis: A Summary

This Know Your Epidemic synthesis has identified the following key features of the Zimbabwean HIV epidemic:

- A generalised mature epidemic with historically extremely high HIV prevalence levels of about 27% in 1997. While adult HIV prevalence has almost halved from its peak level, there is today a large population of people living with HIV (1.2 million in 2009).

- The epidemic looks fairly homogenous with similar HIV prevalence levels across the ten provinces, but there is local variation in HIV prevalence. There is evidence of particularly high HIV prevalence levels in residents of resettlement farms and growth points. ANC clients residing in areas classified as urban and rural (this excludes growth pints and resettlements farms) have very similar HIV prevalence.

- The urban epidemics continue to contract according to ANC surveillance data.

- There was a sharp drop in HIV incidence from about 5.5% in adults in 1992 to about 0.85% in 2009. This translates still into an estimated 47,309 new adult HIV infections in 2009, and it is projected that this number of annual incident infections may increase in the next few years. New HIV infections in children up to 15 years of age have been declining due to overall lower levels of both HIV infection in women at child-bearing age and mother-to-child transmission interventions.

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30 In women: HIV prevalence 27.5% vs. 20.0% (p<0.0001); in men 29.1% HIV prevalence vs. 13.5% (p<0.0001).
31 In women: HIV prevalence 33.9% vs. 20.8% (p<0.0001); in men 36.0% HIV prevalence vs. 14.1% (p<0.0001).
• Self-reported data from several sources suggest that there has been a reduction of non-regular (casual) sexual partners and an increase in condom use with non-marital, non-regular and commercial sex partners. Reported secondary abstinence has increased in men and women.

• Qualitative data suggest that exposure to relatives and close friends dying of AIDS, leading to increased perceived HIV risk, was the principal explanation for behavior change. Growing poverty, which reduced men’s ability to afford multiple partners, was also commonly cited as contributing to reductions in casual, commercial and extra-marital sex.

• There is a high rate of marriage compared to other countries in the region, although work-related migration means that couples may not always cohabit.

• Women are not very accurate in beliefs about whether or not husband has additional partners, wives, or small houses, and women who do not know that their husband has an additional partner have increased HIV risk.

• Poor communication between couples when it comes to disclosure of HIV testing and status.

• Macro-level factors, such as poverty and deprivation, mobility and migration, violence and gender inequality, for an ever-changing backdrop to the HIV epidemic.
CHAPTER 4. CHARACTERISTICS OF ZIMBABWE’S HIV RESPONSE OVER TIME

POLICY CONTEXT TO THE HIV PREVENTION RESPONSE

42. Zimbabwe has over the last 25 years developed a policy environment for HIV prevention culminating in a multi-sectoral approach lead by a national coordination authority and guided by evidence-informed strategic frameworks.

Following the discovery of the first case of HIV and AIDS in 1985, the Government of Zimbabwe (GoZ) introduced universal HIV screening of blood before transfusion during that year. This was followed in 1987 by a One-year Emergency Short Term Plan aimed at creating awareness and training of health personnel in different aspects of HIV prevention and control. In 1993, the Medium Term Plan was adopted focusing on expanding interventions for promoting behavior change, care for PLHIV as well as epidemiological surveillance. Based review results, a five–year Medium Term Plan was developed in 1994 focusing on a multi-sectoral approach. The main focus of this plan was to reduce transmission of HIV and other STIs, mitigating personal and social impacts of HIV and AIDS/STI as well as socio-economic consequences of the epidemic.

The multi-sectoral approach required a firm institutional coordinating mechanism, leading to establishment of the National AIDS Control Programme (NACP) in 1987. In 1999, the National Policy on HIV and AIDS was adopted, followed by creation of the National AIDS Council through an Act of Parliament. The council became operational in 2000. One of the key issues within the HIV and AIDS policy is prohibition of HIV screening for purposes of employment as well as the requirement for AIDS research to be reviewed by the national Medical Research Council of Zimbabwe and other appropriate review ethics committees.

To operationalize the HIV Policy, the National HIV and AIDS Strategic Framework 2000-2004 was developed to guide the national HIV and AIDS response. In June 2006, the Zimbabwe National HIV and AIDS Strategic Plan 2006-2010 was developed after a thorough review of the HIV Policy of 1999 and the 2000-2004 Strategic Framework. The purpose of the ZNASP is provide a framework for all HIV and AIDS interventions in Zimbabwe. The ZNASP is based on principles that include understanding HIV as an emergency, the need for all stakeholders to work together in a multi-sectoral response, addressing gender inequality and stigma, the need for adequate resources, Zimbabwe’s commitment to international goals and the need to adopt effective and evidence based strategies to fight the epidemic.

43. Zimbabwe has a large number of policy instruments relevant to HIV prevention at national and sectoral level.

Selected policies, guidelines, strategies and plans of the country are listed in Table 4. The Policy on Safe and Voluntary Male Circumcision was launched in October 2009, and a male circumcision strategy is being developed. The latest additions in 2010 are the National Adolescent Sexual and Reproductive Health Strategy 2010-2015, and the Ministry of Higher and Tertiary Education’s HIV and AIDS Workplace Policy.

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32 Zimbabwe Policy on HIV and AIDS 1999
Table 4: Selected national instruments addressing HIV prevention in Zimbabwe

<table>
<thead>
<tr>
<th>Legislation/Policy Instrument</th>
<th>Approval</th>
</tr>
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<tbody>
<tr>
<td><strong>Prevention Policies and Strategies</strong></td>
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<tr>
<td>The Zimbabwe National HIV and AIDS Strategic Plan 2006-2010</td>
<td>2006</td>
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<tr>
<td>The Zimbabwe National Behavior Change Strategy</td>
<td>2006</td>
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<tr>
<td>PMTCT and Pediatric HIV prevention, care National Plan 2006-2010</td>
<td>2006</td>
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<tr>
<td>National Female Condom Strategy 2006-2010</td>
<td>2006</td>
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<tr>
<td>The Zimbabwe Health Sector HIV Prevention Strategic Framework 2007-2010</td>
<td>2007</td>
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<tr>
<td>National Adolescent Sexual and Reproductive Health Strategy 2010-2015</td>
<td>2010</td>
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<tr>
<td><strong>INTERNATIONAL AGREEMENTS</strong></td>
<td></td>
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<tr>
<td>International Conference on Population and Development (ICPD)</td>
<td>1994</td>
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<tr>
<td>Millennium Development Goal 6: To halt and reverse the spread of the epidemic by 2015</td>
<td>2000</td>
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<tr>
<td>United Nations General Assembly Special Session on HIV and AIDS (UNGASS)</td>
<td>2001</td>
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<tr>
<td>Maseru Declaration on HIV and AIDS</td>
<td>2004</td>
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<tr>
<td>Universal Declaration of Human Rights, Economic, Social and Cultural Covenant</td>
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<tr>
<td><strong>NATIONAL POLICIES</strong></td>
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<td>Zimbabwe National HIV and AIDS Policy</td>
<td>1999</td>
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<td>Zimbabwe National Reproductive Health Policy</td>
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<tr>
<td>Zimbabwe Policy Guidelines on Safe and Voluntary Male Circumcision</td>
<td>2009</td>
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<td>National Gender Policy</td>
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<td>National Youth Policy</td>
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<tr>
<td><strong>LAWS</strong></td>
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<tr>
<td>Criminal Procedure and Evidence Amendment Act Number 8: This was drafted in response to the increase in numbers of cases of sexual abuse of minors. Consequently, Victims Friendly Courts were created to ensure that sexually abused minors testify freely without fear.</td>
<td>1997</td>
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<tr>
<td>The Children’s Act</td>
<td>2001</td>
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<tr>
<td>The Child Adoption Act: Allows testing of children for adoption so that HIV positive children will access support services while prospective parents understand what they need to do to ensure the psychosocial well being of the HIV positive child.</td>
<td>2006</td>
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<tr>
<td>Sexual Offences Act: This criminalizes wilful transmission of HIV even between husband and wife. It also provides a stiffer penalty of 20 years for rapists convicted of raping and infecting their victims with HIV.</td>
<td>2003</td>
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<tr>
<td>Criminal Law Reform and Codification Act</td>
<td></td>
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<tr>
<td>Domestic Violence Act: The act criminalizes all forms of violence including physical, sexual and emotional.</td>
<td>2007</td>
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<tr>
<td>Sodomy Act: Provides protection for non-consenting men who are forced to have anal sex</td>
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<tr>
<td><strong>STRATEGIES</strong></td>
<td></td>
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<tr>
<td>The Zimbabwe National Health Strategy 2008-2013</td>
<td>2008</td>
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<tr>
<td>National Gender-Based Violence Strategy</td>
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<tr>
<td>National Strategic Plan for the Education of Girls, Orphans and Other Vulnerable Children</td>
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<tr>
<td>National Male Circumcision Strategy</td>
<td>In draft</td>
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<tr>
<td><strong>GUIDELINES</strong></td>
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</table>
The table illustrates the elaborate policy environment regarding prevention of HIV. Issues of human rights are also covered within the constitution as well as within the ZNASP.

44. However, there are policies hindering HIV prevention and policies which are not effectively implemented, both potentially having a negative impact on HIV prevention outcomes

**Policies hindering HIV prevention:**
- The illegal status of sex work makes it difficult to target and reach them with prevention programmes even though they are a key high risk group in terms of HIV infection and transmission
- Government policy prohibiting teaching of condom use among in school youths is adversely affecting prevention efforts in sexually active youth
- The illegal status of MSM makes it difficult to target and reach them although they are present in Zimbabwe.

**Policies not being implemented:**
- The prevention, control and PEP policy of 2007 aims to reduce HIV related risk, morbidity and mortality among health workers, victims of sexual abuse, and people at risk of accidental exposure to HIV infection. Converting these guidelines into accessible services for women and girls is a slow process, and comprehensive post-rape services remain limited. The MoHCW has made some progress by introducing clinical guidelines for post-rape, and UNFPA, IOM, UNICEF and NGOs are in the process of establishing pilot one-stop centres.
- The Domestic Violence Act passed in 2007 which has potential to curb domestic violence is not fully implemented – domestic violence continues to happen, and so does abuse derived from cultural or customary rites or practices that discriminate or degrade women (virginity testing, female genital mutilation, pledging of women and girls for purposes of appeasing spirits, child marriages, forced wife inheritance etc).
- Although the Sexual Offences Act protects married people through criminalising HIV transmission in marriage, lack of awareness among women, a rigid justice delivery system and entrenched socio-cultural barriers hinder its full implementation
- The legal age of consent is 16 years while the legal age of majority is 18 years
- The policy on HIV testing does not allow a sexually active girl to have an HIV test without consent from parents or guardians
- The law is not user friendly as it requires a person to prove they were HIV negative prior to sexual contact.
45. The primacy of customary law over the Bill of Rights specifically affects women and girls by preventing their constitutional rights on protection and gender equality.

While the Constitution includes a clause that specifically promotes gender equality it nonetheless maintains a “claw back clause” that undercuts fundamental values by recognising the primacy of customary law over the Bill of Rights. The dual legal system results in women's rights not being recognised when customary and constitutional laws are in contradiction, with customary law taking precedence.

Customary laws govern issues of marriage, divorce and inheritance within the context of a patriarchal ideology, which see women as minors with limited decision-making and property rights. Three types of marriage are recognised in Zimbabwe, namely the civil marriage, registered customary marriage and unregistered customary marriage. The predominance of registered and unregistered customary marriages contributes to the vulnerability of women and girls.

46. There are several structures at national and decentralized levels mandated to coordinate the complex multisectoral HIV response in Zimbabwe

In line with the Three Ones principle\(^3\), and under the overall guidance of the ZNASP and the NBCS, there are different layers of coordination between the different implementers in HIV prevention. There is acknowledgement of NAC as the overall coordinating body while the Zimbabwe AIDS Network (ZAN)\(^3\) coordinates the Civil Society’s response. Also of importance is the role of faith and community based networks and organisations some of whom have developed their own prevention strategies.

ZAN developed its strategic plan (2008-2010) in line with the ZNASP, and the focus areas include resource mobilisation, strengthening member competence, improving programming and co-ordination of HIV interventions, improving information flow and best practices uptake by members as well as enhancing advocacy competency among members.

47. The contribution of community level organisations is well recognised, but the community response is poorly defined, not sufficiently prioritised, and affected by the economic crisis

Zimbabwe’s communities are organized around community based organizations (CBOs), support groups, community networks and local-level coordinating structures. These structures are intended to support and coordinate communities in the delivery of community-based health interventions and have in the past resulted in community participation towards local health issues. Both the ZNASP and the National Health Strategic Plan 2009 – 2013 acknowledge that communities are in a position to contribute meaningfully in the provision of health care, disease prevention, promotion of health and well-being, and advocating the need for communities to be afforded decision making space in order for them to participate in local health development issues. Strengthening community participation is also important in ensuring high standards of transparency, accountability of health service management, and promoting community ownership of health programmes. However, community response has suffered from a lack of definition, prioritization and cohesion. The protracted socio-economic decline has left communities disempowered and frequently unable to engage meaningfully in the HIV and AIDS response.

Faith Based Organizations (FBOs) play a critical role in supporting secondary care givers, providing community and home based care for PLHIV along the continuum of care. Furthermore, community and FBOs provide psycho-social support, care for OVC, and life skills programmes for in and out of school youths. There is generally a lack of documentation on church based activities as part of the national response. Poor structures for

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\(^3\) One coordinating authority, One strategic framework and One monitoring and evaluation framework

\(^3\) ZAN is a membership based national network of AIDS Service Organisations, faith based and private organisations which coordinates civil society’s response to HIV in Zimbabwe. It has over 400 members.
CBOs, a limited funding base and failure to utilize local knowledge have had a negative effect on the overall impact of community mobilization and participation efforts.

48. Prevention of new infections is the first of four key strategies within the Zimbabwe National HIV and AIDS Strategic Plan. The Strategic Plan 2006-2010 promotes “refocusing and intensifying behavior change approaches and programmes”. Prevention of new infections, as provided in the ZNASP, should focus on the following issues:

- Promotion of abstinence and delaying first sex;
- Promotion of condom use among regular and non regular partners;
- Promoting uptake of Counselling and Testing services;
- Faithfulness in marriage and stable relationships;
- Addressing underlying factors of vulnerability and reasons why people engage in risk behaviors;
- Ensuring an enabling environment for sexual behaviour change;
- Empowering women to protect themselves from risky partnerships;
- Adopting and strengthening the four prongs of PMTCT;
- Reducing spousal separation;
- Promoting Meaningful Involvement of PLHIV in prevention programmes;
- Consolidating and expanding the in-school life skills programme;
- Mapping and responding to prevention needs of Most At Risk Populations (MARPs) like Sex Workers (SW) and Men who have Sex with Men (MSM)

49. The National Behaviour Change Strategy 2006-2010 is a multi sectoral framework to reduce sexual transmission of HIV by promoting responsible sexual behavior. The NBCS 2006-2010 provides the strategic direction for the National Behavior Change Programme coordinated by the United Nations Population Fund (UNFPA) and the NAC. The guiding principles of the NBCS are:

- Clear and consistent messages about HIV prevention and desired behaviors;
- Combating stigma associated with HIV and AIDS as well as HIV prevention services for PLHIV;
- Leaders at all levels should be advocates and role models in behavior change;
- Increasing male participation in HIV prevention programmes, addressing gender relations and reducing vulnerability of women and girls;
- Empowering target groups to understand their personal risk;
- District structures, faith based organizations and communities need to be involved in decentralized planning of behavior change promotion; and
- Behaviour change (BC) interventions should be developed based on epidemiological as well as behavioral information on age, sex, and behavioral patterns of target groups.

50. The Zimbabwe Health Sector HIV Prevention Strategic Framework 2007-2010 outlines priority objectives and strategies on the health sector HIV prevention response. The purpose of this framework is to guide overall planning, implementation and monitoring of HIV prevention interventions in the health sector. It proposes that gender mainstreaming in HIV prevention will be a central element of the national response, and that “meaningful involvement of PLHIV” should be a cornerstone of the national prevention response especially in the context of positive prevention. It makes strong points about avoiding stigma and discrimination against PLHIV and other vulnerable groups, and about upholding the respect for human rights, ethics, gender, culture and equity in all HIV prevention activities. It stipulates that confidentiality and informed consent must be preconditions to all HIV testing and counselling activities. It also emphasizes that evidence-based HIV prevention programming shall be based on correct data reflecting the body
of knowledge about the epidemic in Zimbabwe. Strategies shall recognise regional and international commitments made by GoZ as part of global responses to HIV and AIDS.

51. **Zimbabwe has crafted and passed bills that help uphold rights of vulnerable people.**

The Criminal Procedure and Evidence Amendment Act No. 8 of 1997 was drafted in response to increased cases of sexual abuse of minors. Consequently, Victim Friendly Courts were created to ensure sexually abused minors testify without fear. In addition, the Criminal Procedure and Evidence Amendment Act and the Sexual Offences Act of 2000 which criminalize wilful transmission of HIV even between husband and wife was amended. A stiffer penalty of 20 years for rapists convicted of raping and infecting their victims with HIV was included in the Sexual Offences Act of 2000. In 2007 the Domestic Violence Act was enacted. The act criminalises all forms of violence such as psychological, physical and sexual. The Child Adoption Act (2006) allows for HIV testing in children up for adoption. Allowing testing before adoption ensures that HIV positive children will receive necessary support while prospective parents also know what they are required to do in terms of providing support to the child living with HIV. Legislation has generally been aimed at protecting vulnerable groups such as women, children, orphans and people with disabilities.

52. **Despite a firm policy environment, the country’s policy and regulatory guidelines are unclear in terms of protecting sub-populations such as sex workers, men who have sex with men, and intravenous drug users. Nevertheless, some organisations work with these groups on HIV prevention and behaviour change.**

These sub-populations have no legal status in Zimbabwe. Protection for non-consenting men who are forced to have anal sex is provided for under the Sodomy Act. The ZNASP recognised the need to address prevention issues for these groups but besides sex workers, there have not been prevention programmes for other MARPs. All available information points to the number of IDUs being very small and conclusions have been that they are not playing an important role in overall HIV transmission in Zimbabwe.

Even with current policy and legal constraints in providing support targeting high risk groups such as Sex Workers, Prisoners, MSM and IDUs with prevention activities, there are organisations working with them. This includes organizations representing gays and lesbians (Gays and Lesbians of Zimbabwe GALZ) and organisations working with sex workers such as Gweru Women AIDS Prevention Association (GWAPA) and Regai Dzive Shiri on their sex worker project under the NBCP.

**HIV PREVENTION STRATEGIC INFORMATION**

This section briefly summarizes issues around the availability of monitoring and evaluation data to inform HIV prevention.

53. **The national monitoring and evaluation system is operational, but not optimally functional, with respect to the 12 components that define a functional M&E system. There is still a need to harmonise the systems to ensure uniformity in data collection and presentation, and data verification at decentralized level need to be strengthened.**

The National AIDS Council coordinates and maintains the national M&E system, and most national programmes and partner projects are linked to the national system. A national M&E plan was developed in 2009 and a multi-sectoral and multi disciplinary National Monitoring and Evaluation Advisory Group (MEAG) facilitates

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35 Zimbabwe UNGASS Report 2009
36 HIV and AIDS National M&E Plan, 2008-2010
participation of all stakeholders in national monitoring and evaluation issues. MEAG also facilitates coordination, quality and standards in monitoring and evaluation.\(^{37}\)

The National AIDS Reporting Form is used by stakeholders to report data on selected indicators. Different sectoral coordinating bodies were identified to coordinate data collection and reporting within respective sectors. The MoHCW collects data from health institutions while ZAN coordinates M&E within civil society organizations. Private sector M&E is coordinated by the Zimbabwe Business Council on HIV and AIDS for the non medical business sector while the Employers Confederation of Zimbabwe collects data from employers. The Zimbabwe Medical Association coordinates M&E for the medical sector.

### Gaps – M&E system

1. There are inconsistencies in data both from the NAC and the MoHCW, underlining the need to harmonise the M&E systems to ensure uniformity in data collection, presentation and use.\(^ {38}\)
2. The lack of incentives for district data verification activities affects full operationalization of the M&E system.
3. The database and data management system requires improvements to minimize errors in data entry, analysis and utilization.
4. There is an imbalance between quantitative and qualitative M&E indicators within the National AIDS Reporting Forms.
5. The data from the private sector are not well captured in the current national M&E system.
6. There are M&E capacity gaps in government and civil society organizations.
7. The Evaluation aspect is weak; as such no discernible evaluation work of note has been commissioned yet.

### 54. Sentinel surveillance of pregnant women has been implemented every 2-3 years and this is a valuable source of data on HIV prevalence trends and for estimations and projections. The use of PMTCT programme data for HIV surveillance is being evaluated.

The MoHCW conducts antenatal clinic (ANC) sentinel surveillance since 1989 to establish the HIV and syphilis prevalence among women attending ANC. The last surveys have been conducted in 2002, 2004, 2006 and 2009. The data are used by the MoHCW and the Estimates Working Group to generate national estimates using the Estimation Projection Package (EPP) and Spectrum software. The 2009 round also collected data on PMTCT uptake to evaluate differences in those using and refusing PMTCT services. A comparison was made to evaluate the appropriateness of using PMTCT programme data for HIV surveillance purposes.\(^ {39}\)

Population level data on HIV prevalence were collected through the Demographic and Health Survey 2005/06 for the first time. Importantly, this survey does not provide HIV prevalence information on children 0-14 years and adults aged 50 or older. Also, the survey is not designed to provide HIV prevalence data of MARPs like sex workers.

### 55. The NAC National AIDS Reporting Form collects routine programme monitoring data and provides information about outputs of prevention activities. In 2009, 70% of implementers complied with this reporting system.

All district, provincial and national quarterly as well as annual reports are produced using the NARF.\(^ {40}\) Each implementing partner is provided with a NARF to complete on a monthly

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\(^{37}\) ZNASP MTR July 2009

\(^{38}\) For instance, the 2008 NAC annual report put the number of STI cases at 233 609 while another NAC report put the number at 188 739. The MoHCW put the number of cases at 314 158. These are three different figures for one year.


\(^{40}\) The National AIDS Reporting Form collects information on PMTCT, HIV Counselling and Testing, STIs, Condom Promotion and Distribution, Youth in School and out of School, Behaviour Change Communication, Most at Risk Populations, Infection Control, Community and Home Based Care, and Workplace prevention programmes.
basis and these are submitted to the NAC secretariat following the NAC reporting structures. Just over 50% of implementing organizations were submitting National Activity Report Forms (NARF) on a monthly basis to NAC Districts Offices in 2008. This improved to 70% in 2009. The remaining challenge is to achieve 100% in registration and reporting by implementers. The Country Harmonization and Alignment Tool reported that some partners do not feel obliged to submit reports to NAC but only to their funding partners.

### Gaps – Routine programme monitoring

1. Inconsistent reporting or lack of reporting through the NARF – compliance by service providers and implementers at 70% in 2009
2. Insufficient data quality and completeness
3. Lack of capacity to develop and maintain reporting system at primary data collection level
4. Delays in reporting monthly data by implementers
5. Bias towards quantitative data collection
6. Lack of harmonization between the Health Information Management System (that is, the District Health Information System) and the programme monitoring within NAC’s National M&E system

### 56. Routine monitoring activities are complemented by behavioural research studies, and periodic reviews compile these data to “take stock” and inform future prevention programming.

There have been several reviews conducted in Zimbabwe and the most prominent was the comprehensive review of behavior change as a means of preventing sexual HIV transmission in Zimbabwe by NAC and UNFPA in 2005. The review provided an evidence base for the development of the NBCS. Other key studies include the 2005 UNAIDS epidemiological review, which was updated in 2010, and the 2006/7 STI/prevention review. A BC baseline study was conducted in 2007 while a BC interim survey was conducted in 2009. These are critical tracking activities especially for the NBCP. There were also rapid assessments from 26 first phase NBCP districts in 2007. These were mainly rapid reviews done by NGO staff using key informant interviews and focus group discussions. In addition, there are Knowledge Attitudes and Practices surveys conducted annually by Population Services International (PSI). These have provided useful information on condom use, concurrent sexual partnerships as well as HIV testing and counselling. Randomized Controlled Trials (RCTs) have been conducted by institutions like ZiCHIRE, Regai Dzive Shiri and Zvitambo.

### 57. The Manicaland HIV/STD Prevention Project is a major collaborative scientific research initiative that has been underway in rural areas of eastern Zimbabwe since 1998.

It is the longest ever followed study cohort in Zimbabwe. The study was initiated through the establishment (in 1998) and follow-up of a general population cohort of more than 10,000 adults and parallel surveillance of women attending local antenatal clinics in Manicaland. Some of the major objectives of the Manicaland study are:

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41. The NAC reporting structure is from the district level to the provincial level and the national level
42. NAC Annual Report 2009
43. Zimbabwe Country Harmonization and Alignment Tool Report 2009
44. NAC/UNFPA Comprehensive Review of Preventing Sexual HIV Transmission in Zimbabwe
45. Evidence for HIV Decline in Zimbabwe, a comprehensive review of the epidemiological data, UNAIDS 2005
50. Biomedical Research and Training Institute website: [www.brti.co.zw](http://www.brti.co.zw)
To measure trends in HIV prevalence, HIV incidence, AIDS mortality and the wider socio-demographic impact in a general population sample in eastern Zimbabwe;

To describe key determinants in the spread and impact of HIV/AIDS;

To provide data on trends in coverage and on the effectiveness of HIV prevention, treatment and impact mitigation strategies - including estimates of current and potential future population-level impact derived by fitting mathematical models to local data;

To disseminate the research findings at international, national and local levels and contribute to their utilization in the formulation and implementation of policy; and

To contribute to building local capacity in HIV/AIDS research and programming in Zimbabwe

Gaps – Research studies and surveys

1. There is no centralised national database for all HIV related research studies
2. The Young Adult Survey has not been conducted since 2002
3. There have not been research on MSM although they are part of the population
4. There has been inadequate research into multiple and concurrent partnerships (MCP) besides PSI and UNFPA, although it is widely believed to be one of the key drivers of the epidemic in Zimbabwe
5. There is no coordinated mechanism for sharing research findings (this may in part be due to different funding sources for various studies).

HIV PREVENTION PROGRAMMES

58. The National Behavior Change Programme has been rolled out to all 62 districts of the country after operating in 26 districts first.

The National Behavior Change Strategy (NBCS) 2006-2010 outlines four key focus areas: 1) Creating an enabling environment for behavior change; 2) Increased adoption of safer sexual behavior and risk reduction; 3) Increased utilization of HIV prevention services; and 4) Improved national and sub-national institutional frameworks to address behavior change.

The behavior change component was being implemented in 16 districts with Expanded Support Programme support and a further 10 districts with European Commission support. Figure 32 shows the districts covered by the National Programme as of 2008. With Global Fund Round 8 funding, the National Behavior Change Programme was rolled out to all 62 districts of the country beginning in January 2010.
Figure 32: Coverage of the Expanded Support and European Commission behavior change programme, Zimbabwe (2008)

Source: ESP Annual Report 2008

National coordination is done by UNFPA in collaboration with the NAC, which is responsible for the NBCP and implemented at district level by 8 NGOs contracted by UNFPA. The involvement of traditional, opinion and political leadership and FBOs promotes open dialogue on risky behaviors and negative cultural practices that fuel HIV transmission. Table 5 summarizes monitoring data from the behavior change programme in 2009.
Table 5: Activity monitoring data from the behavior change programme in 26 districts of Zimbabwe (2009)

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Female 2009</th>
<th>Male 2009</th>
<th>Total 2009</th>
<th>Female Cumulative</th>
<th>Male Cumulative</th>
<th>Total Cumulative</th>
</tr>
</thead>
<tbody>
<tr>
<td>People reached during sensitization/ action planning</td>
<td>19,649</td>
<td>19,584</td>
<td>39,233</td>
<td>201,127</td>
<td>156,049</td>
<td>357,176</td>
</tr>
<tr>
<td>Wards that have gone through community action planning</td>
<td>n.a.</td>
<td>n.a.</td>
<td>500</td>
<td>n.a.</td>
<td>n.a.</td>
<td>799</td>
</tr>
<tr>
<td>BC facilitators trained</td>
<td>1,560</td>
<td>1,284</td>
<td>2,844</td>
<td>2,152</td>
<td>1,745</td>
<td>3,897</td>
</tr>
<tr>
<td>Persons reached by BC facilitators (person exposures)</td>
<td>2,747,159</td>
<td>1,838,112</td>
<td>4,585,271</td>
<td>3,075,016</td>
<td>2,147,055</td>
<td>5,222,116</td>
</tr>
<tr>
<td>People who have been certified (completed 11 week sessions)</td>
<td>107,660</td>
<td>55,994</td>
<td>163,654</td>
<td>108,751</td>
<td>57,824</td>
<td>166,575</td>
</tr>
<tr>
<td>Persons reached through video screening and other BC events (person exposures)</td>
<td>57,652</td>
<td>46,152</td>
<td>103,804</td>
<td>121,032</td>
<td>107,842</td>
<td>228,874</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Traditional / religious</th>
<th>Other</th>
<th>Total</th>
<th>Traditional / religious</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of leaders trained</td>
<td>2,098</td>
<td>896</td>
<td>2,994</td>
<td>4,975</td>
<td>1,777</td>
<td>6,752</td>
</tr>
<tr>
<td>Number of leaders refresher trained</td>
<td>1,216</td>
<td>459</td>
<td>1,675</td>
<td>1,270</td>
<td>466</td>
<td>1,736</td>
</tr>
</tbody>
</table>

Source: ESP Annual Report 2009 UNFPA

Annex D gives further detail by presenting BCC activities implemented by different organisations, how the activities were delivered, the main messages and target groups, and estimated proportion of target group reached.

59. NBCP interim results suggest that the National Behaviour Change Programme may positively influence partner change, communication between partners, condom use, and community norms on concurrency. The Regai Dzive Shiri HIV prevention intervention trial for adolescents found less impact.

The NBCP interim survey reported that 94% of the people who attended BC meetings found the information useful while 33% percent reported that they had started being faithful to one partner. In addition, improvements were reported in partner discussions on HIV and sexual health, condom use as well as partner reduction. The programme has strong community participation with the majority of respondents interviewed indicating that they heard about BC from Behavior Change Facilitators.

There have been reported improvements in community norms about partner concurrency between the baseline and interim survey. In 2009 compared to 2007, more people disagreed that in their communities most men (21%
vs. 14%) and women (24% vs. 20%) have multiple sexual partners even while married and that most women belong to a ‘small house’ (39% vs. 34%). However, more people disagree that few men in their communities have ‘small houses’ (18% vs. 14%)\textsuperscript{52}. The programme uses a mix or methods and approaches to facilitate BC, and some messages are targeted at specific populations like women and youths.

The Regai Dzive Shiri cluster randomised trial tested a community-based, multi-component HIV and reproductive health intervention aimed at changing social norms for adolescents in rural Zimbabwe (Cowan et al., 2010). It found modest improvements in knowledge and attitudes among young men and women in intervention communities, but no impact on self-reported sexual behavior. There was no impact of the intervention on prevalence of HIV or HSV-2 or current pregnancy. However, women in intervention communities were less likely to report ever having been pregnant. The authors concluded that this trial provides further evidence that behavioral interventions alone are unlikely to be sufficient to reverse the HIV epidemic.

Gaps – Behaviour change programming and interventions

1. No targeted messages for Most At Risk Populations
2. Some of the community leaders do not act as role models i.e. behave in ways which can promote risky behaviours
3. The interim survey reported that adult men (66%) and women (60%) tend to participate in BC meetings more than the youth (51% and 48% respectively). The BC meeting approach may not be the most appropriate for reaching youth
4. There are gaps in tertiary institutions having sufficient Behavior Change Facilitators and in implementing NGOs coordinating the work with tertiary institutions and other organisations working on HIV prevention
5. There was no evidence of audience segmentation - messages may reportedly reach a high number of people but those may not constitute the target audience
6. There is no evidence for BC activities within support groups of PLHIV. This is a critical gap especially in the context of reduced condom use among PLHIV\textsuperscript{53}.

60. Male condom distribution almost doubled from 2000 to 2008 and shown some decline in 2009. The increase is being attributed to the strong condom social marketing initiatives and distribution infrastructure from national to village level, whereas the decline may be due to further contraction of the retail and wholesale sector in the economic crisis.

In Zimbabwe, condom promotion and distribution is spearheaded by both the MoHCW, the Zimbabwe National Family Planning Council and Population Services International. The National Female Condom Strategy (2006-2010) was developed and is currently being implemented\textsuperscript{34}. The main objective of the ZNASP (2006-2010) under condom distribution is to make more widely available both re-branded public sector and socially marketed condoms in rural and remote areas. The ZNASP target for condom distribution is 150 million condoms per year by 2010. The Zimbabwe National HIV and AIDS Policy states that “To limit HIV transmission through sexual intercourse, condoms should be made available, accessible and affordable to all sexually active individuals.”

\textsuperscript{52} UNFPA/NAC. 2009. National Behaviour Change Strategy Interim Survey
\textsuperscript{53} N. Taruberekera et al. 2010. Risk-Taking Behaviors of HIV-Positive Adults in Zimbabwe: Opportunities for Prevention with the Positives
In summary, the Zimbabwe condom distribution efforts have reported increases in condom distribution up to 2008. Major success has been achieved in female condom distribution which is now reported to be the highest in the world. Also, there has been reported a zero stock-out rate for condoms under the Delivery Team Top-Up (DTTU) system and PSI social marketing through identified outlets. A strong infrastructure for condom distribution from national to village level has been developed. All procured commodities are assessed for quality by the Medicines Control Authority of Zimbabwe and all commodities that fail are destroyed.

Figure 33 shows male condom distribution by year from 2000 to 2009. Although there was an increase in public sector condom distribution from 2008 to 2009, overall condom distribution dropped by 5,506,938 in the same period. While the increase in public sector condom distribution has been attributed to the effectiveness of the DTTU system, possible reasons for overall condom distribution decline are:

- A significant number of trade outlets (26%), particularly in rural areas, closed at the height of the economic crisis in 2008
- Eroded purchasing power and liberalization of markets, there is weak demand for bulk purchases at the wholesale level; consequently 47% of wholesalers have either closed and/or now act as retailers.
- The consumer perception of what is considered affordable is in a state of flux - the dollarized economy is in its infancy and there are fluctuations in pricing of goods based on the USD/SA Rand exchange rate
- Limited supply of smaller denomination coins, particularly for USD, many traders of low-end items attempt to sell in bulk, and most retail shops barter for change in place of coins.

Figure 33: Male condom distribution in Zimbabwe (2000-2009)

<table>
<thead>
<tr>
<th>Year</th>
<th>Social Marketing</th>
<th>Public Sector</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>48,810,415</td>
<td>26,092,440</td>
<td>74,902,855</td>
</tr>
<tr>
<td>2001</td>
<td>65,092,440</td>
<td>28,596,280</td>
<td>93,688,720</td>
</tr>
<tr>
<td>2002</td>
<td>69,596,280</td>
<td>28,596,280</td>
<td>98,192,560</td>
</tr>
<tr>
<td>2003</td>
<td>67,897,385</td>
<td>28,596,280</td>
<td>96,493,665</td>
</tr>
<tr>
<td>2004</td>
<td>81,233,675</td>
<td>28,596,280</td>
<td>109,830,955</td>
</tr>
<tr>
<td>2005</td>
<td>77,059,898</td>
<td>28,596,280</td>
<td>105,656,178</td>
</tr>
<tr>
<td>2006</td>
<td>79,773,046</td>
<td>28,596,280</td>
<td>108,369,326</td>
</tr>
<tr>
<td>2007</td>
<td>86,562,348</td>
<td>28,596,280</td>
<td>115,158,628</td>
</tr>
<tr>
<td>2008</td>
<td>95,463,490</td>
<td>28,596,280</td>
<td>123,059,770</td>
</tr>
<tr>
<td>2009</td>
<td>89,956,552</td>
<td>28,596,280</td>
<td>118,552,832</td>
</tr>
</tbody>
</table>

Source: Ministry of Health and Child Welfare AIDS and TB Programme

Public sector condom promotion is done by the MoHCW, the Zimbabwe National Family Planning Council (ZNFPC) and are distributed through a public health sector network with support from John Snow Inc (JSI) DELIVER project in which condoms are delivered to outlets every 2 months under the Delivery Team Top-Up system (DTTU system). Community based distributors at sub-district level ensure that condoms availability as near as possible to the community. There are Depot Holders at community level who keep back up stocks for community based distributors in the event of stock outs.

Zimbabwe UNGASS Report 2009
The ZNASP MTR 2009 concluded there is still high preference for socially marketed condoms (Protector and Care) versus the government distributed ones (Panther/Femidom). The National Female Condom strategy had forecasted female condom consumption of 14,055,004 by end of 2010. This was surpassed with distribution and consumption of 15,426,325 female condoms between 2006 and 2009 - Figure 34.

**Figure 34: Female condom distribution in Zimbabwe (2000-2009)**

In the MIRA (“Methods for Improving Reproductive Health in Africa”) trial, van der Straten et al. (2010) found that high condom use levels achieved during the trial were not sustained post trial in the condom group. The results suggest that some level of services, including counselling, should be continued beyond the duration of the trial.

**Gaps – Condom promotion and distribution**

1. There are no approaches for promoting condom use in PLHIV especially in the context of sero-discordance
2. There is need to develop key message and targets for different sub-populations
3. Distribution targets for male condoms were unrealistic i.e. not based on an understanding of pathways for further growth and latent demand (the target set by the ZNASP of 150 million condoms per year was not attained)
4. Further increases in condom use among casual partners and commercial partners appear difficult
5. Myths, misconceptions and negative perception by many of the public sector distributed condoms persist – there are insufficient marketing efforts for public sector condoms and unattractive packaging of public sector condoms
6. Service providers are not confident to educate people and demonstrate the use of the female condom
7. There are social norms that create barriers to communication on sex and negotiating safe sex, in particular within marriage
8. There is inadequate enquiry into understanding of who is using condoms, with what partners, in what kinds of sexual acts, how consistently and how correctly

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56 Extracted from MTR and other recent reports

57 Extracted from MTR and other recent reports
61. All schools must provide life skills based HIV and AIDS education to pupils, but there is neither an approved strategy nor a recent evaluation of the HIV education in schools. Condoms and contraceptives are not part of the in-school education.

The Ministry of Education, Arts, Sport and Culture (MoEASC) policy on Life skills based HIV and AIDS education in schools (Circular 16 of 1993) is that all schools should provide life skills based HIV and AIDS education to pupils in schools\(^58\). A pre-service training on life skills based HIV and AIDS education has been in existence for all student teachers since 1994. In addition, each provincial office has an Education Officer (EO) responsible for HIV and AIDS, Life Skills as well as Guidance and Counseling\(^59\). A UNESCO review of the Education Sector Response to HIV in Southern Africa\(^60\) concluded that Zimbabwe has a weak education sector response. The Adolescent Sexual and Reproductive Health (ASRH) Assessment (2008) reported existing linkages between schools and ASRH service providers in provision of Life Skills IEC materials and training sessions. These linkages can be strengthened to improve provision of HIV prevention services for in school youths. The MoEASC Draft Interim Plan 2010-2011 reported that at least 10-15% of children are not in school while there are an estimated 976,000 children orphaned by AIDS.

A critical issue noted is that the HIV and AIDS Life Skills Strategic Plan for the period 2006 to 2010 developed with support from UNICEF was finalized, but was rejected by the Ministry of Education Sport and Culture. Without this strategic plan, the life skills programme is running in a vacuum. Furthermore, there has not been an evaluation of the Life Skills Education programme making it difficult to ascertain progress made, address key gaps and refine programme content in line with epidemic trends and the national response. Although there is no official documentation on the state of the programme, there are indications that it has become redundant given the absence of a Life Skills education strategic plan.

A study by SACMEQ\(^61\) on HIV knowledge concluded that only 4% of grade six students in Zimbabwe had desirable HIV and AIDS related knowledge levels against 93% of teachers who reportedly had desirable knowledge.

The ZNASP MTR identified the weak linkages between the school system and the family as a major problem. It highlighted the need for the family to utilize youth friendly information about HIV and AIDS to compliment what youths learn within the school based programme. Most colleges allocate 1-2 hours weekly and ensure that every student teacher goes through the programme\(^34\). It could not be ascertained whether this is being implemented within institutions and if there are any mechanisms like examinations to ensure all student teachers take it seriously.

The HIV and AIDS Life Skills programme promotes abstinence and the ministry prohibits teaching of contraceptives including condoms. Prevention programmes for in school youths are based on the HIV and AIDS Life Skills Education Syllabus\(^62\) which provides different messages for each specific level from grade four (4) up to grade (7) seven. Key HIV issues covered in the Life Skills syllabus are

- What is HIV and AIDS,
- Transmission and prevention of HIV;
- Myths and misconceptions about HIV and AIDS;
- Linkages between substance abuse and HIV infection; and
- Living with and caring for PLHIV

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\(^{57}\) NAC/UNFPA: Comprehensive Review of Behavioural Change as a means of Preventing Sexual HIV Transmission in Zimbabwe

\(^{58}\) UNGASS Report 2009


\(^{60}\) SADC/UNESCO 2010, Review of the Education Sector Response to HIV and AIDS in Africa

\(^{61}\) Southern and Eastern Africa Consortium for Monitoring Educational Quality (SACMEQ) 2010. How Effective are HIV-AIDS Prevention Education Programmes?

\(^{62}\) MoESAC HIV and AIDS Life Skills Education Primary School Syllabus Grade 4-7
The NBCP provides for separate peer sessions for youths and has specific topics for young people. However, the focus and quality of these programmes could not be ascertained. Figure 35 shows the number of youth person exposures (young people reached with a specific HIV prevention messages) to HIV and AIDS Life Skills Education in 2007, 2008 and 2009. The number of youth person exposures to HIV and AIDS life skills education decreased from 2008 to 2009. No documentation on the reasons for decline could be identified.

**Figure 35: Youth person exposures to HIV and AIDS life skills education in Zimbabwe (2007-2009)**

![Bar chart showing youth person exposures to HIV and AIDS life skills education in Zimbabwe (2007-2009)]

Source: NAC Annual Reports 2008 and 2009

### 62. The health education programme for youths in tertiary institutions focuses on key aspects like condoms, partner reduction, HIV testing and disclosure, and age mixing. Monitoring and coordination are weak and actual implementation is not systematic.

Most students within Zimbabwe’s tertiary institutions fall between the 19-25 age groups where most are introduced to sex. The Ministry of Higher and Tertiary Education (MHTE) has a Health Education programme which encompasses reproductive health as well as HIV and AIDS. Despite having an HIV and AIDS workplace policy for staff at ministry level, there is no HIV and AIDS policy for students in tertiary institutions. Although there are BCFs among university students, improved collaboration between BC implementing organizations and organisations working within tertiary institutions may be more effective especially with evidence of MCPs and transactional sex within university students. There have been prevention programmes within tertiary institutions run mainly by NGOs such as Students and Youths Working on Reproductive Health Action Team (SAYWHAT) and Sustainability, Hope, Action, Prevention Education (SHAPE) Zimbabwe though their scale is limited to due to limited funding. Prevention programmes in tertiary institutions focus on Condom promotion and distribution; Partner reduction; HIV testing and counseling; Disclosure; Access to treatment and to PMTCT services; and Reducing age mixing.

There is however, weak coordination of youth programmes and absence of focal persons to focus on implementation of HIV prevention activities in tertiary institutions. Furthermore, the absence of a clear prevention strategy for tertiary institutions means programming is not systematic.

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63 SAYWHAT Baseline Study on Access to Reproductive Health Services in Tertiary Institutions, February 2010

64 Tsitsi B Masvaure. 2009. Living of Sex: Male Students and Pimping at a Zimbabwean University Campus.
Gaps – Youth in school programming (all levels of educational institutions)

1. No National HIV and AIDS Life Skills Strategic Plan and no National Tertiary Institutions HIV Prevention Strategy
2. An estimated 10-15% of children of school going age are not in school placing them at further risk and making them hard to reach with HIV prevention programmes
3. Weaknesses in monitoring and reporting of in-school HIV activities - in tertiary institutions there is no agreed harmonized reporting framework and indicators
4. Confusion and poor coordination in tertiary institutions between behavior change facilitators, the BC implementing NGOs and organisations working on HIV prevention; the BC programme does not include organizations working within tertiary institutions

63. The Adolescent Sexual and Reproductive Health Strategy is used to guide service provision for out of school youth. Youth friendly services are available but have their funding and human resource challenges.

Programming for youths out of school is difficult as they are a transient group. They often move from one location to another and it is critical to ensure nationally harmonised packages which young people can access wherever they go. Youth Friendly Centres have been used to reach out of school youths with the overall coordination of ZNFPC. There were two models with one standalone multipurpose that had 22 sites supported by the GFTAM round one. There is also the integrated youth-friendly service provision model usually within health centres. The Global Fund supported sites have closed due to lack of funding and the lack of creative materials relevant to youth. The EC/UNFPA supported integrated sites were affected by staff turnover during the 2007/8 health sector crisis. The number of young people who were reported to have visited youth friendly centers declined from 31,161 in 2008 to 28,370 in 2009. Youth Friendly Centres that have remained open have been negatively affected by shortage of personnel (NAC 2009 Annual Report). There was also a GTZ supported youth programme under ZAN titled Join-In-Circuit (JIC). The Join-In-Circuit programme targeted youth and advocated for behavior change in an interactive and innovative manner, operating as part of a wider campaign called “Don’t give AIDS a chance”.  

As such, the intended target audiences are not receiving adequate services. Current efforts being coordinated by NAC with funding from the European Union have led to the establishment of the Zimbabwe National Young People’s Network on HIV and AIDS. Its key role is to mainstream youth issues into the overall NAC coordinating framework. It also provides a mechanism for open dialogue and exchange between youth groups, youth serving organizations and relevant partners in the national response.

Gaps – Out of school youth programming

1. There is need for innovative and cost effective models for YFS provision as the standalone model has shown weaknesses, being expensive and with limited coverage
2. The ASRH strategy has not been widely disseminated with some service providers expressing lack of awareness regarding its existence
3. There is no mapping of organisations providing prevention services to youths out of school
4. Funding for Youth Friendly Centres that were being supported by the Global Fund Round 1 has ended

63 The JIC concept focused on issues of love and sexuality as they relate to HIV and AIDS. Its intention was to address issues of pleasure and joy in love relationships rather than just focusing on danger and risk. Central to this concept was the belief that love, sexuality and growing up are pleasurable events in a young persons’ life which programmes need to focus upon.
5. There are no creative materials to attract youths to use YFS.

64. The policy context for the provision of male circumcision has been created and an ambitious five-year target set. The MC intervention has started in pilot sites.

The ZNASP identifies MC as a potential service-based HIV prevention intervention. Zimbabwe is generally a low-circumcising nation but there is evidence that some minor ethnic groups, the Tonga, Chewa, Moslem and Tshangani found in some areas or regions of Zimbabwe practice MC for various reasons which include cultural and religious reasons. The ZDHS (2005/06) estimated the percentage of circumcised men to be 10.3% of males between 15-49 years.

A male circumcision situation analysis (feasibility and acceptability) concluded that MC scale up will is feasible for already circumcising and non circumcising communities. A tool to assess readiness of health facilities to introduce or expand provision of male circumcision as part of a comprehensive HIV prevention programme was developed. The MC Policy was launched in November 2009 as a component of the overall HIV prevention strategy. The goal of the policy is “to provide a framework for the provision of safe, accessible, voluntary and sustainable male circumcision services in a way that safeguards the human rights of individuals and communities”. The MC policy further highlights that MC services shall be provided alongside other male SRH services as an additional entry point for increasing male participation in HIV prevention services.

The MoHCW is leading MC implementation, and training was undertaken by ZNFPC with PSI providing technical and financial support for the initial phase. Other agencies involved include civil society, UNFPA, WHO, churches and traditional circumcisers. Four health centres were selected as MC pilot sites (Spill House Harare, Mutare Provincial Hospital, Karanda Mission Hospital Mt Darwin, Bulawayo Eye Clinic and Manyame Air Base). As of August 2010, an estimated 10,000 men have been circumcised.

The national MC target by 2015 is to reach 80% coverage of 15-29 year old HIV negative adolescents and men, involving an estimated 1.2 million MC procedures. Community mobilization can only take place once services are widely available.

65. STI prevention is now part of all HIV prevention programmes and has been linked to other services like HIV testing and counselling, PMTCT, ART and condom promotion. In reality, STI activities are under-resourced and have lost visibility and support compared to the time of the vertical STI control programme.

The Health Sector Strategy recommends syndromic STI case management at all levels. Zimbabwe has a comprehensive STI prevention and control programme whose main strengths lie in a well structured STI training programme and full integration of STI control into Primary Health Care and other healthcare services. A review of the sexually transmitted infections programme in Zimbabwe was conducted in 2007. The review reported that all provinces conduct health education and promotion programmes on STIs. Key approaches for STI prevention and management include condom distribution and promotion, as well as encouraging early treatment of STIs. The review noted that STI patients are referred to related services like counseling and testing and that there is cross referral to TB, PMTCT and ART services. Screening of antenatal and family planning clients for

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66 NAC/MoHCW/UNFPA, 2008 A situation analysis of male circumcision in Zimbabwe
67 Government of Zimbabwe National Male Circumcision Policy for HIV Prevention
68 Ministry of Health and Child Welfare Policy Guidelines on Safe and Voluntary Male circumcision
69 Such as: Reduction in the number of sexual partners; Provision of male and female condoms and promotion of their correct and consistent use; Delaying onset of sexual activities; Diagnosis and management of STIs; HTC and referral for treatment care and support; Family planning services; and Any other emerging prevention methods.
70 ZNASP MTR July 2009
STIs should be routine while partner notification through the use of contact slips should be done consistently. However, the review concluded that the integration of STI programming into HIV prevention - as a reaction to progressive shortages of resources - has resulted in many challenges including the sidelining of STI management since it is not the primary focus within HIV prevention. In addition, all the services provided above which are supposed to be routine were reportedly being inconsistently offered, while within rural and district health centers STI management was reportedly fully integrated into the general outpatient clinics where the bulk of the nurses had no specific training on syndromic STI case management. Although some of the issues may have improved from the time of review in 2007, further challenges to the STI programme pertained to unavailability of key drugs, STI training centres had stopped dues to lack of funds and M&E activities had been adversely affected by inadequate human and financial resources.

Policy and case management guidelines have been developed and disseminated throughout the country. STI guidelines were revised in 2007; STI flowcharts have been printed and distributed; and the STI curricula was reviewed and expanded to include other HIV prevention activities such as PMTCT, HTC, condom programming and post exposure prophylaxis for sexually abused clients. Currently, the STI manuals are being developed in line with the curricula. Following the closure of the two STI management training centers, training has been decentralized to provincial level.

The annual total number of STIs treated has declined by approximately 50% from over a million in 1989 to about 600,000 in 2005. This decline in STI prevalence was attributed to concerted STI programming efforts centered on strengthening and scaling up of STI prevention activities, improvement in STI treatment strategies and training of staff in syndromic management of STIs, and the strategic deployment of such staff in health centres. The decline could further be attributed to various HIV prevention programmes. By end of 2006, STIs accounted for 6% of the total morbidity burden reported in public health institutions. Between 2003 and 2007 there have been fluctuations in STI cases and the STI review attributed it to the collapse of the vertical STI control programme implemented successfully up to 2000.

Gaps – STI management and control

1. With integration into the HIV prevention programme, the STI interventions have lost visibility and dedicated resources
2. There are no mechanisms compelling private health care service providers and uniformed forces to report on STIs
3. User fees, stock-outs of STI drugs and under-resourced M&E activities make it difficult to interpret statistics of reported STI episodes from the public sector

66. PMTCT coverage continues to improve – in 2009, 46 of 100 HIV positive pregnant women in Zimbabwe benefitted from antiretroviral prophylaxis of mother-to-child transmission.

PMTCT is one of the strategic components of the ZNASP as well as the ZHSHPSF with emphasis placed on improving quality of service, increasing the package as well as expanding the geographical coverage for the programme. The PMTCT and Paediatric HIV Prevention, Treatment and Care National Strategic Plan (2006-2010) has as its goal, “to reduce HIV infection among children, reduce HIV-related morbidity and mortality and

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72 Ministry of Health and Child Welfare: The Zimbabwe Health Sector HIV Prevention Strategic Framework 2007-2010
73 ZNASP MTR July 2009
75 The Zimbabwe Health Sector HIV Prevention Strategic Framework 2007-2010
improve the quality of life of children living with HIV and AIDS.\textsuperscript{76} The four components of the PMTCT programme are:

1. Primary prevention of HIV infection
2. Prevention of unintended pregnancies among HIV infected pregnant women of child bearing age
3. Prevention of mother to child transmission of HIV
4. Provision of comprehensive care and support to HIV infected women and their families

Inclusion of PMTCT activities in the reproductive health “road map” forms a good base to improve the services offered in both programmes. Promotion of PMTCT is being done through media promotion of disclosure of HIV status and male participation in ANC/PMTCT. The PMCT programme benefits of a strong base of willing partners (MTR report).\textsuperscript{77}

As at December 2009, a total of 940 facilities were registered to offer comprehensive PMTCT services\textsuperscript{78} and the rest were providing a minimum package of PMTCT services.\textsuperscript{79} 1,560 public and private health facilities were offering antenatal care services. All facilities in Zimbabwe are mandated to provide both voluntary counseling and testing (VCT) and provider initiated testing and counseling (PITC) services.

Routine data from the MoHCW AIDS and TB Programme is presented in the PMTCT cascade in Figure 36.

\textbf{Figure 36: Prevention of Mother to Child Transmission cascade for Zimbabwe (2009)}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{cascade.png}
\caption{Prevention of Mother to Child Transmission cascade for Zimbabwe (2009)}
\end{figure}

\textbf{Source of data:} MoHCW ATP and Spectrum Estimates (2010)

Note: The estimated number of pregnant women (A) in 2009 was not available. Instead, a Spectrum estimate of HIV infected pregnant women was used (E) in order to calculate PMTCT coverage (“ART update of those in need”).

\textsuperscript{76} Ministry of Health and Child Welfare PMTCT and Paediatric HIV Prevention, Treatment and Care National Plan 2006-2010
\textsuperscript{78} Comprehensive PMTCT Services include counselling, testing and provision of antiretroviral prophylaxis
\textsuperscript{79} Ministry of Health and Child Welfare ANC HIV Estimates Report 2009
The pilot project to analyse the feasibility of implementing more efficacious regimens for PMTCT (MER) was conducted at 6 national PMTCT sites. The national results showed that implementation of MER for PMTCT is feasible and acceptable in the Zimbabwean setting. Existing national PMTCT protocols were amended in line with the WHO recommendations in 2006 and a revised treatment guideline was distributed to all relevant implementing partners and stakeholders.

The national PMTCT programme added early HIV infant diagnosis using HIV DNA PCR testing to the package of comprehensive services in 2007. This was informed by a pilot phase at four central hospitals and key milestones achieved in support of this new initiative during 2008 included capacity building of the National Medical Reference Laboratory, skills and knowledge building for health workers to clinically diagnose HIV in children as well as use of the child health card which documents the mother’s HIV status which has assisted health workers to identify infants and children at risk. Furthermore, a logistics system for collection of samples and delivery of results was established. Currently 8 out of 62 (13%) districts in Zimbabwe are offering MER and early infant diagnosis.

Population Service International (PSI) supported the national PMTCT programme through production of a series of advertisements and accompanying posters to encourage greater community participation in reproductive health services. The advertisements were aired on national TV and radio at prime time and posters were distributed nationwide to both the public and private sectors. Initiatives supporting male involvement in PMTCT include the Zimbabwe HIV and AIDS Prevention Project (ZAPP) in Chitungwiza City as well as the United Nations Children’s Fund (UNICEF) supported PACT project focusing on intensive male targeting in Chirumanzu District in Masvingo Province.

Gaps PMTCT programme

1. Sub-optimal implementation of prongs 1, 2 and 4 due to focus on prong 3
2. Limited access to on-site HIV rapid testing; presenting missed opportunities for women to know their HIV status in ANC, labour and delivery and postpartum
3. Failure to disclose HIV status to regular partner under the confidentiality clause
4. Limited male involvement in PMTCT
5. Task shifting and task sharing should be elevated as a health systems strengthening priority
6. Exclusive breastfeeding not adhered to by all HIV+ mothers
7. Limited availability of CD4 counts facilities for identification of the women and their families that are eligible for ART
8. Loss to follow-up, low mother-infant pair follow-up rates
9. Slow roll out of early infant diagnosis, resulting in unavailability of data on the percentage of infant born to HIV positive women tested for HIV and the percentage testing positive.

67. HIV testing and counselling has evolved from largely urban-based voluntary counseling and testing to nationwide provider-initiated testing and counselling. The number of individuals and couples who have tested increased sharply, but a local research trial did not find an effect of testing on HIV incidence.

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81 MoHCW 2008 PMTCT Annual Report
82 MoHCW ATP Overview PowerPoint Presentation Presented on 25 June 2010
83 MoHCW 2008 PMTCT Annual report
The ZNASP and ZHSHPSF have both identified HIV Testing and Counseling (HTC) as an important component of the national prevention response. The **Zimbabwe National HIV Testing and Counseling Strategic Plan 2008-2010 (ZNHTCSP)** was launched in 2008 and guides the implementation and scale up of HIV Testing and Counseling services in the country. The HTC programme was strengthened in 2008 as a consequence of an increase in the number of funding partners and the implementation of PITC in all MoHCW health clinics and hospitals. PITC gives all patients who register at a health centre the option to be counseled and tested for HIV.

A variety of HTC materials and guidelines for trainings and guidance were developed between 2008 and 2009. Some of these materials include the national HTC training manual for health workers; Zimbabwe National Guidelines for HTC in Children (2008), A Training Course for Counselors on HTC for Children (2008); and PITC and HTC training manuals. This resulted in capacity development of service providers in PITC, HTC for children, and rapid HIV testing.

There is evidence of linkages between the NBCP and increases in access to testing. Results from the NBCP interim survey\(^84\) showed that the percentage of people ever tested for increased from 36% at baseline to 50% at the interim survey after exposure to the NBCP. There were also significant increases reported in couple counseling from 12% in 2007 to 25% in 2009. Although there has been increased access to VCT, a trial by Corbett; 2007\(^85\) did not find an effect of intensive VCT on HIV incidence and this concurred with results from a US trial where rapid testing appeared to have behavioural consequences in HIV negative clients.

According to the Universal Access Report (WHO, 2010), in 2009, an estimated 183/1,000 adults aged 15+ had received HCT, therefore, **HCT coverage is estimated at 18.3% in 2009.** In an effort to increase testing and counseling coverage, the MOHCW has adopted four delivery models, namely:\(^86\)

- Integrated model within the public health institutions
- Stand alone model manned by NGOs,
- Private sector workplace model
- Mobile outreach services conducted by NGOs.

Estimates of centres providing HTC by the end of 2009 were as follows; 27 VCT centres managed by NGOs, 502 HTC service delivery points integrated with health services, and approximately 1,000 counselling and referral-only service delivery points. There were also HTC services provided through mobile outreach, workplace programmes, and family planning clinics.\(^87\) The MoHCW has decentralized and expanded HTC services particularly through the PMTCT programme in which more than 700 health facilities are actively providing HTC services.\(^11\) Table 6 shows the total number of clients who received HTC through the public sector and through PSI from 2007 to 2009.

### Table 6: Number of clients who received HIV testing and counselling services in Zimbabwe (2007-2009)

<table>
<thead>
<tr>
<th>Year</th>
<th>Public Sector</th>
<th>PSI</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>314,464</td>
<td>265,303</td>
<td>579,767</td>
</tr>
<tr>
<td>2008</td>
<td>769,125</td>
<td>266,043</td>
<td>1,035,168</td>
</tr>
</tbody>
</table>

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85 Elizabeth L. Corbett, Beauty Makamure, Yin Bun Cheung et, al (2007) HIV incidence during a cluster- randomized trial of two strategies providing voluntary counselling and testing at the workplace, Zimbabwe
87 UNGASS Zimbabwe 2010 Report
In addition to HTC, clients receive information on BC, referrals for care, treatment and psychosocial support. An analysis of VCT attendees by sex suggests that 30% more women than men accessed Client Initiated Testing and Counselling in 2008. VCT services reach the whole country through networks with various stakeholders and outreach programmes. Referral tracking between VCT and post test support services has improved through the New Start Network but needs further strengthening especially for mobile VCT services.

HIV testing kits are distributed to health facilities through the integrated USAID funded Delivery Team Top-Up System (DTTU) distribution system. National Pharmaceutical Company of Zimbabwe (NatPharm) has a full supply of HIV testing kits. Through the DTTU, each HTC site is visited bi-monthly to replenish stocks. Current delivery rate to facilities can be pegged at 95%. PSI supported New Start centers reported ‘0’ stock-out rates as well in 2008\textsuperscript{39}. Referral tracking between VCT and post test support services has been improved through the New Start network.

Gaps – HIV testing and counselling

1. Whilst HTC services are provided free of charge in the public health sector or at a nominal fee in the New Start Network, escalating transport costs have become a major bottleneck to access health services
2. There appear to be difficulties in harmonizing and reconciling VCT statistics with PITC statistics
3. The aging vehicle fleet for HTC outreach programmes is a concern
4. The delayed assimilation of primary counselors by the Health Services Board (HSB) is a key barrier to the effective delivery of HCT services
5. There is still limited access to HTC services in rural areas

68. The incidence of tuberculosis has sharply risen in the context of a mature HIV epidemic. An increasing number of TB patients are being commenced on Cotrimoxazole prophylaxis and referred for ART, but there are still major screening, testing and treatment shortfalls.

The Strategic Plan for the Nationwide Provision of Antiretroviral Therapy (2008-2012) provides a framework for TB/HIV co-infection by focusing on increasing access of TB patients to ART (and vice versa) by strengthening TB/HIV collaborative activities\textsuperscript{88}. The National TB Control Strategy is harmonized with regional and global plans with the following strategic implementation approaches:\textsuperscript{89}

- Dots expansion and enhancement;
- Addressing TB/HIV, MDR-TB and other challenges;
- Contributing to health systems strengthening;
- Greater involvement of all health care providers;
- Engagement of people with TB; and
- Enabling and promoting operational research.

The TB incidence rate in Zimbabwe in 2007 was 782/100,000, compared to 97/100,000 in 1990. There is a reported increase in the number of TB patients being offered HTC\textsuperscript{90}. This has been aided by the introduction of

\textsuperscript{89} Zimbabwe National TB Control Programme Guidelines, MOHCW, 2007
\textsuperscript{90} UNGASS Report 2009
PITC in health care institutions. Cotrimoxazole prophylaxis is increasingly provided, and co-infected patients are being referred for ART.

The number of TB/HIV patients that received HIV testing were 7,373 (10.2%) in 2007 and 9,371 (13.2%) in 2008. Among TB/HIV co-infected patients 5,824 (8.1%) in 2007 and 7,566 (10.7%) 2008 received cotrimoxazole prophylaxis. The number of TB/HIV dually infected patients who were commenced on ART was 1,727 in 2007 and 2,999 in 2008.

Current TB registers have a section where details on ART are captured while the Zimbabwe National TB Control Guidelines of 2007 and the Zimbabwe National TB-HIV Guidelines of 2009 have clear indications on when to start ART in TB-HIV co-infected patients. Technical and financial support for the National TB programme between 2008 and 2009 has been provided mainly by GFTAM, CDC, WHO, TB-CAP, PSI and MSF.

### Gaps – HIV/TB co-infection management

1. The required payment for X-rays for TB screening is out of reach for most clients
2. Ineffective linkage between TB services and HTC with major TB service providers not routinely offering HTC to all TB patients in the context of 70% TB/HIV co-infection
3. Weak documentation and reporting of collaborative TB-HIV interventions
4. Lack of diagnostic services for TB which may delay treatment of TB and initiation of ART

### 69. Post Exposure Prophylaxis services have been trialled and await scaling-up. There are efforts to build capacity among home-based care givers on infection control.

The prevention, control and post exposure prophylaxis (PEP) policy of (2007) aims to reduce HIV related risk, morbidity and mortality among health workers, victims of sexual abuse, and people at risk of accidental exposure to HIV infection. Practical guidelines for the management of occupational, accidental or criminal exposure to HIV infection are detailed in the Zimbabwe Essential Drugs List for Zimbabwe and the Zimbabwe ARV Guidelines. The emphasis is access to PEP within 48 to 72 hours. Preliminary work has started on the production of infection control material for the guidance of Community and Home Based Care givers. Policy, standards, discharge plan and practice hand books have been produced for use by home based care givers.

Although programme uptake is still low in most health institutions, the ZNASP MTR 2009 reported that PEP learning sites proved that scaling up PEP would be beneficial to people at risk of accidental exposure to HIV infection. Although the objective of infection control was to provide PEP to all health workers who have reported a work related injury that may have exposed them to HIV, in 2008 only 81 out of 121 health workers who reported a work related injury received PEP while 56 of these completed the treatment.

### Gaps – PEP and infection control

1. In 2008, although the objective of infection control was to provide PEP to all health workers who reported a work related injury that may have exposed them to HIV, only 46% of health workers reporting a work related injury completed the PEP treatment course.

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91 National TB Programme Database, AIDS and TB Unit, MOHCW, 2007
92 ZNASP MTR 2009
93 ZNASP MTR 2009
2. Although the need to provide PEP for health workers is clearly outlined and tracked, PEP for rape victims is not clearly outlined and tracked.

70. The national blood services are working according to best practice standards and stringent donor selection procedures are in place, but donor notification needs to be improved.

All blood used in Zimbabwe is provided by the National Blood Services of Zimbabwe (NBSZ), an independent private registered non-profit organization. The NBSZ has the sole responsibility and mandate for collecting and distributing blood and blood products in the country. The purpose of the NBSZ is to provide adequate blood and blood products that are safe and free from microbial contamination by HIV, Hepatitis B and C viruses and syphilis. Blood is collected, processed and distributed in Harare and Bulawayo and at satellite stations in Mutare, Gweru, and Masvingo. **However all blood testing for HIV and other pathogens is centralized at the Harare laboratory.** The NBSZ has achieved WHO best practice standard and been designated a WHO collaborating centre for Southern Africa.\(^{94}\) Quality control on reagents recorded pass rates from 90 to 100%.

The NBSZ with the support of the NAC has developed a guideline document “Prescribing Blood, 2005”. Similar guidelines are also contained in the Essential Drug List. The main strategic priority is to sustain the current high standards of blood safety. This is being done through maintaining **stringent donor selection procedures** as new donors are continuously recruited, and adopting latest testing technologies. **The NBSZ has a good geographical spread of both static and mobile clinics for blood procurement in blood donor catchment areas.** The NBSZ has a donor retention programme and it also provides donor counseling. **Uptake of post donation counseling has been low and only 15% of donors came back to obtain their results and post donation counseling in 2008.**\(^{96}\)

**Over the past few years the overall blood collections has been on the decline.** In 2009, 42,000 units were collected, compared to about 80,000 in 2000 (NBSZ data). The ability of hospital to acquire blood also declined over the same period due to the socio-economic situation and the inability of most end user (patients) to afford the end user fees. The end users are expected to pay for the blood services provided, as the NBSZ operates on a full cost recovery system. In 2010, there is a three-tier pricing structure and cost per unit are USD 85 for government facilities, UDS 105 for private sector facilities, and USD 50 for mission hospitals, in order to maximize access to safe blood. The UNFPA has been conducting a pilot study by procuring blood for selected cases in partnership with the NBSZ, and similar efforts are made by EU for maternal cases in remote settings. Any financial support to the NBSZ results in reductions in user fees for blood and blood products.

**Gaps – Blood donation and blood safety**

1. Weak donor notification mechanism, the donor notification model was introduced more than 10 years ago and an evaluation of donor notification found a return rate of 11%
2. Weak linkages between NBSZ and HTC as well as other health service providers for referrals
3. Cost of blood units not affordable by some health facilities and patients.

71. The private sector is not meeting targets on HIV policy and programmes in the context of economic challenges. The number of employees reached with HIV programmes has gone into decline.

\(^{94}\) It also attained ISO certification in 2006 and retained the certification since.

\(^{95}\) National Blood Service Zimbabwe 2008 Annual Report
The Private Sector HIV and AIDS Response Strategic Framework (2007-2010) provides overall guidelines on the private sector response. The target is to reach at least 80% of the private sector organizations with workplace policies and programmes by 2010. There has not been enquiry into whether or not the target was reached although the economic crisis may have hindered progress. A key focus of this is to reduce workplace stigma and discrimination and to improve access to HIV prevention, care, treatment and support services within the work place.

The National Behavior Change Programme outlines the importance of focusing on Workplace programmes to promote behavior change. The workplace is more important as many people spend their time there and may not be able to attend community based BC meetings. The BC interim survey\(^{96}\) reported that most (41%) of men reported not being able to complete the Love and Respect course due to lack of time. By the end of 2009, 37 companies had been assisted to develop HIV and AIDS workplace policies by SAfAIDS though funding from the Global Fund Round Five Phase One\(^ {97}\).

Economic challenges affecting the country have affected workplace programmes as most companies struggled to survive. Consequently, workplace programme performance was subdued in 2009 when compared to 2008 due to limited investment by companies and organizations.

Workplace prevention programmes are also a component of the NBCS with emphasis on reducing spousal separation. A number of sectors such as mining, agriculture, public service, SMEs, motor industry, transport, energy sector and textile industries have developed workplace policies some dating far back as 2003. Implementing partners for the workplace programmes include Matebeleland AIDS Council (MAC), ZBCA, SAfAIDS, Mutare City Health Department, Zimbabwe Congress of Trade Unions (ZCTU) and Midlands AIDS Service Organisation (MASO). Implementations of policies remain a challenge especially as a result of slow economic growth.

A mapping study of workplace programmes conducted by NAC and SAfAIDS\(^ {98}\) under the Global Fund Round 5 concluded that many organisations had programmes to address HIV and AIDS in the Workplace, reportedly consisting of condom promotion and distribution, HCT and information to promote gender equality. However, the number of employees reached with HIV programmes markedly declined from 234,214 in 2008 to 106,036 in 2009.\(^ {99}\)

**Gaps – Workplace HIV interventions**

1. Inadequate funding due to economic challenges
2. The target of 80% of private sector organisations with workplace policies and programmes seem to have been missed due to companies’ limited funds to invest in such activities

**72. Prevention for positives -** there are over 1000 support groups of PLHIV and they carry out prevention activities. PLHIV increasingly access treatment services, but key prevention challenges remain, especially for discordant couples.

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\(^{96}\) NAC/UNFPA.2009. National Behavior Change Interim Survey  
\(^{97}\) NAC Annual Report 2009  
\(^{98}\) NAC/SAfAIDS. 2009. A Social Mapping of HIV and AIDS Workplace Programmes and Policies in Zimbabwe  
\(^{99}\) NAC Annual Report 2009
The NBCS has as one of its objectives “to reduce stigma and discrimination as well as increase number of PLHIV openly discussing their status and involved in programmes including HIV prevention”. Key prevention BC messages have also targeted PLHIV.

The Zimbabwe National Network for People Living with HIV (ZNNP+) strategic plan prevention component focuses on: Increasing knowledge on abstinence by PLHIV; Increasing knowledge on faithfulness by PLHIV; and Increasing condom use by PLHIV. It also highlights the intention to increase participation of HIV positive youths in their programmes as they are likely to have greater impact among their sexually active peers than any other stakeholders. The Institutional capacity of ZNNP+ is being developed for better coordination of activities of PLHIV. The International Committee of Women living with HIV, Zimbabwe Chapter, is a key institution advocating for the right of women and girls living with HIV.

Population Services International Zimbabwe operates the New Life Post Test Support Network. The New Life centres provide information on positive living, ART adherence as well as providing a networking and experience sharing forum for PLHIV.

The number of opportunistic infections\(^{100}\) OI/ART initiating centres increased from 107 in 2008 to 117 in 2009 whilst follow up sites increased from 175 to 195 in the same period. A total of 200,001 people accessed cotrimoxazole in 2009 with 62% of them being female. This represents an increase from 2008 where 188,386 clients accessed the service. The number of people initiated on ART increased from 85,000 to 207,000 between December 2008 and 2009 respectively. The increase was a result programme decentralization as well as expansion of outreach programmes particularly in Global Fund supported districts\(^{101}\).

In 2009, a total of 396,626 PLHIV received food assistance in all provinces, the majority being in Masvingo followed by Manicaland. With an estimated 1.2 million PLHIV in Zimbabwe\(^{102}\), this represents about 33% access to food assistance.

A National MIPA\(^{103}\) Technical Working Group has been constituted and it identified the issue of user fees in OI clinics as a challenge and discussions between the group and the MoHCW resulted in the Ministry abandoning user fees in government OI clinics. Due to the need for a coordinated approach towards activities for PLHIV, ZNNP+ received technical and financial support from NAC. There are some prevention efforts for PLHIV including the recruitment of 26 MIPA officers through the NBCP. There have also been programmes through PSI’s New Life post test support centres. However, there are still key prevention challenges especially for discordant couples. To adequately work with PLHIV, one of the key strategies involved encouraging formation of support groups. The MIPA baseline (2009) concluded that there are over 1000 support groups of PLHIV and a baseline study of support groups conducted by ZNNP+ (2010) concluded that although they lacked technical and financial capacity, support groups carry out prevention activities and are willing to scale up these activities with the necessary support.

### Gaps – Prevention for positives

1. The number of people on ART is still below the number of those in need
2. There is lack of coordination among PLHIV organisations
3. Support groups lack capacity to carry out coherent and consistent activities like training on ART adherence, providing information on prevention for positives and recording programme activities.

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100 Opportunistic Infections Clinics provide treatment for opportunistic infections among PLHIV. They are situated within Health Centres
101 NAC Annual Report 2009
102 Spectrum estimate for 2009 (June 2010)
103 Meaningful Involvement of People Living With HIV and AIDS
73. Risk reduction for Most at Risk Populations – Sex Workers and to a lesser extent MSM have benefitted from specific interventions. The Military has an HIV policy and focuses on condom promotion and distribution, uptake of HTC and male circumcision.

Most-at-risk populations are defined based on HIV prevalence and behaviours putting them at risk of HIV infection or transmission. In Zimbabwe, the NARF collects data on the following specific at-risk populations: Sex workers (SWs), cross border traders, married women, Men who have Sex with Men (MSM), mobile populations, truckers, internally displaced people, uniformed personnel (soldiers, police, game rangers, customs and immigration officers), prisoners, the physically challenged, survivors of rape and sexual abuse, illegal immigrants, and Injecting Drug Users (IDU). There is a lack of population size estimates for MARPs in Zimbabwe.

The ZNASP recognizes the importance of including MARPs in HIV prevention programmes and mentions the need for interventions to focus on SW, MSM, IDU, Prisoners, orphans and street children, and others. It explicitly provides strategies for SW and MSM. The strategy highlighted that “an assessment of MSM patterns, meeting points and behaviors will therefore be carried out, and adequate public health interventions developed based on the findings”. This was not done and it is critical for the upcoming ZNASP to come up with strategies that ensure MARPs are clearly defined and strategies for reaching each category are spelt out.

The ZNASP MTR indicated that the BC strategy has no component targeting MARPs. Although the strategy highlights the need to develop innovative strategies to reach MARPs, there was no evidence suggesting this has been done. A study by the NAC and the International Organisation for Migration revealed that there are limited services available for mobile and migrant population in terms of awareness campaigns, VCT services, ART, clinics, condom programmes, education, food programmes, HBC and workplace programmes.

Sex Workers

A sex work situation analysis was conducted in 2008 by the IOM, UNAIDS, UNFPA and NAC to study and understand the situation and response analysis of Female Sex Workers and HIV in Zimbabwe. The situation analysis highlighted that even though national policies discuss sex workers, programmes for sex workers are limited and underfunded.

In 2009, with support from UNFPA, NAC convened a stakeholder workshop on sex work programming. Regai Dzive Shiri was identified as the implementing partner for the response project which has been piloted in Harare and along the Harare-Nyamapanda highway. A drop-in centre and clinic was established in Harare (Mbare) offering HTC, condoms, safer sex training, early STI treatment, PPT (periodic presumptive treatment), family planning, primary health care for family, and other services.

Current interventions comprise of HIV prevention education, including condom distribution, STI awareness and treatment, peer education programmes, availing micro-credit for small-scale income-generating projects and programmes that facilitate and support exit from sex work. HIV prevention for sex work is also obtained through the services meant for the general population in which the “ABCs of HIV” (abstinence, being faithful and consistent and proper condom use) are used. The A and B of this message are antithetical to sex

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104 IOM/NAC 2009. Access to HIV and AIDS Services for Mobile and Migrant Populations
work. They have to rely on C and contend with its challenges. The illegal status of sex work in Zimbabwe makes it difficult to recruit sex workers for prevention interventions.

**Men having Sex with Men**

The ZNASP mentions the need to assess MSM patterns, meeting points and behaviours to come up with adequate public health interventions. A needs assessment for MSM was conducted but there are challenges in identifying and involving them in the national response as the practice is illegal in Zimbabwe. GALZ has a health department which provides the following HIV prevention services:

- Counseling;
- GALZ Positive Support Group for members affected and infected;
- Positive Image Access to Treatment Health Scheme;
- Database of gay friendly doctors and clinics in Zimbabwe;
- Buddy groups peer educators

**Military**

The Military has an HIV policy and focuses on condom promotion and distribution, uptake of HTC and male circumcision (Manyame, one of the four MC sites, is for the military). The Zimbabwe National Army (ZNA) Expanded HIV and AIDS Programme 2009-2015 has as its objectives to:

- Reduce the incidence of HIV infection by 50% by 2014;
- Reduce the incidence of STIs by 50% by 2014;
- Have 75% of the serving members and their spouses know their status by 2014;
- Provide ARVs and other HIV and AIDS services to all members and their spouses who may need them, by 2010;
- Strengthen the M&E of the HIV/AIDS programme.

The ZNA policy highlights the need for targeting communities near camps with prevention services; promoting abstinence during spousal separation; MC; regular free from infection inspections as well as provision of PMTCT services. The extent to which the policy has been implemented could not be ascertained.

### 4.4. Review of Expenditure for HIV Prevention

This section presents summary information on the amount of funds spent on HIV/AIDS and on HIV prevention in Zimbabwe over the four years 2006 to 2009. It is based on the National AIDS Spending Assessments conducted by NAC and UNAIDS (see methodology section for details). It is important to note that not all funding partners were able to provide their levels of funding on HIV and AIDS to the NAC.

**Total HIV/AIDS spending and sources of funds**

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107 ZNASP 2006-2010
108 Keith Goddard & Clara Makosa, Synergy Project Needs Assessment Report Issues of HIV and AIDS amongst members of GALZ
109 What is GALZ? Pamphlet on GALZ
A comparison of total HIV/ADS expenditure over the four years shows that highest expenditure was recorded in 2006 (USD 86.0 million) and lowest expenditure in 2008 (USD 26.5 million - less than one-third of the 2006 amount) – see Table 7. Expenditure in 2007 and 2009 was in between the two extremes at about USD 54 million.

Table 7: Total HIV/AIDS expenditure in Zimbabwe, in USD (2006-2009)

<table>
<thead>
<tr>
<th></th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total expenditure</td>
<td>85,985,547</td>
<td>54,697,169</td>
<td>26,484,932</td>
<td>54,147,723</td>
</tr>
</tbody>
</table>

(63% of 2006) (31% of 2006) (63% of 2006)


A large part of the 2006 expenditure was from bilateral sources (Figure 37), with USD 26.3 million alone from the US Government and USD 11.8 million from the British Government. The spending increase between 2008 and 2009 was due to higher spending from most funding sources, with domestic and GFTAM expenditures in 2009 making the largest contributions to the increase. The general increase in spending can be attributed to the relative stabilisation of the economy, as well as introduction of the multicurrency system which halted hyperinflation.

Figure 37: Total HIV/AIDS spending by sources in Zimbabwe, in USD (2006-2009)


Comparison of NASA data from different countries in the regions reveal the low level of HIV resources available to Zimbabwe in recent years: Despite the fact that Zimbabwe is in the top five in the region of countries that need assistance, in 2006, Zimbabwe had US$7.08 per head against the planned US$16 per head. In 2007, expenditure per person went down to US$4.50 against a projection of US$17.66. This is against average annual per person spending of about US$39 in Lesotho, US$104 in Botswana, US$139 in Swaziland, US$190 in Zambia, US$192 in Mozambique, US$250 in South Africa and US$362 in Uganda.

It is repeatedly said that from a technical perspective, Zimbabwe's HIV and Aids intervention strategies are superior to those of most countries that get more funding per person.

Expenditure for HIV prevention
The proportion of total AIDS spending for prevention has decreased from 39% in 2006 (first NASA year) to 22% in 2009 (last NASA year). In 2006, 35% was spent on care and treatment, and 22% on mitigation. In 2009, 29% was spent on care and treatment, and 43% on mitigation. Therefore, according to the NASA data, spending on care and treatment has equally decreased in absolute and relative terms, while impact mitigation has increased in absolute and relative terms (see Figure 38).
Figure 38: Relative and absolute amounts of AIDS expenditure by thematic area in Zimbabwe (2006-2009)

Note: “Other” includes Programme management; Human resources; Social protection; Enabling environment; and Research & documentation.

Figure 39 illustrates for 2009 only the expenditure by thematic area

Figure 39: Thematic area expenditures in Zimbabwe’s HIV/AIDS response (2009)

According to the NASA data, in 2009, over 40% of expenditure was for PMTCT activities (Figure 40). About 17% was spent on communication for social and behaviour change programmes and about 15% was spent on VCT activities. According to the data, out-of-school you activities obtained almost 9% of funding, and in-school activities just below 4%. Another 7% was spent on community mobilisation, and 2% on workplace interventions. Less than 1% was spent on prevention for positives (“prevention of HIV transmission aimed at PLHIV”). Table 8 provides the breakdown in absolute amounts of expenditure.

**Figure 40: Breakdown of HIV prevention expenditure by prevention area in Zimbabwe (2009)**

<table>
<thead>
<tr>
<th>Prevention area</th>
<th>US Dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication for social and behavioural change programmes (on health risks)</td>
<td>1,398,745.00</td>
</tr>
<tr>
<td>Communication for social and behavioural change programmes (non-health risks)</td>
<td>128,724.00</td>
</tr>
<tr>
<td>Communication for social and behavioural change (not disaggregated)</td>
<td>513,776.00</td>
</tr>
<tr>
<td>Community mobilization</td>
<td>894,092.00</td>
</tr>
<tr>
<td>VCT</td>
<td>1,617,609.00</td>
</tr>
<tr>
<td>VCT as part of programmes for vulnerable and special populations</td>
<td>195,979.00</td>
</tr>
<tr>
<td>Prevention - Youth in school</td>
<td>432,380.67</td>
</tr>
<tr>
<td>Prevention - Youth out-of-school</td>
<td>1,056,741.00</td>
</tr>
<tr>
<td>Prevention of HIV transmission aimed at PLHIV</td>
<td>111,560.00</td>
</tr>
</tbody>
</table>

**Source:** National AIDS Council Finance Department (2010)
<table>
<thead>
<tr>
<th>Prevention area</th>
<th>US Dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td>VCT as part of programmes for sex workers and their clients</td>
<td>19,411.00</td>
</tr>
<tr>
<td>Prevention programmes in the workplace</td>
<td>223,072.00</td>
</tr>
<tr>
<td>Safe infant feeding practices (including substitution of breast milk)</td>
<td>328,311.67</td>
</tr>
<tr>
<td>PMTCT not-disaggregated by intervention</td>
<td>2,658,840.00</td>
</tr>
<tr>
<td>PMTCT activities not elsewhere classified</td>
<td>2,181,042.00</td>
</tr>
<tr>
<td>Prevention activities not elsewhere classified</td>
<td>257,986.00</td>
</tr>
<tr>
<td>Prevention Total</td>
<td>12,029,543.34</td>
</tr>
</tbody>
</table>

**Source:** Updated NASA (2010)

**CHAPTER 5. LINKING THE RESPONSE TO THE EPIDEMIC**

**5.1. Do HIV prevention policies and programmes respond to the key drivers of the epidemic?**

In accordance with other assessments in Zimbabwe and the region, this analysis suggests the interplay of a variety of factors influencing and driving the HIV epidemic in Zimbabwe. The report presented a large spectrum of epidemiological and behavioural data, and it is likely that Zimbabwe shares key drivers with other countries in the region. Multiple and concurrent partnerships, in combination with low and inconsistent condom use among longer-term partners (including discordant couples) are likely to be important behavioural factors in driving continuous new infections. The low level of male circumcision is likely to have been a major determinant of the epidemic trajectory.

The modelled epidemic curve of Zimbabwe differs from those of other countries in Southern Africa in the sense that HIV incidence peaked early and at a very high level, and subsequently collapsed to a relatively low level. The Zimbabwean HIV epidemic therefore appears to have contracted to a greater extent and at a faster pace than other epidemics in the region. With estimated HIV incidence about six times lower in 2009 than at its peak value in the early 1990s, it is probable that the drivers of the Zimbabwean epidemic have changed significantly over the last two decades. Figure 41 illustrates the early peak of the estimated HIV incidence and the massive decrease in Zimbabwe compared to the other high-epidemic and hyperendemic countries.
Some of the decrease in HIV incidence in Zimbabwe is simply due to the natural course of the maturing epidemic: Once a certain saturation of infection within higher-risk groups occurs, HIV incidence decreases and HIV prevalence starts to stabilize.

AIDS mortality reached very high levels by the late 1990s (UNAIDS, 2005; Smith et al., 2007) and certainly contributed to the stabilization of HIV prevalence at around this time. However, Hallett et al. (2009) found that mathematical model simulations indicated that the pace of the decline in HIV prevalence in Zimbabwe could not have occurred without changes in behaviour or other determinants of the epidemic, which would probably have occurred between 1999 and 2004.

**MULTIPLE AND CONCURRENT PARTNERSHIPS**

**Local evidence**

Gregson et al. (2010), by conducting secondary analyses and triangulating all data available on sexual behaviour, found evidence for substantial reductions in the proportion of individuals (particularly men) reporting non-regular partners, occurring precisely during this period. The proportion of men reporting having paid for sex also fell between 1999 and 2005. In the Manicaland cohort, similar observations were made with decreases in reported recent casual partners between 1998 and 2003 in men and women. In terms of infection levels, both HIV prevalence and HIV incidence are overall higher in people who report multiple partnerships and other risky behaviours like sex with a non-marital, non-cohabiting partner (see Point 21 in KYE chapter 3).

In all these self-reports on sexual partnerships, it is important to factor in underreporting of secondary partners and in particular extramarital affairs. In a study exploring different interview techniques by Gregson et al. (2002) in Manicaland, women were over 5 times more likely to report having multiple partners currently when responding via a Informed Confidential Voting Interview instead of a standard face-to-face interview (the only
reporting of extramarital partners among married women and rural women was through the ICVI method (see Appendix C for research on validity of self-reported data). Also, it cannot be ruled out that there are temporal changes in bias, i.e. that the social desirability of multiple partner behaviours changes over time and affects people’s answers to these questions about their intimate lives differently at different stages of BCC interventions.

There is evidence that multiple sexual partnerships has been relatively more important as a driver of the Zimbabwean epidemic in the past than it is today. A qualitative study by Muchini et al. (2010) sheds some light on the multiple partner behaviours in about 1992 (time of HIV incidence peak), 1999 (after dramatic drop in HIV incidence) and 2007 (“present”) – see Figure 42. The study found a clear trend towards a reduction in multiple sexual partnerships, particularly casual sex partners, and an increase in condom use with casual partners. Partner reduction was reported most consistently by men and increases in condom use were reported most consistently in discussions with sex workers.

Figure 42: Multiple sexual partnerships over time in Zimbabwe (1992, 1999, 2007)

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple partnerships common among males and females, across different social groups, and in urban and rural areas. Different forms of MSPs, including both longer-term concurrent, commercial and casual relationships. Condom use low and inconsistent, even in casual and commercial sex.</td>
<td>Many men and women disengaging from MSPs. Partner reduction, friends sanctioning each other, a sense of panic due to AIDS sickness and mortality. MSPs still common among some higher-risk groups (‘men with money’, gold panners, transport workers, cross-border traders, men in uniform). Condoms used frequently with casual and commercial partners, but not in longer-term relations.</td>
<td>Further disengagement from MSPs, but not in men with greater incomes, truckers, gold/diamond panners, cotton/tobacco farmers, cross-border traders, young sex workers &amp; youth with “parents in the Diaspora.” MSPs generally limited to long-term con-current partnerships (“small houses”) and to cross-generational sex. Condom use high in casual/commercial relations but low within marriage &amp; other longer-term partnerships.</td>
</tr>
</tbody>
</table>

Source: Adapted from Muchini et al., 2010

Some of the underlying reasons for partner reductions can be summed up as follows:

- The stark increases in AIDS morbidity and mortality
- A partial shift in social norms towards reduced acceptability of casual and commercial sex
- Reduced ability of men to attend bars and afford multiple partnerships.

Findings from Muchini’s study and other studies confirm that multiple partnerships, especially long-term concurrent partnerships, remain a key driver (and are frequently underestimated based on self-reported behaviour in surveys). According to the NBCS baseline survey of 2007/08, 28% of men and 9% of women reported having two or more partners in past 12 months, and 10% of men and 3% of women reported having had a concurrent partnership.\(^{110}\)

In the context of decreased AIDS mortality and treatment for AIDS cases, and a potential economic recovery which may make more disposable income available again, there is a real possibility that the frequency of multiple partnerships may increase. There is however the opportunity to build on the shift in social norms which, according to qualitative research, has already started to take place. Acceptability of

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\(^{110}\) ACASI (Audio Computer Assisted Survey Instrument): Participants completed the questionnaire on a laptop using a mouse to click answers to questions while listening to questions, instructions, and responses through headphones.
casual and commercial sex has decreased, and this needs to be consolidated and carried into the next generation of sexually active Zimbabweans.

Do HIV prevention policies and programmes respond to multiple and concurrent partnerships?

✓ The **Zimbabwe National AIDS Strategic Plan 2006-2010** addresses the topic of multiple and multiple parallel partnerships in various sections. It states that “Programmes and interventions will go beyond awareness-raising and the ABC approach ... to include norms that permit men in particular to have multiple relationships ....”, and “... mobility and spousal separation that increases both partners’ risk of being unfaithful” In the target statements, “national level leaders speaking out against multiple partners” is an indicator. It also frames research questions which include “the meaning and patterns of multiple parallel relationships”.

✓ The **National Behaviour Change Strategy 2006-2010** puts emphasis on the MCP issue - 3 of the 6 key themes touch upon MCP111. The strategy states: “In the past, programmes have not really focused on faithfulness, parallel relations and the so-called ‘small houses’. In an advanced HIV epidemic, which affects all population groups like in Zimbabwe, behavioural prevention aimed at partner reduction, particularly concurrent partners, is key to the overall success of prevention efforts”. The strategy also states the importance to “address underlying factors for multiple partnering including imbalanced gender relations”. The strategy considers multiple sexual relationships are a key driver of the HIV epidemic in Zimbabwe.

✓ The **National Behaviour Change Programme** has as its main thrust to promote HIV testing and sexual risk reduction, in which partner reduction and faithfulness are key elements. The number of reported partners, being faithful, having reduced partners and village leaders speaking out against multiple partner behaviours are all programme indicators being tracked as baseline, interim and end of programme survey.

✓ Several **national BCC campaigns and activities** focus on multiple partner behaviours (see Table 5 for activity monitoring data and Annex D for details of the BC campaigns):
  - Mass media campaign “Loving carefully/ Kudanana Kune Hungwaru” (UNFPA)
  - Mass media campaign “Be faithful” (addressing sexual networks, PSI)
  - Film “I want a wedding dress” (UNFPA)
  - Interpersonal communication activities with behaviour change facilitators (UNFPA)
  - “Love and respect course” (UNFPA)
  - Film “Big House Small House” (Action)

The mid-term evaluation survey of the NBCP suggests that the programme has a positive effect on partner reduction, communication between partners, and community norms on concurrency (see Point 59 in KYR section 4.3). Remaining weaknesses and gaps are: Higher-risk populations (including PLHIV) not specifically targeted; Some community leaders failing to be role models; Youth participation in BC meetings being relatively low; and Interventions in tertiary institutions needing strengthening.

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111 Personalized risk perception in relation to key drivers of HIV (including MCP); Underlying gender and community norms; Partner reduction / faithfulness
MALE CIRCUMCISION

Local evidence

Zimbabwe is a low-circumcision country, although some ethnic groups practice male circumcision for (MC policy 2009):

- Religious reasons among Chewa and Muslims, who constitute approximately 1% of the population (concentrated in Harare);
- Cultural/traditional reasons in specific groups, which represent a relatively small size of the population such as the Xhosa/“Fengu” of Ntabazinduna, Tonga of Binga, Venda and the Tshangani of Chiredzi and Mberengwa as part of initiation rites of passage to manhood; and
- Medical reasons.

According to the ZDHS 2005/6, only about 10% of men are circumcised (see Point 23 in KYE chapter 3). The MC situation analysis on feasibility and acceptability concluded that MC is an appropriate intervention for both circumcising and non-circumcising communities (see Point 64 in KYR section 4.3).

Low male circumcision is beyond any doubt a key driver of the Zimbabwean epidemic. In a context of high circumcision, the epidemic would simply never have reached the levels it has reached, with peak annual HIV incidence over 5% (Figure 41) and peak HIV prevalence over 26% in adults in the past (Figure 3). At couple level, MC would have reduced female-to-male transmission by about 60% on average, and therefore drastically changed the dynamics and course of the epidemic trajectory.

Following the three randomised controlled trials published in 2005 (South Africa) and 2007 (Kenya, Uganda) and the follow up study based on the Kisumu MC trial (announced in 2008)\textsuperscript{112}, WHO has recommended scale-up of MC in high HIV prevalence countries as an additional HIV prevention strategy to complement existing HIV prevention efforts.

A recent modelling study by Hallett et al. (2010) using Manicaland data estimated that circumcision confers a 46% reduction in the rate of male-to-female HIV transmission. The authors conclude that this effect substantially enhanced the total impact of MC, increasing by 40% the infections averted by the intervention overall and doubling the number of infections averted among women. Therefore, communities, and especially women, may benefit much more from MC interventions than had previously been predicted.

Do HIV prevention policies and programmes respond to low male circumcision?

- The Zimbabwe National AIDS Strategic Plan 2006-2010 already identifies MC as a potential service-based HIV prevention intervention. The plan proposes further research into “the acceptability and feasibility of large-scale male circumcision”.
- The Male Circumcision Policy (launched in 2009) has as its goal “to provide a framework for the provision of safe, accessible, voluntary, and sustainable male circumcision services in a way that safeguards the human rights of individuals and communities”.
- A National Male Circumcision Strategy is available in draft form.

The MC intervention has started in four pilot sites, and by August 2010, it was reported that approximately 10,000 MC procedures had been performed. According to the GFATM round 10 proposal, all plans, systems and

\textsuperscript{112}Study showed that the protective effect of MC is sustained after 42 months of follow-up and is estimated to be as high as 65-70%.
tools are now in place to allow rapid scale-up of MC. The proposal includes support for key operational aspects of the MC scale-up including service delivery accompanied by communications with traditional leaders, and other key stakeholders. According to the draft National MC Strategy, 1.2 million adult and adolescent males are to be circumcised between 2010 and 2015 to reach the 80% coverage of 15-29 year old HIV negative adolescents and men, which is thought to be needed to achieve population based impact in HIV incidence reduction. Funds from US Government, Gates Foundation, UNFPA and the government are projected to cover 785,000 MCs leaving a gap of 415,000 males to be circumcised between 2012 and 2016. The scale-up of MC activities is envisaged to combine MC provision through integrated sites and mobile outreach services as well as a comprehensive communication campaign with a focus on community mobilization and interpersonal communications. Service delivery will leverage human resources from the private sector through public/private partnerships proven to be an effective model of service delivery in the pilot phase and also rely on the Uniformed Forces of Zimbabwe health delivery system.

This review was not able to identify any specific weaknesses and gaps regarding MC policy and programming. The target of 1.2 million MC procedures in less than 5 years is highly ambitious, and Zimbabwe will rely on maximum and timely donor support, as well as multiple partnerships and collaborations with all sectors, in order to meet this target and conduct an effective communication campaign to create MC demand and safeguard against risk compensation.

LOW CONDOM USE IN LONGER-TERM RELATIONSHIPS

Local evidence

Like other self-reported sexual behaviour data, reported condom use is also prone to bias. The local studies by Allen et al. (2003)\textsuperscript{113} and by Minnis et al. (2009)\textsuperscript{114} demonstrated that condom use is vastly over-reported in surveys. As in reporting of sexual behaviors such as multiple and concurrent partnerships, it cannot be ruled out that there are temporal changes in bias, i.e. that the social desirability of condom use changes over time at different stages of condom promotion activities.

However, it appears that there were some real changes in condom use patterns over the last two decades. Muchini et al. (2010) found in their qualitative study that condom use around 1992 was probably low and inconsistent, even in casual relationships and contacts with sex workers (see Figure 42 on 1992, 1999 and 2007 comparison). Condom distribution and promotion activities increased considerably from the late 1980s - reaching 21.5 million condoms distributed in 1995, 49.3 million in 1995, 65.1 million in 2000, and 79.8 million in 2005 (Muchini et al., 2010). Recent MoHCW data on total male condom distribution show year 2008 as the year with highest-ever distribution number (95.5 million, although the annual target in ZNASP of 150 million was not achieved to date).

The distribution of socially-marketed condoms has in recent times suffered from the contraction of the private sector wholesale and retail network due to the economic crisis (see Point 60 in KYR section 4.3). Locally, the closure or disappearance of condom outlets can have critical impacts on people’s physical access to condoms. The government’s programme of clearing slum areas across the country started in 2005 (Operation Murambatsvina) had wide-ranging impacts on access to health services, including mass evictions, demolitions, and the destruction of nearly 2,000 outlets providing condoms in the urban townships during the evictions (HRW, 2006).

\textsuperscript{113} This study used sperm on vaginal smears and other biological markers to validate reported condom use. It was found that at least half of unprotected contacts in discordant couples were not reported.

\textsuperscript{114} This study used Prostate Specific Antigen to validate reported condom use and sexual activity. Among those testing positive for recent unprotected sex, 48% of women erroneously reported not having had unprotected sex in the previous 2 days, most reported having only had condom-protected sex.
Reported condom use reached relatively high levels by the time of the first nationally representative survey in 1999 (e.g., 72% at last sex with a non-regular partner among males), and remained at similar levels through 2007. Across different data sets, reported condom use is higher with pre-marital, non-regular and commercial partners than with regular partners (Table 3 in KYE chapter 3). Gregson et al. (2010) summarizes data on reported condom use at last sex with a non-regular sexual partner in the past 12 months for 15–29-year-olds from nine surveys spanning the period 1999–2006, and concludes that condom use with non-regular partners was already high by the late 1990s. In Manicaland, consistent condom use with recent casual partners was at 42% in 1998–2000 and in 2001–03, and increased in women aged 15–44 years from 26% to 37% (Gregson et al., 2006).

Do HIV prevention policies and programmes respond to low condom use, in particular in longer-term relationships?

✔ The Zimbabwe National AIDS Strategic Plan 2006-2010 has as a main objective under condom distribution to make more widely available both re-branded public sector and socially marketed condoms, particularly in rural and remote areas. It envisages condom promotion through mass media, print and interpersonal means, ensuring targeting to those who need them, including to those adults and couples that are either not faithful, do not know their status, or are HIV test discordant.

However, the plan is not explicit on longer-term sexual relationships.

✔ The National Behaviour Change Strategy 2006-2010 makes very important statements on the matters of consistent condom use, condom promotion among youth, and long-term relationships not necessarily being a protective factor:

- “Promotion of consistent male and female condom use will remain a key priority”.
- “Sexually active young people need support in avoiding multiple partnerships and accessing condoms... international literature provides little reason to believe that the promotion of condom use among sexually active young people promotes sex”
- “More emphasis needs to be placed on correct and consistent use of male and female condoms, including in regular relationships”

Similarly, the strategy is not explicit on longer-term sexual relationships.

The National Female Condom Strategy 2006-2010 is being implemented, and Zimbabwe’s distribution of female condoms far exceeds what most countries have been able to accomplish. Female condoms are mainly sold through a combination of pharmacies and hair salons, but programme implementers have pursued alternative channels of distribution and programming, such as barber shops (targeting men), commercial sex worker networks, and support groups for PLHIV (female PLHIV have been trained to conduct interpersonal communication trainings on positive prevention and have sold Care female condoms to support groups, CHANGE, 2009). Strikingly, from 2004-2007, Care female condom distribution increased 150% and public sector distribution tripled. The female condom is intended to provide an alternative barrier method in cases when the male condom is not an option. It is possible that some use is in longer-term relationships, but this analysis could not corroborate this. Channelling the female condom through PLHIVs and PLHIV support groups is however a highly appropriate targeting approach.

The mid-term evaluation survey of the NBCP suggests that the NBCP has a positive effect on reported condom use. Muchini et al. (2010) comment that “direct programme impact is apparent in the area of condom programming, as the high levels of condom use with non-regular partners would not have been achieved without consistent condom supplies and demand creation in the areas of public sector distribution and social marketing”.

Remaining weaknesses and gaps are (especially regarding condom use in longer-term relationships): Overall weak condom targeting to and promotion among PLHIV; Social norms that create barriers to negotiation of safer
Sex particularly within marriage and among discordant couples; and Inadequate qualitative data to understand condom use decisions with different types of partners and kinds of sex acts.

Several contemporaneous studies and reviews (Gregson et al., 2010; Muchini et al., 2010; Halperin et al., 2010) try to gauge the importance of condom promotion and distribution in the Zimbabwean epidemic. They generally conclude that condoms are likely to have had an effect on the course of the Zimbabwean epidemic. While condoms were a family planning tool in the early 1990s, they became a risk reduction tool in casual and commercial relationships as the AIDS epidemic unfolded, and — more importantly — there are reports of more consistent condom use in recent years. Unfortunately, **there is no robust trend data on condom use in longer-term relationships.**

**Figure 43** summarizes the evidence against the background of other factors believed to affect the epidemic curve.

**Figure 43: Condoms within the Zimbabwean HIV epidemic (1990-2009)**

Source: Adapted from Halperin et al., 2010 and Muchini et al., 2010. Estimated HIV mortality and new infections from latest Spectrum estimates.

**Zimbabwe appears to have several positive factors having a containing effect on the epidemic** (see Chapter 3, where some regional comparisons were also made). Among them are:

- high rates of marriage;
- high levels of educational attainment;
- relatively late sexual debut of young Zimbabweans;
- comparatively short period of post-partum abstinence; and
- comparatively more equal society in terms of income.
Halperin et al. (2010) point out that the **high levels of secondary education and marriage**, especially among urban men, represent a unique combination, which helped facilitate “a clearer understanding and acceptance of how HIV is sexually transmitted (once such information became widely available through various programmes), and a greater ability to act upon “be faithful” messages, given the stronger marriage pattern than in neighbouring countries”.

On the **behaviour-change effect of AIDS mortality**, the same report comments that “the adoption of a home-based care policy may have accelerated behaviour change; It has been hypothesized that, when people die at home, this direct confrontation with AIDS mortality is more likely to result in a tangible fear of death than when patients are primarily cared for in clinical facilities”.

5.2. Are Zimbabwe’s HIV prevention policies and strategies based on the latest available evidence and global best practice?

**STRENGTHS**

1. The target populations of the current Strategic Plan (2006-2010) are based on a 2005 needs assessment, and the cross-cutting issues in the plan are based on local and regional understanding of the determinants and risk contexts of the epidemic. According to official government documents, the target populations for HIV and AIDS interventions within the current 5-year strategy were identified in a needs assessment in 2005. Zimbabwe has chosen to not retain “injecting drug users” in its national strategy since this population is presumed very small and of little importance to the overall HIV transmission dynamics in Zimbabwe. The other commonly targeted populations in generalized epidemics (youth, women and girls, sex workers, MSM, orphans and other vulnerable children) are included in the strategy. Some other specific groups are targeted by partners and their implementers, such as internally displaced persons and other mobile and vulnerable populations by the International Organisation of Migration via a group of implementing partners. Cross-cutting issues which have been found important in generalized epidemics (HIV and poverty, protection of human rights, involvement of PLHIV, addressing stigma and discrimination, and gender equality) are represented in the strategy.

2. Guidelines for biomedical interventions such as PMTCT, HCT and HIV/TB co-infection are based on local evidence as well as international standards. Actual delivery of the biomedical services is clearly not optimal, due to resource constraints in the health sector overall, difficulties in retention of qualified staff, and some shortages in commodities like drugs. But in principle, these programmes are based on the latest international standards and guidelines that help to standardise the quality of HIV care. The following protocols, guidelines, protocols and policies can be highlighted for being based on local evidence and international best practice:

- **National PMTCT protocols/treatment guidelines (2010)** – the former guidelines were amended in 2008 and 2010 in line with the WHO recommendations of 2006 and 2010. The UN’s 4-pronged approach to PMTCT has been adopted. The revised guidelines were distributed to all relevant authorities and implementing partners. A multi-sectoral national PMTCT Partnership Forum (PPF) has been established to improve coordination of the programme.

- **National guidelines for HIV testing and counselling (2005) and National Guidelines for HCT in Children (2008), and a variety of HCT materials and guidelines for trainings and guidance (developed between 2008**

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116 Primary prevention of HIV infection; Prevention of unintended pregnancies among HIV infected pregnant women of child bearing age; Prevention of mother to child transmission of HIV; and Provision of comprehensive care and support to HIV infected women and their families. Zimbabwe has adopted Option A of the 2010 WHO guidelines i.e. AZT from 14 weeks of pregnancy, sdNVP, and Combivir for 7 days after delivery; and NVP daily throughout breastfeeding period. There is also a strong emphasis on initiating treatment-eligible HIV positive pregnant women on ART for their own health.
and 2009). The HCT strategy uses four delivery models, which have all been shown internationally to contribute towards HCT coverage, namely the Integrated model within public health institutions, Stand alone model manned by NGOs, Private sector workplace model, and Mobile outreach services conducted by NGOs.

- The National TB Control Guidelines (2007) and the National TB-HIV Guidelines (2009) – provide clear indications on when to start ART in TB-HIV co-infected patients. The 2007 guidelines emphasize the importance of collaboration between TB and HIV programmes. The National TB Control Strategy is harmonized with regional and global plans with the following strategic implementation approaches: DOTS expansion and enhancement; Addressing TB/HIV co-infection and MDR-TB: Contributing to health systems strengthening; Greater involvement of all health care providers; Engagement of people with TB; and Enabling and promoting operational research.

- National community and home based care guidelines (2009) - National guidelines and standard and national data were used for the development of these guidelines.

Overall, the government has continued to demonstrate its commitment and leadership through the establishment, implementation and review of national guidelines and policies on HIV and AIDS. The 2009 Male Circumcision Policy is based on a large-scale stakeholder consultation commencing in 2007, the findings of a comprehensive situation analysis, the recommendations from stakeholders meetings, global research evidence and global policy recommendations.

Regionally and globally, Zimbabwe is a signatory to several commitments to improve the HIV and AIDS response towards universal access to comprehensive prevention, treatment, care and support by 2010. A policy to ensure that HIV research protocols involving human subjects are reviewed and passed by national/local ethical review committees is also approved. Therefore, protocols for AIDS research are reviewed by the national Medical Research Council of Zimbabwe and other appropriate review ethics committees.

3. Zimbabwe’s strategic direction of the HIV response has been guided by 5-year frameworks which were based on data and lessons learnt from previous implementation. They are also informed by best practice from elsewhere and aligned to international commitments. The second five-year Medium Term Plan developed in 1994 was based on review results from the first plan of 1989 and the early responses to the epidemic. It focused on a multi-sectoral approach as recommended by the international community. This was followed by the National HIV and AIDS Policy of 1999 and the development of the first National HIV and AIDS Strategic Framework (2000-2004). This first strategic framework was extended and reviewed in 2005 resulting in the development of the current Zimbabwe National HIV and AIDS Strategic Plan, 2006 – 2010. This plan provides a policy and strategic framework for operationalising the “Three Ones” principle – another global initiative and best practice - and overall guidance to all HIV and AIDS interventions implemented by stakeholders, Government, civil society, the private sector and development partners in Zimbabwe. The ZNASP is also aligned to Zimbabwe’s regional and international commitments such as the Millennium Development Goals particularly Goal 6 that seeks to halt and reverse the spread of the HIV and AIDS epidemic by 2015 (2000), the Maseru Declaration on HIV and AIDS (2003), the G8 Universal Access Targets (2005), the Brazzaville Commitment on Universal Access (2006), the African Union’s Abuja Call for Accelerated Action (2006), the Global Plan to Stop Tuberculosis 2006-2015, and the SADC Strategic Framework on HIV and AIDS (2006). Political support for the HIV programme in 2009 was rated 9 out of 10 in the National Composite Policy Index (NCPI) of the 2010 UNGASS report.

4. Zimbabwe has a multi-sectoral approach to prevention, care, support and mitigation, evidenced by the National HIV and AIDS Strategic Plan 2006-2010. Multi-sectoral and inter-sectoral collaboration as well as community participation are regarded as important elements of a strategic prevention response (UNAIDS, 2005ref). Zimbabwe has followed international guidance regarding broadening sectoral participation in the response against HIV and AIDS. The composition of the non-executive Board of the NAC with its 14 members of different backgrounds reflects the multi-sectoral nature of the response. Zimbabwe AIDS Network (ZAN) has 120 provincial level coordinators. The national response is guided by the Zimbabwe National HIV and AIDS
Strategic Plan (ZNASP 2006-2010), which was developed through a broad consultative process. The civil society was actively involved in the development of the multi-sectoral strategy (planning workshops involving the National Association of Non Governmental Organisations, ZAN, and their respective partners). All sectors contributed to the formulation of the strategy, including legislators, politicians, chiefs, and FBOs. With support from various partners, and working with the MOHCW, NAC has developed other sector strategies to ensure a coordinated national response. As the ZNASP draws to a close in 2010, NAC has already set in motion a widely consultative process leading to the crafting of the next 5-year strategic plan.

The spirit of the multisectoral approach is also reflected in the AIDS levy which is a tax instrument designed to collect 3% of all taxable individual and corporate income to fund HIV programmes. Although the collected amounts have been small to date, it is nevertheless an important initiative towards more self-dependence and the mobilization of domestic resources.

5. Universal HIV screening of blood before transfusion was introduced early and is being done according to global best practice. Following the discovery of the first case of AIDS, the government introduced universal HIV screening of blood before transfusion in the same year. The National Blood Services of Zimbabwe has achieved WHO best practice standard (ISO certification in 2007), and been designated a WHO collaborating centre for Southern Africa. Quality control on reagents recorded a 100% pass rate. The donation of blood is governed by the Anatomical Donations and Post-Mortem Examinations Act, Chapter 15:01 whose administration falls under the MoHCW. All blood testing for HIV hepatitis B and C and syphilis is centralized at the Harare laboratory of the National Blood Services of Zimbabwe. The “Pledge 25” initiative is cited by the WHO as a good practice (Pledge 25 encourages school leavers to pledge to give blood 25 times before they are 25, while also committing to leading healthy lives in order to keep their blood safe117). HIV prevalence among blood donors drop from 4.5% in 1989 to 0.5% in 2008. There is evidence that people who think they may be HIV positive do not seek to become donors. This reduces the collection of infected blood, but can also lead to shortages of blood units, as reported for early 2010.118 The guideline “Prescribing Blood, 2005” addresses the priority of sustaining the current high standards of blood safety, stringent donor selection procedures and adopting the latest testing technologies.

WEAKNESSES

6. Although policy and strategy documents support universal access, user fees have rendered some HIV services less accessible for the poor. One report on the issues states the following: “Government says consultation fees at state public health institutions remain the biggest impediment to access to treatment by people living with HIV and Aids”.119 Free maternal and child health care is a policy objective, but in reality, mothers have to pay user fees to access services like PMTCT. To enable health care providers to reduce or eliminate user fees for women and children, financial support from elsewhere has to be secured. The same report cites a government official commenting on the dilemma of user charges: "User fees have remained a challenge for us. Clinics say they need the money to keep running". Charging of user fees at many health facilities (in an effort to generate revenue to support running costs in the context of the economic situation) has been seen to limit the numbers of women able to access ANC and FCH services, with consequent impact on all maternal and child health service coverage including the PMTCT cascade.

A related matter is the screening costs suspected TB patients incur. Zimbabwe ranks 17th of 22 countries that the WHO has designated high burden; countries that together report 80% of the total number of TB cases in the

http://allafrica.com/stories/201008231150.html
world. The TB incidence rate in 2007 was 782 per 100,000 people. However, the required payment for X-rays for TB screening is out of reach for most clients. User charges have also reduced the demand for blood units. The NBSZ works on the basis of a full cost recovery scheme, and the end user has to pay for blood units, unless the NBSZ has sufficient subsidy.

User fees are one of the many symptoms of Zimbabwe’s economic meltdown in past few years. According to a report by Human Rights Watch on a 2006 survey, user fees for health services in state hospitals tripled in March 2006, while private sector doctors’ fees increased in April by 100%. The report also claims that the government did not provide sufficient information to the public on the criteria for exemptions from paying the user fees for those who cannot afford to pay. Instead, many poor and vulnerable people were denied exemptions by social welfare officers. The lack of an enforceable and standardized assessment process by which all social welfare officers administer the exemptions led to their subjective and ultimately arbitrary application.

7. Sex work and homosexuality is illegal in Zimbabwe, as a consequence, sex workers and men who have sex with men lack legal status and protection. Zimbabwe has laws that present obstacles to effective HIV prevention, treatment, care and support for sex workers, MSM, IDUs and prison inmates. The clandestine nature of sex work hampers and limits implementation of prevention programmes with sex workers. Concerning MSM, legislation to decriminalise homosexuality is urgently needed. This would for instance facilitate condom distribution in prisons. Protection for non-consenting men who are forced to have anal sex is provided for under the Sodomy Act. According to the UNGASS report, the inconsistencies that remain between any policies and laws and the National AIDS Policy are the legal provision and protection with regards to sex work and MSM, and legal provisions on human rights issues with special mention on homosexuality. Also, there is no mechanism to record, document and address cases of discrimination experienced by PLHIV, most at risk-populations or any other vulnerable sub-populations.

Equally there is no independent national institutions for the promotion and protection of human rights (human rights commissions, law reform commissions, watchdogs and ombudspersons) who consider HIV related issues within their work, or any focal points within governmental health and other departments to monitor HIV related human rights abuses and HIV related discrimination. The 2010 UNGASS NCPI rated the policies, laws and regulations in place to promote and protect human rights in relations to HIV at only 4 out of 10. The underlying problem is that the HIV policy has not been translated into laws and regulations, and this is compounded by relatively poor efforts to enforce the existing policies, laws and regulations.

Despite the current lack of legal frameworks for prevention activities with sex workers, prisoners, MSM and IDU, Zimbabwe has allowed the existence of informal lobby groups for these populations. This includes organizations representing gays and lesbians living in Zimbabwe and organisations working with sex workers. However, the country still needs to put in place targeted programs such as condom promotion and other prevention strategies in order curb the spread of the HIV among these groups. Zimbabwe also needs to conduct special studies such as size estimation for these groups and to understand the nature of the epidemic among them.

8. While stakeholder participation is high in these strategic planning processes, current use of M&E data is not optimal. Since Zimbabwe does not publish a HIV M&E report on an annual basis, strategic information does not appear to be readily available. In the NCPI assessment for UNGASS 2010, Zimbabwe’s effort to use M&E data in developing/revising the national AIDS strategy was rated only 3 out of 5. The main reasons given for this shortfall were data quality and data dissemination.

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120 TB control 2009. Epidemiology strategy & Financing – WHO
122 At the time of the survey in 2006, there was a system of exemptions or waivers for health user fees to assist in equitable access to health care for the poor and vulnerable.
5.3. Is funding for HIV prevention allocated to where it is most needed?

A conclusive interpretation of the expenditure data from the NASAs is difficult because there are overlaps in how expenditure is classified. In prevention, some categories are based on target group (youth in and out of school, employees in workplaces), and some by intervention type (communication for social and behaviour change, VCT, community mobilisation). Also, with increasing service integration and packaging of services into combined activities, the provision of expenditure break-downs by intervention type within a thematic area can be limited by the available data. For instance, the four-pronged PMTCT approach contains primary prevention activities, as well as care and support for mothers and babies, all summed up as PMTCT expenditure. This analysis found therefore that there are few conclusions which can be drawn for the linking of the programmatic, spending and epidemic evidence combined.

The amount spent on HIV prevention has decreased between 2006 and 2007, and remained at a similarly lower level in 2009 (see Figure 38 in KYR section 4.4). In contrast, expenditure for impact mitigation has increased significantly since 2007. This could have been due to the economic collapse that the country faced; it had hit rock-bottom during the years 2007/2008. Programmes might have been prioritising this area deliberately for “quick wins”. Different to other countries in the region, care and treatment expenditure has reduced from 2007 onwards, despite increasing pressure to provide ART to PLHIV with advanced infections to meet ART access targets. The proportion of total AIDS spending for prevention (relative amount) has also decreased from 39% in 2006 (first NASA year) to 22% in 2009 (last NASA year) - see Figure 44.

Figure 44: Proportion of AIDS expenditure by thematic area in Zimbabwe (2006, 2007, 2009)

Note: “Other” includes Programme management; Human resources; Social protection; Enabling environment; and Research & documentation.

According to the UNGASS 2010 report, the global and local economic meltdown, politically-induced tension, anxiety and uncertainty in the country, and less than optimal external donor support especially to the public sector contributed to the inadequate funding needed for the national response in 2008 and 2009. The disbursement of funds from partners was inconsistent such that some of the funds could not be spent. The switch to other national currencies beginning in 2009 resulted in most funds set aside in Zimbabwean dollars not being used. A contributing underlying reason may be the loss of human capacity through “brain drain”. The NASA 2006-2007
report relates that “45% of the challenges faced by service providers were delays in disbursement; Economic instability accounted for 23% of the challenges mentioned whilst withdrawal of funding was at 11%. Other challenges included lack of skills to compile proposals that meet minimum donors’ requirements, lack of capacity to implement large scale projects and competing services providers in an environment of limited resources”.

There are some 2009 data available on total expenditure by type of prevention intervention (see Figure 39 in KYR section 4.4). Over 40% of expenditure was for activities classified under PMTCT. About 17% was spent on communication for social and behaviour change programmes and about 15% was spent on VCT activities. According to the data, out-of-school youth activities obtained almost 9% of funding, and in-school activities just below 4%. Another 7% was spent on community mobilisation, and 2% on workplace interventions. Less than 1% was spent on prevention for positives (“prevention of HIV transmission aimed at PLHIV”). This seems very low, but there may be classification problems. For instance, part of the VCT efforts will be for PLHIV benefit and could have been classified as “prevention for positives”. Equally, some of the expenditure classified as in-school and out-of-school youth spending will be on social and behaviour change. This analysis found it overall not possible to make firm conclusions on whether funding for HIV prevention is allocated to where it is most needed. One observation was that research expenditure was very low across the four years of NASA data. Also, the expenditure for programme management and human resources appeared unusually low, compared to other countries, but there may have been data gaps or alternative classification of expenditure for these areas.

Overall, it can be concluded that Zimbabwe, given the much lower HIV funding per head available than other countries in the region, achieved respectable levels in HIV service coverage:

- HIV counselling and testing in adults: 18.3% in 2009
- Behaviour change interventions: All 62 districts covered by the National Programme in 2010
- Prevention of Mother-to-Child Transmission: 46% of mothers in need in December 2009
- Antiretroviral treatment for infected people with DC4 count<350: 38% in December 2009

## CHAPTER 6. RECOMMENDATIONS

The global financial crisis has sent a stark reminder that countries - in order to avert an AIDS treatment crisis – need to prevent the maximum of new infections at minimum expense. The cost of treating someone with HIV for life means it makes financial as well as ethical sense to minimise new infections. Zimbabwe needs to commit to adequately resourced high-impact HIV prevention, despite the resource needs in other thematic areas, where there may be possibilities to leverage additional funding from other sources (for instance in impact mitigation and through health sector strengthening). The estimates on the cost-benefit of male circumcision illustrate this point well: Scaling up male circumcision to reach 80% of adult and newborn males in Zimbabwe by 2015 has been modelled to potentially avert almost 750,000 adult HIV infections between 2009 and 2025 and yield total net savings of more than US$3.8 billion between 2009 and 2025 in Zimbabwe.\footnote{USAID MC Factsheet, cited in GFATM Round 10 proposal}

In the previous chapter, evidence was presented on the roles AIDS mortality and the economic decline are believed to have played in sexual behaviour change, in particular partner reduction. With AIDS mortality decreasing (due to the advanced stage of the epidemic and to ARV treatment), and the economy showing signs of recovery, these two stimulators of partner reduction may weaken in the future and not exert the same effect on the sexually active. This represents a real risk, and a potential for the HIV epidemic trend to reverse. The country needs to keep focus on reducing HIV transmission and therefore acquisition to even lower levels and prevent any complacency which may set in after Zimbabwe has been hailed a prevention success.
The recommended future objectives to reduce transmission and acquisition of HIV in Zimbabwe are to:

- Reduce **acute stage transmission and acquisition** by changing the structure of sexual networks and concurrency, condom use during concurrent relationships, and male circumcision with risk reduction counseling;
- Reduce **vertical transmission** through the 4-pronged PMTCT approach: only planned pregnancies amongst HIV positive women, screening of all pregnant women, early antiretroviral treatment for all HIV-positive pregnant women, and ARV prophylaxis for the infant;
- Reduce **acquisition from or transmission to a long-term sexual partner** through couple HTC, consistent male & female condom use, male circumcision with risk reduction counseling if the female is the HIV-positive partner and ART;
- Reduce **transmission from PLHIV** through ART at CD4 count of 350 combined with risk reduction counselling and condom promotion; and
- Reduce **transmission from and acquisition during casual heterosexual sex** through male circumcision, condom use, and a comprehensive HIV prevention programme for sex workers.\(^1^2^5\).

Given these HIV prevention objectives, the **priority HIV prevention interventions** for implementation in Zimbabwe are: male circumcision programmes, PMTCT programmes, earlier ARVs, condom promotion and distribution, couples HIV counselling and testing and a comprehensive HIV prevention programme for sex workers. Each of these interventions require, embedded within them, comprehensive risk reduction counselling, compulsory condom distribution, and a comprehensive HIV prevention programme for sex workers.

These objectives are in line with Zimbabwe’s new HIV strategy and the GFATM round 10 proposed HIV prevention activities. Given the country’s success in reducing HIV to lower levels already and the fact that there is consensus in Zimbabwe on what to do to arrest HIV, the next wave of focus in HIV prevention in Zimbabwe needs to focus on (a) allocating more dedicated HIV resources for priority interventions and fewer dedicated HIV resources for non-priority interventions; (b) setting quality standards for these priority interventions; (c) getting coverage to levels where it will make a difference; (d) planning all aspects of implementation, monitoring of implementation and coordination thereof; and (e) better performance management of those priority interventions that are being implemented to as to improve efficiency and effectiveness.

With an uncertain funding base for the HIV response in the future, and increasing treatment, care, support and mitigation costs, prevention funding, as all other aspects of HIV prevention funding, will need to do “more with less”. Above all, there is a great necessity for **vigilance to prevent secondary increases in the epidemic curve with lower levels of funding**.

The recommendations below were developed with this premise and priorities in mind.

### 6.1. Programmatic recommendations

1. **Rapidly scale up male circumcision using WHO’s implementation standards and guidelines to 80% coverage by 2015.** If there are funding gaps for MC, other prevention activities that have less/no proof of efficacy (such as VCT, STI management as part of HIV prevention) should be downscaled so as to be able to fully execute the male circumcision intervention as planned by the Government of Zimbabwe.

2. **Scale up comprehensive HIV prevention programmes for sex workers, both by creating the specific context for facilitating behaviour change, and by funding targeted and tailored services for these**

\(^1^2^5\) Such a comprehensive programme for sex workers consist of the following components: HIV and STI testing and treatment, condom promotion programmes, solidarity programmes, violence and abuse support, and protective policing.
populations. Such a comprehensive programme for sex workers consist of the following components: HIV and STI testing and treatment, condom promotion programmes, solidarity programmes, violence and abuse support, and protective policing.

3. Identify opportunities for and scale up a couples HIV prevention programme so that 60% of couples are reached with such a programme by 2015. Such a programme should focus on concordant negative and discordant couples, and the faith-based community should be widely involved in such an intervention. Components of it should include regular mutual HIV testing and disclosure of status, counselling and support services, earlier ARVs for those discordant couples who choose to have it, family planning services for discordant couples, and relationship and family skills building.

4. Regulate and rapidly distribute self test kits for HIV at a subsidised cost so as to add an additional vehicle through which persons could know their HIV status, and to rapidly reduce the cost of such implementation.

5. Integrate social norm and behaviour change interventions into the delivery of social and HIV-related services, as opposed to stand-alone services, whilst continuing with an agreed minimum package of HIV prevention public health messaging at lower cost. In spite of normative changes, positive behavioural changes and decreased HIV transmission, high-risk behaviours, particularly multiple sexual partnerships, continue to fuel HIV transmission. Partner reduction must remain a primary message, and the advantages of mutual faithfulness need to be communicated (less stress and mistrust, less STIs, less cost, less jealousy and domestic violence, etc). Condom promotion should emphasize the lack of benefit provided by inconsistent use, especially if additional sexual risks are taken. Social norm and behaviour change interventions must aim at reducing the likelihood of girls to acquire HIV. Communication among couples about HIV testing and disclosure of results must be stimulated. These messages need to be integrated into the delivery of all social services, whilst a minimum standard of public health communication is retained. Expensive mass media campaigns should be discouraged.

It will entail mainstreaming prevention messages into treatment, care, support, and impact mitigation. These thematic intervention areas must all contain HIV prevention components in order to stem the tide of additional people in need of these services in the future. In treatment, individuals in the pre-ART and the ART cohort represent key targets for partner reduction, consistent condom use, IEC on sexual networks and risk perception, and treatment adherence. In care and support, providers including home based carers need to be empowered to practice universal precautions and support the patient in positive living. In impact mitigation, OVCs and widowed people represent major targets for BCC, counselling and protection.

6.2. Policy recommendations

6. Initiate legal and policy reforms that ensure that:
   a) Legislation and traditional practices are non-discriminatory, gender-sensitive and empowering to women;
   b) All protections afforded to women are strengthened and fully compliant with Zimbabwe’s obligations under the Convention on the Elimination of All forms of Discrimination Against Women (CEDAW) and are implemented as a matter of urgency

7. Translate the HIV policy into laws and regulations, in order to promote and protect human rights, and deploy the required efforts to enforce the existing policies, laws and regulations. Aim for a National Composite Policy Index rating of at least 7 out of 10, up from a current 4 out of 10 rating in the 2010 UNGASS report.
### 6.3. Research, monitoring & evaluation

8. **Conduct operational research in order to identify potential efficiency gains.** Such research should focus on the “how” to implement, and not necessarily on the “what” to implement. In an economic climate of uncertainties and limitations, to make the money go further has become important to National AIDS Responses. This analysis showed two areas where operational research is needed:

   a) Although integration and linkage of HIV prevention with other service areas is being promoted, very little is known about whether these service integrations work and achieve the anticipated synergies and impact. The linking and integration includes the strengthening of links with school health services, the integration of sexual and reproductive health, STI and HIV/AIDS services, an expand integration of PMTCT with antenatal, family planning and other MCH related activities, and the integration of couple HCT in family planning and male reproductive health services. This is an area where operational and even process-related research is needed.

   b) User fees in MCH and TB services contradict policy and have been reported to affect access to services. Operational research needs to assess the exemption system run by social welfare officers, how it works and how such a system can be implemented without impacting equity.

9. **Make HIV incidence monitoring a focus, use all the measurement tools available, and triangulate data obtained from different sources and through different methodologies.** The policy makers, M&E specialists, and implementers at the front line need to remain alert to any early warning signs that the epidemic trend may reverse. This includes the monitoring of maternal HIV prevalence in young women, in-depth analysis of population level and cohort data, and keeping a close eye on other clues and proxies potentially indicating changes in HIV/STI transmission dynamics (such as, for instance, reported number of partners, statistics on STI episodes).

10. **Conduct impact evaluations.** Impact evaluations estimate the effect of a programme and provide information on the net change that can be attributed to a specific programme. Such evaluations help inform policy as to what works, what does not, and why. Like most countries, Zimbabwe has in the past conducted more often descriptive rather than causal evaluations. But impact evaluations are urgently required in order to make decisions on high-impact priority programmes and interventions. They may need more complex designs, but are more likely to deliver the information policy makers really need. One obvious area where programme effects need to be understood is the **PMTCT programme.** This intervention is the single largest spending item in Zimbabwe’s HIV prevention, and evidence on each of the four prongs of the PMCT package is required in order to be able to justify the large expenditure for PMCT while other prevention interventions are seriously under-resourced.

### 6.4. Resources for HIV prevention

11. **Advocate for resources for HIV prevention, including from domestic sources and the AIDS levy.** The case of Zimbabwe is special: It has one of the most dramatic HIV epidemic declines of any country, and the epidemic has unfolded in a context of multiple other hardships, including recurring droughts, food shortages, and a wide range of political and economic problems. Just like Uganda, Zimbabwe is mentioned among the few countries where HIV prevalence has significantly reduced. There is evidence that HIV prevention programmes, in conjunction with contextual changes like the economic crisis, have contributed to this success. Sufficient resources must be made available in order to fund proven interventions, and prevent the epidemic from reversing at a time when AIDS mortality and economic hardship may be less present.
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Annex A:

Description of the three main sources of HIV prevalence data in Zimbabwe

In general, there are two established ways of tracking HIV prevalence in the general population. One way is to carry out a household-based population survey of a representative sample of women and men and to collect data about HIV behaviour and samples for HIV testing. These surveys enable conclusions to be drawn about the HIV prevalence of sub-populations with specific behaviours or characteristics. Common types of such surveys are the Demographic and Health Surveys (DHS) and the AIDS Indicator Surveys (AIS).

POPULATION-BASED SURVEYS: Zimbabwe has conducted four DHS surveys since 1988, of which the last (in 2005/6) conducted HIV testing of respondents. A fifth DHS is underway in 2010/11 and will also collect samples for HIV testing. But even household-based surveys provide biased HIV prevalence data. Some persons will not be seen at household level because they are migrants or otherwise away from home, some persons will agree to be interviewed, but not tested for HIV, etc. Reniers & Eaton (2009) have shown that persons who know their HIV status are more likely to refuse consent for an HIV test during a population-based HIV survey. This biases the sample of persons who consent to HIV testing, to be less likely to be HIV positive. In the Zimbabwe DHS of 2005/6, 24 percent of all women and 37 percent of all men did not have a valid HIV test result, either because they were not available to be tested or (more commonly) because they refused to have an HIV test. Coverage of testing was higher in rural areas (78 percent) than in urban areas (58 percent), and varied from 55 percent among all eligible respondents in Harare (62 percent of women and only 46 percent of men) to 87 percent in Midlands. An analysis concluded that the effect of this non-response bias was small and not statistically significant, among both men and women (Wapeta et al. 2010).

ANTENATAL CLINIC SURVEYS: In an epidemic in which HIV is mainly heterosexually transmitted, another way of monitoring the HIV epidemic is to assess HIV prevalence in pregnant women attending antenatal care (ANC) services. This works best if coverage of antenatal clinics for pregnant women is nearly universal and fertility is high enough that sexually active women are likely to present to an antenatal clinic every so often (WHO, 1988). In Zimbabwe, 95% of women attend ANC at least once during their most recent pregnancy (DHS 2005/6 table 9.2). HIV can also be monitored among blood donors, STI patients and counseling and testing clients, but HIV prevalence in these sub-groups cannot be generalised to the general population.

ANC sentinel surveillance (ANCSS) surveys in Zimbabwe have used unlinked anonymous testing of blood left over from routine syphilis testing of pregnant women, in order to minimise refusals and bias in the HIV prevalence data. ANC surveys have been conducted in Zimbabwe since 1989. In 2000, the ANC survey methods were strengthened and standardized to provide consistent and comparable data over time (ANC Sentinel Surveillance Report, 2009). Based on these data and mathematical modeling, the estimated adult prevalence of HIV was 20.1 percent in 2005. When Zimbabwe’s first national population-based sero-survey (the DHS) was conducted in 2005/6, the adult prevalence was observed to be 18.1 percent, very close to the previous estimate.

COHORT STUDIES: In Zimbabwe there is an additional source of population-based data, an open population-based cohort of approximately 10,000 people in Manicaland, eastern Zimbabwe, that has been studied since 1998. Findings from this unusually rich source of data will be highlighted throughout this chapter.
Annex B: Zimbabwe Modes of Transmission Modelling Report

(insert version 3 Nov, 30 pages)
Annex C: Research on Validity of Self-reported Data

A study of couples in Zambia published by Allen et al. (2003) used sperm on vaginal smears and other biological markers to validate reported condom use. It was found that at least half of unprotected contacts in discordant couples were not reported. The authors conclude that ideally, both self-report and biological markers should be used in studies (self-report measures to maximize sensitivity, and biological markers to provide an estimate of the degree of underreporting).

Gregson et al. (2002b), in a study in Manicaland, compared two interview methods, a standard face-to-face interview in which the respondent’s answers were known by the interviewer and an Informed Confidential Voting Interview (ICVI) in which the respondent submitted responses through a ballot box and the responses were not known by the interviewer. When interviewed through ICVI, men were more likely to report multiple sexual partners currently (OR = 1.33, p = .028), in the past month (OR = 1.71, p = .002), and in the past year (OR = 1.35, p = .002). The discrepancies in women’s reporting of multiple partners were even more striking, with women more than 5 times as likely to report having multiple partners currently (OR = 5.24, p = .001), nearly 3 times as likely to report multiple partners in past month (OR = 2.92, p = .001), and nearly twice as likely to report having multiple partners in past year (OR = 1.97, p = .003) when interviewed using the ICVI method versus face-to-face interviews. Gregson et al. also report that this effect was strongest among married women, that women cohabiting with their husbands were least likely to report extramarital partners (OR = 0.40), and women in rural areas were less likely than women in estates and business centers to report multiple sexual partners (OR = 0.36). The only reporting of extramarital partners among married women (9 of 881 women) and rural women (13 or 1175) was through the ICVI method.

Minnis et al. (2009) compared self-reported data on sexual behavior (collected through either face-to-face interviewing or audio computer-assisted self-interviewing [ACASI]) with a biomarker which indicated whether Zimbabwean women had recently had unprotected intercourse. (The biomarker, known as a prostate-specific antigen or PSA tests, detects exposure to semen in the previous 2 days.) Of the 21.5% of study participants who tested positive for PSA (in other words, who tested positive for recent unprotected sexual intercourse), only 52% reported having had unprotected sex in the previous 2 days. Of the 48% of women who erroneously reported not having had unprotected sex in the previous 2 days, most reported having only had condom-protected sex (36.2% of all women who tested PSA-positive) while 11.7% of women who tested PSA-positive reported not having had sex at all in the previous 2 days. Self-reports through ACASI were no more accurate than self-reports through face-to-face interviewing.
## ANNEX D: BCC Activities, Implementing Organisations, Key Messages and Target Groups

### Behavior Change Communication Interventions

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Activity</th>
<th>Delivery mode</th>
<th>Key Messages/Themes</th>
<th>Target Group</th>
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</thead>
</table>
| UNFPA              | Mass Media programme          | Serialised radio programme Loving carefully/ Kudanana Kune Hungwaru (26 call-in sessions each in Shona and Ndebele, 2008, 26 radio drama episodes in 2009, each in Shona and Ndebele) | ● Risk of multiple & concurrent and age-disparate sexual partnerships  
● Consistent condom use  
● Underlying gender issues, sexual rights and responsibilities;  
● Stigma associated with HIV  
● Build confidence to communicate with your partner | Women and men 18-44 |
| PSI                | Mass Media Campaign           | TV and Radio (Delayed Debut campaign)                                         | ● A real man is not pressured into having sex prematurely;  
● A real woman will not indulge in sexual activity prematurely;  
● A real man does not force women to have sex with him | 12-20 years |
| PSI                | Mass Media Campaign           | TV and Radio (Be faithful campaign)                                           | Increase knowledge of sexual networks and associated risk. Don’t be part of sexual network               | Single women (16-24 y), Married/Co-habiting men (25-39 y)                     |
| PSI                | Mass Media                    | TV and Radio (Stigma and discrimination campaign)                            | ● HIV cannot be transmitted by eating food prepared by an HIV positive person;  
● HIV cannot be transmitted by using the same utensils as PLHIV;  
● HIV cannot be transmitted by being touched by PLHIV | General population and families of PLHIV |
| PSI/NAC            | Mass Media                    | Weekly radio programme (Utano hwedu/Uthini ngalokhu)                        | Knowledge about male circumcision and where the service is provided                                   | Male circumcision (Teenagers 13-19 y and men 20-29 y)  
Dual Protection (Sexually active 16-29, HIV+ F, HIV+ and discordant couples)  
New Start (Couples)  
Be faithful: Single women 16-24, Married/co-habiting men 25-39 |
| PSI/SAiAIDS/GF TAM | Mass Media                    | TV and Radio talk show (Positive Talk) Print Media as well                  | It is important to know One’s HIV Status  
It is possible to live longer with HIV through adhering to treatment, proper nutrition and psychosocial support | PITC (sexually active M&F 16+, care givers of children, HIV+ F with young children, health service providers)  
TB and HIV (TB patients and PLHIV) |
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<th>Key Messages/Themes</th>
<th>Target Group</th>
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<tbody>
<tr>
<td>SAFAIDS/ MLSS</td>
<td>Mass Media</td>
<td>Radio – Inzwi Redu TV show being produced along the same concept, print media booklets, posters &amp; newsletters</td>
<td>TB is preventable (Round 8) Male Circumcision (Round 8) Orphans and Vulnerable Children are everyone’s responsibility, they should be supported through education, life skills and psychosocial support</td>
<td>12 – 60+ ART (PLHIV, TB patients) 6 -17yrs 17 – 60yrs+</td>
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<tr>
<td>UNFPA/BC Implementing partners</td>
<td>Mass Media</td>
<td>TV film (I want a wedding dress)</td>
<td>Risk of multiple including concurrent and age-disparate sexual partnerships Related social and gender norms</td>
<td>Women and men 18-44</td>
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<tr>
<td>UNFPA/BC Implementing partners/NAC</td>
<td>Interpersonal</td>
<td>Participatory development of ward action plans and sensitization on the BC programme</td>
<td>Six key themes of the BC strategy: Personalized risk perception in relation to key drivers of HIV (including MCP) Open communication about HIV Underlying gender &amp; community norms Partner reduction / faithfulness Consistent and correct condom use Stigma reduction</td>
<td>Community stakeholders, AIDS Action Committee Members</td>
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<tr>
<td>UNFPA/BC Implementing partners/NAC</td>
<td>Interpersonal</td>
<td>Training of leaders as role models and advocates</td>
<td>Six key themes of the BC strategy (see above)</td>
<td>Traditional, religious, and other community leaders</td>
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<tr>
<td>UNFPA/BC Implementing partners/NAC</td>
<td>Interpersonal</td>
<td>Community-based communication by 3,800 behaviour change facilitators</td>
<td>Six key themes of the BC strategy (see above)</td>
<td>Adult men (25-49), adult women (25-49), young men (15-24), young women (15-24)</td>
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<tr>
<td>UNFPA/BC Implementing partners/NAC</td>
<td>Interpersonal</td>
<td>Love&amp;Respect Courses conducted by behavior change facilitators</td>
<td>Six key themes of the BC strategy (see above)</td>
<td>Adult men (25-49), adult women (25-49), young men (15-24), young women (15-24)</td>
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<td>UNFPA/BC Implementing partners/NAC</td>
<td>Interpersonal</td>
<td>Community-video screening and other HIV BC related events</td>
<td>Six key themes of the BC strategy (see above)</td>
<td>Women and men 15-49</td>
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<tr>
<td>ACTION</td>
<td>Mass Media</td>
<td>Film (Big House Small House)</td>
<td>It is possible to have a relationship that is both emotionally and physically</td>
<td>Missing</td>
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<td></td>
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<td>satisfying with one person</td>
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