



HIV Prevention in Southern Africa for Young People with a Focus on Young Women and Girls in Botswana



AFRICAN COMPREHENSIVE HIV/AIDS PARTNERSHIPS

LITERATURE REVIEW AND IMPLICATIONS FOR PROGRAMME PLANNING

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Young People with a focus on
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Report by

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Disclaimer

The contents and opinions expressed herein are the responsibility of the author and do not necessarily reflect the views of ACHAP.

Acronyms

ABC	Abstain, Be faithful, Condomise
ACHAP	African Comprehensive HIV/AIDS Partnerships
AIDS	Acquired Immune Deficiency Syndrome
ART	Antiretroviral Therapy
ARV	Antiretroviral
BAIS	Botswana AIDS Impact Survey
BNAPS	Botswana National HIV and AIDS Prevention Support
CBO	Community-Based Organisation
HCT	HIV Counseling and Testing
HIV	Human Immunodeficiency Virus
IPC	Interpersonal Communication
M&E	Monitoring and Evaluation
MCP	Multiple Concurrent Partnerships
MOH	Ministry of Health
NACA	National AIDS Coordinating Agency
NSF	National Strategic Framework
OVC	Orphans and Vulnerable Children
NGO	Non-Governmental Organisation
PMTCT	Prevention of Mother to Child Transmission
PLHIV	People Living with HIV
RCT	Randomised Controlled Trial
SBCC	Social and Behavior Change Communications
STI	Sexually Transmitted Infection
UNAIDS	The Joint United Nations Programme on AIDS
UNICEF	United Nations Children's Fund
UNFPA	United Nations Population Fund
WHO	World Health Organization

Key indicators

Indicator (2008-2010)	Male	Female	All
% Unmarried, males 25-39, females 15-29	-	-	86.2
% Cohabiting, males 25-39, females 15-29 ¹	-	-	7.0
% 0 partners in past year, males 25-39, females 15-29	8.2	12.3	10.6
% 1 partner in past year, males 25-39, females 15-29	47.7	62.6	56.5
% >1 partner in past year, males 25-39, females 15-29 (Males 25-29, 42.1%; 30-34, 39.1%, 35-39, 41.1%) (Females, 15-19, 7.3%; 20-24, 24.7%; 25-29, 24.9%) ²	44.1	35.1	32.9
% Alcohol, once a week or more, males 25-39, females 15-29 ³	38.2	11.1	21.0
% Some secondary schooling, males 25-39, females 15-29	-	-	57.7
% Tertiary education, males 25-39, females 15-29 ⁴	-	-	28.4
% Literate, 15-24 ⁵	-	-	93.0
% Not working for money, males 25-39, females 15-29 ⁶ (Data limited by survey method)	39.5	77.1	60.7
% Work far from home, employed males 25-39, females 15-29 ⁷ (Data limited by survey method)	16.0	6.5	10.0
% Christian, males 25-39, females 15-29 ⁸ (14% report no religion)	-	-	82.5
% Source of HIV info: radio, males 25-39, females 15-29	-	-	32.4
% Source of HIV TV: radio, males 25-39, females 15-29 ⁹	-	-	23.7
% Close family member living with HIV, males 25-39, females 15-29 ¹⁰	-	-	58.4
% Males and females aged 15-19 HIV+ ¹¹	2.4	5.0	3.7
% Males and females aged 15-24 HIV+ ¹²	4.8	10.7	8.0
% Males 15-19, circumcised ¹³	5.4	-	-
% Males and females 15-24 who had sex before age 15 ¹⁴	-	-	3.5
% Males and females 15-24 with correct knowledge, and who reject myths ¹⁵	-	-	43.0
% Males and females 15-24 who using condoms who had 2+ partners in past year ¹⁶	-	-	81.1
% Males and females 15-24 who using condoms with non regular partner in past year ¹⁷	-	-	78.4
% Males and females 15-49 testing for HIV in past year ¹⁸	-	-	41.2
% Children under 18 who are orphans (single/double) ¹⁹	-	-	16.2
% Schools providing HIV life skills ²⁰	-	-	100.0
% HIV+ pregnant women receiving PMTCT ²¹	-	94.2	-
% Children and adults with advanced HIV infection receiving ART ²²	-	-	89.9

¹ NACA, 2010b

² NACA, 2010b

³ NACA, 2010b

⁴ NACA, 2010b

⁵ data.worldbank.org/country/botswana

⁶ NACA, 2010b

⁷ NACA, 2010b

⁸ NACA, 2010b

⁹ NACA, 2010b

¹⁰ NACA, 2010b

¹¹ CSO, 2009.

¹² CSO, 2009.

¹³ CSO, 2009.

¹⁴ CSO, 2009.

¹⁵ CSO, 2009.

¹⁶ CSO, 2009.

¹⁷ CSO, 2009.

¹⁸ NACA 2010b.

¹⁹ http://www.unicef.org/infobycountry/botswana_statistics.html

²⁰ NACA 2010b.

²¹ NACA 2010b.

²² NACA 2010b.

EXECUTIVE SUMMARY

For the period 2010-2014, the African Comprehensive HIV/AIDS Partnerships (ACHAP) is focusing on strengthening HIV prevention interventions among young people aged 15-29, including an emphasis on young women and girls.

Approach: To inform programme development, this review focuses on the major factors that drive HIV infection and explores interventions that have illustrated important learnings and demonstrated effectiveness for HIV prevention.

HIV/AIDS Policy and Epidemiological Context in Botswana: Botswana has followed a sequenced strategic response to the HIV epidemic, and prevalence declines have been noted among youth aged 15-24. However, the epidemic remains severe, and incidence levels are high – especially for females in their 20s. Young females are biologically more susceptible to HIV than males, and are also vulnerable as a product of a range of practices related to sexual partnerships. Likelihood of HIV infection is high, even among young women who only have one partner. For example, a study of youth in South Africa found that HIV prevalence was 15.2% for females who had ever had one partner, 23.1% for those ever having had two partners and 28.5% for those ever having had three partners.

Main Risk Factors: Vulnerability to HIV infection among young women is directly related to an interplay of factors including sexual debut and early fertility in a context where late or non-marriage is an established pattern; where immediate needs and consumer-related wants in a context of poverty, unemployment or low income flow into transactional and inter-generational sexual relationships; where high partner turnover and concurrent sexual partnerships have become normalised; and, where risk is further accentuated by alcohol consumption and mobility. Physical violence is a related factor. HIV risk flows directly from sexual partnerships with men who are at higher risk for HIV – either as a product of being older and thus in a higher HIV prevalence pool, or as a product of risky practices such as having concurrent sexual partners. Sub-populations of young females additionally at risk include orphans and youth with disability. There is also a need to integrate the large proportion of young females already living with HIV into prevention programming.

Approaches: Although there are no absolute certainties in determining ‘what works’ for HIV prevention programming – largely as a product of limitations related to evaluation – there are types of programmes and lessons learned from programmes that inform the Botswana context. School-based interventions, facility-based and community-based health services and mass media have been identified as effective, while broader lessons for effective programming centre around comprehensive

approaches that include engaging youth in intervention design, addressing communities as a whole and using traditional networks for intervention delivery.

There are no ‘one size fits all’ programmes, and adaptable community-wide approaches are necessary. Although biomedical approaches to incidence reduction have been proven using randomized controlled trials (RCTs), social interventions have not achieved demonstrable impacts on incidence. Reviews and other research noted reservations about peer-led programmes and microfinance programmes for youth. Lessons for programmes addressing intergenerational sex include promoting dialogue, offering explicit information about risk, emphasizing adult roles in caring for young females and promoting safety.

Mass media is recognised as providing an important backdrop to key focal areas for communication, and must be complemented by communication processes closer to grassroots level, including interactive dialogue and harnessing horizontal networks of communication. Overlapping strategies at the community level are noted to be effective, especially if they are endorsed and promoted through leadership advocacy.

Drawing Together the Evidence: A vital element of a new vision for HIV prevention programming is a shift from individual-centred approaches, to a comprehensive approach that engages with people in relationships, peers, families and communities. A review exploring the ‘next generation’ of HIV prevention strategies notes that the most efficacious interventions move beyond individualised orientations and engage participants with interactive activities including one-on-one, small group, community-level skill building and dialogue. Incorporating community perspectives in identifying health priorities and guiding the intensity and sequencing of support through programmes is thus a necessary part of HIV/AIDS programming. This involves a shift in perceptions of AIDS governance that is focused on supporting a broad based social response that is led on many fronts.

Related strategies include networking with local leaders, churches, schools, politicians and the like, incorporating reiteration of the importance of mobilising HIV response and building coalitions. Approaches also need to take into account the varied and unstable nature of ‘families’ in the Botswana context, as well as noting wide variations in community structures and dynamics – although the small population of the country represents an opportunity for a coordinated comprehensive approach. Existing programmes could also readily be drawn into an intensified, rigorously defined national-level programme to address HIV prevention among young females.

Defining a Way Forward: An ecological change model provides a means for clarifying domains of intervention, including defining exacerbating and mitigating factors. Evaluation of interventions is key, and programme plans should include baseline data and mid-programme assessment.

Contents

1. BACKGROUND	8
2. APPROACH	8
3. THE HIV/AIDS POLICY CONTEXT IN BOTSWANA	9
4. THE EPIDEMIOLOGICAL CONTEXT OF HIV IN BOTSWANA	10
5. WHAT ARE THE MAIN RISK FACTORS FOR HIV AMONG YOUNG FEMALES?	13
5.1 Early sexual debut, late marriage, early fertility	16
5.2 Transactional sexual relationships	17
5.3 Multiple and concurrent sexual partnerships	19
5.4 Alcohol use and HIV risk	22
5.5 Mobility.....	23
5.6 Violence against women	24
5.7 Special populations: Orphans, youth with disability and PLHIV	25
6. APPROACHES TO ADDRESSING HIV PREVENTION AMONG YOUTH AND YOUNG FEMALES	27
6.1 Exploring ‘what works’	27
6.2 Livelihood and economic support programmes.....	32
6.3 Addressing intergenerational sex	33
6.4 Support through mass media and other communication approaches.....	34
7. DRAWING TOGETHER THE EVIDENCE	37
7.1 Focal Issue: Evaluating HIV prevention through RCTs	37
7.2 Focal issue: Gender.....	39
7.3 Focal issue: Limits of individual cognitive-behavioural approaches	41
8. DEFINING A WAY FORWARD	47
 Appendix 1: Exacerbating and mitigating factors for concurrency	52
Appendix 2: Statutes and policies in Botswana	53
 BIBLIOGRAPHY	56

1. BACKGROUND

The African Comprehensive HIV/AIDS Partnerships (ACHAP) has embarked on a second phase of support to the national HIV response in Botswana (2010-2014) with a focus on strengthening HIV prevention interventions among young people aged 15-29, and an emphasis on young women and girls.

A total of 534,000 young people fall into the 15-29 year age range, of which 53% are female. Young females are vulnerable to HIV and have prevalence and incidence rates up to three times those of their male counterparts.²³

This review focuses on the major factors that drive HIV infection and explores interventions that have demonstrated effectiveness, as well as illustrating important learnings for programme development. Findings inform understanding of sex and sexuality in relation to HIV risk and the potentials for interventions in the Botswana context.

2. APPROACH

There is a comprehensive body of literature on HIV prevention among youth that includes reviews of programmatic interventions, HIV prevention models and trials relevant to Southern Africa. Additionally, a range of literature has a bearing on the vulnerability of young people, including young women and girls, to HIV infection. While key risk factors are well known, what is less well understood are the modalities of programmes that are demonstrably effective in preventing HIV incidence.

Relevant literature was identified through a combination of processes including initially drawing on ongoing work in similar focal areas, literature collected by the ACHAP/AED team and recent reports related to HIV in Botswana. This was followed by a rigorous internet-based search using search engines including Google, Google Scholar, PubMed and HighWire, among others. Additional searches were conducted using literature identified as being closely related to the focal area, with links to cited literature and related literature being explored.²⁴ References and citations within articles were also included where relevant.

While an emphasis was placed on peer-reviewed literature – with a particular focus on contemporary literature in journals – other sources including books, reports

²³ CSO, 2009.

²⁴ It is a useful feature of the various search engines that related information and cited articles are provided as hyperlinks. However, this does also produce multiple layers of references that result in a massive body of literature being reviewed – as evidenced by the several hundred articles incorporated into the present review. Focusing on current literature helps to minimise the sheer volume of literature, and most articles and reports anyway include literature reviews and summatively incorporate previous research. This largely does away with the need to draw in literature beyond the past decade.

considered to be ‘grey literature,’ academic dissertations and HIV prevention websites were included. For the most part, full copies of journal articles were accessible, although in a minority of instances only abstracts could be considered, while reports and other documents were generally available in full.

Findings in the literature follow common trends, although there are also contradictory perspectives on ‘what works’ at the programme level. While some of these contradictions are a product of timing (i.e. emerging findings might contradict conclusions of older reviews or studies), the multidisciplinary nature of the AIDS literature and diversity of analytic frameworks employed also produce divergent conclusions.

3. THE HIV/AIDS POLICY CONTEXT IN BOTSWANA

Botswana has a population of 1.8 million and is considered to have a hyperendemic HIV epidemic with a national HIV prevalence of 17.6% and a total sub-population of 320,000 children and adults living with HIV.²⁵

The country’s response to the epidemic is informed by concerted planning led by the national government, and includes regular development of strategic plans and reviews. The National HIV/AIDS Strategic Framework of 2003-2009 focused on intensifying incidence reduction and impact mitigation within the context of a multisectoral response including district and public sector mobilisation, as well as a strengthened policy environment.²⁶

The Government is committed to a sequenced approach addressing most urgent priorities first, working collaboratively through partnerships and highlighting gender in HIV prevention. Gaps in response are noted to include a lack of strategic and coordinated communication, poor integration of community mobilisation, persistence of stigma and inadequate knowledge, limited teacher capacity, and a need to improve condom distribution. Other gaps include those related to human resource capacity overall, HIV counseling and post-test services, youth-friendly services and STI prevention. The HIV prevention strategy includes a focus on multiple partners, stigma, intergenerational and transactional sex, alcohol abuse and HIV.²⁷

A robust legal and policy system informs HIV/AIDS response in Botswana.²⁸ This includes addressing rape (but not marital rape), sexual abuse or sex with children under 16 (with additional punitive measures if the perpetrator is HIV positive), criminalising sex work, addressing HIV in the workplace, and criminalising willful

²⁵ CSO, 2009; UNAIDS, 2010.

²⁶ NACA, 2003

²⁷ See NACA 2003, 2005, 2007, 2008, 2010a, 2010b.

²⁸ See Appendix 2.

transmission of HIV. Policies include 'opt-out' HIV testing, a draft policy on alcohol abuse and a draft orphan and vulnerable children (OVC) policy.

The mid-term review of the Strategic Framework noted that while significant gains had been made in treatment and care of people living with HIV (PLHIV), there was an urgent need for prevention efforts to be intensified and for effective and impactful approaches to be implemented.²⁹ The review noted that although participation of communities in HIV/AIDS response needed to be understood as 'an essential condition,' communities were not being effectively supported and the socio-cultural contexts related to prevention behaviours and underlying determinants of vulnerability were being overlooked.

Promising changes among youth were noted in the review including an increase in already high levels of condom use with non-regular partners among 15-24 year olds from 82% in 2001-02 to 87% in 2004, although sexual abstinence among both males and females declined over a similar period. It was noted that multiple concurrent sexual partners (MCP) and intergenerational sex were drivers of the epidemic and required more focus.³⁰

The National Operational Plan for scaling up HIV prevention notes that prevention is the most urgent 'survival strategy' and orients emphasis around prevention of sexual transmission, HIV counseling and testing (HCT), Prevention of Mother to Child Transmission (PMTCT), Sexually Transmitted Infections (STI) management and preventing blood borne transmission.³¹ The plan emphasises that emerging approaches should be oriented towards relevant strategic communication and refocusing community participation away from a recipient/beneficiary orientation to one where community members are active planners of responses.

➤ **Implications:** *Botswana has a well-established policy and strategy environment and has successfully implemented a comprehensive response. Weaknesses in HIV prevention response have been acknowledged and intensification of prevention efforts, including a commitment to 'programmes that work,' is seen as a priority. The importance of integrating community participation has also been recognised.*

4. THE EPIDEMIOLOGICAL CONTEXT OF HIV IN BOTSWANA

HIV prevalence among people aged 15-49 peaked in Botswana in 2001 at 27%, while annual new infections peaked in the mid-1990s during the first phase of the

²⁹ NACA, 2007

³⁰ A third of school girls aged 18-22 were noted to have older partners, with most of this group also having sex with boys in their immediate age range, with condom use lower among those girls with older partners in comparison to those with partners in the same age range.

³¹ NACA, 2008a.

epidemic.³² Currently, HIV prevalence among youth and adults aged 15-49 in Botswana is 25.0% including 10.7% of young females and 4.8% of young males aged 15-24. Among young people aged 25-29, the female-male prevalence levels are 33.9% and 16.0% respectively. HIV prevalence has declined in Botswana among young people aged 15-24 – among females, from 18.2% in 2004 to 10.7% in 2008, and among males from 5.8% to 4.8%.³³ Notwithstanding this promising trend, HIV prevalence remains high among young people, and incidence levels are particularly high among females 25 years and older.³⁴

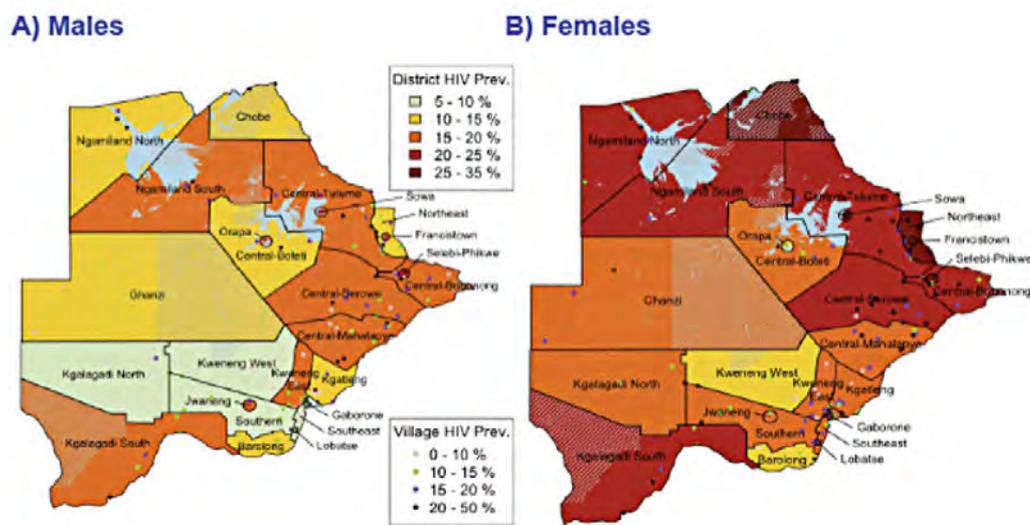


Figure 1: Geographic heterogeneity of HIV in Botswana

HIV prevalence is higher in urban areas than rural areas, and is higher among people who are living together (34.4%) in comparison to those who are married (21.1%) or who have never married (16.1%).³⁵ Prevalence is unevenly distributed throughout Botswana among young people, although variations even out in older age groups. Among females overall, the differences in range remain stark. For example, among 25-29 year old females, district HIV prevalence is around 15-17% in Southeast and Lobatse, while it is nearly three times higher, at 44%, in Francistown and Central Tutume.³⁶

A spatial analysis of HIV in Botswana highlights heterogeneity, with differences illustrated in Figure 1, leading to the conclusion that HIV prevention interventions should be geographically targeted.³⁷ Hot spots were also identified. In the same study,

³² NACA, 2008b.

³³ Ghys et al., 2010. It was not established whether declines in HIV prevalence were associated with prevention programmes or behavioural changes. Further research is necessary to establish causal pathways and associations.

³⁴ See CSO, 2009 and Stover et al., 2008.

³⁵ CSO, 2009.

³⁶ CSO, 2009, 18.

³⁷ Okano et al., 2010.

analysis of HIV prevalence data noted that being female, drinking alcohol, cohabiting with a partner and having a partner 10 or more years older was associated with higher odds of HIV infection, while marriage was protective.

Although HIV incidence among young people aged 15-19 is somewhat low at 0.7%, this percentage increases to 3.3% in the 20-24 year age group and 5.4% in the 25-29 year age group, with incidence being markedly higher among females.³⁸ Incidence is 6.14% for females aged 20-30, and this level remains as in the older age band – 6.61% for females aged 31-49. Comparative incidence for males is 2.01% for males aged 20-30 and 5.73% for males aged 31-49.

Table 1: HIV prevalence of youth and population in Botswana³⁹

Age	Population		Male HIV+		Female HIV+		Total pop HIV+		Relative proportion among females
	Male	Female	%	Pop	%	Pop	%	Pop	
15-19	86,175	87,842	2.4	2,068	5.0	4,392	3.7	6,460	8.5
20-24	81,883	97,641	7.4	6,059	16.0	15,622	12.3	19,160	30.3
25-29	87,080	93,168	16.0	13,932	33.9	31,583	25.9	45,515	61.2
Total/Ave	255,138	278,651	8.6	22,059	18.3	51,597	14.0	71,135	100%

Table 1 illustrates the total prevalence of young people in relation to population. As can be seen, of all young females aged 15-29, 61.2% (31,583) of those living with HIV are aged 25-29. Young females aged 15-19 account for 8.5% (4,392)⁴⁰ of the total females living with HIV aged 15-29, followed by 30.3% among those aged 20-24.

Provision of antiretroviral therapy (ART) is extensive, with coverage estimated to exceed 90% and high rates of retention contributing to marked declines in AIDS deaths and the number of children newly orphaned – although 93,000 children aged 0-17 (12%) have lost one or both parents to AIDS.⁴¹ Coverage for PMTCT exceeds 80%.⁴²

A recent comprehensive HIV/AIDS social assessment survey of females aged 15-29 and males 25-39 highlights successes in terms of service provision (e.g. ART, PMTCT, HCT), information dissemination, condom dissemination, life-skills provision for youth, discourse about sex and gender and networking between

³⁸ Ibid.

³⁹ Derived from CSO 2009.

⁴⁰ Note that this proportion is of all young people aged 15-19, and not all of this group has had sex before. The proportion of those who are HIV positive among those who are sexually active will therefore be higher. Notwithstanding, HIV incidence increases markedly among people in their 20s in comparison to those in their teens.

⁴¹ Total orphan estimate is 130,000 – see Stover et al. 2008.

⁴² Ibid.

stakeholders.⁴³ Levels of knowledge were however noted to be inadequate, and over a quarter of respondents were classified at high HIV risk. More than a third reported multiple partners in the past year, while a similar proportion of males also reported sex under the influence of alcohol or drugs. General patterns of risk included higher risk among males (although epidemiological data illustrate that this still translates into lower prevalence among males relative to females), less control over sexual behaviour among younger people and a relationship between social norms and risk. It was noted that an emphasis on condoms weakened internalisation of the risks of having multiple partners, while human resource capacities and inadequate monitoring and evaluation (M&E) systems weakened programmes. A lack of community involvement in HIV response was noted to be a deficiency. A multilevel response including individual, interpersonal,⁴³ community and society level responses was recommended.

➤ **Implications:** *The HIV epidemic in Botswana is severe, although there have been recent declines in prevalence among younger people. It is unclear what factors underpin this decline, or whether declines will continue at the same pace. A large number of females 15-29 are living with HIV (51,597), with incidence increasing as age increases. Given the high proportion of PLHIV, prevention programmes should include emphasis on prevention with PLHIV of both sexes. Incidence differences between males and females are indicative of intergenerational sex, with high incidence among females occurring in the 20-30 year age range. This latter trend suggests a high level of exposure to densely clustered sexual networks. Females aged 15-29 are thus exposed to a combination of HIV risk factors including sexual partner turnover and concurrent sexual partnerships concentric around male partners who are HIV positive as a product of high risk behaviours and/or who are older.*

5. WHAT ARE THE MAIN RISK FACTORS FOR HIV AMONG YOUNG FEMALES?

Young females are biologically more susceptible to HIV than young males. Transactional sex, having older partners, partner turnover and being linked to sexual networks through concurrent sexual partnerships are key factors related to HIV incidence, and even individuals who have conservative sexual practices may be exposed to HIV as a consequence of the risk practices of their partners.

Biological factors include physiological vulnerability as a product of young age at sexual debut

In relation to decreases in HIV infection among young females in Botswana and Malawi, it was noted that prevention emphasis should include delay of sexual debut, partner reduction and consistent condom use, while also giving attention to male circumcision and targeting places that act as 'nodes for sexual networks' (Gouws et al., 2008).

⁴³ See NACA 2010a, 2010b.

and during pregnancy, higher transmission risk through sex with a partner who is in the acute stage of HIV infection and transmission risk related to disruptions to vaginal flora, being infected with STIs (e.g. HSV2, bacterial vaginosis, *Trichomonas vaginalis*) and immune activation brought about by other illnesses.⁴⁴ HSV2 is noted to have a marked impact in increasing transmission rates in advanced HIV epidemics.⁴⁵

Of particular concern is the hyper-vulnerability of young females to HIV infection. Young females acquire HIV rapidly at rates far greater than the probability of 0.0001 found in studies of transmission among people in relatively stable partnerships.⁴⁶ A study of youth aged 15-24 in South Africa found that HIV prevalence was higher as the total number of partners increased, with a very high likelihood of HIV transmission per partner. *HIV prevalence was 15.2% for females who had ever had one partner, 23.1% for those ever having had two partners and 28.5% for those ever having had three partners.* The conclusion is drawn that HIV transmission per partner among young females is far more efficient than has previously been assumed, and that even exposure to a single HIV positive partner poses a high risk for transmission.⁴⁷

One biological risk factor that has not been a focus of prevention campaigns is heterosexual anal sex. Receptive anal sex is estimated to be 20 times riskier for HIV transmission compared to vaginal sex.⁴⁸ Anal sex is reported by around 5-16% of respondents in various studies in Southern Africa.⁴⁹ Females who engage in anal sex have higher overall HIV prevalence and it has been suggested that this practice could potentially account for 45% of all incident infection among females because of the significantly higher risk of HIV transmission per sex act.⁵⁰

A study of HIV prevalence among young people in nine Southern African countries found high HIV prevalence among female youth, with HIV prevalence escalating markedly in successive age bands.⁵¹ These patterns are attributed to young females having older male partners in combination with greater biological susceptibility.

Gendered identities of young females affect vulnerability to HIV, with identity

A study of HIV/AIDS knowledge among youth from schools around Gaborone, Botswana found that family factors influenced the likelihood of having adequate knowledge, with maternal employment being an important factor. Other factors included family socialisation, level of education, extent of common residence of parents, level of conflict in the family, extent of disagreement with mother and extent of discussion of sexual issues within the family (Fako et al., 2010).

⁴⁴ UNAIDS, 2008a; Chersich & Rees, 2008

⁴⁵ Freeman et al., 2008.

⁴⁶ Gray et al., 2001.

⁴⁷ Pettifor et al., 2007.

⁴⁸ Boilly et al., 2009b.

⁴⁹ Kalichman et al., 2009a; Mathews et al., 2009; Colvin et al., 2009; Lane et al., 2006; Kazaura & Masatu, 2009.

⁵⁰ Gray & Wilson, 2009; Boilly et al., 2009b.

⁵¹ Gouws et al., 2008.

construction, entrée into sexual life and sexual partnerships often contradicting sexual safety,⁵² while at the same time biological vulnerability to HIV infection for young females is substantially higher than for young males.⁵³

A study testing a developmental model to determine pathways to risky sexual behaviours among South African youth found that poverty, parent-child relations, personality and behavioural vulnerabilities and peer influences were important focal areas for future programmes.⁵⁴

While relativities in gendered power may influence primary prevention practices such as condom use, relationship power may also negatively influence risk exposure.⁵⁵ For example, a study of youth in KwaZulu-Natal found that more frequent condom use among males was related to higher levels of partner attachment (hyper-romanticism) and approval of relationship dominance and violence, whereas for females, more frequent condom use was related to lower endorsement of relationship violence. Females with higher relationship power were more likely to have more sexual partners and be less consistent condom users.⁵⁶

While a core strategy for HIV prevention has been the widespread implementation of HIV testing and counseling, testing HIV negative does not lead to the adoption of prevention behaviours.⁵⁷

A study in Botswana noted that post-test outcomes of HIV testing among youth included higher levels of trust of a partner, and less fear of contracting HIV – both of which increased their vulnerability to HIV infection (Platner et al., 2010).

- **Implications:** *Biological factors play a key role in female susceptibility to HIV. This includes high vulnerability as a product of early sexual debut which is compounded by exposure to high-risk male partners and acquisition of STIs. Heterosexual anal sex may also play a role in increased susceptibility. HIV transmission risk per sex act for young females is clearly more efficient than the relatively low transmission risks demonstrated in studies of HIV transmission in stable relationships. The data illustrates that even having only one partner poses a high risk for HIV infection. Individual-oriented approaches such as condom promotion and HIV testing do not adequately contribute to HIV risk reduction for young people who are HIV negative. A focus on discordant relationship dyads,*

⁵² Reddy & Dunne, 2007.

⁵³ MacPhail et al., 2002.

⁵⁴ Brook et al., 2006.

⁵⁵ Langen, 2005..

⁵⁶ Harrison et al., 2006; Shelton, 2007.

⁵⁷ See Cremin et al, 2010;

family, peers and community is necessary to address the interface between biological and other risk factors.

5.1 Early sexual debut, late marriage, early fertility

The timing of first sex directly influences potential immediate and subsequent exposures to HIV and earlier sexual debut results in longer lifetime exposure to the virus.⁵⁸ The following findings are relevant:

- Early debut among young females is associated with mental distress, poor economic status, lower education, alcohol abuse, having no close friends and poor parental connectedness.⁵⁹
- Better knowledge of HIV, perception of negative consequences of first sex, peer and family support for abstinence and perceived benefits of emotional maturity flowing from delayed debut are associated with limiting transition to first sex.⁶⁰
- Coercion at first sex is not uncommon. A study of sexual debut in four African countries found that between 15% and 38% of young females were ‘not willing at all’ at first sex. Forms of coercion included force, pressure through money or gifts, pestering, threatening to have sex with other girls, and passive acceptance.⁶¹

Early fertility heightens susceptibility to HIV infection. Following debut, young females are on a pathway that includes higher partner turnover over a long time period as a product of norms related to late marriage.⁶²

The BNAPS study in Botswana found that among females aged 15-29 and males aged 25-39, only 7% of respondents were married and only 6% were cohabiting. Marriage has declined among females 15 and older from 42.9% in 1971 to 17.9% in 2001. Total fertility in Botswana was 3.2 in 2006, declining from 7.1 in 1981. Adolescent fertility among females 15-19 has declined from 28.7% in 1988 to 11.8% in 2006. Factors influencing declines include improved family planning services, condom dissemination and various other health promotion activities. (NACA, 2010; Leburu et al., 2009).

Although pre-marital fertility is relatively common in southern Africa, it is stigmatised by friends and families and is related to negative consequences including school abandonment, economic adversity and health risks, and often results in single motherhood. Elders have little ability to influence fathers to marry the mother of a child born out of wedlock and there is often little paternal involvement. Poverty and social exclusion by families contribute to

⁵⁸ A study of South African youth found that first sex was associated with having older sexual partners and having forced sex, with lack of condom use also being a factor (Pettifor et al., 2009; Dixon-Mueller, 2009). Risks are further accentuated when STI infections occur soon after sexual debut (Hallet et al., 2007).

⁵⁹ Peltzer, 2010. Death of a parent and school non-attendance may also be factors (McGrath et al., 2008).

⁶⁰ Mathews et al., 2009. This study also found that more males than females reported that they had been ‘forced to have sexual intercourse against their will’ (28% vs. 18%). See also Dlamini et al., 2008.

⁶¹ Moore et al., 2007.

⁶² Zaba et al., 2008.

high-risk practices among single mothers, including, for example, resorting to sex work or other transactional adaptations among young mothers.⁶³

In Namibia, attitudes towards late or non-marriage include perceptions that marriage results in loss of independence and loss of agency, while the need to be financially stable before marriage and the need to complete education before marriage are upheld as values. Perceptions that people are unfaithful in marriage and that marriages are often unsuccessful were also noted to discourage intention to marry.⁶⁴

Sex work is illegal in Botswana and the number of female sex workers (FSW) is unclear. However, a large proportion of FSW are likely to fall within the 20-29 year age group. A formative assessment of FSW and their male partners in major towns, mining towns and roads in Botswana found sex work provided a means for financial autonomy, albeit with multiple risks, while males sought out FSW as a product of alcohol use, abstinence, excitement and wishing to appear as 'men of means.' Condom use was inconsistent. A focus on FSW and male clients was recommended to address HIV prevention (I-Tech, 2007).

- **Implications:** *Early debut increases exposure to HIV, and establishes a pattern of exposure to multiple partners and exposure to sexual networks over a long period of time as a product of a context where late marriage is entrenched.⁶⁵ Pregnancy is a risk factor for HIV acquisition and fathers often do not establish ties with young mothers. Single parenting by young women increases vulnerability as a product of economic needs. Focusing on benefits of delayed debut in conjunction with peer and family support is necessary to increase the age of debut, with a clear emphasis on the stark vulnerabilities related to risky post-debut sexual partnerships. Early fertility, although declining in Botswana, needs to be addressed with a view to avoiding vulnerabilities that flow from single parenting.*

5.2 Transactional sexual relationships

Transactional sex involves sexual partnerships that include motivation for material gain occurring with a casual or informal sexual partner (although some partnerships may be longer-term). Transactional sex among young females is typically, although not exclusively, conducted with older partners.⁶⁶ Key findings include:

⁶³ Zwang & Garenne, 2008.

⁶⁴ Research Facilitation Services, 2005.

⁶⁵ Bongaarts, 2006.

⁶⁶ A study in Mozambique identified partnerships that included trusted same age boyfriends (namorados), partners for sexual pleasure (pitos), older married men (sengue) and lovers (amante), with the latter two categories incorporating transactional elements. Relationships are overall long-term, and young females perceive themselves as relatively empowered within these relationships (Hawkins et al., 2005).

- Transactional sex reproduces risks of exposure to multiple sexual partnerships,⁶⁷ and is associated with prevalent STIs and HIV infection,⁶⁸ as well as risks of pregnancy.⁶⁹
- Having older male partners is directly related to HIV infection, particularly when the age difference is ten years or more.⁷⁰
- Economic status influences the likelihood of engaging in transactional sex, with poorer or less educated females being more likely to engage in this practice.⁷¹ Transactional sex occurring in urban areas is more likely to be linked to consumption, whereas in informal settlements it is predominantly linked to subsistence.⁷²
- For many young females, intergenerational relationships with older men are an immediate pathway towards addressing needs – although ‘needs’ are often not solely related to immediate concerns of impoverishment, but extend to social, physical and psychological benefits.⁷³ Modernity and valorisation of consumption are important factors.⁷⁴ Benefits of transactional sexual relationships include receiving cash, food, cosmetics, clothing, transportation, items for family members or children, school fees or a place to sleep.
- In Uganda, ‘something for something’ love is motivated by peer pressure, financial gain, the need to pay school fees and to meet basic needs, but is also associated with family pressure.⁷⁵ A higher degree of gift giving by males is

A study in Botswana found that young females were not passive partners in age-disparate sexual relationships, with pleasure, enjoyment, love and equal partnership being noted as components of such relationships. Some young females reported relatively high decision-making power to determine HIV prevention practices such as condom use, while for others, coercion, manipulation and unsafe sex were relationship characteristics. This illustrates that vulnerabilities flowing from age-disparate relationships do not manifest uniformly for all young females, although there is a general pattern of heightened risk as a product of power differentials related to age differences and gender (Nkosana & Rosenthal, 2007; Dunkle et al., 2007).

In a study of intergenerational relationships in Botswana, Namibia and Swaziland, it was found that although young women were aware of the elevated risk of HIV in such relationships, they were willing to continue them. Older partners were often referred to in disparaging ways including terminology such as ‘ATM’ (Automated Teller Machine) and ‘my stupid one’ (Cockroft et al, 2010).

⁶⁷ Maganja et al, 2007.

⁶⁸ Norris, et al., 2009; Dunkle et al., 2004.

⁶⁹ Chatterji et al., 2005.

⁷⁰ Kelly et al., 2003.

⁷¹ Lopman et al., 2007; Johnson et al., 2009.

⁷² Hunter, 2007.

⁷³ Leclerc-Madlala, 2008; This finding was echoed in a study in Botswana where transactional relationships were found among women in households above and below the poverty line. Most women in non-formal sexual relationships received monetary support from partners – see Bjørndahl, 2005.

⁷⁴ Leclerc-Madlala, 2008; Hunter, 2002.

⁷⁵ Impoverished families may benefit materially when a daughter is able to secure groceries and other resources. Samara, 2010.

described as resulting in a higher likelihood of unprotected sex.

A study of transactional sex in Tanzania found that females used their sexuality as an economic resource, and that more affluent, higher risk men were more desirable as partners.⁷⁶ Transactional sex is also perceived as providing benefits to both partners, with romantic love or seeking a long-term partner being understood as absent from the relationship.⁷⁷

Avoiding or rejecting intergenerational relationships by young females is related to having a strong sense of self-worth, accepting economic circumstances and having a desire to maintain a sense of decision-making power.⁷⁸

➤ **Implications:** *Sex is commodified in a context where needs and wants overwhelm concerns about vulnerability to HIV infection. Transactional sexual practices intersect with the selection of partners who are much more likely to be HIV positive as a product of their being in a higher HIV prevalence pool (e.g. males who are 10 or more years older), but also high risk males in general. Lack of emotional attachment contributes to having concurrent transactional partners. While programmes should focus on both partners in transactional and intergenerational sexual relationships, families and communities should highlight and discourage the short-term benefits of such relationships, while positively reinforcing relationships that do not follow this format.*

5.3 Multiple and concurrent sexual partnerships

Relative position in a sexual network underpins individual vulnerability to HIV. When there are serial monogamous partnerships, both partners are excluded from a sexual network and risk to the HIV negative partner is related to the sum of risk of previous sexual partners of one's current partner. Where there is partner concurrency, vulnerability increases exponentially because an HIV negative individual is linked to high numbers of partners through network pathways that include sexual partnerships occurring within the current timeframe.⁷⁹ Mixing concurrent partners with different characteristics – for example, partners from different towns or economic groups – widens sexual networks and increases overall rates of HIV transmission.⁸⁰

⁷⁶ Cockroft et al., 2010.

⁷⁷ Wamoyi et al., 2010.

⁷⁸ Nkosana & Rosenthal, 2007.

⁷⁹ Morris et al., 2004. Measurement of concurrency in surveys has recently been refined (Aral, 2010; UNAIDS, 2009c), but measures of having two or more recent sexual partners illustrate the extent of concurrent partner practices – for example, in an analysis of participants aged 20-30 in national survey in South Africa, 13% of males and 5% females reported two or more partners in the past month. Similar findings were made in Botswana – 11% for males and females aged 15-34, while a study in Lesotho found that 44% of men aged 18-65 had two or more current partners (Parker et al., 2007; Gourvenec et al., 2007).

⁸⁰ Doherty et al., 2006.

An analysis of the relationship between stages of infection and new infections draws attention to the importance of addressing partner turnover (i.e. the rate of partner acquisition) as well as concurrent sexual partnerships, rather than exclusively focusing on concurrency. This is illustrated in Table 2.⁸¹ The table highlights the importance of addressing acute phase transmissions that occur over a short period of time (where HIV is 27 times more efficient than during the latent phase of infection), but also shows that many transmissions occur during latent and late phases of infection.⁸² Similarly, a study of Kenyan and other data found that 17% of HIV transmissions in Kisumu were attributable to acute infection, followed by 51% for latent stage and 32% for late stage infection.⁸³ Variations were related to the stage and epidemiological pattern of the epidemic, and this was noted to be different between countries.

Table 2: Estimated number of infections by stage of HIV infection⁸⁴

Stage of infection	Hazard of transmission per year	% duration of high infectiousness over period of infection	% of new infections (serial monogamy)	% new infections (random mixing)
Primary/Acute	2.76	0.24	0.10	0.67
Asymptomatic/Latent	0.106	8.38	0.77	0.91
AIDS/Late stage	0.76	0.75	0.21	0.57

Key findings from the literature are as follows:

- Reasons for having multiple sexual partners given by young people include benefits emanating from material gain, desire for sexual variety, peer pressure, bravado, low self-esteem, demonstration of virility and masculinity, difficulty in restraining male sexual desire, malleability of the concept of ‘faithfulness,’ modeling of relationships found in popular television dramas, deference to culture (either traditional, such as polygamy, or acceptance within contemporary culture) and gender roles within relationships.⁸⁵
- A relatively small change in the mean number of concurrent partners significantly influences the rate of new HIV infections.⁸⁶

⁸¹ Hollingsworth et al., 2008; Poundstone et al., 2004.

⁸² Late phase infectiousness is estimated to be seven time higher than in the latent phase – Hollingsworth et al., 2008.

⁸³ Abu-Raddad & Longini, 2008.

⁸⁴ Hollingsworth et al., 2008.

⁸⁵ See Leclerc-Madlala, 2009; Parker, 2009; Parker et al., 2007; Nshindano & Maharaj, 2008; Selikow et al., 2009.

⁸⁶ Morris, 2010.

□ Reduction in multiple partnerships in combination with other risk reduction strategies is associated with prevalence declines. In Kenya, fewer multiple partnerships, increased age at debut and condom use were associated with HIV prevalence decline.⁸⁷ Reduction in casual sexual partnerships and high levels of condom use in non-regular partnerships were associated with HIV prevalence decline in Zimbabwe.⁸⁸ In Uganda, declines have been associated with partner reduction among unmarried couples, reduction in extra-marital partnerships among married couples and use of condoms with non-regular partners.⁸⁹

□ Although concurrency is relatively common, it is not considered to be socially acceptable in some countries.⁹⁰

□ Consistent condom use is a key challenge in sexual partnerships, particularly among young people. Condom use often declines in longer-term relationships where love and trust interact negatively with condom use. Power relations within relationships also negatively impact consistent or any condom use.⁹¹

➤ **Implications:** *While addressing concurrency has recently emerged as a central focus for HIV prevention programming in southern African countries, historically, these countries have deprioritised partner reduction and concurrency in favour of*

A study by PSI assessing Multiple Concurrent Partnerships (MCP) among young people in Botswana found high levels of STIs in past year (6% for males, 17% for females), with 22% of males and 9% of females reporting two or more partners in the past six months, 20% reporting sex with more than one of their past three partners and 30% reporting an additional partnership during the course of a current partnership. Around half believed their current partner had other partners. Partnerships were short in duration, and partner turnover was frequent (Gourvenec et al., 2007). Among youth in Botswana, concurrency is more common among males, and is also associated with norms supporting MCP and low-efficacy for faithfulness. Respondents noted that MCP was not socially acceptable (Carter, 2007). An assessment of a PSI mass media campaign to address MCP in Botswana found high reach and some prompting of discussion, with recommendations highlighting the need to facilitate and support community level dialogue on the issue (PSI, 2008). A review of the O Icheke campaign in Botswana, which focuses on MCP, found that the campaign prompted dialogue and promoted multisectoral response. It was noted that mass media programming needed to be complemented with community-level activities (Lillie, 2010).

⁸⁷ Cheluget et al., 2006.

⁸⁸ Gregson et al., 2010.

⁸⁹ Kirby, 2008.

⁹⁰ Carter et al., 2007.

⁹¹ Corbett et al., 2009. Among young people, talking to a partner about condom use is a significant predictor of consistent condom use. Moyo et al., 2008. See also Lifshay et al., 2009; Versteeg & Murray, 2008; Bowleg et al., 2010; Hargreaves et al., 2009.

prioritising condom promotion and dissemination.⁹² As a consequence, southern African countries now face the difficult challenge of turning around much larger HIV epidemics through reorienting prevention strategies. Although Botswana has conducted a number of campaigns to address MCP, the multidimensional nature of HIV vulnerability and risk may mean that focusing only on concurrency would not achieve sufficient traction. Among young females, the evidence shows that even having a single partner results in high vulnerability to HIV infection, and each successive partner increases risk. While concurrency, or exposure to a partner with other partners remains an important risk factor, reversal of incidence trends will require emphasis on a repertoire of risk factors related to sexual partnerships.

5.4 Alcohol use and HIV risk

Alcohol consumption is associated with sexual risk and vulnerability to HIV infection. Drinking higher quantities of alcohol (binge drinking) is more strongly associated with risk than frequency of drinking.⁹³ Males are more likely to engage in higher risk behaviour following drinking, whereas risk to women is related to alcohol consumption by a partner.⁹⁴

With regard to female youth, a study in Zimbabwe found that females aged 15-19 with the riskiest sexual behaviours were those who were found at alcohol venues.⁹⁵

A study of females aged 15-24 in Uganda found that self-reported alcohol use before sex was associated with physical violence and sexual coercion, with significantly higher HIV prevalence being found in this group as well as among those who reported alcohol use before sex.⁹⁶ A study of men with multiple partners in South Africa found an association between alcohol and transactional sex,⁹⁷ while a cross-country study by the World Health Organization (WHO) found that alcohol was related to constructions of maleness, coping with life and providing pathways to sexual encounters.⁹⁸

A cross-sectional study in Botswana found that 31% of men and 17% of women were heavy drinkers, with women who drank heavily being more likely to have unprotected sex, have multiple partners and exchange sex for money (Weiser et al., 2006).

⁹² This is argued to be one of the fundamental differences between the unfolding epidemics in Uganda and Botswana. See Allen & Heald, 2004.

⁹³ Binge drinking is noted to produce a twofold higher risk for HIV, in comparison to not drinking at all (Chersich & Rees, 2010).

⁹⁴ Kalichman et al., 2007. A systematic review of the links of HIV and alcohol found strong associations with consumption of alcohol and HIV incidence, but it was not clear whether this was a causal relationship, or related to personality traits that were risk-oriented. It was also noted that alcohol negatively impacted support-seeking and medication adherence – Shuper et al., 2010.

⁹⁵ Singh et al., 2010.

⁹⁶ Zablotska et al., 2010.

⁹⁷ Townsend et al., 2010.

⁹⁸ World Health Organization, 2005.

Although alcohol abuse is a generalised problem, it is important to note that emerging trends in the use of recreational drugs in southern Africa are also potentially important for HIV prevention. For example, a study of young out-of-school females in Cape Town found that a subgroup of female methamphetamine (tik) users were six times more likely to have unprotected sex,⁹⁹ while a study of adolescents in Zambia found correlations between having smoked marijuana and having had sexual intercourse.¹⁰⁰

➤ **Implications:** *Alcohol consumption increases risk as a product of reinforcing exposure to risky sexual partnerships. Binge drinking at alcohol venues requires particular attention. Recreational drugs are an emerging problem in southern Africa and should be considered in HIV prevention programming.*

5.5 Mobility

For many decades, labour migration and mobility were largely male phenomena, but more recently such mobility includes women who are mobile as a product of seeking work or are engaged in informal employment such as hawking goods, domestic work, farm labour and trades, as well as labour in the hospitality and civil service sectors. Women engaged in sex work are also mobile.¹⁰¹ Although women tend to migrate shorter distances than men, and for shorter durations, such mobility increases the potential for multiple sexual partnerships, including having overlapping partners in different geographic locales.¹⁰² Factors influencing the feminisation of migration include unemployment, food insufficiency, late marriage and circular migration linked to informal settlement.¹⁰³

Women seeking work or who have low-income work are particularly vulnerable as they may be exposed to rape, exploitation by police and other officials, exploitation by taxi drivers or may be drawn into transactional sex or sex work to secure shelter or money. Some forms of work are also poorly regulated – for example, domestic work and informal trading.¹⁰⁴

Female non-migrants have higher HIV prevalence than male non-migrants, and data is similar when comparing female and male migrants. A study of rural migrants in South Africa found that the odds of HIV infection per partner were higher for migrants – in comparison to non-migrants, migrant males were 3% more likely to be HIV positive per partner, whereas for females there was a 46% higher likelihood among migrants in comparison to non-migrants.¹⁰⁵ Because of their partners' elevated risks, non-migrant

⁹⁹ Wechsberg et al., 2010.

¹⁰⁰ Siziya et al., 2008.

¹⁰¹ Crush et al., 2005.

¹⁰² Camlin et al., 2010.

¹⁰³ See Hunter, 2007; Hope, 2001; Weiser et al., 2007.

¹⁰⁴ IOM, 2006.

¹⁰⁵ Camlin et al., 2010.

females who have partners who are migrants are also more vulnerable to HIV infection.¹⁰⁶ Non-migrant female partners of male migrants may also be more vulnerable to engaging in multiple sexual partnerships as a product of their migrant partners being away for long periods of time.¹⁰⁷

➤ **Implications:** *Mobility related to work seeking and employment is a prominent feature of southern African communities. While there is limited data on the extent of mobility among young women in Botswana, HIV vulnerability and risk is reproduced not only through female mobility, but also through exposure to mobile men. Migrancy and mobility increase exposure to sexual networks by accentuating the likelihood of having multiple and concurrent partners. Programmes addressing mobility have largely focused on sex work in relation to forms of employment such as truck driving or mining among males. Potential avenues for addressing migration and mobility through other programme formats should be explored.*

5.6 Violence against women

Violence against women includes physical, sexual and psychological abuse or neglect by intimate partners, as well as sexual violence or exploitation perpetrated by non-partners.¹⁰⁸ Higher risk sexual behaviours are associated with higher levels of violence, and females who experience partner violence are more likely to be HIV positive.¹⁰⁹

A study in South Africa found high perceived prevalence of violence against women, with half of respondents agreeing that ‘men in this community often hit their girlfriends,’ while abuse of alcohol and abuse of drugs was seen by most respondents as being an important contributory factor for violence.¹¹⁰ Significant associations with experiencing violence or controlling behaviours included being younger, being drunk in the past month and having multiple partners.¹¹¹

A study in Botswana found that forms of violence included physical, verbal, emotional and sexual abuse, and that emotional and sexual abuse were the best predictors of sexually risky behaviours (Modie-Moroka, 2009).

An analysis of survey data in South Africa found that youth from communities where sexual violence was prevalent were significantly more likely to have experienced teenage pregnancy or be HIV positive, in comparison to communities with low levels

¹⁰⁶ Men working in agriculture, trucking, construction and mining industries are often more vulnerable to HIV than other migrants.

¹⁰⁷ Lurie et al., 2003, 2004. Lurie also found that among discordant migrant couples, in 29% of instances it was the female partner who was HIV positive.

¹⁰⁸ Krug et al., 2002.

¹⁰⁹ Fox et al., 2007; Jewkes et al., 2006.

¹¹⁰ Parker & Makhubele, 2010.

¹¹¹ See also Andersson et al., 2008; Townsend et al., 2010; Sathiparsad et al., 2010.

of sexual violence. Condom use was also negatively impacted.¹¹² A diary study in rural South Africa found that condom use was more likely to be inconsistent where male youth had used threats or force to engage in sex, with further influences being alcohol use and the belief that male sexual desire was greater than that of females.¹¹³

A review of gender-based violence in the context of hyper-endemic epidemics in southern Africa noted the importance of focusing on perpetrator dynamics, as well as ensuring that gender-based violence components were incorporated into HIV prevention programmes.¹¹⁴

➤ **Implications:** *Physical violence and threats of violence in relationships increase HIV risk by constraining prevention practices. Addressing violence is a necessary component of HIV prevention programming.*

5.7 Special populations: Orphans, youth with disability and PLHIV¹¹⁵

The prevalence of orphaning increases as HIV epidemics mature, and levels of orphaning are extensive in countries where there is high HIV prevalence. While vulnerabilities of orphans are often the focus of livelihood and support programmes, specific vulnerabilities to HIV as a product of orphaning are often overlooked. A study in rural Zimbabwe found that loss of a mother or both parents accentuated HIV risk for young females,¹¹⁶ while a study in rural South Africa identified similar vulnerabilities.¹¹⁷ A study of data including biomarkers in Zimbabwe found that female adolescent orphans were at increased risk of HIV and HSV-2 infection, as well as pregnancy.¹¹⁸ Orphanhood was also noted to be a risk factor for child sexual abuse.¹¹⁹

Sexual risk-taking among orphaned adolescents is noted to decrease when orphans receive support including savings accounts, workshops and mentorship, although young females may benefit less than males.¹²⁰

Orphaning-related health disparities have been noted in Botswana, which has one of the highest levels of orphaning in the world (Miller et al., 2006; 2007).

¹¹² Speizer et al., 2009.

¹¹³ Hoffman et al., 2006.

¹¹⁴ UNAIDS, 2008a.

¹¹⁵ One vulnerable group where incidence is high, and whose practices are linked to incidence among young females, are MSM. A study of MSM in Malawi, Namibia and Botswana found that unprotected anal sex was common, and that 53.7% of MSM among a small non-probability sample had male and female partners. See Baral et al., 2009.

¹¹⁶ Gregson et al., 2005.

¹¹⁷ Thurman et al., 2006.

¹¹⁸ Birdthistle et al., 2008.

¹¹⁹ Birdthistle et al., 2009.

¹²⁰ Ssewamala et al., 2010a, 2010b.

Youth with disabilities represent another sub-population especially vulnerable to HIV. Depending on the disability and severity of impairment, those with disabilities may be less able to access materials and engage in dialogues with health workers. A study in Rwanda and Uganda found that young people with disabilities were marginalised and viewed as not sexually active, had

limited efficacy in sexual relationships and were targets of rape and exploitation.¹²¹

The extent of such vulnerabilities in Botswana is unclear, and a review of literature on disability and HIV in southern Africa notes a paucity of information on this issue.¹²²

With regard to PLHIV, the scale-up of antiretroviral treatment in high HIV prevalence countries has prompted increased attention to prevention of transmission by people who know their HIV positive status. The current paradigm for response is framed as Positive Health, Dignity and Prevention (PHDP), and includes multiple components of support to PLHIV with a view to strengthening prevention.¹²³

Young PLHIV are subject to many of the common prevention challenges facing HIV negative youth, and HIV prevention for PLHIV requires stepwise processes to address transmission risk in situations where there is potential discordancy between partners and/or where discordancy is known. While condom use without HIV status disclosure is a potential strategy for short-term

relationships, longer-term relationships require prioritisation of risk reduction by both partners and disclosure is a necessary step in the process.¹²⁴ Support groups are acknowledged to be useful resources for young PLHIV, allowing for increased knowledge, coping skills and HIV prevention.¹²⁵

In advanced epidemics, a cohort of perinatally infected children has advanced to adolescence and faces particular challenges for HIV prevention. In Uganda, for example, perinatally infected adolescents consider themselves to be ‘innocent’ and do

Women’s rights influence vulnerability of women to violence and HIV. A review of women’s rights in Botswana recommended addressing gender discrimination in marriage, inheritance, property and employment laws, while also needing to strengthening the Domestic Violence Bill and expanding gender policy through working with civil society organisations. Addressing poverty and stigma were also identified as priorities. (Hoffman et al., 2006)

A study in Botswana found that adolescents said young PLHIV kept silent about their status (Thupayagale-Tshweneagae, 2010), while a study of adult PLHIV found that one-fifth had more than two partners in the past three months, with condom use being lower amongst this group (Kalichman et al., 2007).

¹²¹ Yousafzai et al., 2005.

¹²² Rohleder et al., 2009.

¹²³ UNAIDS, 2009c.

¹²⁴ Olley et al., 2004.

¹²⁵ See Olley, 2007; Visser et al., 2005; Gaede et al., 2006.

not see themselves as PLHIV, and a study found that 60% of those who were dating had not disclosed their status, while a third were sexually active.¹²⁶

PLHIV tend to have more psychological and mental health problems in comparison to people not living with HIV, and addressing mental health issues among PLHIV contributes towards addressing HIV prevention in the spheres of sexual behaviour, as well as contributing to ART adherence, amongst other aspects of prevention.¹²⁷ While young PLHIV are likely to be more marginalised, it is also necessary to incorporate adult PLHIV in HIV prevention programming to address youth vulnerability – for example, older PLHIV in intergenerational relationships.

➤ **Implications:** *In high prevalence countries such as Botswana, orphaning is widespread and orphans are at increased risk for HIV. Youth with disability are also vulnerable to HIV. Additionally a high proportion of young people living with HIV may have acquired HIV perinatally. The three groups are not mutually exclusive. HIV negative orphans are more vulnerable to HIV in comparison to non-orphans because of a range of vulnerabilities, as are young people with disabilities. Young PLHIV may be marginalised and less able to engage in prevention of HIV infection in relationships. All three groups should be considered in HIV prevention programming.*

6. APPROACHES TO ADDRESSING HIV PREVENTION AMONG YOUTH AND YOUNG FEMALES

A range of reviews and analyses have explored programmes focused on youth with a view to identifying models that are ready for scale-up. Many reviews include programmes that have been rigorously evaluated, typically in the form of randomised controlled trials (RCTs), but also other forms of evaluation. Most reviews note however, that programmes are inadequately or unevenly evaluated, and it is thus difficult to draw firm conclusions about ‘what works.’ Consensus does however emerge around the limitations of certain types of programming. It is also observed that the notion of seeking ‘boiler-plate’ programmes that can be applied across contexts is problematic. Instead, focusing on adaptability of programmes to contexts and integration of multiple programmes is far more likely to yield sound impacts.

6.1 Exploring ‘what works’

A UNAIDS interagency task team conducted a systematic review of evidence for policies and programmes to decrease HIV prevalence among young people aged 10-

¹²⁶ Kwagala et al., 2010; Birungi et al., 2009.

¹²⁷ Sikkema et al., 2010.

24 in developing countries.¹²⁸ A ‘go, ready, steady, do not go’ scale was used to rank programmes in relation to impact on HIV prevention. ‘Go’ programmes were recommended for immediate and widespread dissemination, while ‘ready’ programmes had met some evidence criteria, but required further evaluation and operations research to clarify impact. ‘Steady’ programmes required further development, testing and evaluation before further implementation.¹²⁹ Findings included:

- School-based interventions: Curriculum-based programmes with characteristics found to be effective in developed countries and led by adults *should* be conducted and expanded. Programmes not including ‘effective characteristics,’ and/or being led by peers were not recommended.
- Health services: Programmes with service providers in facilities *and* in communities *should* be conducted and expanded.¹³⁰ Programmes that included service providers in the community only or that were conducted with service providers involving other sectors were not recommended.
- Geographically defined communities: Programmes addressing youth through existing youth-service organisations received ‘ready’ status. New structures, or addressing communities through traditional networks or community events were recommended.
- Young people most at risk: Programmes providing information and/or services through outreach were not recommended. Provision of facility-based information and services alone or in combination with outreach activities received ‘steady’ status.
- Mass media: Programmes involving radio and other media and/or television *should* be conducted and expanded. Radio only programmes received ‘steady’ status.¹³¹

¹²⁸ Ross et al., 2006.

¹²⁹ Programmes considered included: a radio intervention in St Vincent and the Grenadines; a radio and other media programme in Paraguay; a mass media campaign in China; an adolescent programme in Cameroon; the PRISM campaign and an adolescent reproductive health programme in Guinea; a community programme in Zimbabwe; Tsa Banana in Botswana; the HEART campaign in Zambia; the PLUS campaign in Côte d’Ivoire; loveLife, Soul City and an adolescent reproductive health programme in South Africa; the Staying Alive MTV campaign in 44 countries; and the Stop AIDS love life programme in Ghana. It was noted that the review focused on HIV prevention only and did not include treatment, care and support for young people living with HIV/AIDS, nor was prevention with HIV positive youth addressed.

¹³⁰ Programmes including service providers in facilities and in communities that also involved other sectors were given ‘ready’ status.

¹³¹ A review of an entertainment education radio programme in Botswana found discrete effects on identification with characters and behaviour modeling. Lovell et al., 2008. See also Smith et al., 2007.

A workshop held in 2009 exploring HIV prevention among youth and drawing on the earlier review,¹³² noted the value of linking individual-focused and structural interventions and highlighted the importance of focusing on youth in- and out-of-school, incorporating periods of transition (such as school leaving), exploring new technologies (e.g. mobile phones, internet), and strengthening the links between interventions.

An updated review incorporating more recently published findings¹³³ noted limitations of the approaches utilised in programmes evaluated through RCTs,¹³⁴ further noting that *programmes that engaged youth in intervention design, that addressed communities as a whole and that used traditional networks for intervention delivery were most effective in improving reported sexual risk behaviours and impacting biological outcomes*. It was concluded that ‘one size fits all’ interventions were unlikely to be effective, and that it was relevant to incorporate different approaches while implementing interventions in different settings simultaneously.

A systematic review of programmes for HIV prevention among youth in South Africa addressed eight prevention interventions.¹³⁵ This included school-based and group-based interventions and all were single-component activities. The orientation of theorised causal pathways for interventions included structural and social factors such as gender-based violence, gender equity, economic contexts, alcohol, peer social norms and leisure time use.¹³⁶ Although all programmes brought about positive changes in behavioural proxy measures for HIV prevention, it was noted that no interventions had demonstrated an impact on HIV incidence, and ‘a definitive assessment of what works’ was not possible. Lessons learned included the observation that *focusing on individual, social and structural factors increased impacts, and that addressing social norms (including through fostering collective critical thinking) contributed to individual self-esteem and empowerment*.¹³⁷ With regard to school-based programmes, it was recommended that delivering interventions through personnel (including adults other than teachers) should be prioritised, while variation in youth needs should be taken into account including addressing out-of-school youth. Engaging schools as active partners and engaging the broader ‘school community’ were seen as promising future directions.

¹³² The workshop was convened by the London School of Hygiene and Tropical Medicine and the Mwanza Research Centre of the Tanzania National Institute for Medical Research, with technical and other support provided by WHO, UNICEF and FHI. See LSHTM & NIMR, 2009.

¹³³ Mavedzenge et al., 2010.

¹³⁴ Either as a product of a measured outcome, or as a product of adequate evaluation methodology.

¹³⁵ Harrison et al., 2010. Programmes included HIV/AIDS Prevention Study (HAPS) in KwaZulu-Natal; HealthWise in Cape Town; Mpondombili in KwaZulu-Natal; Adolescent Livelihoods in KwaZulu-Natal; SATZ, a school-based programme in Cape Town; Stepping Stones in the Eastern Cape; Tshwane Peer Education and Support in Gauteng; and IMAGE in rural areas in Limpopo.

¹³⁶ A recent report on a RCT in a school setting in South Africa was associated with a 49% reduction in unprotected sex, a 38% reduction in having had sex and a 50% reduction in having multiple sexual partners. See Jemmott III et al., 2010.

¹³⁷ The importance of critical consciousness and collective response is highlighted in Hatcher et al., 2010.

A long-term evaluation of the multi-component MEMA kwa Vijana programme in Tanzania, which included school, health service, and community prevention and condom promotion activities, found no impacts on HIV and STI prevalence, and that noted that “*youth interventions integrated within intensified community-wide risk reduction programmes*” would potentially be more successful.¹³⁸ A study of the community-based multicomponent Regai Dzive Shire Project in Zimbabwe, which followed a similar model, illustrated the challenges of achieving impacts on HIV and HSV2, although the programme was impactful for knowledge, attitudes and pregnancy.¹³⁹ Both programmes utilised participatory active learning methods.

A recent systematic review and meta-analysis of programmes addressing youth risk behaviours and HIV among young people aged 10-25 explored 28 studies in sub-Saharan Africa.¹⁴⁰ It was found that overall risk reduction impacts were small and impacts varied between males and females, with greater impacts occurring among males.¹⁴¹ Impacts were higher where exposure to the intervention was higher, and engaging with younger youth who were not yet sexually active was noted to increase

The African Youth Alliance (AYA) programme in four countries including Botswana, involved policy and advocacy, behaviour change communication, youth friendly services, integration of adolescent sexual and reproductive health into livelihood programmes, institutional capacity building, coordination and dissemination. An evaluation focused on youth aged 17-22 in three intervention countries found that exposure to the programme was generally low, with around half of respondents reporting exposure to one or more interventions, and only around a quarter being exposed to three or more – with marked variations per country for different types of interventions. Using propensity score matching to demonstrate programme impacts, it was found that there were positive significant impacts on behavioural outcomes, albeit small, with more positive outcomes among females. There were minimal or no impacts on key risk behaviours among males overall, although among females delay of first sex, condom use, fewer partners and use of contraceptives were important outcomes (Paul-Ebhohimhen et al., 2008).

delayed debut, reduce frequency of sexual intercourse and improve condom use intentions, thus highlighting the importance of working with younger age groups.¹⁴²

A review of peer education interventions in developing countries found that while knowledge and condom use increased, there were non-significant impacts on biological outcomes such as STIs (also noting that study designs were weak overall).¹⁴³ This finding is echoed by a review of peer-led programs amongst youth,¹⁴⁴

¹³⁸ Doyle et al., 2010.

¹³⁹ Cowan et al., 2008; Cowan et al., 2010.

¹⁴⁰ Michielsen et al., 2010.

¹⁴¹ Other interventions may impact more on females than males – see box for example.

¹⁴² Another review focused on the 8-12 year age group found limited data specific to the age group – Hewlett, 2006.

¹⁴³ See Medley et al., 2009.

¹⁴⁴ Maticka-Tyndale & Penwell-Barnett, 2010.

as well as interventions in schools generally,¹⁴⁵ which together reinforce the findings of the UNAIDS systematic review with respect to school-based programmes.

The main challenges of peer-based programmes include complexities related recruitment, motivation, training, maturity and sensitivity, capacity to bring about critical thinking, social distance, retention and sustainability.¹⁴⁶

➤ **Implications:** *While school curriculum-based programmes are in place, there is potential to incorporate schools as active partners within the broader community since they provide linkages to parents and families, as well as other community stakeholders. The following should be considered:*

=> While noting that community-wide, intensive and multidimensional programmes are necessary, the concept of health-promoting schools allows for an aspect of community response to be addressed.¹⁴⁷ In-school activities should be led by adults, and there is potential for local NGOs to partner with schools in relation to AIDS programming. Incorporating youth involvement and fostering critical thinking and problem solving would be key components. There also needs to be accountability to ensure those involved in programmes 'practice what they preach.'

=> Beyond schools, programmes providing services provide various entry points for youth – predominantly out-of-school youth. Over and above the specifics of service provision, emphasis should be placed on consistently propagating the importance of vulnerability and risk reduction through the range of identified key factors.

=> While peer education is relevant, there is little evidence impact at the scale necessary for transformative change. Peer-based approaches should thus not be seen as a central component of programmes.

=> Key concepts should be anchored via mass media programming and reinforced through layered communication approaches including interactive and interpersonal communication. New technologies should be incorporated into the communication mix and traditional networks of communication and engagement should not be overlooked.

=> Transition points are relevant – for example, addressing the hyper-vulnerability associated with school-leaving or vulnerabilities of unemployment, young motherhood and the like.

=> While a coherent theoretical and causal model is necessary for programming,

¹⁴⁵ Kirby et al., 2006.

¹⁴⁶ Adamchak, 2006; A manual providing guidelines on maximising impacts of youth peer education programmes has been produced by FHI. See FHI., 2010.

¹⁴⁷ See Mukoma & Flisher, 2004.

adaptability must be recognised to allow for variations in community capacities and specifics of local epidemiology and risks.

6.2 Livelihood and economic support programmes

The interaction between poverty and gender has been the focal point of a number of programmes addressing HIV prevention among youth. Microfinance programmes incorporate various forms of lending to support individual and/or group empowerment, with protective structural changes being seen as potentially bringing about downstream reductions in HIV incidence. A review of microfinance programmes found limited impact of stand-alone microfinance interventions on HIV risk, but recommended that integration of programmes be considered.¹⁴⁸

Although the Intervention for Microfinance and Gender Equity (IMAGE) study in South Africa contributed to violence reduction and improved women's empowerment, HIV incidence among participants and unprotected sex among youth in intervention participants' households were not impacted by the intervention.¹⁴⁹ Evaluation findings noted the value of group processes in contributing to community social capital.

A literature review and case study analysis of livelihood programmes for young females explored potentials for HIV prevention.¹⁵⁰ It was noted that it was important to differentiate between females by age, observing that what was meant by 'girls,' 'adolescents' and 'women' was seldom understood in standardised ways,¹⁵¹ while vulnerabilities across contexts were not adequately described or disaggregated. Support to multifaceted dimensions of power were noted to be important – particularly at the individual level (self-esteem, financial confidence, and capacity to challenge gender norms); in relation to power to make decisions, contribute to the household and garner respect in a relationship; and to power related to group membership and collective action.

While some microfinance programmes may improve individual female empowerment, outcomes in relation to HIV may also occur in negative directions – for example, increased mobility produced through economic empowerment may increase risk through increased exposure to sexual partners. Overall, the stand-alone nature of microfinance interventions mitigates against their capacity to address HIV prevention. It has also been noted that there is a need to integrate men with a view to

¹⁴⁸ Dworkin & Blankenship, 2009; Kohler & Thornton, 2010.

¹⁴⁹ While noting the lack of direct impact on HIV, proponents of economic empowerment models argue for integration of such programmes in the broader approach to addressing the epidemic. See Kim et al., 2008.

¹⁵⁰ IPPF et al., 2007

¹⁵¹ It was noted that surveys mostly referred to young women and girls in the 15-24 year age range.

supporting developments in gender equity, rather than focusing primarily on women.¹⁵²

With regard to addressing the deeper challenges of young females, it has been found that important orientations include creating safe spaces for girls, fostering mentorship by older females and supporting microfinance activities, and the inclusion of families and communities in response.¹⁵³

With regard to financial support, there has been recent interest in the concept of cash transfers to youth for incentivising HIV prevention, and such interventions are also being assessed through ongoing RCTs. However, a cash transfer programme for youth in Malawi found that young males were more likely to practice risky behaviours and young females less likely to practice risky behaviours shortly after receiving rewards, and that there was no effect on long-term HIV status or risky behaviour. This led to the conclusion that cash transfer programmes that aim to bring about safer sexual behaviours in Africa should take into account local and/or cultural contexts, as well as agency of individuals in relation to sexual behaviors.¹⁵⁴ A similar finding was made in relation to the SHAZ! Project in Zimbabwe.¹⁵⁵

➤ **Implications:** *There is no robust evidence to suggest that microfinance programmes are impactful on HIV vulnerability and risk when implemented as singular interventions. It is clear that vulnerability is multidimensional and that simplified linear interventions that expect direct beneficial outcomes are unlikely to work. Outcomes are also not uniform and gender-oriented approaches need to take into account unintended outcomes. The creation of safe spaces, fostering mentorship and including families and the broader community would appear to be important complementary aspects to be considered in programmes.*

6.3 Addressing intergenerational sex

A review of programmes addressing intergenerational sex noted limited sophistication in evaluation of activities,¹⁵⁶ with programme evaluation reports finding limited impacts on HIV.¹⁵⁷ The review highlights the importance of addressing asymmetries of power that flow from inequalities inherent in intergenerational sexual relationships and makes a number of recommendations for programmes including:

- Focusing on preventing events closer in time – for example, unintended pregnancy, abortion and STIs;

¹⁵² Dworkin & Blankenship, 2009.

¹⁵³ Bruce, 2007.

¹⁵⁴ Kohler & Thornton, 2010.

¹⁵⁵ Dunbar et al., 2010.

¹⁵⁶ Hope, 2007a.

¹⁵⁷ See Dunbar et al., 2010.

- Giving explicit information about the greatly increased risk of sex with a partner five or more years older in comparison to someone the same age;
- Focusing on schools as safe spaces for young people, including addressing the expectation of sexual favours by some teachers;
- Including an emphasis on outcomes of programmes that keep girls in school and make schools safer, including reducing gender-based violence;
- Emphasising approaches that facilitate wide-ranging community discussions about rights, agency and change that extend to dialogue between youth and adults about the risks of intergenerational sex, transactional sex and other harmful practices;
- Including skills building and youth participation.

A summary of risks and opportunities includes a framework for conceptualising the drivers of sexual activity, including a relation to economic rationale, and identifies *promising practices in programmes where community dialogue is encouraged – notably Stepping Stones and ‘Community Conversations’ approaches in combination with youth involvement, and close attention to communication.*¹⁵⁸

In Uganda, the Young, Empowered and Healthy Initiative (YEAH) addressed ‘something for something’ love, promoting abstinence until ready for a longterm relationship, setting long-term goals that are not compromised for material gain and avoiding giving or receiving gifts for sex. A focus on adults included emphasis on examining one’s personal role in protecting young people.¹⁵⁹

➤ **Implications:** *Addressing this issue requires a combination of the provision of explicit knowledge of vulnerabilities and risks alongside the promotion of a community conversation that addresses the multidimensional impacts of high HIV incidence through this form of exposure to the virus. While it is important to involve youth in programming activities, a focus on adults related to the protection of young people from harm and the disapproval and sanction of adult males who engage in such relationships is a relevant programme orientation.*

6.4 Support through mass media and other communication approaches

Mass media communication about HIV/AIDS provides an overarching knowledge framework that shapes response to the epidemic. While such communication may affect attitudes and contribute to behaviour change, it is insufficient for bringing about marked change without synergies linked to other processes and services that involve interpersonal communication.

¹⁵⁸ See Feldman-Jacobs & Worley, 2010.

¹⁵⁹ The outcomes of this programme do not appear to have been evaluated. See www.yeahuganda.org.

While mass media is limited by a unidirectional and homogenising orientation to communication, it is not without demonstrable effects. A review of mass media communication on various health-risk behaviours found direct and indirect population-level outcomes – especially when conducted in conjunction with other programmes and service provision.¹⁶⁰

An analysis of exposure to national-level communication programmes in South Africa found that exposure to programmes was related to increased propensity to practice prevention behaviours, and thus related to HIV prevention. Exposure to multiple programmes increased impacts.¹⁶¹ Mass media approaches improve knowledge of HIV transmission and contribute to reduction in high-risk sexual behaviour, while individual programmes foster personal efficacy through identification,¹⁶² although overall effect sizes are small.¹⁶³ Branding of public health campaigns provides coherence between programme elements.¹⁶⁴

A study exploring HIV/AIDS in relation to five ethnic groups in Botswana found that 'culturally situated sexual realities' needed to be taken into account, further observing that 'ABC' programming had been externally imposed without sufficiently addressing community values (Ntseane & Preece, 2005). This led to the conclusion that engaging with dominant discourses in communities that took into account ethnic groupings should be a core component of prevention approaches (See also Sambisa et al., 2010). Another study in Botswana concluded that HIV-related communication should promote links to cultural values and principles, as well as be conducted in indigenous languages and use culturally appropriate communication approaches and media (Ntshebe, et al., 2006).

While immediate impacts of mass media communication are brought about through increasing knowledge, beliefs and attitudes, the capacity to encourage behaviour change contributes to larger public health impacts.¹⁶⁵

While mass media garners wide reach, the unidirectional nature of mass media communication remains an important limitation – and it is for this reason that relatively small effects are produced through mass media communication on its own. A review of cost-effectiveness of health communication found that mass media approaches were cost-effective relative to other interventions, but that risk behaviour outcomes were modest. This conclusion was also tempered by the acknowledgement that evaluative research addressing cost-effectiveness of communication programmes was weak.¹⁶⁶

¹⁶⁰ Wakefield et al., 2010.

¹⁶¹ See Kincaid & Parker, 2008.

¹⁶² Smith et al., 2007a.

¹⁶³ Bertrand et al., 2006; Sood & Nambiar, 2006.

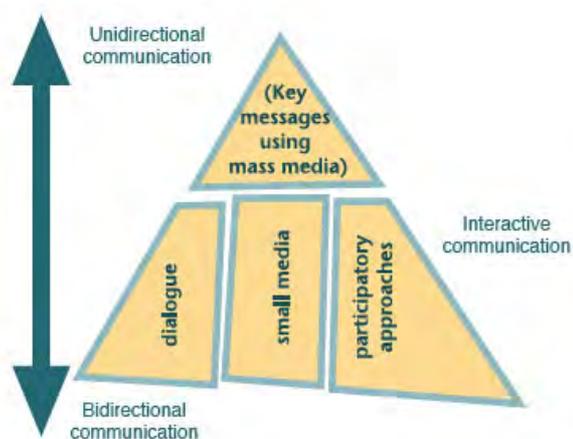
¹⁶⁴ Douglas Evans, 2008.

¹⁶⁵ Noar, 2006.

¹⁶⁶ Hutchinson & Wheeler, 2006.

Communication is subject to vagaries of interpretation across contexts, and precision is required to ensure meaning is effectively conveyed. Formative and process evaluations are thus necessary core-components of communication development and implementation.¹⁶⁷ An analysis of messaging by a range of communication campaigns in South Africa underscored the merits of direct and clear communication messages, finding that ‘puzzling’ or complex messages did not lead to engaging discussion nor enhance comprehension.¹⁶⁸ While the limitations of fear-based messaging has been well established,¹⁶⁹ there is value in communication that focuses on the ‘plausibility of uncertainty’ about individual disease exposure and vulnerability – for example, communication promoting HIV testing.¹⁷⁰ It has also been noted that concern about personal health is a greater motivating factor than appealing to concerns about infecting one’s partner.¹⁷¹

An evaluation of *Straight Talk*, a mass media programme incorporating multilingual and multimedia approaches, found high reach and important impacts in reducing sexual activity, taking relationships more seriously, higher levels of condom use, higher levels of HIV testing, dialogue with parents and self-efficacy of young females.¹⁷²



Communication is necessary at all levels of programme intervention and the illustration above outlines the various orientations.¹⁷³ Such communication typically includes integration with parallel programmes and services.

Another communication domain is that of advocacy, whereby emphasis is placed on promotion of programme activities through public relations approaches, as well as promotion of key principles and concepts towards policy makers, leaders, donors,

¹⁶⁷ Freimuth et al., 2001.

¹⁶⁸ Lubinga et al, 2010.

¹⁶⁹ Witte & Allen, 2000.

¹⁷⁰ Hullet, 2006.

¹⁷¹ Ibid.

¹⁷² Adamchack et al., 2008.

¹⁷³ Parker et al., 2000.

researchers and other stakeholders. Emphases include promoting programme activities and outcomes and mobilising around specific themes and issues.

The relevance of new communication technologies is also important to consider – for example, computer-based and internet-based approaches as well as sharing information through mobile phones.¹⁷⁴

- **Implications:** *Mass media communication is a cost-effective key element of programming, and is best suited to conveying and reiterating key concepts in clear and direct audience-appropriate language, and taking into account the cultural domains of audiences. Although mass media communication reaches widely, impacts are generally small. Effectiveness can only reasonably be expected if mass media communication is complemented by other activities closer to the ground and allows for interactive and horizontal approaches to communication. Multimedia, multilingual approaches such as those adopted by Straight Talk are relevant to programme development in Botswana. Branding facilitates coherence of communication.*

7. DRAWING TOGETHER THE EVIDENCE

Delivery of public health interventions involves complex activities that are context dependent, and this complicates evaluation – specifically the capacity to determine whether an intervention concept or theory is flawed, or whether implementation was inadequate.¹⁷⁵ Although ‘what works’ is not readily determined in absolute terms, analyses of HIV prevention programmes note that the goal should be to implement integrated and comprehensive approaches rather than depending on stand-alone or single interventions to contain incidence.

7.1 Focal Issue: Evaluating HIV prevention through RCTs

Two gender-related Randomised Controlled Trials (RCTs) conducted in South Africa – IMAGE and *Stepping Stones* – found no direct impacts on HIV incidence. A systematic review of HIV prevention interventions evaluated through RCTs has noted that around 90% of HIV prevention trials do not achieve HIV incidence reduction. Evidence of incidence reduction has been limited to three male circumcision trials, one STI-related trial, one vaccine trial, and a microbicide trial,¹⁷⁶ while another microbicide trial produced adverse results. Conclusions suggest that ‘flat’ results may

¹⁷⁴ See Swendeman & Rotheram-Borus, 2010.

¹⁷⁵ Rytchetnik et al., 2002; Bonell et al., 2006.

¹⁷⁶ The CAPRISA 004 trial found HIV incidence reduction of 54% among high gel adherers, and 38% and 28% among intermediate and low adherers respectively. It was noted that the gel could potentially fill an important HIV prevention gap for women unable to successfully negotiate mutual monogamy or condom use. See Abdool Karim et al., 2010.

be attributable to trial design or implementation and are not an absolute indication of failure.¹⁷⁷

While it may seem contradictory that theoretically grounded interventions that follow plausible causal logics and are implemented with high levels of supervision should fail to impact on HIV, it is apparent that the main shortcoming of RCTs is assumptions about the potential effects of singular interventions. Factors related to HIV vulnerability and risk are complex, and are not readily addressed through stand-alone programmes. Approaches evaluated through RCTs do not sufficiently take into account the complexity of HIV prevention – specifically, that multiple interventions addressing a variety of objectives and groups and interacting synergistically at the community level are necessary for effective HIV prevention.¹⁷⁸ Such linking and layering was evidenced in the Ugandan response to AIDS, where overlapping strategies including training of trainers, mobilisation of communities, countrywide mass media messaging incorporating indigenous constructions of meaning, materials dissemination at the sub-national level, and advocacy through leadership interacted to produce HIV incidence declines through changes in social norms and sexual behaviour.¹⁷⁹

Another concern with approaches evaluated through RCTs is that effective HIV programming requires ongoing process evaluation and adaptation is necessary when implementing intervention models in communities, yet RCTs require that intervention models remain relatively static over a fixed timeframe to allow for effective measurement and adherence to predetermined models. Furthermore, RCTs seek ‘universality’ by demonstrating the consistent and reliable impacts of a particular intervention through controlled implementation. This assumption contradicts the basic principles of ‘know your epidemic, know your response,’ which orients interventions to the specifics of each context – specifically, the need for considered combination approaches to HIV prevention that are shaped by community-level epidemiology and take into account community-level resources.¹⁸⁰

➤ **Implications:** *The RCT approach to evaluation is limited by the need for HIV prevention programmes to be integrated with other programmes at the community level. While some interventions evaluated through RCTs have not demonstrably impacted on HIV incidence, consideration of some of the approaches evaluated through RCTs remains relevant as part of wider multi-level programming*

¹⁷⁷ Padian et al., 2010.

¹⁷⁸ See Auerbach et al., 2008. Alternative research designs are detailed by West et al., 2008. See also Victora et al., 2004.

¹⁷⁹ Slutkin et al., 2006.

¹⁸⁰ See Hankins & de Zaldúaondo, 2010.

7.2 Focal issue: Gender

Addressing the gendered vulnerabilities of young females for HIV prevention is not synonymous with focusing programmes directly on young women. Addressing gender inequalities that reproduce HIV risk requires interactive approaches that foster dialogue between men and women with a view to developing critiques of the norms that underpin and sustain imbalanced vulnerabilities.

Approaches such as *Stepping Stones* allow for reflection, engagement and goal setting and focus on the development of community-level responses. Such approaches reinforce commitment to action as a product of fostering a common purpose in the lived context of the epidemic.¹⁸¹ In Zimbabwe, a modified model of *Stepping Stones* was used to address HIV prevention and showed promise in a number of gender-related spheres – notably opening up dialogue between partners and reducing multiple partnerships by increasing understanding of sexuality within relationships.¹⁸² While there was potential to reduce the overall number of workshops and to focus on improved participation, particularly in rural areas, the setting of community-level goals and fostering changing social norms and accountability by individuals to the community in relation to key risk behaviours – notably multiple and concurrent partners – illustrated the importance of multidimensional programmes that focus on the community as the unit of intervention.

Although singular approaches improve gendered power relations for girls and women, they are known to be inadequate for HIV prevention on their own, highlighting the importance of including multiple strategies to address gendered vulnerabilities at the community level.¹⁸³

The development of the *Raising Voices* programme to address violence against women in Uganda further illustrates lessons learned through reflecting on the limited and counter-productive effects of short-term engagements that critique the status quo.¹⁸⁴ These included avoiding ill-considered emphases on rights messaging in communities where the dimensions of gender power imbalances were not sufficiently recognised nor understood, as this led to defensiveness, confusion and rejection by men and women. Avoiding sporadic sectoral engagements was also noted as these led to fragmented and counter-productive activities over time. The programme adopted a ‘comprehensive community mobilisation’ approach that included working with the whole community (men, women, youth and children), encouraging individuals *and* the community to embark on change processes, using multiple strategies over time to build a ‘critical mass’, and promoting the understanding that gender-power disparities

¹⁸¹ See also the role of developing critical consciousness in the context of the IMAGE study in Hatcher et al. 2010.

¹⁸² Parker et al., 2009.

¹⁸³ For a summary of the range of approaches see International Center for Research on Women, 2009.

¹⁸⁴ Michau, 2007.

are not ‘out there’ but are intrinsic to many relationships. A key remaining element was fostering activism among a cross-section of community members. Community ownership was cultivated by generating interest and enthusiasm for alternatives in conjunction with highlighting the importance of individual contribution and involvement.¹⁸⁵

There is a need to develop new conceptual understandings of what relationships mean in the context of a severe HIV epidemic, stressing the importance of how both partners can address their own risk, and the implications of one’s risk practices on the other. While emphasising the domains of gendered inequality and power differentials, it is important to underscore the importance of understanding that both men and women serve as agents for change, and that alienating either gender creates an impasse. Gender roles in relationships are changing as a product of the influences of modernity and globalisation, and there is a need to articulate and validate egalitarian ‘sexual scripts’ that engage in a repositioning of gender relations.¹⁸⁶ Masculinities are changing in a direction that moves away from deference to male dominance in sexual decision-making and this trend needs to be drawn into new normative frameworks. This will not be achieved through reiteration of negative constructions embedded in gender analyses, and programmes that simplistically dichotomise females as victims and males as perpetrators fail to take into account the subtleties and processes of negotiating physical, economic and other aspects of wellbeing.¹⁸⁷ There are also possibilities for deferring to already sanctioned male gender roles – notably a responsibility for protecting women – as well as evoking social rights discourses that position protection from exposure to HIV infection as a fundamental right.

In *Raising Voices*, community mobilisation for prevention was noted to be the first ‘key action’ in addressing vulnerability of young women to HIV, with a particular emphasis on male involvement and a communication focus. In the Botswana contexts, such emphases should include causes, consequences and solutions to addressing vulnerability – i.e. concurrency, delayed debut, consistent condom use and addressing cross generational and transactional relationships. ‘Zero-tolerance’ of relationships that exploit gendered vulnerabilities and pose high risks for HIV transmission could potentially be fostered, as could positive reinforcement of safer sexual relationships that minimise vulnerabilities.¹⁸⁸

□ **Implications:** *It is well established that gender-power imbalances underpin many aspects of HIV vulnerability and risk, and power balances are not unidirectional –*

¹⁸⁵ Integrating adults and youth in dialogue about sexuality fosters transformative learning and facilitates ongoing open communication. See Njoroge et al., 2010.

¹⁸⁶ O’Sullivan et al., 2006

¹⁸⁷ Mills et al., 2009.

¹⁸⁸ Stirling et al., 2008.

*for example, transactional relationships are expressions of sexual power of one partner and monetary power of the other. A key lesson from programmes addressing gendered vulnerability to HIV is that it is necessary to focus beyond the individual, while avoiding alienating rhetoric about gendered power. Vulnerability and risk lie within relationship dyads, and the evidence points to the importance of addressing these risks through focusing on relationships in relation to family and community contexts. For example, focusing only on young women only to address 'sugar daddy' relationships is limiting, given that male partners of these young women form part of the relationship dyad. It is also necessary to engage the issue at the family and community levels to address the norms that allow such relationships to continue given that the severity of high prevalence epidemics produces a very high likelihood that young females in these relationships will be infected with HIV.*¹⁸⁹

7.3 Focal issue: Limits of individual cognitive-behavioural approaches

HIV programmes have largely been externally driven and have typically restricted community involvement in shaping and adapting programmes. This tension has largely been reproduced through the focus on individuals and processes of individual rationalisation in relation to risk and behaviour change. The individualised focus of HIV prevention is underpinned by the dominance biomedical and psychological orientations that give priority to individuals as the 'unit of change'. Such orientations are embedded in the emphasis on Abstain, be faithful, condomise (ABC) programming which emphasise individual rationalisation while failing to take into account vulnerabilities and power relations that directly influence the likelihood of HIV infection.¹⁹⁰

All too often, programmes are disengaged from the people they seek to serve. Approaches that require centralised monitoring of micro-indicators and that focus on delivering numbers in an effort to demonstrate intervention outcomes miss the point.¹⁹¹ Much of what is required in relation to community involvement is not readily boiled down to discrete individualised indicators. Rather, it is an emphasis on dialogue and participation that allows for the emergence of indigenous problem-solving within a framework of clearly framed objectives for incidence reduction and transparent knowledge about vulnerabilities, risks and causal pathways.

A broader approach requires understanding and integration of causal pathways that take into account individual variations in agency and vulnerability embedded in

¹⁸⁹ As highlighted in Pettifor et al., 2007.

¹⁹⁰ See Collins & Coates, 2008.

¹⁹¹ It is also possible that the requirements for simplified monitoring that involve counting 'units' of intervention, have unnecessarily steered programmes towards an individualised focus.

sexual partnerships and framed by varied and multidimensional contexts.¹⁹² *What is needed is “not a set of discrete interventions, but a planned and comprehensive approach with multiple tailored components, guided by data on the local epidemic.”*¹⁹³ A review exploring the ‘next generation’ of HIV prevention strategies¹⁹⁴ notes that the most efficacious interventions move beyond individualised orientations and engage participants with interactive activities including one-on-one, small group, community-level skill building and dialogue.¹⁹⁵ Incorporating community perspectives in identifying health priorities and guiding the intensity and sequencing of support through programmes is thus a necessary part of HIV/AIDS programming. This involves a shift in perceptions of AIDS governance that is focused on supporting a broad based social response that is led on many fronts.

If one is considering a community-level response, approaches previously ignored may be relevant for addressing prevention – for example, partner notification. Such programmes can contribute to breaking the chain of infection by focusing on social networks. A small-scale trial in Malawi encouraged notification and referral, with between a quarter and half of partners returning for counseling and testing. It was noted that partner referral may increase early referral to care and facilitate risk reduction among high-risk uninfected partners.¹⁹⁶

HIV vulnerability and risk are multidimensional and it is important to address complexity,¹⁹⁷ particularly taking into account the differences between controlled settings with high quality infrastructure and ‘real world’ settings.¹⁹⁸

Replication of programmes includes the necessity of adapting programmes to different contexts while maintaining core elements such as theoretical basis, internal logics and causal components. Structural interventions are necessary companions to epidemiological, biological and behavioural interventions, with important intervention types including community mobilisation, service integration, economic interventions such as microfinance and a supportive policy and legislative environment.¹⁹⁹

An exploration of social capital in relation to AIDS governance proposes the following:²⁰⁰

¹⁹² See Henderson et al., 2009.

¹⁹³ Collins & Coates, p3.

¹⁹⁴ Rotheram-Borus et al., 2009c.

¹⁹⁵ See Albarracin et al., 2005.

¹⁹⁶ Brown et al., 2010.

¹⁹⁷ See Piot et al., 2008.

¹⁹⁸ Rotheram-Borus et al., 2009c.

¹⁹⁹ See Blankenship et al., 2006; Gupta et al., 2008.

²⁰⁰ Low Beer & Sempala, 2010.

- Intense open social communication on AIDS led nationally, and devolved locally;²⁰¹
- HIV programme governance which engages systematically through social networks (local leaders, community groups, local media, most at risk populations);
- Community governance mechanisms that coordinate the response.

Related strategies include networking with local leaders, churches, schools, politicians and the like, incorporating reiteration of the importance of mobilising HIV response.

Community dynamics vary considerably within any given country, and community cohesion is not a strong feature of modern societies – particularly informal and formal urban areas. To bring about shifts from individual-focused interventions to approaches that are community oriented, it is necessary to work with groups and sectors in communities. This may include informal groups brought together by programmes to engage with HIV issues as well as engaging with existing groups and organisations. Inclusion of indigenous and local leadership is necessary, and this aspect has often been circumvented with perspectives emanating from traditional cultural frameworks have been criticised or condemned.²⁰²

A study exploring youth involvement as stakeholders in AIDS policy-making in Uganda highlighted the disempowering effects of poverty, non-indigenous languaging and westernised perspectives.²⁰³ The merits of involving implementers and youth in programme adaptation have also been noted in an exploration of the validity of transferring a U.S.-based, schools-based programme into an African context.²⁰⁴

A thesis exploring youth socio-cultural factors and risk reduction in Botswana notes that reducing HIV vulnerability would be best achieved through fostering positive social relationships with families, other adults and the broader community with a view to instilling a sense of belonging, competence and usefulness. This could be achieved through utilising participatory development approaches (Johnson-Baker, 2009).

A summary of lessons learned in understanding HIV prevention among youth underscored meaningful youth involvement in programmes and highlighted the following:²⁰⁵

- Youth are heterogenous, have diverse realities, vulnerabilities and preferences;

²⁰¹ In the context of HIV prevention among youth with a focus on gendered vulnerability, this would be advocacy communication that focuses on vulnerability and risk.

²⁰² Green et al., 2009; Jeeves & Jolly, 2009.

²⁰³ Norton & Mutonyi, 2010.

²⁰⁴ Wegner et al., 2007.

²⁰⁵ UNFPA, 2001.

- No single strategy or message will work, and HIV prevention approaches need to be comprehensive and multidimensional;
- It is important to focus on youth who are not sexually active, or who have limited sexual experience, with a view to establishing learned patterns of risk reduction. Frank sexual discussion does not prompt exploration of sex;
- Youth who have positive relationships with adults and who have prosocial attitudes and behaviours are less likely to adopt risky sexual behaviours;
- Young people who are disempowered economically, socially or care situations are more likely to be exposed to and engage in HIV-related risk.

Lessons learned from a family-focused intervention addressing HIV among younger youth – the Collaborative HIV Prevention and Adolescent Mental Health Programme (CHAMP) model – included the following:²⁰⁶

- Interventions are more likely to be successful and sustainable if they are collaborative, including community involvement in design;
- Local knowledge should be combined with empirical evidence to ensure ‘cultural congruence;’
- An ecological framework is important to understand family processes, regardless of micro-theories and change strategies;
- Family interventions should be group-based to enhance networking and the capacity to collectively renegotiate social norms and rebuild social ‘controls;’
- Emerging social networks and protective peer support networks enhance outcomes by providing social support;
- Lay facilitators can be used under the supervision of specialists.

The necessity of a participatory orientation is clearly underscored in the findings of the recent BNAPS study – in particular the qualitative findings, which include the following points:²⁰⁷

- Well-implemented standardised interventions have not adequately impacted HIV prevalence/incidence;
- Differences in ethnicity and language have not been taken into account, programmes are not localised nor tailored for specific communities, and there is a lesser emphasis on rural areas;

²⁰⁶ Bhana et al., 2010.

²⁰⁷ NACA, 2010b.

- HIV programmes lack local input – community stakeholders are not consulted and programmes ‘lose their power when there is no engagement and feedback, or interest in gaining insight, from the grassroots.’ There must be community ownership;²⁰⁸
- There should be increased collaboration between government (local), non-governmental and community-based organisations, schools and religious institutions to address HIV prevention among young people;
- Arts, religion and alternative forms of outreach should be utilised to address young people.
- It was also noted that people could contribute meaningfully to HIV prevention if they were organised into committees comprising all age groups at the community level.

There is a general consensus on issues related to programme design for HIV prevention that highlights the need to address heterogeneity, avoid an individualised focus, incorporate vertical and horizontal processes, involve youth in programme design, address the risks and severity of the epidemic, focus on risk at the relationship and partner levels, protect young females, include a focus on vulnerable groups and incorporate effective and appropriate approaches to relationships. These are summarised in Table 3.

Table 3: Issues in programme design

Issue	Approach
Heterogeneity of audiences	Incorporate an understanding that young people hold a range of values and beliefs and should not be assumed to identify with a singular set of values. Programs should thus allow for heterogeneity, or alternately, a diversified range of programs should be conducted in synergistic combinations. Include separate orientations for younger age groups (15-19), middle age groups (20-24) and young adults (25-29).
Avoid individual-only focus	Include a community focus that incorporates multiple elements and that are oriented beyond the individual, addressing families, groups, community-based social networks, service providers and community leaders. Include workshops and other interactive sessions with groups within communities conducted systematically and sequentially that facilitate discussion among and between youth and adults and that focus on risks, vulnerabilities and rights.
Utilise vertical and horizontal approaches to communication	Include mass media and interpersonal communication including traditional networks, as well as mobilising awareness and action through the use of technologies such as mobile phones and the internet. All communication ‘messages’ should be explicit and direct and should take into account the language and ethnicity of various youth audiences. Formative and process evaluation should be incorporated.
Involve and empower youth	Involve youth in programmes overall, as well as focusing on promoting dialogue between adults at the community level and incorporate an understanding of youth as change agents.
Highlight immediate and tangible risks for young people	Include a focus on unintended pregnancy, abortion and STIs.
Instill a sense of severe risk of infection through early sex and partner turnover	Promote and reinforce social norms that advocate for delayed sexual debut in the context of a high risk HIV prevalence context, with a high risk of HIV transmission to young females in any relationship.

²⁰⁸ Ibid, p107.

Address concurrent sexual partnerships	Highlight the risks of linkages to sexual networks and promote social norms that encourage transparency and dialogue openness in sexual relationships. Highlight the societal risks imposed by concurrent partner practices and increase peer-level sanctions against concurrent sexual partnerships.
Address both partners in intergenerational relationships	Focus on adults who have sexual relationships with young people aged <20. A 'zero tolerance' approach should be instilled at the community level. Harness the legal power of statutory rape/defilement legislation.
Include a focus on alcohol	Address alcohol consumption, particularly binge drinking, with a particular emphasis on reducing risks of exposure to HIV linked to consuming alcohol at alcohol venues.
Protect young females in school	Include activities that create safe spaces for girls with a strong emphasis on schools as safer places and adopting a 'zero tolerance' approach to sexual relationships with teachers and violence in schools.
Include a focus on orphans and other vulnerable youth	Subsets of youth require additional support through counseling and mentoring programmes.
Include young PLHIV	Address knowledge of HIV status including providing psychosocial support and prevention orientation to HIV positive young people. Support groups are a key intervention.
Evaluate activities	Include an appropriate evaluation model that seeks to measure programme activities over time including providing an informed assessment of direct impacts on HIV incidence.

➤ **Implications:** *To address HIV prevention at the national level in Botswana requires a national, coordinated response that moves away from a focus on individuals towards a community-level focus. This involves a clear articulation of this new orientation, alongside processes that allow for bridging between national-level imperatives and involvement of communities in implementation and adaptation of programmes on the ground. Effective, evidence-based interventions involve establishing a framework for understanding behaviour change, conveying issue-specific relevant information, building skills relevant for response and addressing environmental barriers to implementation.²⁰⁹ The fundamental elements related to HIV prevention need to be agreed upon, funded, implemented, achieved and measured. Participatory approaches that recognise community perspectives and incorporate community members into processes of addressing HIV prevention are key. Building resilience of youth can be drawn into programming as an underlying objective. For example, building on external assets such as family, community values and activities, boundaries and expectations and constructive use of time, as well as internal assets such as commitment to learning, upholding positive values, developing social competencies and adopting an optimistic social identity provides a broad basis for youth empowerment and self-efficacy and contributes to a reduction in vulnerability to HIV.²¹⁰*

²⁰⁹ See Rotheram-Borus et al., 2009a.

²¹⁰ See Makiwane & Mokomane, 2010; DeMello e Souza, 2008.

8. DEFINING A WAY FORWARD

This review has sought to identify appropriate directions for intensified programmes directed at young people in Botswana. Although there are many programmes active in the region that have youth and gender emphases that parallel the needs in Botswana, none of the evaluated programmes have made demonstrable impacts on HIV (apart from male circumcision interventions, which are already being considered for young males by ACHAP). It is also evident that standalone interventions are inadequate for preventing HIV at the community (or individual) level.

Although these findings may be disappointing, it does not follow that ‘nothing works.’ The literature illustrates the importance of multidimensional and synergistic activities that address the context of HIV vulnerability and risk along multiple pathways. It is clear that the over-reliance on the domain of individualised behaviour change has constrained progress by limiting involvement of partners, peers, family, community groups and sectoral leaders, among others, in responding in concert to address a pressing local concern. As expressed by one policy leader in the BNAPS study – the challenge is to *“mobilise the population, for them to realize what resources they hold as leaders of communities, as people living in communities which are affected by this epidemic, for them to make their contribution.”*²¹¹

There are many prevention activities directed at youth occurring in Botswana. These occur at national and district levels and include:

- National-level programmes addressing key drivers of HIV – for example, MCP;
- Wide-ranging HIV-related services including condom provision, sexual and reproductive health, VCT, PMTCT and ART;
- Male involvement programmes that train peer educators;
- Youth programmes that include entertainment-education, condom distribution and knowledge promotion activities;
- Girl-focused programmes that address gendered vulnerability;
- Prevention with positives programmes that include support groups.

Any emerging programmes focusing on addressing young people and the gendered vulnerability of young females should be designed to work in concert with existing programmes and interventions. Programmes therefore need to be designed to acknowledge the combined effects of existing responses ‘on the ground,’ including programmes that work to similar objectives in relation to addressing prevention of HIV infection among young females.

²¹¹ NACA, 2010, p127.

A theoretical grounding in causal pathways is a fundamental building block for programme design. These pathways necessarily include addressing biological factors in conjunction with limiting and reducing high-risk behaviours, while at the same time considering reduction of vulnerability by addressing socio-cultural and structural factors. The epidemiology of HIV needs to be taken into account – particularly the dynamics of sexual networks in each context. Specifically, it is variations in connections and density of sexual networks that have produced much of the variation in the epidemic to date, and it follows that efficiencies in disrupting sexual networks are directly related to gains in incidence reduction.

Although there is evidence of prevalence decline among youth in Botswana, the epidemic remains severe and incidence needs to be reduced more extensively in a shorter timeframe. What is required is an intensified focus that is directly and clearly focused on the key behavioural risk factors for young females – early sexual debut, transactional sex, sex with older partners, partner turnover and concurrent sexual partnerships. Vulnerability to HIV infection is directly related to partner characteristics in a context of high partner turnover in relatively short timeframes. One strategy would be to emphasise that in the context of a severe epidemic, short-duration relationships accentuate risk as a product of increasing exposure to multiple partners over time.

If prevention is to be directly connected to norms that frame risk reduction, an approach is required that integrates dialogue between people in relationships, as well as families and the broader community, centered around a goal of coherently and urgently addressing HIV prevention at the community level. How a community might envision a community-level response was explored in an action research process in a school and rural community in South Africa, with community members developing a detailed participative pledge to action that was launched at a community gathering and endorsed by community members.²¹² What is instructive about this action research project is that the process was led by a small group of young people in the community. The findings highlight that youth participation in programme activities should include engaging with adults and stakeholders in the community around immediate risks to their health and well-being.

Addressing family and community contexts with a view to including indigenous knowledge systems that incorporate processes of empowerment was highlighted in an analysis of the failure of 'ABC' programming in Botswana. Participatory approaches that 'mobilise people to seek solutions within their own diverse cultural contexts' were also endorsed as a means to engage 'the collective and consensus nature of society in Botswana.' (Ntseane & Preece,

²¹² See Kelly et al., 2002.

Proactive change that aggressively constrains incident HIV infections among young females at the community level can only be brought about if the necessary actions (i.e. known risks) are accompanied by processes of accountability and sanction (including positive and negative sanctions). While there is awareness accompanied by an undercurrent of dissatisfaction around key risk behaviours – notably concurrent partnerships, young women with older sexual partners and early sexual debut (with attendant early fertility) – accountability for stopping these practices and sanctions that prompt the same need to enter community discourses at a higher, more public level.

A modified version of the *Stepping Stones* model would provide a useful foundation for achieving the necessary dialogue – particularly if local leaders, including traditional and religious leaders, are engaged in the process,²¹³ – while participatory action research models could be employed to draw communities into the adaptation and implementation of programmes. Such processes would also need to be supported by a national conversation that takes place around the same issues and that is expressed through mass media communication (some of which is already occurring – for example, through intensive campaigns addressing the risks of concurrent sexual partnerships).

There are clear merits to grounding an emerging programme within an ecological framework that considers multiple influences on risk and vulnerability, including family, community, socio-cultural and socio-political domains in conjunction with access to resources and services. This approach overcomes the diminishing impacts of behaviour change that occur when programmes are conducted on a short-term basis. The vulnerability of young females to HIV infection is reproduced through ‘diverse sources of influence transecting different levels of causation’ and these levels of causation need to be addressed in programme design to bring about sustained changes.²¹⁴

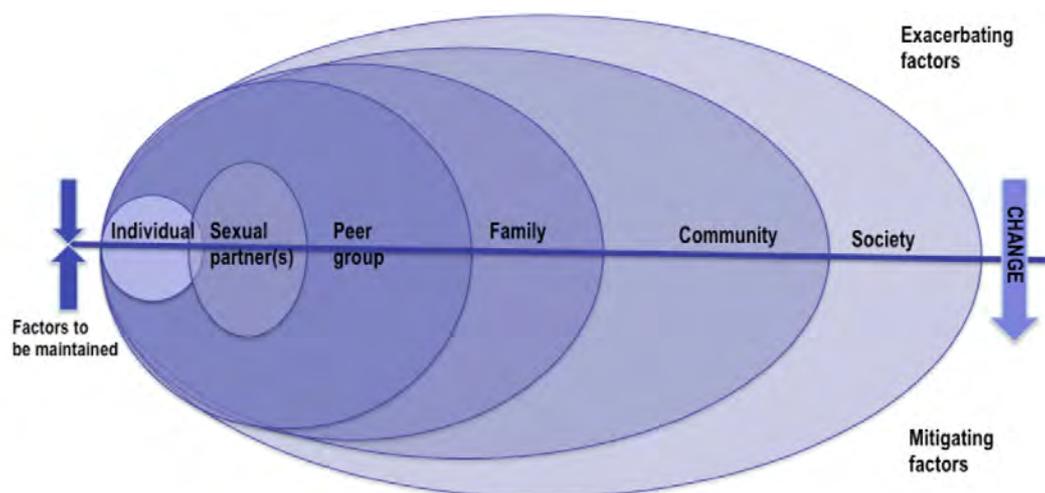


Figure 2: An ecological change model for HIV prevention among young females

²¹³ See for example, Tabane & Delport.

²¹⁴ Di Clemente et al., 2006.

Figure 2 illustrates an ecological change model addressing HIV prevention in multiple domains including individual, relationship, peer, family, community and society. Change is envisioned at each level as a process of diminishing exacerbating factors for HIV vulnerability and risk, and enhancing and expanding mitigating factors (See Appendix 1). The model also allows that there are many elements related to HIV vulnerability and risk that do not need to change.

It is also necessary to recognise the complexity of each sphere of the model. What is meant by ‘family’ includes stark variations and contrasts. Likewise, communities vary in a range of important ways.

Family structures in southern Africa, including Botswana, have been subject to change over the past century, impacted by shifting modes of economic production, markets, and labour migration. More recently modernisation and globalisation have impacted rural-urban migration and family structure generally, as well as values and norms related to family. Late or non-marriage and early fertility are also well entrenched, leading to single parent households, shifting patterns of parental and adult care, and extended family linkages of varying stability (ranging from multigenerational households to single parenting). Increased orphaning due to AIDS also contributes to changes in fostering and family care arrangements, as well as child-headed households. Where both parents are present, employment (including informal employment) and work-seeking weaken parental care arrangements.²¹⁵

In the absence of support to parenting care systems, children are exposed to psychological stress and the effects of social disintegration.¹ A study in Botswana noted that one half of families left children home alone on a regular or occasional basis, with outcomes including negative behavioural and developmental patterns (Ruiz-Casares & Heymann, 2009). Another study in Botswana linked aggressive and antisocial behaviours among secondary school students to poor parent-child relations and low parental monitoring (Maletse, 2010).

Communities include rural/urban variations, relativities in poverty and unemployment and population mobility, variations related to the specifics of geographic locale (e.g. informal settlements, border towns, mining towns), variations in language and culture and differences in the scale and impact of the HIV epidemic.

Next steps include the distilling of findings into a model that includes a theoretical foundation (or guiding principles), along with definition of causal pathways and programme logic. Key principles include engagement and participation of subgroups of community members as part of the programme design, while at the same time

²¹⁵ See Evans et al., 2008

requiring a consistent overall approach and strategy. Guiding principles and lessons learned are presented in the literature and provide relevant guidance for the development of a strategic programme that can be implemented over the second phase of the ACHAP intervention.

The insights and recommendations of the BNAPS study fit well with the findings of this review. The study includes a comprehensive description of community consultations and discussions that look closely and specifically at the successes and challenges of HIV programming in Botswana, including HIV prevention, youth and gender. The study includes recommendations made by a diverse range of research participants. District-level analyses illustrate the heterogeneity of response and variations in community perspectives on solutions, inform the contextual challenges of HIV prevention, and are an essential companion piece for programme design.

An intensive, and perhaps aggressive, approach is necessary if incidence levels are to be driven downwards. This is not out of the question provided that this goal is clearly articulated as a singular purpose. The population of Botswana is relatively small, which allows for national-level

interventions to be implemented rapidly throughout the country. It is therefore not difficult to imagine tangible change over relatively short timeframes. There is also a considerable body of research, including the extensive findings of the recent BNAPS study, that can be mobilised to inform HIV prevention programming.²¹⁶

Outcome goals in relation to cost-effectiveness need to take into account infections averted, alongside the potential extent of HIV incidence prevention over time.²¹⁷

Evaluation of interventions is key, and should include baseline data. With regard to understanding outcomes related to HIV, antenatal data for younger age groups remains a useful proxy for estimating HIV incidence, and simple mathematical methods exist to calculate year-on-year incidence.²¹⁸

In sum, the literature is clear in recommending a comprehensive approach that includes participation in programme design and involvement in programme implementation at the community level. A key component is horizontal communication and dialogue between individuals, peers, family and community stakeholders and leaders focused on understanding and addressing HIV vulnerability.

²¹⁶ See Bertozzi et al., 2008.

²¹⁷ Most HIV prevention interventions may appear cost-effective when contrasted with the long-term per-person costs of ART. A review of developing country interventions found condom promotion, STI control, VCT, blood supply screening and PMTCT to be highly cost-effective when measured against Disability Adjusted Life Year's (DALYs) – see Marseille et al., 2001. A comparative review found that two factors underpinned cost-effectiveness – the HIV prevalence of the population at risk, and the cost per person reached (Cohen et al., 2004.) while a review of community-level interventions concluded that they were cost-effective (although programmes reviewed were not in Africa – see Pinkerton et al., 2002). It is also noted that drawing in a gender component to existing programmes does not require much additional funding (ICRW, 2009).

²¹⁸ See Shisana et al., 2009, p20; Rehle et al., 2009.

Appendix 1: Exacerbating and mitigating factors for concurrency

Table 4 illustrates how the ecological change model might be applied to the issue of HIV prevention and concurrency.

Table 4. Exacerbating and mitigating factors for concurrency

Domain	Exacerbating factors	Mitigating factors
Individual	<ul style="list-style-type: none"> • Low awareness of risk • Low self-esteem • Desire for affirmation • Bravado • Peer pressure 'pro' 	<ul style="list-style-type: none"> • High awareness of risk • Self-esteem delinked from concurrency • Affirmation addressed through single partnerships • Risk internalisation tempers bravado • Peer pressure 'against' • Partner resistance • HIV risk dialogue
Sexual partner	<ul style="list-style-type: none"> • Low awareness of risk • Low self-esteem • Desire for affirmation • Bravado • Peer pressure 'pro' 	<ul style="list-style-type: none"> • High awareness of risk • Self-esteem delinked from concurrency • Affirmation addressed through single partnerships • Risk internalisation tempers bravado • Peer pressure 'against' • Partner resistance • HIV risk dialogue
Peer group	<ul style="list-style-type: none"> • Accepting of concurrency practices in peer group 	<ul style="list-style-type: none"> • Reject concurrency practices in peer group
Family	<ul style="list-style-type: none"> • Uninvolved in risk 	<ul style="list-style-type: none"> • Concerned about risk
Community	<ul style="list-style-type: none"> • No or minimal sanctions in response to concurrency • Normative environment accepts concurrency 	<ul style="list-style-type: none"> • Negative sanctions in response to concurrency • Positive reinforcement of monogamous and longer-term relationships • Normative environment rejects concurrency
Society	<ul style="list-style-type: none"> • Community leaders silent about risks of concurrency • Concurrency legitimised in mass media • No visible role models rejecting concurrency 	<ul style="list-style-type: none"> • Community leaders vocal about risks of concurrency • Concurrency critiqued in mass media • Visible role models for rejecting concurrency

Appendix 2: Statutes and policies in Botswana

A summary of the relevant documents related Legal statutes and Policies that have a bearing on the prevention and management of HIV and AIDS in Botswana.

Background

Since the emergence of HIV in Botswana, various statutes and policies have been developed specifically to address HIV/AIDS. Some were developed to address HIV issues through proxy, while other existing ones were expanded to also cover HIV/AIDS-related issues. The table below presents some HIV-related issues against whether national policies or statutes exist or not.

The Public Health Bill, which is at an advanced stage for approval, will address the age of testing for HIV and provided a legal instrument that backs the current policy.

Minor (law) Issue	Legal statute	Policy	Comment/Notes
Rape	✓		Penal code (Amendment) Act 1998 Cap 08:01 Section 141. Although the law exists on rape, many cases go unreported due a number of factors, among them stigma associated with rape. Rape without violence or HIV is punishable by a minimum of 10 years imprisonment and a maximum of life imprisonment. If rape is done with violence without HIV, the minimum punishment is 15 years imprisonment to a maximum of life imprisonment with or without corporal punishment. In cases of rape if the perpetrator is HIV positive but unaware of his status at the time of rape, the minimum punishment is 15 years in jail to a maximum of life imprisonment with corporal punishment. In a case where the perpetrator was aware of his HIV positive status, the minimum punishment is 20 years in jail and the maximum is life in jail with corporal punishment. Attempted rape is punishable by a minimum of 5 years in jail. Its maximum penalty is jail with or without corporal imprisonment.
Marital rape			The Botswana Penal code is silent on the issue, while this is also a potential source of HIV for women both young and old who are married. The problem of marital rape is also one of the explanations as to why women who know their HIV positive status continue to get pregnant. This issue is also related to the generally weak economic status of women. Human rights as well ethics and law organisations in Botswana are advocating for the inclusion of marital into the penal code.
Sexual abuse of children below 16 years; Defilement.	✓		Penal code (amendment) Act 1998 (Cap.08:01 Sec 148) states that any person who unlawfully and carnally knows any person under the age of 16 years is guilty of an offence and on conviction shall be sentenced to a minimum term of 10 years imprisonment or to a maximum term of life imprisonment. ²¹⁹ If HIV positive, the perpetrator shall on conviction be sentenced to a (a) minimum term of 15 years' imprisonment and a maximum term of life imprisonment with or without corporal punishment, where it is proved that such person was unaware of being HIV positive; or (b) minimum term of 20 years' imprisonment and a maximum term of life imprisonment with or without corporal punishment, where it is proved that on a balance of probabilities such person was aware of being HIV positive. It however excludes individuals aged 16-17.
Incest	✓		Penal Code Cap 08:01 Sec 147 addresses this issue. It however excludes other blood relatives, such as maternal and paternal aunts and uncles. There is no prescribed minimum punishment for incest cases. There is however no requirement for mandatory HIV testing for incest cases.
Commercial sex work			According to the penal code (CAP.08:01), everyone who is knowingly lives wholly or in part on the earnings of prostitution, or in any public place persistently solicits or importunes for immoral purposes, is guilty of an offence; and, in the case of a second or subsequent conviction under this section the court may, in addition to any term of imprisonment awarded, sentence the offender to corporal punishment. Nonetheless, several studies conducted in the region suggest very high HIV prevalence rates in this group (some estimates being as high as 69%). ²²⁰ Sex workers have to deal with issues of poverty, gender inequality, stigma and discrimination (including at the hands of health service providers and the police), violence and other social problems. ²²¹ Research suggests that sex work is a critical mode in the spread of HIV. ²²² There are limited interventions being implemented by NGOs for sex workers.

²²⁰ Ntseane P. G. (2004). Gender and unemployment: HIV/AIDS prevention challenges for Botswana sex-workers. Int Conf AIDS. 2004 Jul 11-16; 15: abstract no. C10003.

²²¹ ITECH. (June 2007). HIV Needs Assessment of Female Sex Workers in Major Towns, Mining Towns, and Along Major Roads in Botswana.

²²² Talbot, J.R. (2007). Size Matters: The Number of Prostitutes and the Global HIV/AIDS Pandemic. PLOS One, Issue 6.

Stigma and discrimination (S&D)	✓	✓	<p>Issues related stigma and discrimination are covered by the national AIDS policy. Studies in the region have found that S&D is one of the key barriers to prevention and treatment efforts.²²³ Some of the policy positions that seek to address stigma and discrimination issues include;</p> <ul style="list-style-type: none"> • Confidentiality issues where the policy states that information about the HIV status of individuals (patients, clients, employees, etc.) should be treated confidentially, and not be divulged to others without the consent of the person concerned. • Pre-employment HIV testing as part of the assessment of fitness to work is unnecessary, and should not be carried out. • HIV testing should not be carried out as part of periodic medical examination of employees. • No travel restriction should be imposed on people with HIV
Willful transmission of HIV	✓		<p>Any person who unlawfully or negligently does any act which is, and which he knows or has reason to believe to be, likely to spread the infection of any disease dangerous to life, is guilty of an offence.</p>
Refugees			<p>Refugees have legal access to public service prevention services, testing and counseling services, but don't have legal access to ART programmes.²²⁴</p>
Prisoners			<p>In Botswana prisons, HIV is transmitted through voluntary and involuntary sexual activities, poor sanitary conditions, physical violence, etc.²²⁵</p>
HIV counselling and testing (HCT)		✓	<p>Covered in the national HIV/AIDS policy. Routine HIV testing (provider initiated) is a public health strategy offered in all health care facilities based on the 'opt-out' policy, which enjoins the health care provider to offer an HIV test to an individual, couple or group. The people to whom the offer to do the test is made have a choice to 'opt-out' or decline the offer. Botswana's implementation of the HCT began in 2004.²²⁶ Some of the policy positions regarding HIV counselling and testing are as follows;</p> <ul style="list-style-type: none"> • Testing should not be done without the knowledge of the subject. • Counselling should be offered and confidentiality maintained. • HIV testing will not be carried out against the will of individuals. • Pre- and post-test counselling should accompany all testing in which the individual will be given test results. Referral for on-going supportive counselling should be offered as part of the post-test service. • Voluntary testing should be encouraged and provided, with appropriate counselling services.
Alcohol abuse		✓	<p>The draft policy is aimed at reducing alcohol abuse for both men and women in the country, with the ultimate goal of reducing problems associated with abuse of the substance such as HIV transmission, accidents and gender violence, among others. Some of the measures put in place in Botswana to address the problem of alcohol abuse include raising taxes on alcohol, reducing the hours of operation for bars and an education campaign against alcohol. Funds from the levy are used for youth development projects.</p>
Orphans and Vulnerable Children	✓	✓	<p>In 1981, Botswana's Parliament adopted the Children's Act—Botswana's first policy to protect children from ill treatment, neglect, and other social vulnerabilities (Government of Botswana, 1981a). The Act mainly addressed issues of custody, care, juvenile justice and aspects of child protection.²²⁷</p> <p>In 1981, Botswana's Parliament also adopted the Destitute Policy, which established guidelines for the identification, registration and support of orphans. The Destitute Policy outlined guidelines for the provision of social welfare (i.e. food, clothing, shelter and uniforms) to orphans, as well as food support for households, which included orphans. Implementation of the Destitute Policy (Government of Botswana, 1981b) was placed under the MLG's Social Welfare Division, which later became the Department of Social Services in 2002 (USAID 2010).</p> <p>The National OVC Policy is still in draft form.</p>
Youth economic empowerment		✓	<p>The National Youth Policy, although not directly addressing HIV/AIDS, is a framework for youth development in Botswana which endeavours to ensure that young people are given the opportunity reach their full potential. It addresses major concerns and issues critical for young people in Botswana and gives direction to youth programmes and services provided by the government of Botswana and NGOs. According to the policy, youth are people aged between 12 and 29 years. Its implementation is driven the Ministry of Youth and Culture.</p>

²²³ Weiser, S.D.; Heisler, M.; Leiter, K.; Percy-de Korte, P; Tlou, S.; DeMonner, S.; Phaladze, N.; Bangsberg, D.R. & Iacopino V. (2006). Routine HIV Testing in Botswana: A Population-Based Study on Attitudes, Practices, and Human Rights Concerns. Vol 3(7).

²²⁴ Jacques, G., Mmatli, T. (2010). Harmonizing the halo effect: present strengths and future opportunities for HIV and AIDS policies in Botswana. Presented at Population Association of Botswana National Conference, University of Botswana.

²²⁵ Masethle, K. (2002). HIV/AIDS prevention in Botswana Prisons: What could be done? The Prisoners' Perspectives and Policy Recommendation. London: London School of Economics, Department of Psychology.

²²⁶ Parliament of Botswana (2007). Interim Report for the Botswana National Assembly hearings 2 – 12 October 2007.

²²⁷ USAID Health Policy Initiative (September 2010). Assessing implementation of Botswana's program for Orphans and Vulnerable children.

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