



Social Determinants of HIV in the Eastern Cape

**Submitted to the
Eastern Cape Socio-Economic Consultative Council**

By

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EXECUTIVE SUMMARY

This report was prepared for the Eastern Cape Socio Economic Consultative Council to review the Social Determinants of HIV/AIDS in the Eastern Cape with the aim of proposing programmes and research agenda for the scale up of effective HIV prevention. The report is based on a rapid review of available and accessible literature, both published and unpublished ('grey literature'), of HIV/AIDS studies conducted mainly in the Eastern Cape, and secondary analyses of HSRC's national HIV prevalence surveys (SABSSM) and the Department of Health's annual survey of HIV infection in antenatal clinic attendees.

The report addresses the following research questions:

- What is the state of HIV/AIDS epidemic in the Eastern Cape Province?
- What are the social, economic and political factors that influence HIV and AIDS incidence and prevalence in the Eastern Cape Province?
- What are the social and structural factors shaping patterns of risk behaviour in the Eastern Cape, e.g. informal settlements, teenage pregnancy, etc?
- How can the knowledge of these factors be used effectively to advise the government to design relevant HIV and AIDS policies and programmes in the Eastern Cape Province?
- What are the research gaps and priorities?
- What are the key recommendations on priority research areas?

The report shows that HIV prevention remains the most important priority. While there has been substantial media attention focused on the decline in HIV prevalence in some age groups, overall, the levels of infection and the human toll from the epidemic remain unacceptably high. The HIV epidemic continues to expand and there is an urgent need for more effective HIV preventions.

This report also highlights the major social, economic and behavioural factors that drive the epidemic in the Eastern Cape which include culture and social norms, stigma and denial, poverty, labour-related migration, gender-based violence including rape, concurrent multiple sex partners and age mixing patterns.

Further, the report identifies several gaps in information and advocates for more local studies to explore social determinants of HIV infection. The case is made for these studies to explore the general findings from national research but fine tune it for the circumstances found in the Eastern Cape.

This report makes several recommendations, namely:

- There is a need to address inadequate HIV and AIDS surveillance systems;
- Studies specifically on social determinants of HIV are needed;
- Gaps in knowledge of effective prevention strategies should be addressed; and
- The impacts of structural interventions (e.g. economic empowerment) should be explored in more detail.

This report has attempted to identify province-specific data on the social determinants of HIV for the Eastern Cape. It is by no means conclusive and has, as might have been predicted, found that the amount of local information is quite limited. However, it is

intended as a working document which, with the 'Conference on the Political Economy of HIV and AIDS' to be held in East London from 7-9 March 2010, will be the starting point for more comprehensive analysis in the future.

ACRONYMS AND ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal care
ART	Antiretroviral therapy
ARV	Antiretroviral
CDC	United States Centers for Disease Control and Prevention
CBOs	Community-based organizations
CCT	Confidential counselling and testing
CHWs	Community health workers
EC DOH	Eastern Cape Department of Health
ELISA	Enzyme Linked Immunosorbent Assay (HIV test)
FBO	Faith Based Organisation
FGD	Focus group discussion
FHI	Family Health International
FP	Family planning
HIV	Human immuno-deficiency virus
HSRC	Human Sciences Research Council
LSA	Local Service Area
MCH	Maternal and child health
MTCT	Mother-to-child transmission of HIV
NPO	Non-Profit organisation
NVP	Nevirapine
PCR	Polymerase chain reaction
PEPFAR	United States President's Emergency Plan for AIDS Relief
PLWHA	Person living with HIV and AIDS
PMTCT	Prevention of mother-to-child transmission (of HIV)
RPR	Rapid Plasma Reagin (Syphilis test)
SAHA	Social Aspects of HIV/AIDS and Health Research Programme (HSRC)
SAHARA	Social Aspects of HIV/AIDS Research Alliance
StatsSA	Statistics South Africa
STI	Sexually transmitted infection
TBA	Traditional birth attendants
THP	Traditional Health Practitioner
VCT	Voluntary counselling and testing
UNAIDS	Joint United Nations Program on AIDS
WHO	World Health Organisation

GLOSSARY OF TERMS

Effectiveness	The impact of an HIV prevention intervention seen in real-world settings
Efficacy	The impact of an HIV prevention intervention seen in a clinical trial or laboratory setting
Epidemic	A sudden unusual increase in cases that exceeds the number expected on the basis of experience.
Evidence-based practice	An approach to health care wherein health professionals use the best evidence possible, i.e. the most appropriate information available, to make clinical decisions for individual patients.
High risk behaviour	Unprotected sexual intercourse (i.e., without a condom) with many partners, or sharing of unsterilized injecting equipment.
Incidence of HIV	The number of new cases of HIV in a given time period, often expressed as a percentage for a given number of the susceptible population
Intervention	A deliberate process by which change is introduced into peoples' thoughts, feelings and behaviours
Operations research	Operations research (OR) identifies service-delivery problems and tests new programmatic solutions to these problems. An important objective of OR is to provide program managers and policy decision makers with the information they need to improve and expand existing services.
Pre test counseling	Counseling given to an individual before an HIV test, to make sure that the individual has sufficient information to make an informed decision about having an HIV test.
Post-test counseling	The counselling provided when an individual receives his or her HIV test results. Post-test counselling involves one or more sessions
Policy	Written document that aims at setting out a country's position and practices on HIV/AIDS
Randomized Control Trial	A type of scientific experiment most commonly used in testing the efficacy and effectiveness of HIV prevention services or prevention technologies (such as ART drugs, microbicide or male circumcision).
Scale up	Scale up involves other sectors and stakeholder groups in the process of expansion from a pilot study to inclusion of grassroots organizations, policymakers, donors, etc.
Systematic review	A literature review focused on a single question that tries to identify, appraise, select and synthesize all high quality research evidence relevant to the question.
HIV Testing	The obtaining of a bodily sample for the specific purpose of performing a medical test or a number of medical tests to determine the HIV status of a person.
Trained HIV counselor	A person trained in HIV counselling skills, preferably on a course which meets the standards

1. INTRODUCTION

Efforts to monitor and respond to the HIV/AIDS epidemic are complicated by the temporal and geographical evolution of the many sub-epidemics at the provincial or even sub-district level. The interpretation of epidemiological trends is made more difficult by an inadequate understanding of how different social, behavioural and epidemiological factors influence the dynamics of the epidemic within different settings (Rehle et al., 2004). The determinants of HIV transmission establish the theoretical basis for the current HIV and AIDS prevention efforts. The scientific challenge for programme designers lies in trying to identify the most effective ways to decrease HIV transmission by influencing these determinants and to translate theoretical concepts into specific interventions in the field. Against this background, the Eastern Cape Socio-Economic Consultative Council commissioned the Human Sciences Research Council to conduct a review of studies of HIV/AIDS that have been conducted in the Eastern Cape and answer, as far as possible, the following research questions:

- What are the social, economic and political factors that influence HIV and AIDS incidence and prevalence in the Eastern Cape Province?
- What are the social and structural factors shaping patterns of risk behaviour in the Eastern Cape, e.g. informal settlements, teenage pregnancy, etc?
- How can the knowledge of these factors be used effectively to advise the government to design relevant HIV and AIDS policies and programmes in the Eastern Cape Province?
- What are the research gaps and priorities?
- What are the key recommendations?

2. METHODS

The study used secondary data to provide an overview of what is known about the social and economic determinants of HIV infection in the Eastern Cape.

2.1. Desktop review of existing literature and small-scale studies in the Eastern Cape

The study made use of a range of available and accessible literature; both published and unpublished ('grey literature'), in order to gain an overview of the situation of HIV and AIDS in the Eastern Cape in relation to other parts of South Africa and the African continent. These included journal articles, scientific reports and media reports. Effort was made to use the most up-to-date literature as far as possible in order to ensure that the information provided in the report current.

2.2. Secondary analysis of National Department of Health Antenatal Survey Data

The National Department of Health conducts an annual HIV and Syphilis Prevalence Survey which is used to monitor trends in HIV infection among women attending public antenatal services (DOH, 2009). The study design is an anonymous, unlinked, cross sectional HIV and Syphilis survey of 15-49 year-old pregnant women. In the Eastern Cape, there were 269 sentinel sites (public clinics) and all women attending

antenatal services for the first time during the current pregnancy and who consented to be tested, were included. A systematic random cluster sample design was used with probability proportional to size (PPS) where each sentinel site is a primary sampling unit or cluster.

The blood samples from the Eastern Cape were processed by the National Health Laboratory Services (NHLS) in Port Elizabeth for HIV and Syphilis testing. An ELISA test was used for HIV tests and RPR for Syphilis.

The data from this survey was reviewed and the results for the Eastern Cape compared and contrasted to national data and other provinces.

2.3. Secondary analysis of the HSRC national HIV survey (SABSSM) data

The study includes a secondary analysis of the South African national HIV Incidence, Behaviour and Communication Surveys (SABSSM) carried out by the HSRC in 2002, 2005 and 2008. The analysis concentrated on variables related to social and economic determinants of HIV infection.

SABSSM was conducted in 2002, 2005 and 2008, and among other objectives, the study aimed to:

- Determine HIV prevalence among children (2-14 years of age) in South Africa
- Identify social and community risk factors that predispose children to HIV infection
- Determine patterns of sexual behaviour, HIV prevention and behavioural change among children
- Determine levels of knowledge, sources of knowledge and communication about HIV among caregivers and children (Shisana et al., 2002)

2.3.1. Study Design

SABSSM is a repeat cross sectional, household, face-to-face, population representative survey.

2.3.2. Sampling

Using the latest census data and employing the services of noted sampling experts, the HSRC samples are noted for their scientific quality. The SABSSM surveys provide a representative sample of all persons over 2 years of age in South Africa and residing in dwellings, i.e. excluding individuals living in educational institutions, old-age homes, hospitals and uniformed service barracks, but including those living in hostels. A multi-stage cluster stratified sample stratified by province, settlement geography (geotype) and predominant population group in each area was used. A systematic sample of 15 households was drawn from each of 1 000 census enumeration areas (EAs). In each household, one person was randomly selected in each of 4 mutually exclusive age groups (<2 years, 2 - 14 years, 15 - 24 years, ≥25 years). Socio-demographic and behavioural information was collected via questionnaires administered by trained fieldworkers (more details on the methodology are described

by (HSRC, 2008). In order to explore social determinants of HIV infection, only those over 15 years of age were included in the secondary analysis for Eastern Cape (n=1806).

2.3.3. Measures

The SABSSM measures meet the vital requirements of the World Health Organisation (WHO) guidelines for HIV behavioural surveillance in terms of ethical considerations, questioning styles, duration of the interview, and contextual relevance (see WHO, 2001:17). SABSSM measures are validated and have been used in the 2002, 2005 and 2008 surveys (Shisana et al, 2002;2005 & 2008). The measures have been organized into different questionnaires, depending on the age and other demographics of the respondent. Examples of the questionnaires used are:

- Visiting point questionnaire: this questionnaire was used to record a household census and household-level information.
- Questionnaire for mother/guardian of children <2 years.
- Questionnaire for parent/guardian of children aged 2-11 years.
- Questionnaire for children aged 12-14 years.
- Youth questionnaire for individuals aged 15-24 years.
- Adult questionnaire for individuals aged 25+ years.

All questionnaires, information sheets and informed consent forms were translated in the appropriate local languages and pre-tested during preparatory work.

For detailed information on measures refer to Shisana et al (2002; 2005; 2008)

2.3.4. Data analysis

Data analysis was performed using STATA software, version 10.0 (Stata Corporation, College Station, Texas, USA). The analysis took into account the multilevel stratified cluster sample design of the study.

2.4. The study area: The Eastern Cape Province

The Eastern Cape is one of the nine provinces designated in 1994 by the then new democratic Government of South Africa, with Bhisho as the capital (Figure 1). It was formed out of the "independent" homelands (areas reserved for Africans) of Transkei and Ciskei, as well as the eastern portion of the Cape Province (comprising mostly white-owned farms). The Eastern Cape, lying on the south eastern South African coast, is the second largest of South Africa's provinces, taking up 13.9% of South Africa's land area and with a 2001 population of 6.6 million people (StatsSA, 2009).

The population in this area is largely rural, with two-thirds living outside the urban areas, while most of the remaining population live and work in towns and cities,

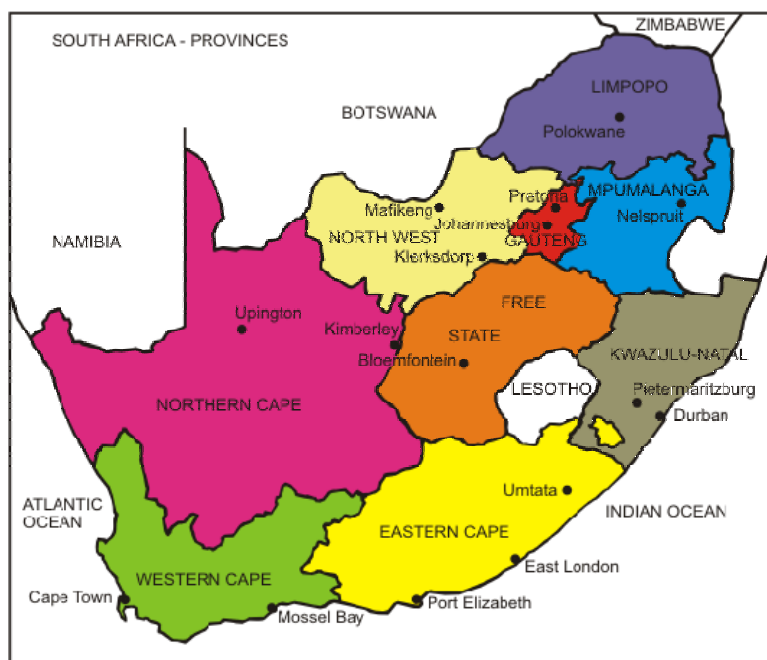


Figure 1: Map showing location of the Eastern Cape Province within South Africa

especially the main cities of Port Elizabeth and East London on the coast (ibid.). The Eastern Cape remains one of the poorest provinces in South Africa. This is largely due to the extreme poverty found in the former homelands, where subsistence agriculture predominates. The two major industrial centres, Port Elizabeth and East London have well-developed economies, based on the automotive industry.

Women and children tend to remain in the rural areas and generally make up the majority of the population; almost 52% of the total population was female in 2009 (StatsSA, 2009). The age distribution of the Eastern Cape population shows relatively few young adults compared to the national patterns. Just over one-third of the population was children under the age of 15 years in 2009 (StatsSA, 2009). This may reflect migration of parents to more industrialized provinces. A relatively small percentage (5.9% in 2009) consisted of those aged 65 years and older.

The province is lagging behind in development and has one of the highest unemployment rates in the country—at 27% in 2009 (StatsSA, 2010). This is especially so in the former “Bantustan” of Transkei. The labour absorption rate was highest among white men at 67,5% in 2001 and lowest among black African women at 14,0% (StatsSA, 2004).

Census 2001 found that the overall proportion of Eastern Cape households using electricity for lighting had increased from 31,6% to 49,5%. Black African-headed households using electricity for lighting increased from 21,7% in 1996 to 43,0 in 2001, while 34,8% of households had access to a flush or chemical toilet. For black African-headed households, the proportion with a refuse removal service at least

weekly increased from 24,9% in 1996 to 29,4% in 2001, while for the Eastern Cape as a whole, 37,0% of all households had a regular refuse removal service in 2001 (StatsSA, 2004). The proportion of households with a telephone in the dwelling or a cellular phone increased from 6,7% in 1996 to 22,3% in 2001 (StatsSA, 2004).

3. RESULTS AND DISCUSSION OF KEY FINDINGS

3.1. Global and African HIV situation

The global estimate for people living with HIV in 2008 was 33.4 million [31.1-35.8 million] where 2.7 million [2.4-3.0 million] were newly infected. Of the 33.4 million people living with HIV, 30.3 million [28.2-33.6 million] are adults and 2.1 million [1.2-2.9 million] are children under 15 years. Overall, the number of men and women infected is similar, but infection rates for males and females differ markedly within age groups (UNAIDS, 2009).

Sub-Saharan Africa is the most severely affected region with 22.4 million [20.8-24.1 million] or 67% of the world's HIV-positive population. There is increasing prevalence in sub-Saharan Africa which accounted for 1.9 million [1.6-2.2 million] new infections in 2008 (UNAIDS, 2009).

3.2. Antenatal surveys

3.2.1. Provincial Estimates

There was no significant change in the estimated national prevalence of HIV infection in antenatal clinic attendees between 2006 and 2008 (29.1%, 29.4%, 29.3%). However, in view of a steady rise in prevalence for the past 16 years (with one minor variation in 1999) this is an encouraging development, suggesting that the number of new infections, among antenatal women between 15 and 49 years, is beginning to level off. The antenatal HIV prevalence in the Eastern Cape Province is slightly lower than the national average but similar to Mpumalanga, Free State, North West, and Gauteng, lower than KwaZulu-Natal, but higher than Limpopo, Northern Cape and Western Cape (Figure 2).

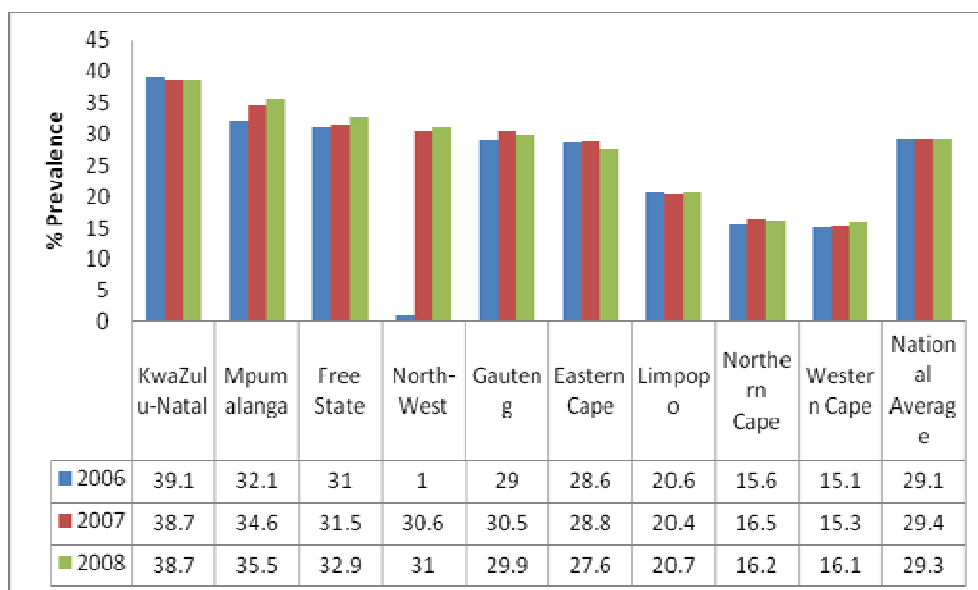


Figure 2: HIV prevalence trends among antenatal women by province, South Africa, 2006 – 2008. Source: Department of Health, (2009)

The annual antenatal clinic surveys show a similar trend for the Eastern Cape to the national average, i.e. prevalence appears to have stabilised at around 28%. The continuing high infection prevalence among women who receive ANC services calls for a concerted effort to prevent mother to child transmission of HIV infection, thereby keeping paediatric AIDS as low as possible. Population-based surveys show a lower HIV prevalence, but still high, especially among young women aged 24-39 years (Shisana, et al., 2009).

KwaZulu Natal continues to have the highest HIV prevalence (38.7%), followed by Mpumalanga (35.6%), Free State (32.9 %), North West (31.0%), Gauteng (29.9%), Eastern Cape (27.6%) and Limpopo (20.4%). Two provinces had observed the lowest prevalence, Northern Cape (16.2%) and Western Cape (16.1%) (see Table 1).

Table 1: HIV prevalence trends among antenatal women by province, South Africa, 2006-2008

	2006		2007		2008	
Province	% HIV prevalence 95% CI	Female 15-49 years Population Estimate	% HIV prevalence 95% CI	Female 15-49 years Population Estimate	% HIV prevalence 95% CI	Female 15-49 years Population Estimate
National	29.1(28.3-29.9)	12 676 400	29.4(28.5-30.1)	12 783 455	29.3(28.5-30.1)	13 464 800
Eastern Cape	28.6(26.8-30.4)	1 808 300	28.8(26.9-30.7)	1 769 496	27.6(25.6-29.6)	1 737 200
Free State	31.1(29.2-33.1)	803 000	31.5(29.1-34.1)	802 218	32.9(30.5-35.3)	813 200
Gauteng	30.8(29.6-32.1)	2 567 000	30.5(29.2-31.9)	2 697 874	29.9(28.4-31.2)	2 958 200
KwaZulu-Natal	39.1(37.5-40.7)	2 609 300	38.7(37.2-40.2)	2 682 956	38.7(37.2-40.1)	2 841 000
Limpopo	20.6(18.9-	1 503 100	20.4(18.9-	1 429 822	20.7(19.1-	1 403 900

	22.3)		21.9)		22.4)	
Mpumalanga	32.1(29.8-34.4)	862 500	34.6(32.1-37.1)	941 095	35.5(33.1-37.8)	981 900
Northern Cape	15.6(12.7-18.5)	2 28 100	16.5(13.9-19.6)	276 522	16.2(13.7-18.9)	296 400
North West	29.0(26.9-31.1)	986 000	30.6(28.6-32.8)	856 138	31.0(28.8-33.3)	924 600
Western Cape	15.1(11.6-18.7)	1 309 100	15.3(12.2-18.9)	1 327 334	16.1(12.6-20.2)	1 508 400

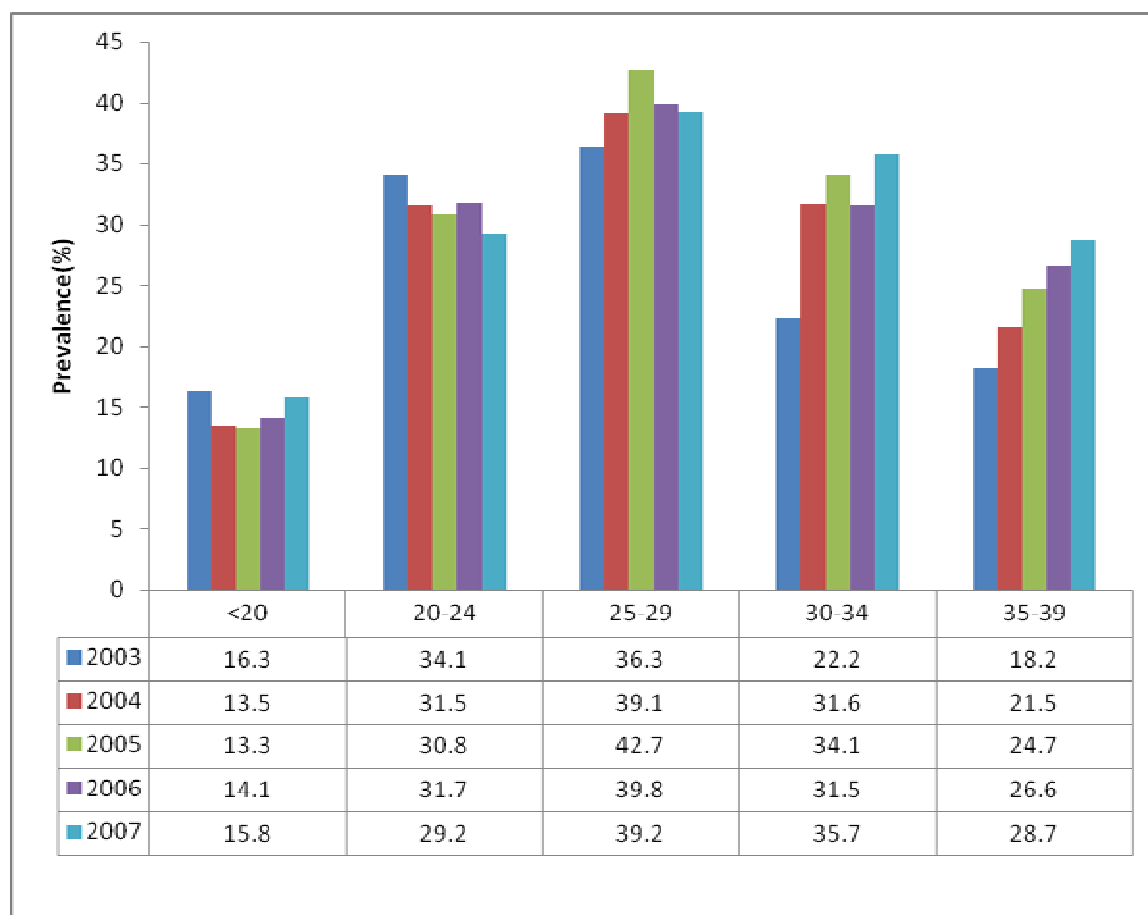


Figure 3: HIV prevalence among ANC attendees by age group in Eastern Cape, 2003 – 2007

Figure 3 shows that HIV prevalence among Eastern Cape women is highest among the 25-29 years age group. While there has been an encouraging decrease in prevalence for the younger mothers (20-24) there was a steady increase among women between the ages of 35 and 39 years over the period 2003 to 2007.

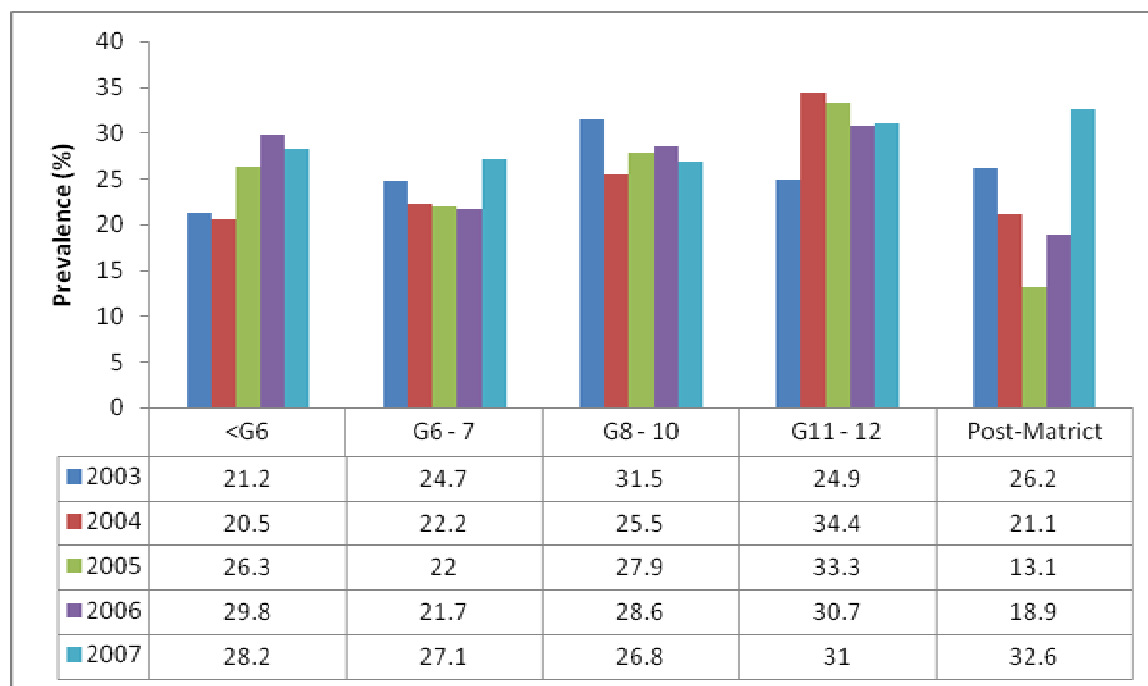


Figure 4: HIV prevalence among ANC attendees by educational status in Eastern Cape, 2003 – 2007

Antenatal survey data for prevalence by educational status is quite varied. Figure 4 shows a steady increase of HIV prevalence among the less educated women (<Grade 6) between 2004 and 2007, while there has been some decrease in prevalence among those with Grade 11 or 12 where the prevalence decreased from 34.4% in 2004 to 31% in 2007.

3.2.2. District Estimates

In 2008 the HIV prevalence at district level ranged from 21.9% (Ukhahlamba) to 29.8% (Alfred Nzo) (see Figure 5).



Figure 5: HIV prevalence distribution among antenatal women by district, Eastern cape, 2008

When looking at the trend of HIV prevalence at the district level between 2006 and 2008 (Figure 6), there is no consistent trend and short term trends must be treated with some caution because sample sizes for some districts are quite small. A case in point is Ukhahlamba, where a significant decrease was recorded from 29.4% in 2007 to 21.9% in 2008, but the sample size was only just over 200, whereas estimates for some other districts are based on over 1000 tests.

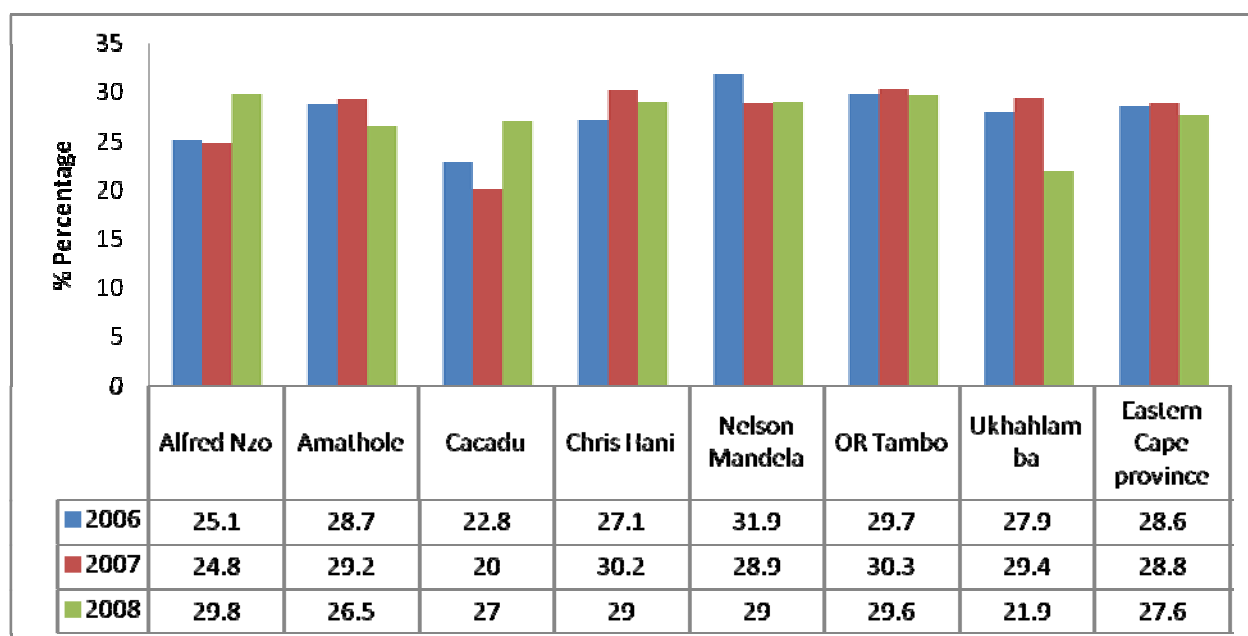


Figure 6: HIV prevalence by district and sub-districts in the Eastern Cape, 2006-2008

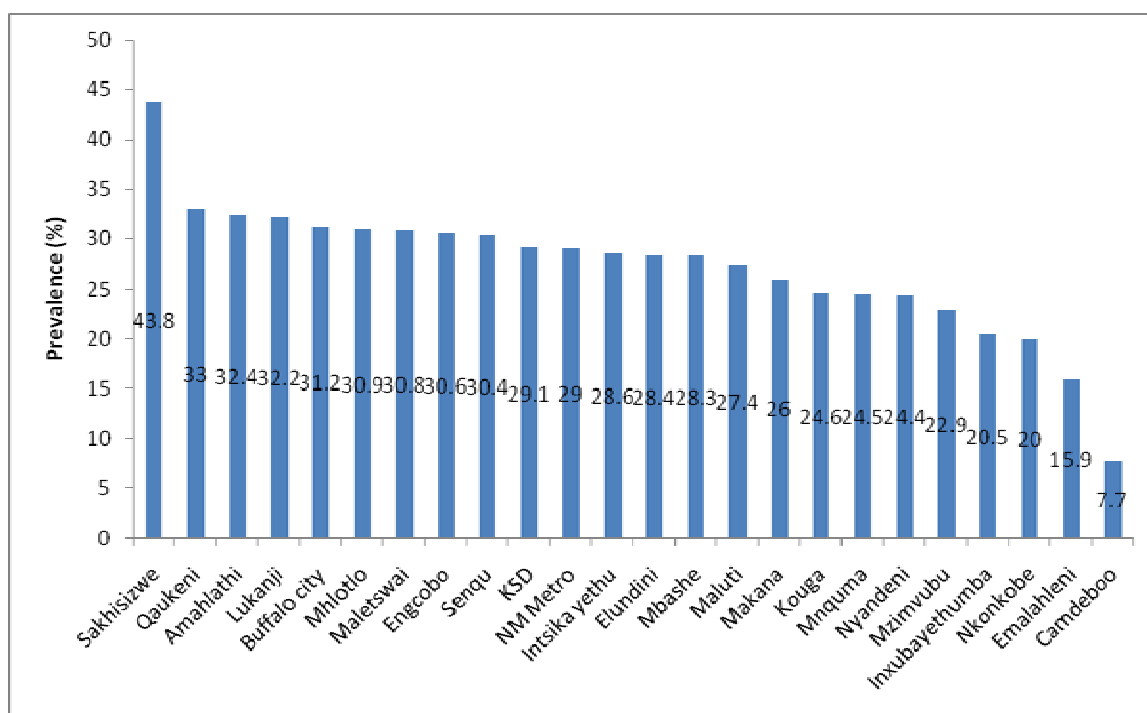


Figure 7: HIV Prevalence among ANC attendees in the Eastern Cape by sub-district, 2007 Provincial average = 28.8% Source: DOH 2008.

Figure 7 shows the prevalence of HIV at sub-district level in 2007 where Sakhisizwe had the highest prevalence (43.8%) while had the lowest prevalence(7.7%). Values such as those for Sakhisizwe and Camdeboo, that lie so far from the average (outliers) are difficult to explain without detailed knowledge of the sample and the situation in these sub-districts.

3.3. HSRC national HIV household survey

In the following section the provincial HIV prevalence found in the national HIV household surveys conducted by the Human Sciences Research Council (HSRC) is presented.

HIV prevalence trends for children aged 2-14 years are presented in Table 2. Using 2002 as a base, there has been an overall decline in the percentage of children living with HIV in all provinces except Mpumalanga where there was no decrease. The Western Cape had the lowest HIV prevalence in 2008 followed by the Eastern Cape.

Although HIV prevalence in children was lower in 2008 than 2002, for the Eastern Cape, there was an increase between 2005 and 2008. Variations in trends over time for the different provinces may be related to different phases of the epidemic. Where the epidemic has been present longest, e.g. KwaZulu Natal and Mpumalanga, there is some evidence that prevalence may have peaked and begun to decline; other

provinces, such as the Eastern Cape, may still be going to experience the peak in infection prevalence.

Table 2: HIV prevalence by province, children 2-14 years, South Africa 2002-2008

Province	2002		2005		2008	
	%	95%CI	%	95%CI	%	95%CI
WC	7.1	4.1 – 11.8	0.3	0.1 – 2.4	1.1	0.4-2.5
EC	3.4	1.5 – 7.7	1.2	0.6 – 2.3	2.1	0.9-5.0
NC	3.8	1.6 - 8.6	0.6	0.2 – 2.1	2.3	0.8-6.1
FS	4.7	1.9 - 11.8	2.3	0.9 – 5.6	4.1	1.6-10.2
KZN	3.9	1.7 – 9.4	7.9	3.5-16.5	2.8	1.2-6.9
NW	4.3	1.9 – 9.5	1.4	0.4 – 5.1	3.2	1.2-8.3
GP	5.0	2.7 – 9.2	2.9	1.6 – 5.1	2.2	1.2-3.8
MP	3.7	1.9 – 7.1	5.4	3.3 – 8.9	3.8	1.7-8.1
LP	4.7	2.4 – 8.9	4.7	2.8 – 8.0	2.5	1.2-5.1
National	5.6	3.7- 7.4	3.3	2.3 – 4.8	2.5	1.9-3.5

Comparisons of HIV prevalence over time among adults (over 25 years) are presented in Table 3. Some of the provinces have had substantial increases in prevalence, while others declined and in some there was no change. Prevalence in Eastern Cape increased by 7.5% between 2002 and 2008. Comparing 2005 with 2008, Eastern Cape had an increase of 1.8%.

Table 3: HIV prevalence by province, 25+age group, South Africa 2002-2008

Province	2002		2005		2008	
	%	95%CI	%	95%CI	%	95%CI
WC	11.2	6.6 – 18.3	2.7	1.6–4.6	5.4	3.7-7.9
EC	8.1	5.5 – 11.9	13.8	10.9–17.4	15.6	12.0-20.1
NC	10.6	7.0 – 15.6	8.0	5.6–11.4	8.6	6.2-11.9
FS	22	14.3 –32.2	19.7	13.2–28.4	20.4	17.0-24.3
KZN	14.9	10.1 –21.5	20.5	16.8–24.6	23.5	19.7-27.8
NW	17.8	13.4 –23.3	18.9	14.3–24.5	17.7	13.9-22.2
GP	18.1	13.8 –28.8	14.9	11.9–18.4	14.4	11.4-18.0
MP	21.0	14.8 –28.8	24.4	19.6–30.0	24.5	18.4-31.9
LP	14.0	8.8 – 21.8	11.4	8.7–14.9	16.7	12.2-22.4

National	15.5	13.6–17.6	15.6	14.2–17.1	16.8	15.3-18.4
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Table 4 presents a comparison of provincial estimates of HIV prevalence in youth (15-24 years). Using 2002 as a base for comparison, there has been an overall decline in infections in young people in most provinces, except in KwaZulu-Natal and Mpumalanga. Eastern Cape had the second largest reduction in HIV infection of 5.1% when comparing 2005 with 2008.

Table 4: HIV prevalence by province, 15-24 year olds, South Africa 2002-2008

Province	2002		2005		2008	
	%	95%CI	%	95%CI	%	95%CI
WC	11.2	6.0 – 19.9	2.3	1.2 – 4.4	3.0	1.5-5.8
EC	9.2	5.4 – 15.2	11.7	7.1 – 18.7	6.6	3.8-11.0
NC	11.8	6.5 – 20.5	6.4	3.9 – 10.3	3.9	2.0-7.7
FS	8.7	3.4 – 20.2	10.3	6.3 – 16.5	3.8	1.9-7.2
KZN	7.2	3.5 – 14.0	16.1	12.5–20.4	15.3	11.8-19.7
NW	8.3	4.5 – 15.0	6.6	3.7 – 11.4	6.3	3.3-11.6
GP	11.6	7.5 – 17.4	9.0	6.1 – 13.2	10.1	5.9-16.7
MP	11.7	6.6 – 19.7	10.1	6.4 – 15.6	13.5	9.2-19.3
LP	5.6	2.7 – 11.2	7.4	4.4 – 12.3	3.9	2.1-7.3
National	9.3	7.5 – 11.4	10.3	8.7 – 12.0	8.7	7.2-10.4

This result, where HIV infection has almost halved over three years, is taken as an indication that prevention messages are beginning to have an effect, especially for young adults.

Comparisons of HIV prevalence over time among adults are presented in Table 5. Here the story is much less encouraging. Some of the provinces have had substantial increases in prevalence, while others declined and in some there was no change. Comparing 2002 with 2008, prevalence increased by 7.5% in the Eastern Cape and then again by a further 1.8% from 2005 to 2008. Only KwaZulu-Natal had a larger increase.

Table 5: HIV prevalence by province, 25+age group, South Africa 2002-2008

Prov	2002		2005		2008	
	%	95%CI	%	95%CI	%	95%CI
WC	11.2	6.6 – 18.3	2.7	1.6–4.6	5.4	3.7-7.9

EC	8.1	5.5 – 11.9	13.8	10.9–17.4	15.6	12.0-20.1
NC	10.6	7.0 – 15.6	8.0	5.6–11.4	8.6	6.2-11.9
FS	22.0	14.3 –32.2	19.7	13.2–28.4	20.4	17.0-24.3
KZN	14.9	10.1 –21.5	20.5	16.8–24.6	23.5	19.7-27.8
NW	17.8	13.4 –23.3	18.9	14.3–24.5	17.7	13.9-22.2
GP	18.1	13.8 –28.8	14.9	11.9–18.4	14.4	11.4-18.0
MP	21.0	14.8 –28.8	24.4	19.6–30.0	24.5	18.4-31.9
LP	14.0	8.8 – 21.8	11.4	8.7–14.9	16.7	12.2-22.4
National	15.5	13.6 –17.6	15.6	14.2–17.1	16.8	15.3-18.4

Table 6 summarises the survey data for the Eastern Cape by age. The highest prevalence is found in adults over 25 years of age.

Table 6: HIV prevalence by age, Eastern Cape, 2008

Age	N	%	95 % CI
Children(2-14 years)	503	2.1	0.8-5.0
Youth(15-24 years)	495	6.6	3.8-11.0
Adults(≥ 25 years)	986	15.6	12.0-20.1
Total ≥ 2	1984	9.0	7.2-11.2

4. WHAT ARE THE SOCIAL, ECONOMIC, STRUCTURAL AND POLITICAL FACTORS THAT INFLUENCE HIV AND AIDS PREVALENCE AND INCIDENCE AS WELL AS SHAPE PATTERNS OF RISK BEHAVIOUR IN THE EASTERN CAPE?

4.1. Framework for presentation of the Social Determinants of HIV

The factors facilitating or inhibiting HIV transmission are summarized in Figure 8. An important point to emerge from this diagram is that factors facilitating HIV spread operate not only at the individual level but at the community and societal levels too. The major social, economic and behavioural factors that drive the epidemic in South Africa include culture and social norms, stigma and denial, poverty, labour-related

migration, gender-based violence including rape, concurrent multiple sex partners and age mixing patterns. Untreated viral sexually transmitted infections (STIs), especially herpes simplex virus type 2 (HSV-2) infection, and relatively low levels of male circumcision are the key biological drivers of the South African HIV epidemic. Our presentation of the social determinants of HIV/AIDS is based on below framework (Rehle et al, 2004; Marais, 2009).

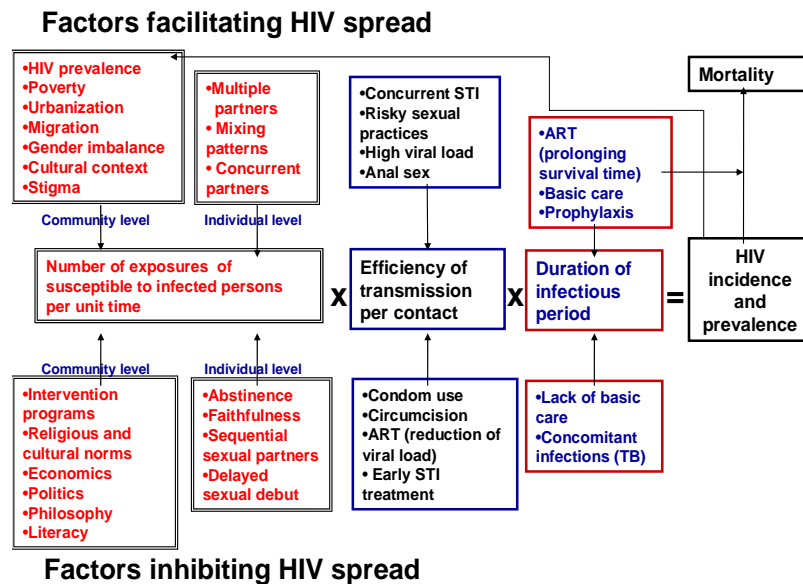


Figure 8: Framework on factors influencing the rate of HIV transmission
Source: adapted from Rehle et al, 2004

4.2. DETERMINANTS OF HIV/AIDS PREVALENCE AND INCIDENCE

This section examines the drivers of the HIV epidemic in South Africa, with specific reference to the Eastern Cape, using information from the national household survey (SABSSM). Most of the literature on the drivers of the HIV/AIDS epidemic has been drawn from SABSSM, Marais (2009) and Rehle et al's (2004) reports. Table 7 shows the demographic characteristics of the respondents from the Eastern Cape who participated in the 2008 survey.

Table 7: Demographic characteristics of respondents 15 years and older in the Eastern Cape, 2008

	Men (n=714) (43.7%)	Weighted	Women (n=1092) (56.3%)	Weighted	Total (n=1806)	Weighted
	N	%	N	%	N	%
Age						
15-19	169	21.8	179	16.0	348	18.6
20-24	114	17.1	141	11.8	255	14.2
25-34	118	20.7	175	22.7	293	21.8
35-44	78	12.5	189	16.0	267	14.5
45-54	106	13.2	161	13.2	267	13.2

55-64	68	7.0	117	7.9	185	7.5
65+	61	7.6	130	12.4	191	10.2
Locality type						
Urban formal	375	42.2	514	36.4	889	39.0
Urban informal	92	7.1	145	8.7	237	8.0
Rural	247	50.7	433	54.9	680	53.0
Population group						
Black African	424	80.5	729	86.6	1153	83.9
White	96	8.5	117	4.8	213	6.6
Coloured	180	9.5	234	8.3	414	8.9
Indian or Asian	12	1.0	10	0.2	22	0.5
Others	2	0.3	2	0.1	4	0.2
Education						
No education	38	6.3	81	7.9	119	7.2
Grades 1 to 5	67	12.6	92	8.3	159	10.2
Grades 6 to 7	96	15.9	123	11.7	219	13.6
Grades 8 to 11	284	43.5	480	46.5	771	45.2
Grade 12	138	15.4	175	16.9	313	16.2
Higher	60	6.3	101	8.7	161	7.6
Income						
No income	104	31.2	169	38.9	173	35.1
Less than R12 000 per year	96	31.3	163	34.4	259	32.9
R12 001 – R48 000 per year	68	13.5	70	10.8	138	12.1
More than R48 001 per year	106	24.0	84	15.9	190	19.9

4.2.1. Sexual debut

Age of sexual debut remains a crucial factor in vulnerability of youth to HIV infection. The SABSSM study found that generally a small proportion of young people had started having sex before the age of 15 years and this has been the case over the last three surveys in the Eastern Cape (7.7%, 6.7% and 7.8%, see table 8). This is one of the lowest prevalences of early sexual debut in the country and may be linked to the predominantly rural nature of the province.

Early sexual debut is linked to youth being less likely to use contraceptives (Geary et al. 2008), and unplanned pregnancies (Baumgartner et al., 2009). Sexual abuse is also another factor in early sexual debut and evidence suggests that girls experiencing sexual abuse are more likely to engage in riskier sexual behaviours compared to their peers. Thus it is critical to protect children from sexual abuse and encourage youth to delay sexual debut for as long as possible (Geary et al., 2008). Even though prevalence of sexual debut before the age of 15 has declined over the past seven years, the fact that a small proportion of teenagers are still initiating sex at an early age has major implications for HIV and STI infection. Early sexual debut can be associated with higher HIV exposure because it is linked to more frequent sexual intercourse, more lifetime sexually transmitted infections, less consistent contraceptive use, and more sexual partners (Donenberg et al. 2003). In view of the above, delayed sexual debut among girls should therefore be commended and focus should be given to target young boys to delay their age of sexual debut. In particular, moulding of masculine identities in ways which discourage early sexual experience must be promoted.

Table 8: Sexual debut before 15 years by province in youth, 15 – 24 years, South Africa, 2002, 2005 and 2008

Province	2002			2005			2008		
	n	%	95%CI	n	%	95%CI	n	%	95%CI
Western Cape	201	6.0	3.3 – 10.8	341	10.4	7.3 – 14.6	324	9.3	6.1-13.9
Eastern Cape	225	7.7	4.0 – 14.4	495	6.7	4.5 – 9.9	333	7.8	5.2-11.5
Northern Cape	79	3.6	1.5 – 8.6	156	4.6	2.4 – 8.9	180	7.3	4.6-11.4
Free State	97	0.9	0.2 – 3.5	200	7.8	4.5 – 13.0	166	9.6	4.9-17.8
KwaZulu-Natal	228	4.9	2.3 – 10.3	535	4.5	2.7 – 7.4	391	4.9	2.8-8.3
North West	104	2.5	1.3 – 4.8	227	12.7	8.4 – 18.8	197	8.5	4.8-14.7
Gauteng	199	6.3	3.2 – 12.1	411	10.2	6.8 – 15.1	364	7.8	4.6-12.9
Mpumalanga	71	4.9	2.4 – 9.6	232	10.1	6.5 – 15.4	160	15.0	9.6-22.9
Limpopo	123	5.5	3.1 – 9.7	313	10.1	6.4 – 15.6	233	11.2	7.3-16.9
National	1327	5.0	3.8 – 6.5	2910	8.4	7.2 – 9.9	2348	8.5	7.1-10.1

4.2.2 Multiple sexual partnerships

Multiple sexual partnerships substantially increase the chances of HIV transmission through sexual networks that facilitate HIV transmission. When groups of people are linked in a sexual network, a new infection has the potential to move rapidly between them as a product of high viral load in the early phase of infection, where transmission is up to ten times more likely to occur than during the latent phase of HIV infection. The SABSSM study found that Eastern Cape respondents reported increased rates of multiple sexual partners (13.1% in 2008 vs. 8.1% in 2005, see table 9), although the increase is not statistically significant. While the extent of partner overlap or partner concurrency is not explored in the present report, it must be noted

that having multiple sexual partners includes the likelihood of partner overlap. The densely clustered sexual networks that result from partner overlap pose a high risk for HIV transmission. In a study involving academic and support staff in eight tertiary institutions of the Eastern Cape, Phaswana-Mafuya and Peltzer (2006) found that more males (significantly high) had more than one sex partner in past 12 month. In a cluster randomized controlled trial of an HIV behavioural intervention involving women in 70 villages of the Eastern Cape, Jewkes et al (2006) found that HIV infection was associated with having three or more past year partners [odds ratio (OR) 2.39; 95% confidence interval (95% CI) 1.48-3.85]. Given the poor levels of knowledge about the risk posed by this factor there is a need to address this issue in future HIV prevention campaigns in the country to ensure that the message on multiple partners targets all age groups and most-at-risk populations (MARPs). Having unprotected sex with more than one partner significantly increases the chances of HIV transmission (Malamba et al., 1994; Wawer et al., 1994; McFarland et al., 1991). This is corroborated by new qualitative research findings (HSRC, 2008).

Behavioural surveys, however, suggest that men in African countries are no more likely to have multiple sexual partners than are men in many other parts of the world. Studies have shown that Africans in general have fewer sexual partners during their lifetime than people in for example Europe or the US (Wellings, et al., 2006; Caraël, 1995). Men in Thailand and Brazil, for example, were more likely to report five or more partners in the previous year than were men in Kenya, Lesotho, Tanzania or Zambia (Caraël, 1995), while other research has shown men and women in Africa reporting the same number or fewer multiple partners than in many industrialized countries (Halperin & Epstein, 2004).

Sexual networking patterns, especially concurrent sexual partnerships, are thought to be a key factor driving the HIV epidemic throughout the Southern African region including South Africa (SADC, 2006). This practice is partly supported by the patriarchal system which manifests itself through the macho image nurtured among men to perceive themselves as superior to women and this therefore allows them to have multiple partners with the attendant number of sexual conquests being generally equated with the concept of masculinity (Caldwell et al., 1994; Campbell, 1997; Meekers, 2001; Gubrium, 2000). Concurrent partnerships also have resonance with the customary practice of polygamy and may be one way in which the system has evolved over time. The situation is further compounded by the economic inequality found between men and women and the reliance of women on men as breadwinners (Caldwell et al., 1994).

But there is evidence that having several *overlapping* sexual relationships (as opposed to consecutive relationships, or 'serial monogamy') can substantially increase the chances of HIV transmission (Chen et al., 2007; HELLERINGER & KOHLER, 2007; Adimora, Schoenbach, Doherty, 2007; Adimora et al., 2004; Adimora et al., 2003; Lagarde et al., 2001). This is partly because viral load (and therefore infectivity) reaches a peak about four weeks after infection and remains very high for several months (Pilcher et al., 2004), boosting the chances that anyone else in that person's sexual network during that period will be infected. And there is evidence (from Cote D'Ivoire, Kenya, Lesotho, Tanzania and Zambia, for example) that multiple partnerships in at least some African countries often are concurrent rather than serial.

It is highly plausible that such ‘concurrent partnerships’ in conjunction with high viral load¹ during acute HIV infection, variable rates of male circumcision and high rates of other sexually transmitted infections may have contributed significantly to the rapid spread and the unusually high prevalence levels of HIV found in southern Africa (Halperin & Epstein, 2004). However, the actual effect of concurrency on HIV spread has not yet been established unequivocally. A study in five cities in sub-Saharan Africa, for example, failed to confirm an association between concurrency and HIV prevalence levels (Lagarde et al., 2001).

Table 9: Having multiple sexual partner in the last 12 months by province, 15 – 49 years, South Africa, 2005 and 2008

Province	2002			2005			2008		
	N	%	95%CI	n	%	95%CI	n	%	95%CI
Western Cape	532	10.9	8.4 – 13.9	972	11.3	8.4 – 15.1	853	9.9	7.5-13.1
Eastern Cape	462	12.1	9.3 – 15.5	1065	8.1	5.6 – 11.5	816	13.1	10.1-16.9
Northern Cape	269	5.6	3.3 – 9.3	386	7.5	4.9 – 11.3	513	8.8	5.4-14.0
Free State	283	5.7	3.4 – 9.3	505	5.4	3.2 – 8.9	421	14.6	10.0-20.8
KwaZulu-Natal	735	9.3	7.3 – 11.7	1453	10.6	7.4 – 15.0	1140	10.2	7.5-13.6
North West	309	10.7	7.6 – 14.8	599	11.4	7.8 – 16.5	495	12.9	9.2-17.7
Gauteng	685	9.6	7.6 – 12.1	1331	11.3	8.2 – 15.3	1062	8.6	6.4-11.5
Mpumalanga	200	10.5	6.8 – 15.8	590	7.2	5.0 – 10.2	522	9.4	6.9-12.6
Limpopo	319	6.9	4.5 – 10.4	727	9.5	6.9 – 12.9	553	10.8	7.2-15.9
National	3794	9.4	8.5 – 10.4	7628	9.8	8.6 – 11.3	6375	10.6	9.5-11.9

4.2.3 Condom use

Consistent and correct condom use is one of the most effective means for preventing HIV infection. In the surveys, condom use at last sex has been measured to illustrate uptake of condom use. The HSRC study found that in 2008 condom use at last sex was highest in Eastern Cape, Mpumalanga and Limpopo, at about 70%, and it was lowest in the Western Cape at 49.0% and in Northern Cape at 52.6% (see table 10). This is encouraging given the fact that previous small-scale studies showed low condom use. For example, in a study involving academic and support staff in eight tertiary institutions of the Eastern Cape, Phaswana-Mafuya and Peltzer (2006) found that only 25.6% had used condom at last sex, though 50% had access to condoms in their workplaces

Table 10: Condom use at last sexual act among respondents 15 years and older, by province, South Africa 2002, 2005 and 2008

Province	2002			2005			2008		
	n	%	95%CI	n	%	95%CI	n	%	95%CI
Western Cape	615	21.3	18.2 – 24.8	1209	22.5	17.6 – 28.4	804	49.0	42.1 – 56.0
Eastern Cape	571	31.5	27.7 – 35.5	1267	35.8	30.1 – 41.9	762	70.0	63.7 – 75.5

Northern Cape	332	16.9	13.1 – 21.5	469	19.1	14.7 – 24.6	420	52.6	44.9 – 60.2
Free State	336	35.1	30.1 – 40.5	590	30.7	22.8 – 40.0	396	64.8	57.5 – 71.4
KwaZulu-Natal	898	26.7	23.9 – 29.8	1805	36.3	32.2 – 40.7	1073	66.2	61.0 – 71.1
North West	376	26.6	22.3 – 31.4	726	37.3	31.7 – 43.3	513	62.0	56.6 – 67.2
Gauteng	806	31.6	28.4 – 35.0	1613	37.7	33.2 – 42.4	1039	57.6	51.7 – 63.3
Mpumalanga	240	24.2	19.0 – 30.2	721	36.1	31.6 – 40.8	510	70.2	63.7 – 76.0
Limpopo	381	27.6	23.2 – 32.4	856	44.7	39.7 – 49.7	551	68.0	62.9 – 72.8
National	4555	27.3	26.0 – 28.6	9256	35.4	33.4 – 37.3	6068	62.4	60.2 – 64.6

The improvements in frequency of condom use were reported among youth (15–24 years), adult males, and even among females who have previously reported low rates of condom use. Apart from the highly successful condom promotion and distribution system developed by the South African government, the improvement seen in condom use at last sex among females may also point to the fact that females are becoming more empowered to negotiate condom use than before. One possible explanation of the findings is that not only might there have been a shift in the levels of condom negotiating skills, but there is also an increased openness in the community to discuss sex and condoms among youth. This is corroborated by new qualitative research findings (HSRC 2008).

This increase in reported condom use at last sex is consistent with the findings reported by a recent longitudinal community panel study among youth conducted by Dinkelman et al. (2007) in South Africa. They found a statistically significant increase in condom use between 2002 and 2005 for young females aged 17–22 years. The results on condom use are also supported by the reduction in HIV incidence and prevalence of HIV in the youth group reported on in this survey. In the same period where we are seeing an increase in condom use there is also an increase in coverage of HIV prevention programmes targeting youth.

4.3.4. Awareness of HIV status

Voluntary Counselling and Testing (VCT) is important as an entry strategy for both prevention and access to treatment, care and support services. Increasing knowledge of HIV status is important as it has been linked to an increase in prevention behaviours among these who test positive through VCT.

A qualitative study among male rugby players and students in the graduate development programme in Uitenhage (Eastern Cape), aged 18 to 25 years, found that a pervasive, psychologically rooted fear; and possible low perception of risk were main barriers to HIV testing. Negative perceptions regarding service delivery in the public health sector constituted another barrier to HIV testing. Peer pressure was viewed as contributing to low levels of HIV test acceptance among these males (Williams, 2007)

Table 11 shows the percentages of those aged 15–49 who had an HIV test in the last 12 months and who knew their results in the different provinces. When 2005 data were compared with those from 2008 data of SABSSM, it was found that there were

significant increases in all provinces, although those for the Eastern Cape and Northern Cape were substantive but not significant.

In 2008, the largest percentages of people aged 15–49 who received an HIV test in the last 12 months and who knew their results were in Northern Cape, Gauteng, and Eastern Cape at 28%, 27.9%, and 27.7% respectively (see table 11).

Table 11: Percentage of the entire sample aged 15-49 who received an HIV test in the last 12 months and who know their results, by province, South Africa 2005 and 2008

Province	2005			2008		
	n	%	95%CI	n	%	95%CI
Western Cape	1560	17.0	14.6-19.8	1398	24.2	21.5-27.2
Eastern Cape	1949	9.0	7.0-11.4	1308	27.7	24.1-31.6
Northern Cape	761	19.3	15.4-24.0	762	28.0	23.5-33.0
Free State	812	9.4	6.4-13.6	708	16.8	12.4-22.4
KwaZulu-Natal	2478	10.4	8.6-12.6	1985	24.1	21.4-27.0
North West	881	9.4	7.0-12.6	791	24.1	20.3-28.3
Gauteng	2100	16.3	13.6-19.4	1689	27.9	24.1-32.0
Mpumalanga	917	10.8	8.6-13.6	856	22.5	19.3-26.1
Limpopo	1142	8.6	7.0-10.6	901	22.1	18.1-26.8
National	12600	11.9	11.0-12.9	10398	24.7	23.4-26.1

4.3.5. Frequency of alcohol use

There is insufficient data for a provincial analysis of alcohol use but national risk behaviours are likely to be replicated in the Eastern Cape. For participants in the national survey over 15 years, 35.9% of the men and 12.4% of the women reported that they were currently (past month) consuming alcohol; for both sexes, the rate was 22.9% (see table 12). Abstention rates were high, 77.1% in the whole sample; 87.6% among females and 64.1% among males. The overall prevalence of hazardous or harmful drinking was 8.5%, 16.0% among men and 2.7% among women, respectively.

Current drinking rates and hazardous or harmful drinking differed by age, sex, population group, locality type, education and income status. Highest levels of current drinking were reported by white men (74.6%), followed by white women (57.4%) and Coloured men (55.5%), and the lowest rates by Black African and Asian women (8.0% and 7.5%, respectively). Hazardous or harmful drinking was highest in men among Coloureds (27.3%) and in women also among Coloureds (11.4%), followed by white men (15.9%) and White women (5.8%). Regarding locality type, hazardous or harmful alcohol use was highest among residents in urban informal settlements (15.8%), followed by residents from formal urban areas (13.7%) and lowest in rural areas (3.4%). Hazardous or harmful alcohol use was significantly higher in men (16.0%) than women (2.7%).

Alcohol use among men and women was higher in those with Grade 12 education and higher (36%) than those with no education to Grade 11 (below 22.5%). Likewise the

proportion of current drinkers increased with increasing income (from 20.5% for those with no income to 44% and more among those earning Rand 12001 a year and more income). However, for hazardous or harmful drinking similar prevalence rates were observed across educational and income levels (see Table 12).

Table 12: Percentage of men and women (aged 15 years or older) reporting current (past month) and hazardous or harmful alcohol use (AUDIT score 8 or more) in affirmative responses, 2008

	Current alcohol use			Hazardous and harmful drinking		
	Men	Women	Total	Men	Women	Total
	%	%	%	%	%	%
Age						
15-24	17.9	9.7	14.0	7.0	2.2	4.8
25+	47.5	13.5	27.2	20.9	2.9	10.2
All	35.9	12.4	22.9	16.0	2.7	8.5
Locality type						
Urban formal	49.1	22.8	35.5	23.5	4.4	13.7
Urban informal	51.8	22.9	34.4	26.8	8.5	15.8
Rural	22.7	3.8	11.9	7.2	0.6	3.4
Population group						
Black African	29.9	8.0	17.3	14.3	1.7	7.1
White	74.6	57.4	67.6	15.9	5.8	11.7
Coloured	55.5	32.6	43.6	27.3	11.4	19.0
Indian or Asian	9.5	7.5	9.2	0	0	0
Education						
<Grade 8	33.7	9.8	22.5	17.7	1.2	10.0
Grades 8-11	27.8	8.6	16.5	12.6	5.1	8.2
Grade 12 or more	38.4	22.5	36.0	21.5	2.3	9.8
Employment status/income						
No income	33.6	10.4	20.5	11.5	2.6	6.5
Less than R12 000 per year	43.6	18.9	30.4	25.0	2.3	12.9
R12 001 – R48 000 per year	59.4	26.0	44.2	21.8	3.6	13.5
More than R48 001 per year	57.4	24.7	44.0	13.6	2.8	9.2

Alcohol use is linked to various forms of behavioural risk that increase the likelihood of HIV infection and therefore the identified patterns of hazardous drinking are potential determinants of the epidemic. For example, high risk drinkers were identified as those most likely to have multiple sexual partnerships (27.9%, 2005; 26.2%, 2008) from among those classified as being in the most at risk populations (MARPS). This proportion is higher than found with recreational drug users (203%, 2005; 24%, 2008).

4.3.6. Frequency of illicit drug use

According to the 2008 HSRC survey, national cannabis use was 2.4% – 4.2% among men and 1.0% among women (see table 13). Regarding area of residence, cannabis use was highest among residents in urban formal (3.8%) and urban informal areas (3.0%), and lowest among residents in rural areas (1.3%).

Among the different population groups, Coloureds had the highest rate of cannabis use (8.1%), followed by whites (5.9%) and Black Africans (1.6%). Persons low educational levels (<Grade 8) (3.8%) and middle and high-level income (R12 001 - R48 000 and more than R48001/year) reported the highest levels of cannabis use (3.7%-4.1%).

The overall prevalence of combined illicit drug use (cocaine, amphetamine-type stimulants, inhalants, sedatives, hallucinogens and opiates) without cannabis was 1.1%; 1.2% among men and 1.1% among women. Among the different population groups, Coloureds had the highest rate of combined illicit drug use (3.5%), followed by whites (1.8%) and Black Africans (1.8%). Prevalence rates for combined illicit drugs without cannabis were higher in urban formal areas (2.0%), followed by urban informal areas (1.2%) and than rural areas (0.5%). With increasing income levels, combined illicit drug use without cannabis increased from below 1.0% to 1.9% (see Table 13).

Table 13: Percentage of men and women (≥15 years old) reporting current (past 3 months) illicit drug use, 2008

	Current cannabis use			Any illegal drug except cannabis		
	Men	Women	Total	Men	Women	Total
	%	%	%	%	%	%
Age						
15-24	3.4	0.5	2.0	1.8	0.4	1.1
25+	4.7	1.1	2.6	0.8	1.3	1.1
All	4.2	1.0	2.4	0.8	0.7	1.1
Locality type						
Urban formal	6.6	1.2	3.8	2.3	1.7	2.0
Urban informal	4.6	1.9	3.0	0.9	0.4	1.2
Rural	2.1	0.6	1.3	0.2	0.6	0.5
Population group						
Black African	2.7	0.8	1.6	0.9	0.9	0.9
White	8.8	1.5	5.9	3.8	3.0	3.5
Coloured	13.8	2.9	8.1	1.2	2.3	1.8
Indian or Asian	0	0	0	0	0	0
Education						
<Grade 8	6.6	0.7	3.8	1.4	0.6	1.0
Grades 8-11	4.2	1.7	2.8	2.2	2.1	2.2
Grade 12 or more	4.5	1.4	2.6	1.5	1.2	1.3
Employment status/income						

No income	4.7	1.1	2.7	0.5	1.1	0.8
Less than R12 000 per year	3.9	0	1.8	0.4	0.5	0.5
R12 001 – R48 000 per year	5.9	1.1	3.7	1.8	0.7	1.3
More than R48 001 per year	5.1	2.6	4.1	1.9	1.9	1.9

The association between drug use and risk taking behaviour is similar to that noted for alcohol.

4.3.7 Teenage pregnancy

An association between pregnancy and HIV risk has been postulated in studies in Rwanda, Uganda and Zimbabwe (Leroy et al., 1994; Gray et al., 2005; Mbizvo et al., 2001). It is believed that hormonal changes during pregnancy might affect the body's immune response. However, a study among women in Uganda and Zimbabwe found that neither pregnancy nor lactation placed women at increased risk for HIV infection (Morrison et al., 2007). From the 248 female teenagers aged 15-19 years in the HSRC HIV survey (see table 14) for the Eastern Cape, overall, 17.9% reported having been pregnant. Teenage pregnancy was highest among the Black African population (19.8%) and Coloured teenagers (6.2%). Regarding geolocality, female teenagers from rural areas (21.7%) had much higher rates of teenage pregnancy than those from urban formal (11.9%) and urban informal (8.4%) areas (see Table).

Table 14: Teenage pregnancy among 15-19 year-olds (n=248) in the Eastern Cape (affirmative responses)

		N	%
All		46	17.9
Locality type	Urban formal	11	11.9
	Urban informal	3	8.4
	Rural	24	21.7
Population group	Black African	33	19.8
	White	1	3.5
	Coloured	4	6.2
	Indian or Asian	0	0
Education	<Grade 8	6	9.6
	Grades 8-11	15	20.8
	Grade 12 or more	4	10.6

4.3.8 Intergenerational sex

In a cluster randomized controlled trial of an HIV behavioural intervention involving 1295 sexually active female volunteers, aged 15-26, from 70 villages in the Eastern Cape, after adjusting for age, HIV infection was associated with having a partner three or more years older (OR 1.69; 95% CI 1.16-2.48) (Jewkes et al, 2006),

Young women's chances of becoming infected tend to increase with the age gap between her and her partner (Shisana et al., 2005; Luke, 2005; Kelly et al., 2003; Gregson et al., 2002; Glynn et al, 2001). Epidemiological evidence in southern Africa shows clearly that older men are much more likely to be HIV-infected (Gouws & Staneki, 2008). This is especially true for young women (<20) whose partners are more than 5 years older (Shisana et al., 2009), while the dependencies built into such relationships can severely curtail women's abilities to protect themselves from HIV infection (Gregson et al., 2002; Preston-Whyte et al., 2000).

Fundamentally, transactional sex and age-mixing need to be understood within the broader context of men's generally superior economic position and access to resources (Jewkes & Wood, 2002), and of conceptions of masculinity that place high value on sexual conquest and control of women (Dunkle et al., 2007).

Inter-generational sex is common practice in South Africa. What distinguishes the HIV risk between young females and young males is the age group with which each has sex. Young females are more likely to have sex with older male partners. The 2005 national HIV household survey found a high HIV prevalence of 29.5% among females aged 15-19 years who had male partners who were at least 5 years older than themselves (Shisana et al., 2005a). The inter-generational age-disparate sexual relationships are usually based on the economic dependence on older men by the younger females (Pettifor et al., 2004). A growing number of studies indicate that even relatively well-off young women will seek older male partners for 'top-up' income, or for social and emotional reasons (Leclerc-Madlala, 2008). It is however suggested that the stereotypical affluent "sugar daddies" are not the only players here, and that even impoverished men play a larger role than often recognized (SADC, 2006).

4.3.9 Gender-based violence

Hunter (2007), Leclerc-Madlala (2008) and Steinberg (2008) have described how young women often defy the stereotype of victimhood and powerlessness, and exercise their agency by pursuing sexual liaisons that involve various forms of material (and emotional) 'reward'. That agency, however, can be highly circumscribed and risky, especially when exercised in the context of severe HIV epidemics, and of aggressive constructions of masculinity that valorise sexual risk-taking and the 'conquest' of women.

Gender-based violence is common throughout the world, and it is widespread in southern Africa (Garcia-Moreno et al., 2005) – as shown in several studies in Lesotho

(Brown et al., 2006) and South Africa (Dunkle et al., 2006; Jewkes et al., 2006). Several studies have shown intimate partner violence, sexually risky behaviours, and HIV infection to be closely linked. Women subjected to intimate partner violence are up to three times more likely to acquire HIV than women who have not experienced such violence, according to studies in South Africa and Tanzania (amfAR, 2005; Dunkle et al., 2004b; Maman S et al., 2002).

Perpetrators are more likely to engage in transactional sex (Dunkle et al., 2006; Jewkes et al., 2006) – a reminder that both sexual violence and transactional sex (see below) involve attempts to exercise control over women.

HIV prevention interventions must explicitly address the links between the perpetration of intimate partner violence and HIV risk behaviour among men, as well as the underlying gender and power dynamics that contribute to both (Gupta et al., 2008). This is a massive challenge: including perpetrators and victims; perhaps one third of the southern African population is involved in the gender-based violence-HIV dynamic (Andersson, Cockcroft, Shea, 2008).

South Africa has among the highest rates of violence against women, with over 53,000 rapes reported to police in 2000, translating into a rape reporting rate of 123 women per 100,000 population (Jewkes & Abrahams, 2002). This figure excludes those who were raped but the incident was not reported to police. Sexual violence is linked with a culture of violence involving negative attitudes (e.g., deliberate intention to spread HIV) and reduced capacity to make positive decisions or to respond appropriately to HIV prevention campaigns. More significantly, the experience of sexual assault has also been linked to risks for HIV infection (Ajuwon et al., 2002; CADRE/DoH, 2003; Dunkle et al., 2004b; Jewkes et al., 2006; Hink & Thomas, 1999; Wojcicki, & Malala, 2001; Wood & Jewkes, 2002).

Two recent studies conducted among men in a township community and in an STI clinic showed that men with a history of sexual assault were also at significantly higher risk for HIV transmission than their non-sexually assaultive counterparts (Kalichman et al., 2007; Simbayi et al., 2006). Since these men are HIV high risk groups and tend to rape women, it is very likely that they transmit HIV to their victims. In South Africa, the gender system fosters power imbalances that facilitate women's risks for sexual assault and sexually transmitted infections (Farmer et al., 1996; Jewkes et al. 2001).

Women with the least power in their relationships are at the highest risk for both sexual assault and HIV infection, both stemming from the inability of women to control the actions of their sex partners (Ajuwon et al., 2001; Jewkes & Abrahams, 2002; Kalichman & Simbayi, 2004b; Wojcicki & Malala, 2001). Men who have limited resources and lack opportunity for social advancement often resort to exerting power and control over women (Boonzaier, 2005). Importantly, sexist beliefs and negative attitudes toward women are held by men who have not been sexually violent as well as men who have a history of sexual violence (Simbayi et al., 2006). In fact, negative attitudes toward women are so pervasive there is evidence that they are often held by women as well (Kalichman et al., 2005). Power and control disparities in relationships create a context for men to have multiple concurrent partners and fuel their reluctance to use condoms. Unfortunately, men's attitudes toward women

impede HIV preventive actions and can culminate in the acceptance of violence against women. Qualitative studies in South Africa consistently show that men believe they are more powerful than women and that men are expected to control women in their relationships (Jewkes et al., 2001; Morrel, 2002). Simbayi et al. (2006) reported that men often held attitudes that accept violence against women including beliefs that women should be held responsible for being raped. The widespread and normative acceptance of sexual violence and male sexual irresponsibility plays a significant role in perpetuating high-risk behaviours and continued high rates of HIV.

Table 15: History of having been physically forced to have sex by province 2008

Province	National		
	n	%	95%CI
Western Cape	1055	35.4	30.2-40.9
Eastern Cape	1025	47.6	42.3-52.9
Northern Cape	656	29.9	24.5-35.9
Free State	502	47.4	40.1-54.9
KwaZulu-Natal	1395	45.6	41.0-50.3
North West	630	45.5	40.3-50.8
Gauteng	1291	43.2	38.8-47.8
Mpumalanga	625	48.2	41.7-54.7
Limpopo	695	51.4	46.2-56.6
National	7874	44.6	42.8-46.5

In a study of 1275 sexually experienced men aged 15-26 years from 70 villages in the rural Eastern Cape, who participated in a cluster randomized controlled trial of an HIV behavioural intervention, it was found that men who reported both physical and sexual violence against a partner, perpetration both before and within the past 12 months, or more than one episode of perpetration reported significantly higher levels of HIV risk behaviour than men who reported less severe or less frequent perpetration of violence (Dunkle et al, 2006).

In a study of 1295 sexually active female volunteers, aged 15-26, from 70 villages in the Eastern Cape who participated in a cluster randomized controlled trial of an HIV behavioural intervention, it was found that IPV was associated with HIV in two-way analyses (OR 1.56; 95% CI 1.08-2.23), but the effect was non-significant after adjusting for HIV risk behaviours. The experience of IPV was strongly associated with past year partner numbers, time of last sex, and partner's education; it was also marginally associated with partner age difference. Adverse experiences in childhood, including sexual abuse, increased the likelihood of having more past year partners (OR 1.43; 95% CI 1.21-1.69). IPV was strongly associated with most of the identified HIV risk factors. These findings provide further evidence of links between IPV and HIV among women and the importance of joint prevention (Jewkes et al, 2006).

In a study investigating intimate partner violence (IPV) and HIV risk among antenatal care attendees at primary care health care facilities in the Eastern Cape involving a convenient sample of 984 pregnant women (mean age of 26.1 years, SD=6.3 years) attending 35 antenatal clinics, logistic regression analysis showed high rates of intimate partner violence and HIV risk: 14% of the women had experienced physical partner violence in the past 12 months, 14% reported a history of having an STI in the

past 12 months, 70.1% reported knowing that their primary partners placed them at risk for HIV transmission, 78.6% were worried that they might already have or in the future get HIV, the virus that causes AIDS (Phaswana-Mafuya et al, 2009).

The Eastern Cape ranks sixth for male reports of forced sex but second for females and third overall. It is likely that males tend to under-report forced sex owing, to social acceptability bias in responses. These results suggest that gender violence could be an important determinant of HIV transmission in the Eastern Cape.

4.3.10 HSV-2 infection

Sexually transmitted infections, especially those causing genital ulcerative disease (GUD), are known to facilitate the transmission of HIV (Fleming & Wasserheit, 1999). Herpes simplex virus type 2 (HSV-2) infection has been identified as the major cause of genital ulcer disease in Africa (O'Farrell et al., 2007). Prevalent HSV-2 infection is associated with a 2-to 4-fold increase in risk of HIV acquisition as well as HIV transmission and there is increasing evidence which demonstrates the substantial link between the epidemics of HIV and HSV-2 (Corey et al., 2004). A study among youth in a South African mining town found that 80% of HIV-positive youth also had an HSV-2 infection, while only 20% of HIV-negative youth were co-infected with HSV-2 (Auvert et al., 2001). These data suggest that close attention to the diagnosis and treatment of HSV-2 infection is warranted, in particular among HIV infected persons. Although the syndromic treatment algorithm was successful in reducing the incidence of bacterial genital ulcer diseases (e.g., chancoid, syphilis), with the emergence of HSV-2 as the most frequent cause of genital ulcer disease, a reassessment of the effectiveness of current STI treatment strategies is needed (O'Farrell et al. 2007).

4.3.11 Labour-related migration

Being away from home tends to be associated with concurrency of partnerships and an increase in risk behaviours (Coffee et al., 2005; Mwaluko et al., 2003; Nyanzi et al., 2004). Employment-related migration links people to wider social and sexual networks, increasing their risk of HIV exposure. Potentially protective factors such as normative regulation and social surveillance usually are less prominent in areas of intense economic activity and circular migration, which may help explain increased HIV risk in such settings. In South Africa's burgeoning urban 'informal settlements', for example, HIV rates are reported to be twice the national average (Shisana et al., 2005).

The HIV epidemics in southern Africa therefore are rooted in the late 19th century – and in the violent imposition of labour markets that proletarianized tens of millions of men within systems of circular migration. The resultant dismantling of family units and normative regulation helped create a social and ideological terrain that strongly favoured the spread of sexually transmitted infections (Hargrove, 2008; Walker, Reid, Cornell, 2004; Kark, 1949).

Recent research from South Africa, focusing on sexuality in the late apartheid and early post-apartheid periods, has expanded on this analysis, and identified three interlinked dynamics critical to understanding the scale of the HIV epidemic in South

Africa and, by implication, other countries in southern Africa with similar economic and social trajectories. Those dynamics are (1) rising unemployment and social inequalities that leave some groups, especially poor women, extremely vulnerable; (2) greatly reduced marital rates and the subsequent increase of one person households; and (3) rising levels of women's migration, especially through circular movements between rural areas and informal settlements/urban areas (Hunter, 2007).

In South Africa, for example, migration has intensified and increasingly involves young women (Crush, 2001). Female entrants into the labour market rose by two million in 1995-1999, while median wages for women fell sharply (Casale, 2004) against a backdrop of collapsing agrarian and wage livelihoods generally – with important consequences for household formation, marriage, sexual networking patterns (Hunter, 2007), and HIV risk. A KwaZulu-Natal study, for example, found shocking levels of HIV infection among migrating young women – 23% among sexually-active 17-18 year-olds to 65% among 22-24 year-olds (Coffee et al., 2007).

The role played by labour-related migration in fueling the spread of HIV in South Africa is widely accepted (Jochelson et al., 1991; Okee-Obeng, 2001). Migration is a risk factor for HIV because migrant workers are more likely than non-migrants to have additional partners (Lurie, 2000; Lurie et al., 1997). In particular, circular migration between the mines and places of residence by migrant workers has facilitated the spread of HIV infection in rural areas (Lurie et al., 2003a, 2003b; Schoofs, 1999a, 1999b; Zuma et al., 2003, 2005). Migration of educators has also been shown to be a major risk factor for HIV (Shisana, et al., 2005).

With its high unemployment rate, the Eastern Cape continues to be a feeder area for rural-urban migration and this is therefore likely to be another factor contributing to the HIV epidemic in the province.

4.3.12 Transactional liaisons

Exchanging sex for favours, goods or services (often termed ‘transactional sex’)(Hallman, 2004) is not unique to southern Africa (Maganja et al., 2007; Khan et al., 2008; Luke & Kurz, 2002), but it appears to be relatively common in many of the hyper-endemic countries (Chatterji et al., 2005; Gregson et al., 2002; Luke & Kurz, 2002; Population Reference Bureau, 2001; Machel, 2001; Meekers & Calvés, 1997; various DHS).

Transactional sex should not be confused with ‘prostitution’. Not strictly commercial, these liaisons can involve complex reciprocal arrangements and varied forms of emotional attachment, and often are used to foster kinship ties (Hunter, 2007). The evidence also does not consistently bear out the stereotype of ‘powerless’ women exploited by ‘venal’ men.

But the networking does involve the financing of a mix of subsistence needs and consumptive desires. As such, it functions as an important mechanism for redistributing formal and informal earnings from men to women (Hunter, 2007). It is therefore grounded in gender inequalities and serves as a reminder that sexuality,

survival and consumption have become closely intertwined in southern Africa (Delius & Walker, 2002) after more than a century of systemic, violent and highly unequal proletarianization.

4.3.13 Poverty

Poverty is sometimes postulated as a key factor in HIV spread. However, data from eight country-wide surveys in sub-Saharan Africa studied by Mishra and colleagues (2007) provided no evidence that poverty enhances HIV risk. In short, the impact varies in different countries – it is true in South Africa but not in Tanzania where the opposite is true whilst in Kenya it is in between. Other, more localized evidence does seem to indicate a relationship between impoverishment and HIV risk (Lopman et al., 2007; Dandona et al., 2006; Cardoso et al., 2005; Fonseca et al., 2003; Leone et al., 2005). Research in three South African townships, for example, found that HIV risk was embedded in various ‘social ills’ that included poor education, unemployment, discrimination, crime and violence (Kalichman et al., 2006). Overall, though, the available evidence currently does not support the contention that a *consistent* relationship exists between poverty and HIV risk. Global evidence suggests that the relationship between poverty and HIV risk is complex, and that poverty on its own cannot be viewed simplistically as a driver of the HIV epidemic.

The norms governing sexual liaisons are imprinted with the experiences of colonialism and apartheid in the hyper-endemic countries, which, to varying degrees, have been interlinked economically for several generations. Workers from Botswana, Lesotho, Mozambique and Swaziland in particular were incorporated into the circular migratory patterns established in their internal labour markets as well as in those of neighbours (notably South Africa, Zambia and Zimbabwe).

Poverty works through a myriad of interrelations, including unequal income distribution (Gie et al., 1993), economic inequalities between men and women which promotes transactional sex (Halperin & Allen, 2001), relatively poor public health education and inadequate public health systems (Mitton, 2000). Poverty-related stressors derived from descriptions of poverty in townships such as housing, transportation, sanitation, insufficient food, HIV and AIDS, unemployment, discrimination, poor education, violence, and crime have also been shown to be associated with HIV transmission risks (Kalichman et al., 2006).

Here again, the Eastern Cape, being one of the poorest provinces, is likely to experience a considerable burden of poverty-related HIV exacerbating factors.

4.3.14 Stigma and denial

HIV infection and AIDS are among the most stigmatised medical conditions in the world. Stigmas interfere with HIV prevention, diagnosis, and treatment and can become internalized by people living with HIV and AIDS (UNAIDS, 2006). Although still prevalent, at a national level, AIDS stigma appears to be declining in South Africa as shown by the findings of the 2005 national HIV household survey (Shisana et al., 2005a), see Table 16 and 17. Generally attitudes to HIV and AIDS in the Eastern Cape were similar to the national average and the majority of respondents (74%) professed positive attitudes to those affected by HIV.

A recent large survey conducted among 1054 HIV positive individuals in Cape Town found high levels of internalized stigma, with a large number of study participants not disclosing their HIV-positive status for fear of stigma and discrimination (Simbayi et al., 2007). This is mostly because despite HIV being transmitted during normal sexual acts, HIV infection is widely perceived as an outcome of sexual excess and low moral character, with a consequent strong culture of silence by people living with HIV and AIDS because of fear of rejection and isolation by close relatives and the community at large (Johnston, 2001). The stigma is more severe for women than for men. AIDS stigma has also been shown to be associated with traditional beliefs that AIDS is caused by spirits and supernatural forces (Kalichman & Simbayi, 2004a).

One of the consequences of stigma is denial. Fear of exclusion and discrimination forces people living with HIV and AIDS to hide their condition. This silence and denial about HIV/AIDS is lethal because it prevents people from assessing and accepting their role in infecting their sexual partners (Qwana et al., 2000; Strydom, 2000).

Table 16: Attitudes of respondents aged 15 years and older by province, South Africa 2008 (affirmative responses)

	WC	EC	NC	FS	KZ	NW	GP	MP	LP	SA
If I knew that a food seller had HIV, I would still buy food from them	68.5	73.3	76.3	77.6	71.0	64.9	77.8	75.1	57.7	71.3
I would be willing to care for a family member with AIDS	93.1	89.1	87.4	92.2	91.6	90.9	93.6	89.2	90.2	91.4
If a teacher has HIV but is not sick, he or she should be allowed to continue teaching	79.6	81.2	79.9	85.6	79.3	83.0	88.4	86.5	70.0	81.7
It is not a waste of money to train or give a promotion to someone with HIV/AIDS	75.8	79.8	76.6	78.4	75.1	81.0	80.8	73.5	69.7	77.1
I would not want to keep secret the HIV positive status of a family member	54.8	61.8	48.7	51.3	39.2	55.0	58.2	43.2	47.1	51.4
It is not foolish to marry a person who is living with HIV/AIDS	51.3	42.5	54.4	54.6	48.7	58.2	59.4	54.5	38.1	51.0
It is not acceptable for a man to have more than one girlfriend at the same time	94.6	89.1	90.1	92.6	90.1	93.4	93.0	91.0	90.4	91.6

Table 17: Knowledge of respondents aged 15 years and older about HIV and AIDS by province, South Africa 2008

<i>Agree</i>	WC	EC	NC	FS	KZ	NW	GP	MP	LP	SA
HIV causes AIDS	85.5	87.4	86.5	89.4	87.9	83.3	89.4	76.7	81.5	86.1
To prevent HIV infection a condom must be used every time you have sex	87.5	87.6	82.4	91.9	87.1	88.2	90.9	81.5	85.9	87.8
One can reduce the risk of HIV by having fewer sexual partners	72.2	57.7	54.0	59.0	45.4	30.6	49.5	31.1	23.3	47.3
If a person has two or more sexual partners at the same time they are more likely to get HIV	84.9	83.4	76.6	76.9	79.0	78.9	78.7	67.7	75.7	78.9
It is against the law for a girl younger than 16 to have sex with much older man even if she agrees	87.0	78.5	74.6	78.6	77.2	87.9	85.6	77.2	82.2	81.7
<i>Disagree</i>										
Christian healers can cure AIDS	77.7	80.5	70.2	83.4	80.8	82.2	85.8	82.9	78.2	81.4
HIV/AIDS is God's punishment on sinners	74.1	69.7	65.0	74.0	68.5	65.3	74.9	67.4	55.2	69.2
AIDS is cured by having sex with a virgin	86.1	83.5	86.6	89.6	89.3	89.5	92.8	89.2	88.4	88.8
There is a cure for AIDS	69.9	80.0	74.0	86.3	83.7	80.2	80.9	82.4	82.1	80.5
AIDS is caused by witchcraft	85.0	87.0	87.0	91.2	92.2	92.3	94.4	91.7	87.7	90.5

Table 18 shows percentages of adults aged 15-49 who correctly identified two ways of preventing the sexual transmission of HIV. Given that data was not available for 2002, and using 2005 as a baseline, only Western Cape had a significant increase in correct answers in 2008 (65.2% vs 51.41% in 2005) whilst in Northern Cape there was a substantive, but not significant, increase (40.4% in 2005 vs. 49.5% in 2008). There were some significant reductions in correct answers in KwaZulu-Natal, North West, Gauteng, Mpumalanga and Limpopo.

In 2008, the Western Cape, Free State and Eastern Cape had the highest percentages of people who correctly identified the two ways of preventing the sexual transmission of HIV, between 55% and 65%, whilst Limpopo, Mpumalanga and North West had the lowest percentages, between 22% to 29%. The percentage of people in the Western Cape who could correctly identify the two ways of preventing the sexual transmission of HIV was significantly higher than in all eight other provinces, the Free State significantly higher than in five (viz., KwaZulu-Natal, North West, Gauteng, Mpumalanga and Limpopo) and the Eastern Cape significantly higher than in four provinces (viz., KwaZulu-Natal, North West, Mpumalanga and Limpopo).

Table 18: Correct knowledge of preventing sexual transmission of HIV by province, South Africa 2005 and 2008

Province	2005			2008		
	N	%	95%CI	n	%	95%CI
Western Cape	1987	51.4	45.0-57.7	1717	65.2	62.1-68.2
Eastern Cape	2590	58.8	55.6-61.9	1743	54.5	50.7-58.2
Northern Cape	1001	40.4	35.6-45.5	999	49.5	45.0-54.0
Free State	1013	56.3	47.1-65.2	876	58.8	53.0-64.5
KwaZulu-Natal	3240	67.9	64.7-70.9	2527	41.8	37.0-46.9
North West	1130	45.0	39.0-51.2	1065	28.5	23.9-33.6
Gauteng	2560	64.8	60.8-68.7	2021	47.4	43.3-51.5
Mpumalanga	1176	59.9	55.4-64.2	1026	28.2	23.4-33.5
Limpopo	1483	69.9	65.1-74.3	1153	22.3	18.2-27.0
National	16180	60.7	59.0-62.6	13127	44.4	42.6-46.1

Table 19 shows percentages of people who correctly rejected myths and misconceptions about HIV transmission. When 2008 results were compared to 2005, it was found that three provinces had significant increases in the percentages of people who correctly rejected four common myths and misconceptions. These were North West which increased from 50.1% to 63.1%, Gauteng which increased from 56.4% to 68.4% and Mpumalanga which increased from 43.7% to 59.8%. There was however a significant drop in the percentage of people from the Western Cape, from 65.1% to 53.0%.

In 2008 the Western Cape had the lowest percentage of people who correctly rejected myths and misconceptions about HIV transmission at 53.0%. All the other provinces had percentages of 60% or more who could correctly do so. All the differences in percentages between all the other provinces and the Western Cape were significant. In addition, Free State (69.9%), Gauteng (68.4%), and KwaZulu-Natal (66.2%) all had significantly higher percentages who correctly rejected myths and misconceptions about HIV transmission than Mpumalanga at 59.8% which was the second lowest among all the nine provinces, after the Western Cape.

Table 19: Rejection of common myths and misconceptions about HIV transmission by province, South Africa 2005 and 2008

Province	2005			2008		
	n	%	95%CI	n	%	95%CI
Western Cape	1986	65.1	58.9-70.9	1717	53.0	49.7-56.2
Eastern Cape	2589	69.2	64.3-73.7	1750	63.1	59.5-66.5
Northern Cape	997	65.1	60.6-69.4	1001	61.5	56.8-66.0
Free State	1013	62.2	55.2-68.7	878	69.9	64.4-74.8
KwaZulu-Natal	3238	65.9	60.2-71.2	2533	66.2	62.8-69.5
North West	1130	50.1	43.5-56.7	1067	63.1	59.5-66.5
Gauteng	2560	56.4	52.1-60.1	2023	68.4	65.5-71.1
Mpumalanga	1176	43.7	38.4-49.1	1026	59.8	56.2-63.4
Limpopo	1481	68.5	59.7-76.1	1154	62.9	58.4-67.2
National	16170	61.6	59.5-63.7	13149	63.8	62.5-65.1

Table 20 shows the percentages of people who both correctly identify ways of preventing the sexual transmission of HIV and who reject myths and misconceptions about HIV transmission. Three provinces had significant decreases in the percentages of people who both correctly identify ways of preventing the sexual transmission of HIV and who reject myths and misconceptions about HIV transmission from 2005 to 2008. These were from Eastern Cape which decreased from 44.3% to 36.0%, KwaZulu-Natal from 49.0% to 29.5%, and Mpumalanga from 27.9% to 18.2%.

In 2008, Free State had the highest percentage of people who both correctly identify ways of preventing the sexual transmission of HIV and who reject myths and misconceptions about HIV transmission at 41.3% whilst Limpopo, Mpumalanga and North West had the lowest who could do so correctly at 14.0%, 18.2% and 18.5%, all respectively. The Western Cape, Eastern Cape, Northern Cape, Free State, KwaZulu-Natal and Gauteng all had significantly higher percentages of people who both correctly identify ways of preventing the sexual transmission of HIV and who reject myths and misconceptions about HIV transmission than North West, Mpumalanga and Limpopo. The Free State also had significantly higher percentages of people who could do so than KwaZulu-Natal.

Table 20: Correct knowledge of preventing sexual transmission of HIV and rejection of major misconceptions of HIV transmission by province, South Africa 2005 and 2008

Province	2005			2008		
	n	%	95%CI	n	%	95%CI
Western Cape	1987	37.8	30.9-45.4	1717	34.1	31.0-37.4
Eastern Cape	2590	44.3	41.2-47.4	1743	36.0	32.1-40.2
Northern Cape	1001	28.9	25.0-33.2	999	32.1	28.0-36.4
Free State	1013	33.3	27.7-39.4	876	41.3	35.5-47.5
KwaZulu-Natal	3240	49.0	44.2-53.8	2526	29.5	25.6-33.7
North West	1130	22.5	18.3-27.4	1065	18.5	15.2-22.4
Gauteng	2560	38.1	34.3-42.1	2021	32.8	29.4-36.4
Mpumalanga	1176	27.9	23.8-32.3	1026	18.2	14.7-22.5
Limpopo	1483	51.3	43.2-59.3	1153	14.0	10.8-18.0
National	16180	40.2	38.2-42.1	13126	29.0	27.5-30.5

Significant declines in correct knowledge over time, as found in the Eastern Cape between 2005 and 2008, are cause for concern.

4.3.15. Culture and social norms.

Firstly, gender inequalities inherent in many societies where women are accorded a lower status than men have serious implications for choices that women can make in their lives especially with regards to when, with whom and how sexual intercourse takes place (Meyer-Weitz et al., 1998). Such decisions are frequently constrained by coercion and violence in the women's relationships with men. In particular, male partners either have sex with sex workers or engage in multiple relationships, and their female partners or spouses are unable to insist on the use of condoms during

sexual intercourse, often for fear of losing their main source of livelihood. Consequently, many women are left unprotected and are exposed to HIV infection from their male partners. In line with global trends for greater gender equality, young women in South Africa are increasingly eager to assert themselves, maximise their interests and forge new identities as modern young women. Doing this within the confines of existing cultural prescriptions for gender, often leads young women to manipulate or exploit their relationships with men in ways that increase their vulnerability and exposure to HIV (Leclerc-Madlala, 2003).

Secondly, there are several sex-related cultural beliefs and behavioural practices such as rites of marriage including premarital sex, virginity testing, fertility and virility testing, fertility obligations, polygamy, and prohibition of post-partum sex and also during breastfeeding, and rites related to death such as levirate (or spouse inheritance) and sororate (a widower or sometimes a husband of an infertile woman marries his wife's sister), or still prevailing beliefs that sex with a virgin can cure AIDS. While these practices may have served a valuable social purpose in the past, today these contribute to the spread of HIV infection (Simbayi, 2002).

5. HOW CAN THE KNOWLEDGE OF THESE FACTORS BE USED EFFECTIVELY TO ADVISE THE GOVERNMENT TO DESIGN RELEVANT HIV AND AIDS POLICIES AND PROGRAMMES IN THE EASTERN CAPE PROVINCE?

A successful response to the epidemic will depend largely on changing the social norms, attitudes and behaviours that contribute to the spread of HIV in South Africa. However, in order to be epidemiologically significant, the extent of these behavioural and societal changes has to be very substantial and more widespread. Acknowledging the value of social capital for health as a mediating mechanism for lowering risk for HIV infection in our communities will facilitate collective action and provide the social context for support and prevention programmes. As HIV continues to spread, and neither a vaccine nor cure exists, prevention remains the key strategy for curbing the epidemic. Prevention works - as evidence from Uganda, Kenya and Zimbabwe demonstrated that behaviour change was the main factor for the observed decline in HIV infection levels in these countries (SADC 2006, UNAIDS 2007).

5.1. HIV Counselling and Testing

There is an urgent need to implement a large-scale, sustained national "Know Your (HIV) Status" campaign. All persons who are at risk of HIV infection, which includes the majority of the South African population, need to know their HIV Status. Ensuring that people know their HIV status is central to achieving the two main goals of the National Strategic Plan, that is reducing HIV incidence by 50 percent, and providing treatment for 80 percent of persons infected with HIV, by 2011. This cannot be achieved without a major scale-up of HIV counselling and testing services and the expansion of the types of services available and the types of people who provide these services. Knowing your status requires repeated testing of those who have ongoing risk of exposure to HIV. At present there are no national guidelines about how often people should be tested but the National Department of Health is developing guidelines. National guidelines on HIV counselling and testing need to be released as

soon as possible to complement a national know your status campaign. SADC recently undertook an exercise in the majority of member states to review and develop minimum standards and guidelines for HIV counselling and testing. Proposals were approved by the Ministers of Health and HIV towards the end of 2009 and further developments can be expected during 2010.

HIV counselling and testing has become increasingly available in South Africa in recent years, but uptake remains low. Less than 20 percent of youth know their HIV status. Knowledge of HIV status among adults in South Africa is also low. Self-perception of HIV infection risk is low. The HSRC national household survey conducted by the HSRC and partners in 2005 (Shisana et al., 2005a) found that 66% of all participants aged 15 years and older, and 51 percent of those who tested HIV positive, reported before the test that they did not consider themselves to be at risk of being infected with HIV. The proportion of survey participants who did not know their HIV status was even higher than the proportion who did not consider themselves to be at risk.

The scope of the HIV epidemic in South Africa calls for the simultaneous use of multiple strategies for expanding the uptake of HIV testing. Currently, client-initiated counselling and testing, better known as VCT, is the predominant approach to providing HIV counselling and testing services in South Africa. Provider-initiated HIV testing has not been widely used other than the testing of pregnant women as part of prevention of mother-to-child (PMTCT) programmes. Internationally there is a trend towards the greater use of provider-initiated testing strategies as a means of increasing the proportion of people who know their HIV status. There has been a massive scale-up of HIV testing in several other African countries with severe HIV epidemics, mostly through VCT programmes. The World Health Organisation recently released guidelines on provider-initiated testing (WHO/UNAIDS, 2007). Some national governments such as those in Botswana, Kenya, and Malawi, have recently placed an increased emphasis on promoting provider-initiated testing and counselling in health-care settings. A working group of experts convened in May 2007 before the Third South African AIDS Conference, concluded that polarisation between advocates of client-initiated counselling and testing, and provider-initiated counselling and testing, is not helpful and stands in the way of reaching the objectives of the National Strategic Plan.

The lack of capacity nationally to counsel and test the large number of people in South Africa who do not currently know their HIV status needs to be given urgent attention. There is a need to increase the number of people who are able to provide HIV counselling and testing services. This will require an expansion of training programmes, as well as a broadening of the range of trained personnel who are permitted to deliver appropriate VCT services. Currently, lay counsellors are widely used to prepare clients for HIV testing before a professional nurse does the HIV test. More resources are needed for HIV counselling and testing services and the scope of testing practice needs to be reviewed. Consideration needs to be given to providing additional training to lay counsellors and expanding the scope of their practice to include HIV testing as well as counselling, as there are not enough professional nurses to meet the need for HIV counselling and testing services in South Africa. There is currently a high turnover in lay counsellors, largely because of poor remuneration for their services. The poor remuneration of people providing HIV testing and

counselling services needs to be addressed. There is a need for greater uniformity and national standards in the training of counsellors. The National Department of Health is in the process of standardising training and career-pathing.

Scientific evidence from other countries has shown that, among HIV-negative people, risk-reduction counselling coupled with HIV testing can reduce one's risk of acquiring HIV infection (Kamb et al., 1998; CDC, 2007). Ensuring that the counselling provided with HIV testing is based on models that have been scientifically evaluated, and that the counselling is focused on risk-reduction among those with negative HIV test results, would contribute to the NSP goal of reducing the incidence of new HIV infections by half by 2011. A scientifically evaluated risk reduction counselling model is already being implemented as standard of care in KwaZulu-Natal. Other provincial health departments should follow the lead set by KwaZulu-Natal and implement risk-reduction counselling as standard of care.

There is also a need to move HIV testing and counselling beyond the health care system and to make it more readily accessible in communities where people live, particularly in rural areas where access to health services is limited. One method of making HIV testing and counselling services more accessible, that is currently being evaluated in a major trial conducted in rural KwaZulu-Natal and Soweto (Project Accept), is the use of mobile HIV counselling and testing services. HIV testing and counselling services also need to be expanded in other settings such as workplaces, youth centres, and higher educational institutions.

5.2. Address Stigma

Real and perceived stigma remains the biggest barrier to knowing one's HIV status. Stigma around HIV and AIDS is likely to decrease as more people make use of HIV testing and counselling services. Fear of disclosing one's HIV status to one's sexual partners, family and friends is another important barrier that prevents people from seeking HIV testing. Difficulties with disclosure could be countered by providing couples counselling or by testing family members as a family unit. Couples counselling services and family counselling services are currently only available in the context of a few research studies and small pilot projects. As part of a national scale-up of HIV counselling and testing services, consideration needs to be given to expanding the availability of couples counselling and family counselling services.

There needs to be a simplification and standardization of the language used to describe different approaches to HIV testing. Ethicists and human rights advocates agree that all HIV testing should be voluntary and that the results should be kept confidential, irrespective of whether the testing is initiated by a health care provider or the client (the individual being tested). In order to meet the objectives of the NSP of getting HIV-infected people into treatment, and to ensure that those who have a positive HIV test result are assessed to see whether they meet the criteria for initiating ART, it is important to ensure that HIV counselling and testing services have integrated linkages with treatment, support and care services. One approach which has already been adopted in some neighbouring states is the 'opt out' approach to provider initiated counselling and testing. In this model patients attending health facilities receive an HIV test as part of their routine medical work up, unless they choose to

‘opt out’. Evidence suggests that this approach is well accepted and so long as appropriate pre- and post-test counselling is ensured, will have a positive impact on the epidemic.

5.3. Improve effectiveness and coverage of prevention of mother-to-child transmission (PMTCT) programmes

One of the ambitious aims of the South African National Strategic Plan (NSP) on HIV & AIDS and STI is to reduce the rate of new HIV infections by 50% by 2011. Within the key priority area of prevention, the objectives are to reduce Mother-to-child transmission (MTCT) of HIV through broadening existing MTCT services to include other related services and target groups and to scale up coverage and improve quality of PMTCT to reduce MTCT to less than 5%. An encouraging development is the finalisation of the new guidelines for dual therapy in the PMTCT programme in South Africa.

The last few years have seen considerable efforts to introduce and expand PMTCT programmes. However, these interventions rely heavily on functioning maternal and child health services. Despite feasibility and cost-effectiveness of PMTCT, implementation and expansion in resource-constrained settings remains sub-optimal. By 2005, only 9% of HIV pregnant women globally were receiving ARV prophylaxis for HIV, with a striking variation in coverage between countries (UNAIDS, 2006).

Implementation of the PMTCT programme remains a challenge, especially in poor, rural areas. The National Department of Health (DOH) found that human resource issues remain a key challenge, together with sustainable drug procurement; transport and inter-departmental collaboration. In many areas, record-keeping systems are inadequate to enable the follow-up of HIV-infected pregnant women, serving as an additional barrier to PMTCT program implementation.

The HSRC with its partners from the US Centers for Disease Control and Prevention has been providing a PMTCT improvement programme in two districts of the Eastern Cape for the past two years. Lessons learnt from this programme can contribute to a province wide PMTCT improvement plan.

5.4. Positive prevention

There is a need for the development and/or cultural adaptation and evaluation of theory-based behavioural risk reduction interventions targeting people living with HIV and AIDS (PLWHA) who are aware of their status. The main goal of such interventions, which are known as positive prevention approaches, is to prevent both the infection of their uninfected partners (primary prevention) and themselves from being re-infected with another strain of the virus (secondary prevention). The latter issue is especially important if people are on ARV treatment because of treatment optimism which often leads to an increase in risk behaviour (known as ‘risk compensation’ or ‘behavioural disinhibition’). Indeed, as more people access ARVs

there is a need to reaffirm the need for people to continue practicing safer sex in order to reduce new infections.

5.5. Male circumcision preparedness

There is now compelling evidence about the protective nature of circumcision to men following three successful trials. One was held in Orange Farm, an informal settlement in Johannesburg, South Africa, where it was shown that circumcision was 60% effective in reducing HIV infection among those who were circumcised compared to those who were not (Auvert et al. 2006). The results of the other two trials conducted in Kisumu in Kenya and in Rakai in Uganda showed a reduction of HIV infection of 53% and 48% respectively (US National Institute of Allergy and Infectious Diseases 2006).

The idea that male circumcision might be protective against HIV infection is not new as it was first suggested over two decades ago by Fink (1986). Since then several studies have examined this issue and produced mixed results (Moses et al., 1994; De Vincenzi & Mertens, 1994; Moses et al., 1998; Van Howe, 1999; Weiss et al., 2000; Bailey et al., 2001; Siegfried et al., 2006). In particular, both Caldwell & Caldwell (1996) and, more recently, Williams et al. (2006) have shown through spatial mapping the close relationship between male circumcision and HIV prevalence. For example, some countries especially in West Africa, which have significantly higher male circumcision rates, have significantly lower HIV prevalence rates compared to countries in Eastern and Southern Africa with lower rates of male circumcision but higher HIV prevalence.

The only available empirical data on circumcision in South Africa on a national level was that obtained from the 2002 national HIV/AIDS household survey which found that 35% of all adult and young males were circumcised (Shisana & Simbayi, 2002). These findings suggest that South Africa is typical of countries in Southern Africa where male circumcision prevalence rates are relatively low compared to most countries in both West Africa and North Africa which are predominantly Muslim in character (Williams et al., 2006). Preliminary analysis of the 2002 national HIV/AIDS household survey showed that male circumcision was more protective among Whites, Indians and Coloureds than among Africans. However, a recent more in-depth follow-up analysis controlling for some confounding variables showed that male circumcision was associated with age, race, socio-economic status, religious affiliation, home language and province; most circumcisions among Whites, Coloureds and Indians were performed mainly in hospital settings during childhood while those among Africans were mainly conducted outside hospitals during adolescence - 40.5% of all circumcisions took place after sexual debut, and 66.5% of men who were circumcised after their 17th birthday were already sexually active by then (Connolly et al., 2007 under review). More importantly, the study revealed that male circumcision undertaken at pre-pubertal age rather than later at post-pubertal age appeared to be protective. These findings clearly have implications for the possible adoption of the mass male circumcision strategy both as a public health policy and an HIV prevention strategy in South Africa.

Successful models for working with traditional circumcisers to perform safe medical circumcisions in the context of traditional initiations for men have been developed and implemented in East Africa. We need to learn more from experiences around the continent for integrating traditional and medical circumcision for HIV prevention.

There is a need to both culturally contextualize the issue and undertake some action research that promotes male circumcision as a male sexual health issue. It is therefore important to investigate attitudes and beliefs people from various cultures hold regarding both traditional and medical male circumcision as well as the acceptability of either practice. This will help to inform both policy and programme development concerning scaling up of male circumcision as a method to reduce HIV prevention whilst also addressing gender issues and responsible parenting among men.

5.6. Condom use

Especially where multiple concurrent partnerships appear to be important factors in HIV transmission, positioning condoms as primarily *contraceptive* tools rather than disease protection devices may be a more effective option than current approaches. There is some evidence of this happening among youth in various African countries such as Botswana (see Botswana Central Statistical Office, 2005) and South Africa (see Shisana et al., 2005a). Integrating family planning and HIV programmes could increase protection for women against unwanted pregnancy and address the unmet need for family planning among HIV-positive women (Prata, Sreenivas, Bellows, 2008).

5.7. Treatment access

“The early evidence from the ART programme in South Africa suggests that, once enrolled, patients enjoy increased levels of survival, viral load suppression, self-reported adherence and retention in treatment that is on a par with levels in the developed world, and even much better than those for several other chronic diseases.” (Van Rensburg, 2007).

Nationally, the public ARV treatment programme had enrolled over 718 000 people by September 2009, with the private sector supporting an additional estimated 120,000 people. This represents about 54% of those in need of treatment and is an increase of 9% since the previous year (DOH, 2010, in press). Recently, the number of accredited ART sites at public facilities has increased and more sites are in the process of accreditation to expand the roll out of ART even further. Task-shifting is a new policy that is being piloted in some provinces, whereby professional nurses and in some cases, doctors from the private sector take over ART case management after initiation of treatment by a public health physician. These pilots have shown positive results in addressing resource constraints while enabling better access to services.

At the current rate of treatment, for every two people put on ARVs another five become newly infected. “Universal access to ART is unlikely to be achieved with the predominant model of ART service delivery currently being implemented in the

public health system, namely, vertical services funded through ring-fenced resources and provided in 313 accredited CCMT (comprehensive care, management and treatment) sites, based in hospitals, community health centres or PHC clinics, and provided by doctors, professional nurses and pharmacists. The need for ART is expanding by about 500,000 people per annum. In order to meet 80% of this need, each of the existing 313 accredited sites would have to enrol more than 100 new patients each month with current use of resources. Very few CCMT sites are able to achieve this level of enrolment” (Van Rensburg et al., 2007)

However, the reliability of these statistics is questionable. A recent article by Akugizibwe and Hassan quote data collected by the M&E cluster of the DoH. According to this internal report, "the interpretation of patient numbers should take into account the effect of patients who are lost to follow-up, deregistered and those who died after the commencement of treatment. This information is not currently captured." Akugizibwe & Hassan (2008) go on to say that “in other words this information tells us nothing about the number of patients who receive treatment, nor how many have been lost: a disturbing sign that little emphasis is placed on continued monitoring and evaluation of treatment outcomes.” Without improvements in the monitoring and evaluation of the ARV programme, it is unclear how many people actually are on treatment. Research to address the M&E requirements of the ARV roll out is currently being undertaken by the University of Cape Town.

The treatment gap, i.e., the percentage of those in need not accessing treatment, will not be closed without a dramatic scale-up in the current growth of the ART programme. This will require that accreditation of sites is decentralised, that patients are enrolled and initiated more quickly, and that more drugs are procured. Failure to do this will continue the unfortunate situation where those that medically qualify for ART but who fail to receive it die within one year (Badri, et al., 2006). South Africa will have to double the number of patients on ART every year until 2012 in order to reach all those who need treatment. Yet the reality is that even if this dramatic scale-up is achieved, the best case scenario predicts that 1.2 million people will die from HIV/AIDS by 2012 (Walensky et al., 2008). Despite increases in the uptake of ART, the treatment gap is widening in all but two provinces, namely Free State and KwaZulu Natal.

5.8. Improved integration of programmes (Setswe et al, 2009)

5.8.1 Targeting men

There remains a need to work more effectively and more directly with men of all ages. There is a special need to design programmes that reach and speak to the experiences of older men, not just the more conservative traditional men but also the more educated, well-resourced men. All evidence suggests a great need for developing and promoting new cultural markers of manhood and new peer-norms among boys and men. More vigorous effort should be put into changing men's behaviour and attitudes while simultaneously empowering women. There remains a great need to speak more openly and frankly about the every-day sexual behaviours of ordinary people, especially men, that are putting everyone at risk and driving this epidemic.

5.8.2 Civil society partners

The alcohol industry as well as media and advertising should be encouraged and even compelled to commit themselves to helping to create an enabling environment for HIV prevention. In many ways these far-reaching and influential role players are contributing to the creation of a disabling environment by undermining messages aimed at promoting responsible sexual behaviours and other health-inducing habits.

5.8.3 Family first

The faith-based sector, schools and other community structures need to accelerate their efforts to address the breakdown in the institution of the family. Compromised domestic and social environments are a major underlying factor in the spread of HIV, and their repair needs to be addressed as part of, and beyond, a poverty-reduction strategy.

5.8.4 Accelerate prevention

Evidence from other sub-Saharan countries strongly suggests that changes in behaviours were a major factor in the reversal of HIV trends. Behavioural change should remain the centerpiece of HIV prevention, with positive prevention and partner limitation programming being major focuses of a new, intensified approach to prevention.

Along with the need for a radically new approach to AIDS is the need for AIDS to become a government priority. One way to start could be through the calling of a national summit whereby scientists, NGOS, the private sector, development agencies and other key stakeholders all contribute to the creation of new momentum, to the identification of new ways of working, and to the fostering of a new commitment to implement the new National Strategic Plan.

5.9 Monitoring and Evaluation

Accurate and ongoing monitoring and evaluation of performance on all the NSP targets is essential to understand whether programmes and responses are having any effect. Systems for data collection are also critical to ensure evidence-based planning and decision making. Appropriate indicators that are feasible to collect on an ongoing basis must be agreed upon, commitment obtained and resources provided, to ensure that all provinces collect the necessary information.

In compiling data for the *2008 UN Global AIDS Report* South Africa reported on only 7 of 25 indicators. In the latest report, currently in press, we are able to report on 17 indicators but this means that there are still 8 indicators for which South Africa has no or inadequate data. The lack of proper data capturing and proper monitoring of the epidemic has left a 'hungry stats hole' (Akugizibwe and Hassan, 2008) in the coordination of the response. Data is missing or wholly inadequate for: the number of orphans and vulnerable children; populations most at risk (sex workers, truck

drivers, refugees, health care workers, etc.); numbers of people on ART; and outcomes of treatment.

5.10 Sustainability of Financing

With growing numbers of people on treatment, rising medical costs, and fiscal constraints a long-term plan to ensure the sustainability of financing for the NSP is becoming critical. This plan must be developed in consultation with all major bilateral donors for health.

5.11 Using existing human resources better

5.11.1 Private GPs.

The 'private sector' includes an established network of private doctors. Ways must be explored to determine how this resource can assist to relieve the burden facing public health care providers. Already this is being successfully introduced. For example, Tshepong Hospital, the largest hospital in the North West Province, has partnered with 19 private doctors. Patients who are stable on ARVs are down-referred to GPs. The hospital then delivers the medication to the GPs on a monthly basis for the GPs to distribute the medication, draw blood to test the patients CD4 count, and monitor the patient's general performance on ART. Thus far, around 1000 patients of the more than 5000 treated by Tshepong Hospital have been voluntarily down-referred. The programme has a 98% retention rate and viral loads are undetectable in more than 90% of the patients. Doctors are paid R100 per patient visit and a limit has been placed on the number of patients that a doctor can see to ensure quality and equity (Variawa, 2008)

5.11.2 Community Health Workers

The health system has come to rely heavily on Community Health Workers (CHWs), in the form of community development workers, community care givers and lay counsellors. The use of CHWs as care providers has expanded rapidly over the past five years to employ an estimated 60,000 carers in the DoH HIV and AIDS programmes alone (Maphumulo, 2008). However, discrepancies exist in conditions of employment. In most instances CHWs are 'volunteers' and so are excluded from formal employment protections, are given no benefits and are not placed on a career-path that allows for further training or promotion.

The NSP recommends that the status of CHWs be clarified and that the necessary training be provided. This will enable the scope of practice of CHWs to be expanded and for task-shifting of mid-level health services to within the mandate of CHWs.

6. RESEARCH GAPS, PRIORITIES AND THE KEY RECOMMENDATIONS

6.1. Inadequate HIV and AIDS surveillance

HIV surveillance systems and information gathering have improved dramatically in the past decade, leading to more accurate understanding of HIV epidemics. These improvements are especially evident in countries with generalized epidemics (Lyerla, Gouws, Garcia-Calleja, 2008), due mainly to national, population-based HIV surveys.

Antenatal surveillance continues to provide important trend data (Montana, Mishra, Hong, 2008) but HIV surveillance systems generally need to be strengthened further.

Much of the data used in this report was extracted from large national HIV/AIDS surveys. The main strength of these surveys is that they provide estimates of HIV prevalence in the general population as well as for different subgroups such as different geographical locations, women and men, and different age groups. The national household survey (SABSSM) allows HIV serostatus to be linked to social, behavioural and other biomedical information, providing the opportunity to study the dynamics of the epidemic in more detail. The annual antenatal surveys provide information on a specific sub-set of the population, namely pregnant women, although they can be used to predict population trends as well. Generally, the direct estimates obtained from representative population samples are more generalisable. Antenatal surveys have their limitations because they are exclusively based on young sexually active women who have had unprotected sex. This group inevitably tends to have a much higher HIV prevalence than the general population.

Strong HIV surveillance systems go hand-in-hand with effective prevention strategies. However, there is no provincial level population based HIV/AIDS prevalence survey that was ever conducted in the Eastern Cape. The majority of the relevant HIV/AIDS studies that were conducted solely in the Eastern Cape are small scale and do not allow generalizations to the larger Eastern Cape Population.

- Regularly updated HIV prevalence data is needed from district level upward in order to plan and administer the continued expansion of ART programmes.
- As wider access to ART increases the life spans of people living with HIV, it is becoming even more difficult to discern recent HIV infection trends from prevalence data. Accurate technologies and techniques for determining HIV incidence are a priority.

An Eastern Cape population-based survey is needed following the validated approaches and methodologies of SABSSM. Such a survey will seek to determine, among others:

- HIV prevalence for different age groups in the Eastern Cape
- Social and community risk factors that predispose children to HIV infection
- Patterns of sexual behaviour, HIV prevention and behavioural change among children
- Levels of knowledge, sources of knowledge and communication about HIV among caregivers and children

6.2. Studies of social determinants of HIV

There is limited knowledge on the Social Determinants of HIV/AIDS and the only survey to explore this issue on a large scale is SABSSM. The dynamics of HIV transmission are a function of vulnerability, which is connected to the social, cultural,

economic, political and legal circumstances that increase susceptibility to infection and enhance the likelihood of engaging in unsafe behaviour. These factors are largely ignored by the biomedical approaches, and must be researched in order to comprehensively understand the underlying “drivers” of the epidemic, including the social and cultural determinants. The interpretation of epidemiological trends in HIV/AIDS is made more difficult by an inadequate understanding of how different social, behavioural and epidemiological factors influence the dynamics of the epidemic within different settings.

Even though the national surveys involve large samples, they still do not provide enough information to explore provincial level variations in much detail. Thus, primary research at provincial level is needed specifically to determine the social determinants of HIV/AIDS in the Eastern Cape; show how major determinants relate to each other; clarify the mechanisms by which these social determinants generate health inequities; evaluate which social determinants are the most important to address; and map specific levels of intervention and policy entry points for action on these social determinants. The World Health Organisation’s Commission on Social Determinants of Health has identified the social determinants of health as a priority for further research.

A recent study by the HSRC in KwaZulu Natal (Naidoo, Seager & Davids, 2009) found that the perceptions of community members regarding intervention programmes were frequently negative with strong opinions expressed about the lack of understanding of local issues by those developing policies and interventions. HIV and AIDS intervention programmes need to engage communities to ensure that the information is locally relevant and understood by the target audience. Stigma needs to be addressed before messages regarding HIV prevention and transmission are likely to be accepted.

6.3. Addressing gaps in knowledge of effective prevention strategies

There are important gaps in our knowledge about the effectiveness of HIV prevention. Yet the research to date clearly documents the impact of numerous behavioural interventions in reducing HIV infection. We also know that in all cases in which national HIV epidemics have reversed, broad-based behaviour changes were central to success. Although much evidence exists to demonstrate that it is possible to change human behaviour to reduce the risk of HIV transmission, there are gaps and limitations in what is known. There is also an inherent challenge in measuring the impact of any health effort that includes HIV prevention: measuring and determining causality for an event that did not occur (for example, an HIV infection averted) is intrinsically more complicated than evaluating an event or phenomenon that did occur. There is a need for context-specific, evidence-based interventions. Prevention efforts should be based on the best available epidemiological and social science evidence. It is critical to note that “there is no “magic bullet” for HIV prevention. None of the new prevention methods currently being tested is likely to be 100 percent effective, and all will need to be used in combination with existing prevention approaches if they are to reduce the global burden of HIV/AIDS.” (Global HIV Prevention Working Group, 2008).

6.4. Structural interventions

Evidence-based structural interventions are needed. Far-reaching measures, such as strategies for boosting the social and economic empowerment of women, reducing inequalities, safeguarding the livelihoods of the poor, reducing violence against women, and reducing alcohol and substance abuse can create conditions and momentum necessary for prevention success. Behaviour does not arise simply from detached, autonomous decision-making, but is shaped by complex underlying factors and dynamics. Structural approaches to HIV prevention seek to change social, economic, political, or cultural factors determining HIV risk – such as various forms of inequality, social marginalization, discriminatory laws and policies, and power imbalances that influence individual behaviour. The literature sometimes distinguishes between distal factors (that are fairly ‘remote’ from the individual, such as the structure of the labour market) and proximal factors (that influence risk more directly, such as losing one’s job). Together they define the terrain on which conventional HIV prevention programmes occur (Gupta et al., 2006). More research needs to be conducted on these interventions.

6.5. Positive Prevention

There is a need for the development and/or cultural adaptation and evaluation of theory-based behavioural risk reduction interventions targeting PLWHA who are aware of their status. The main goal of such interventions which are known as positive prevention approaches is to prevent both the infection of their uninfected partners (primary prevention) and themselves from being re-infected with another strain of the virus (secondary prevention). The latter issue is especially important if people are on ARV treatment because of treatment optimism which often leads to an increase in risk behaviour (this phenomenon is also known as risk compensation or behavioural disinhibition). Indeed as more people access ARVs there is a need to reaffirm the need for people to continue practicing safer sex in order to reduce new infections.

7. SUMMARY

The HIV epidemics are interlaced with the circuits and terms on which power, opportunity and entitlements are distributed and desires and needs are pursued. The role of poverty in HIV epidemics appears to be multidimensional and to interact with a range of other factors, including mobility, social and economic inequalities and social capital, which converge in a particularly potent way for young women living in southern Africa.

Whilst we know a lot about the social determinants of HIV/AIDS, there is still a need for more in-depth information at the provincial level. No province is unique, but neither are all the provinces the same and we should strive to ensure that we have sufficient information to make interventions as effective as possible for *local* circumstances. We have a good idea of the issues that need to be given priority, as indicated in the discussion of determinants above, but local studies are needed to develop the most effective interventions.

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