

# **HIV PREVALENCE, INCIDENCE, BEHAVIOUR AND COMMUNICATION SURVEY 2005**

**Funded by**  
**The Nelson Mandela Foundation**  
**The Swiss Agency for Development and Cooperation**  
**Centers for Disease Control and Prevention**

A collaborative research effort of  
Human Sciences Research Council (HSRC),  
Medical Research Council (MRC) &  
Centre for AIDS Development, Research and Evaluation (CADRE)

# Background to the study

- The present study is a follow-on from a study conducted in 2002 using the same methodology
- Population-based studies are increasingly used to understand the broader aspects of HIV prevalence and *complement* findings of annual antenatal surveys
- Population-based studies have been conducted in a number of countries including Botswana, Burundi, Guinea, Kenya, Mali, Niger, Uganda, Zambia, Zimbabwe
- This is the first national population-based repeat survey

# Comparison of study types

## Population-based studies

- Provide direct measures of HIV for the overall population including by sex, province, residence geotype, age, race
- Provide insights into underlying factors and vulnerabilities that influence HIV infection, but also trends in relation to response including knowledge, condom use uptake of VCT, attitudes to people living with HIV/AIDS, provision of care and support, etc

## Antenatal studies

- Gather information from pregnant women only
- Estimate prevalence in other groups through modelling
- Provide trends of HIV prevalence over time

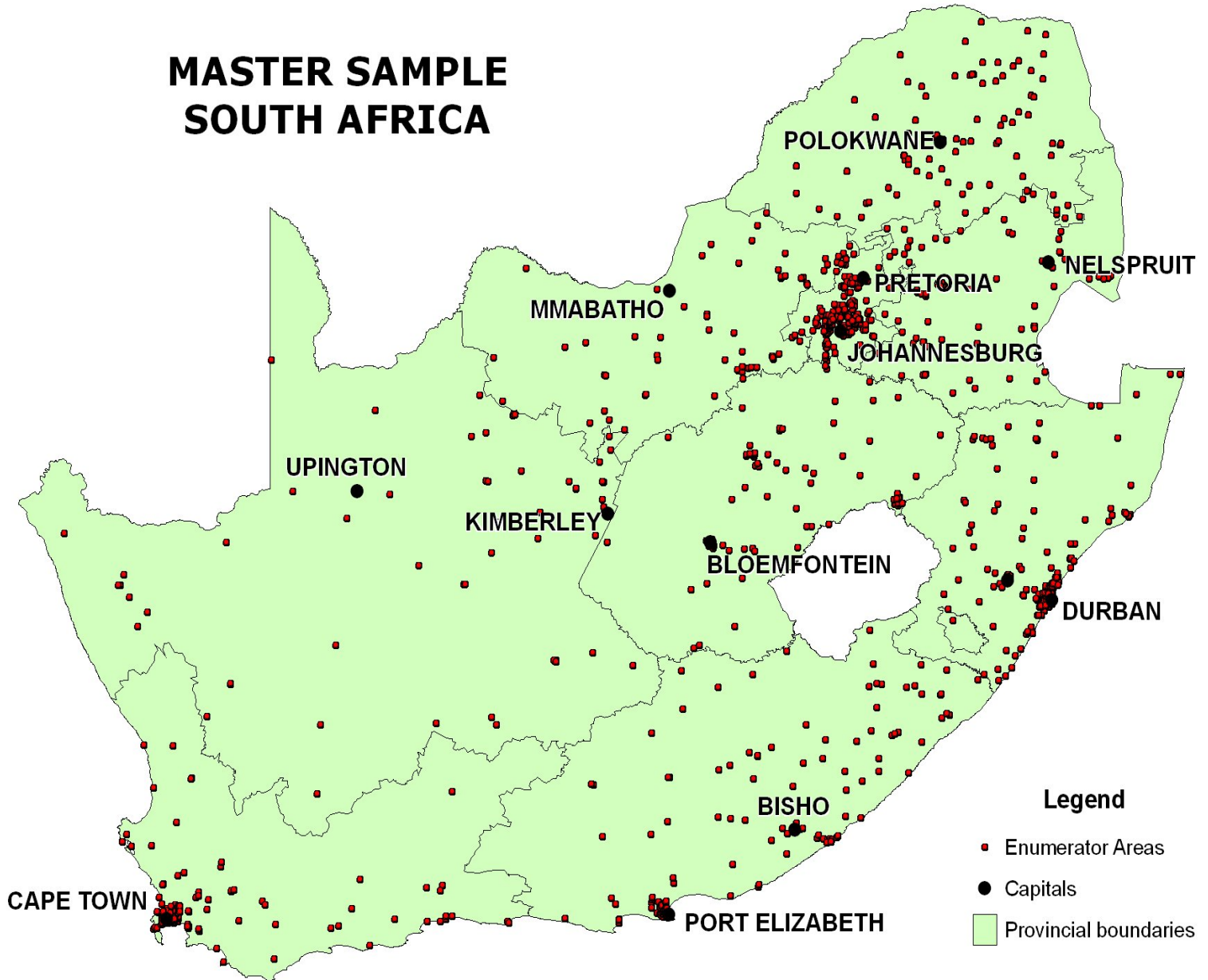
## Limitations

- Antenatal data limited by over-representation of poorer African females as baseline population
- Population-based limited by response rates

# Survey design

- A cross-sectional survey of the entire South African population aged two years and older *living in households*
- Sample included people living in hostels, but *excluded* prisoners, military and police barracks, university residences, patients in hospitals and children under 2
- Sampling is based on a master sample of households developed by the HSRC based on the 2001 census
- This sample is stratified by province and geotype of EA
- In 2002 an oral specimen collection device was used, whereas in 2005 blood spots were taken through finger-pricks
- Blood spots allowed for incidence testing
- Similar questionnaires used in both surveys

# MASTER SAMPLE SOUTH AFRICA



# Sampling rates: 2005 and 2002

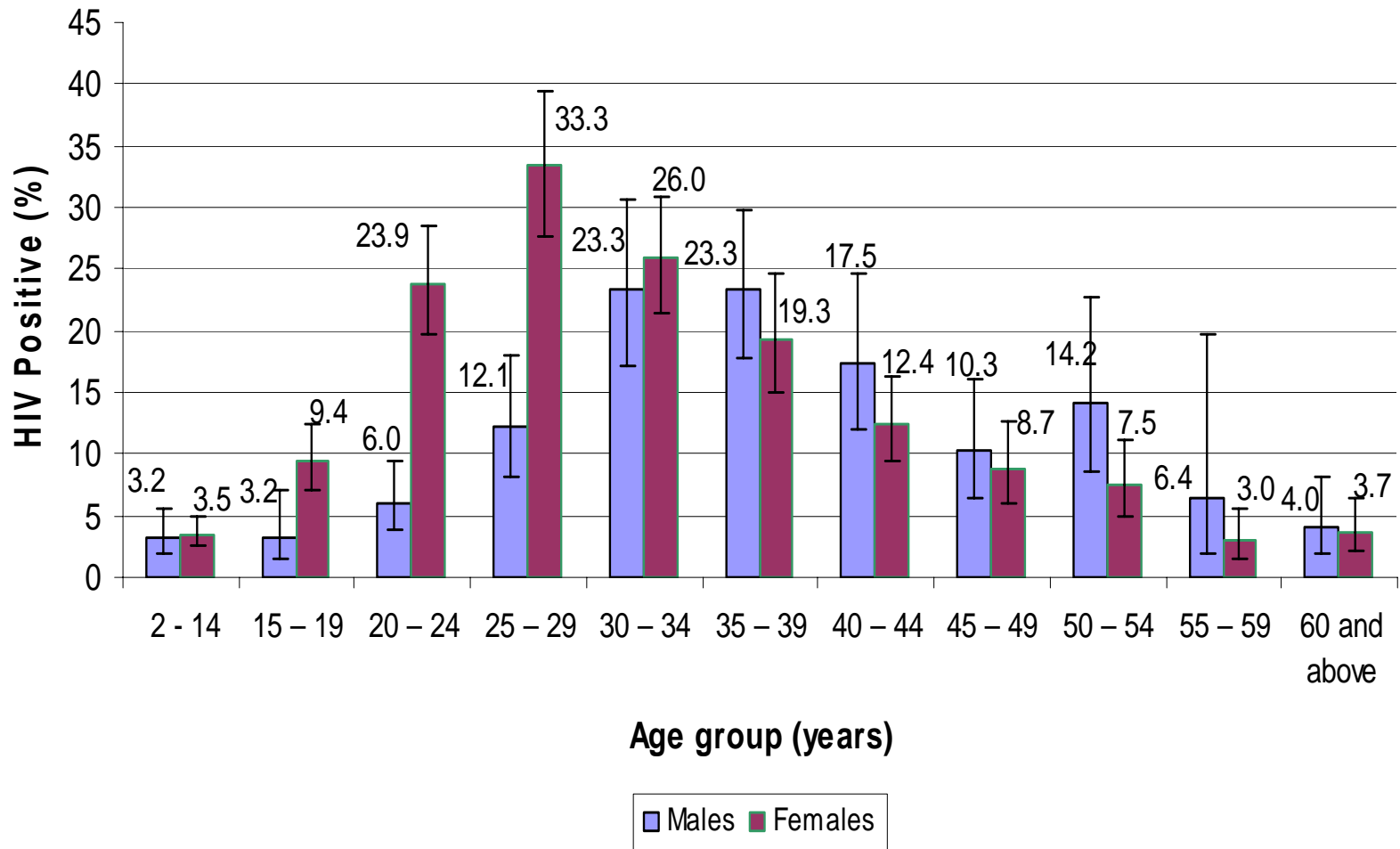
	2005	2002
Household level response	84.1%	71.1%
Individuals interviewed	96%	73.7%
Sample of respondents tested	15,851	8,428
Individuals interviewed	96%	73.7%
Interviewed and tested for HIV	65.4%	62.3%
African interviewed and tested	69.8%	64.8%
White interviewed and tested	45.3%	46.4%
Coloured interviewed and tested	72.3%	68.0%
Indian interviewed and tested	51.3%	56.1%

# Integrity and generalisability

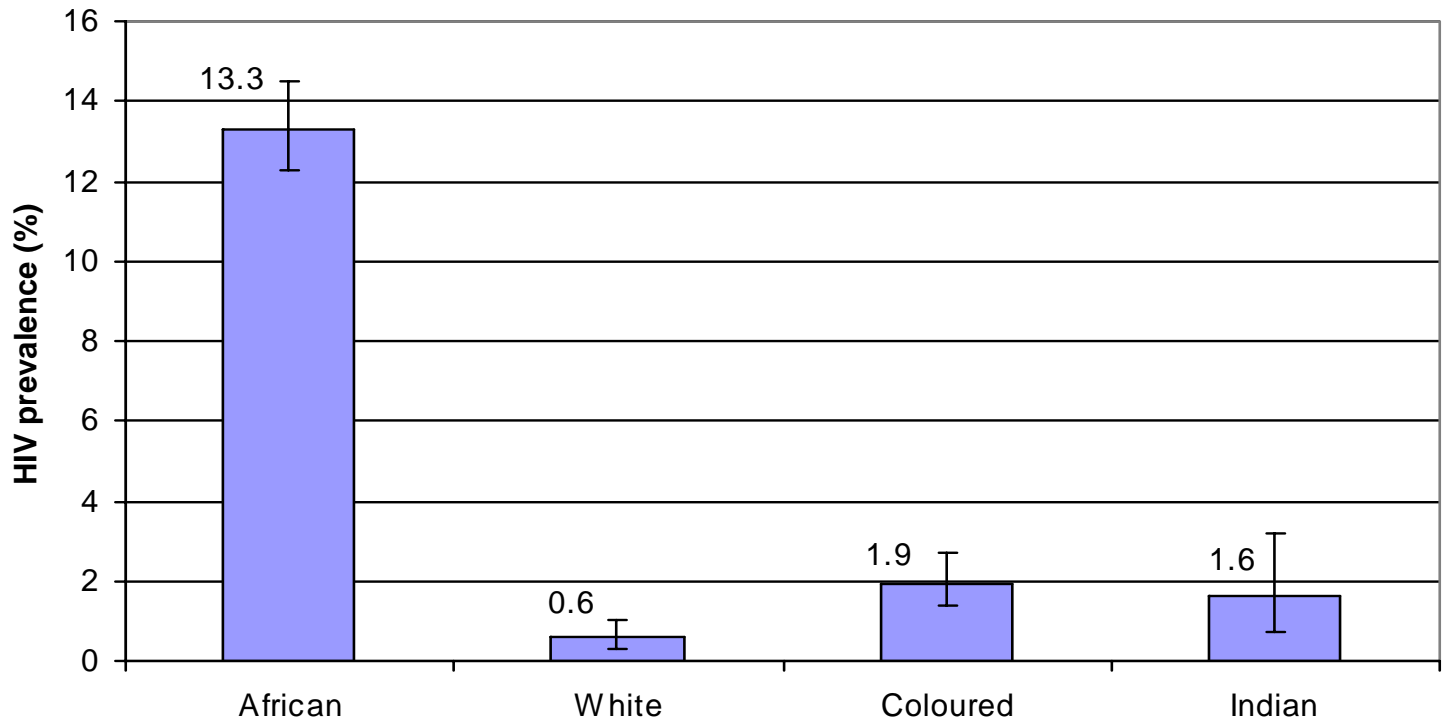
- 2005 findings have been compared with antenatal data and there is close correspondence between HIV rates of pregnant women in this survey and antenatal survey data
- Findings consistent with a population-based survey of youth aged 15-24 conducted by the Reproductive Health Research Unit in 2003/4
- Distribution of HIV by key demographic variables are similar to those of other studies
- Behavioural and communication data consistent with previous findings, and contributes new knowledge in key areas
- Response rates of Whites and Indians make it difficult to provide a definitive understanding of HIV in these groups

# Findings

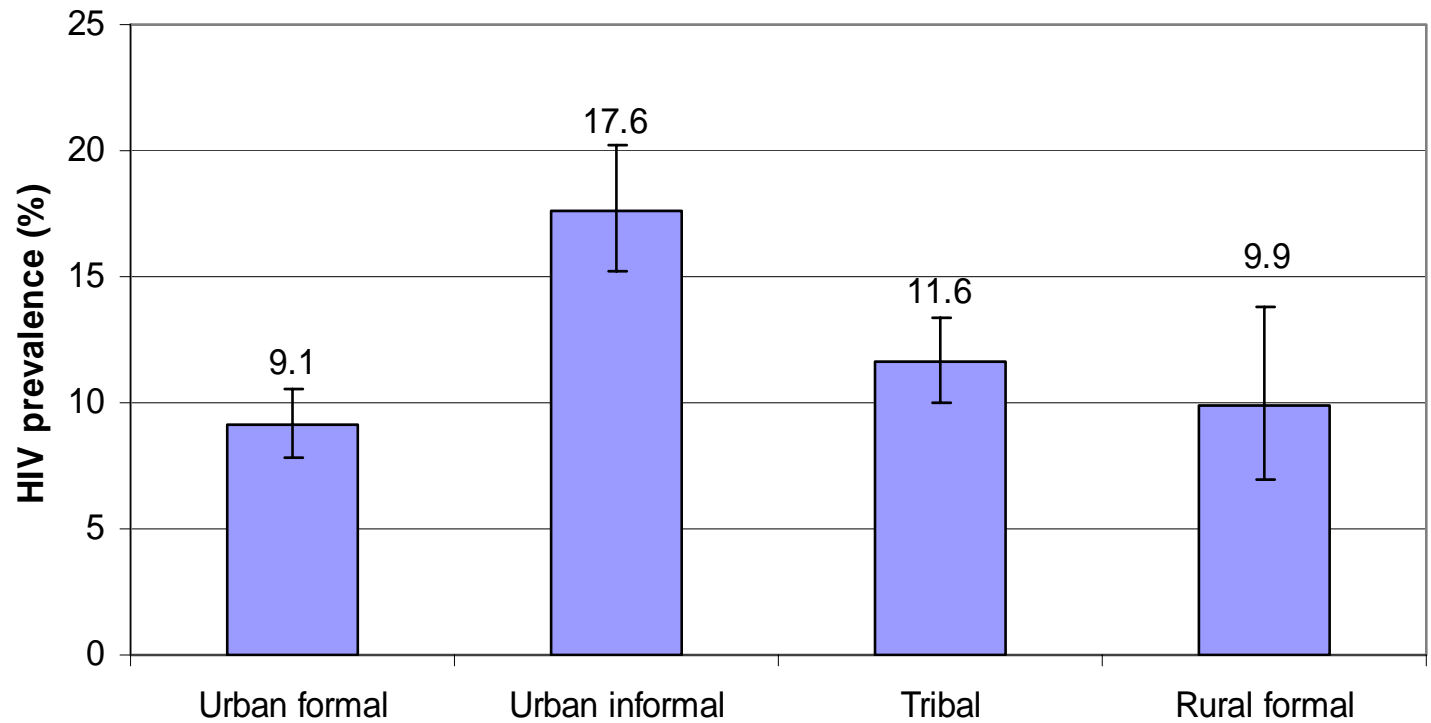
# HIV prevalence by sex and age: 2005



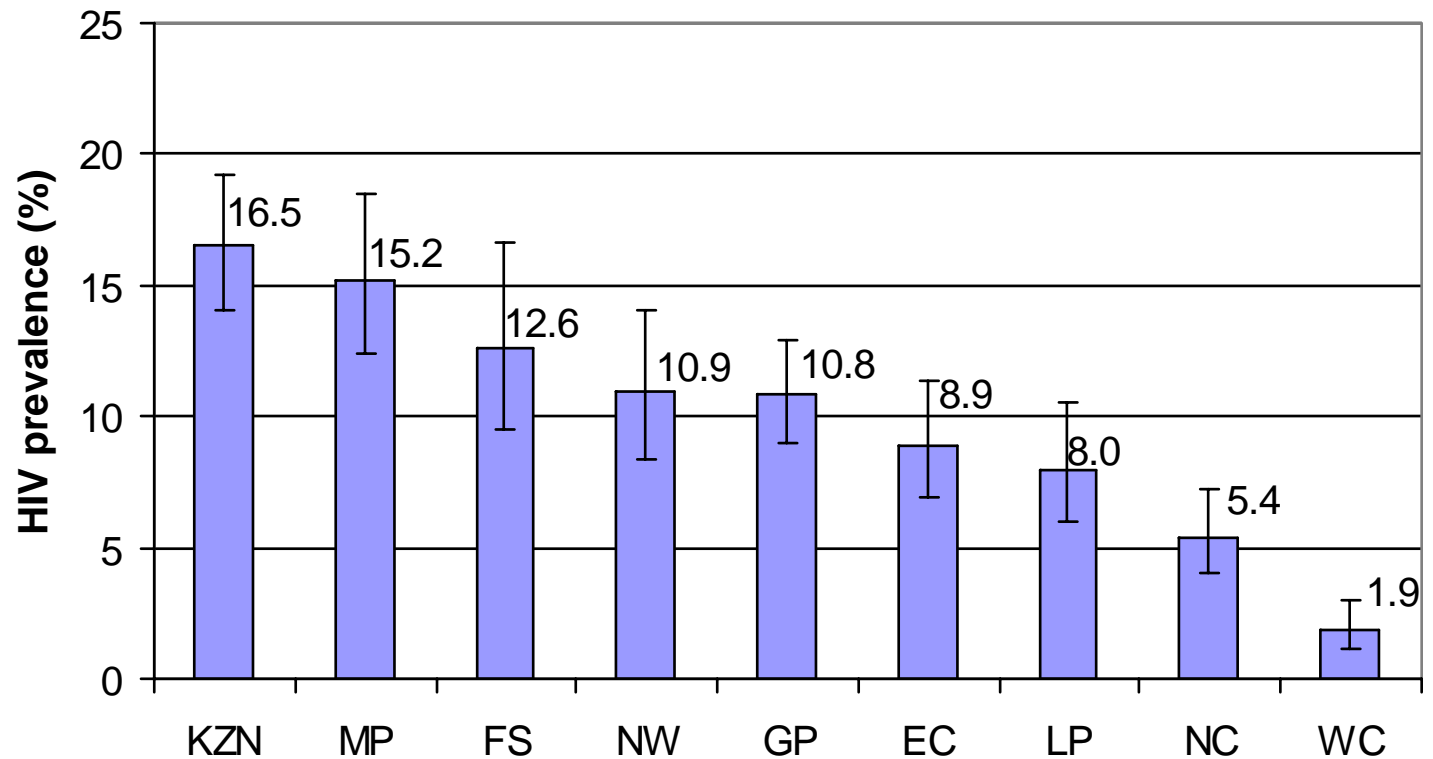
# HIV prevalence by race, $\geq 2$ : 2005



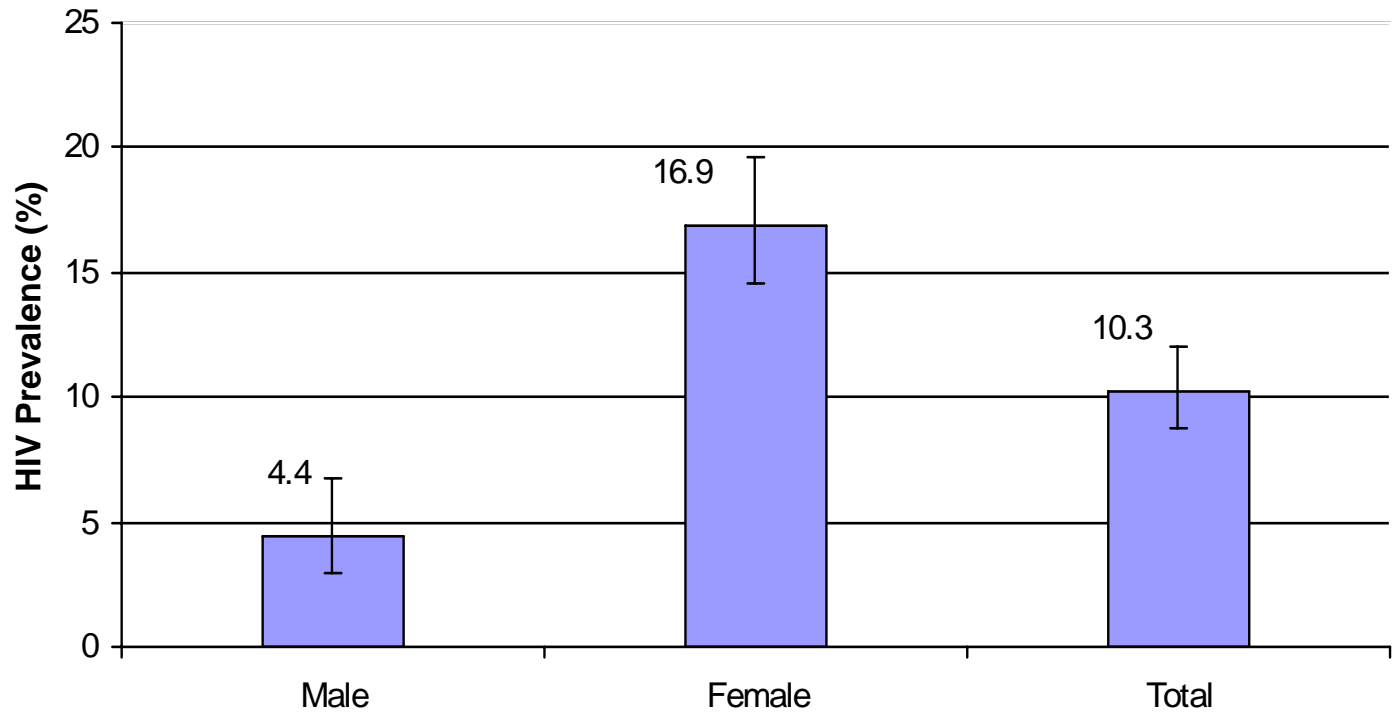
# HIV prevalence by geotype, $\geq 2$ : 2005



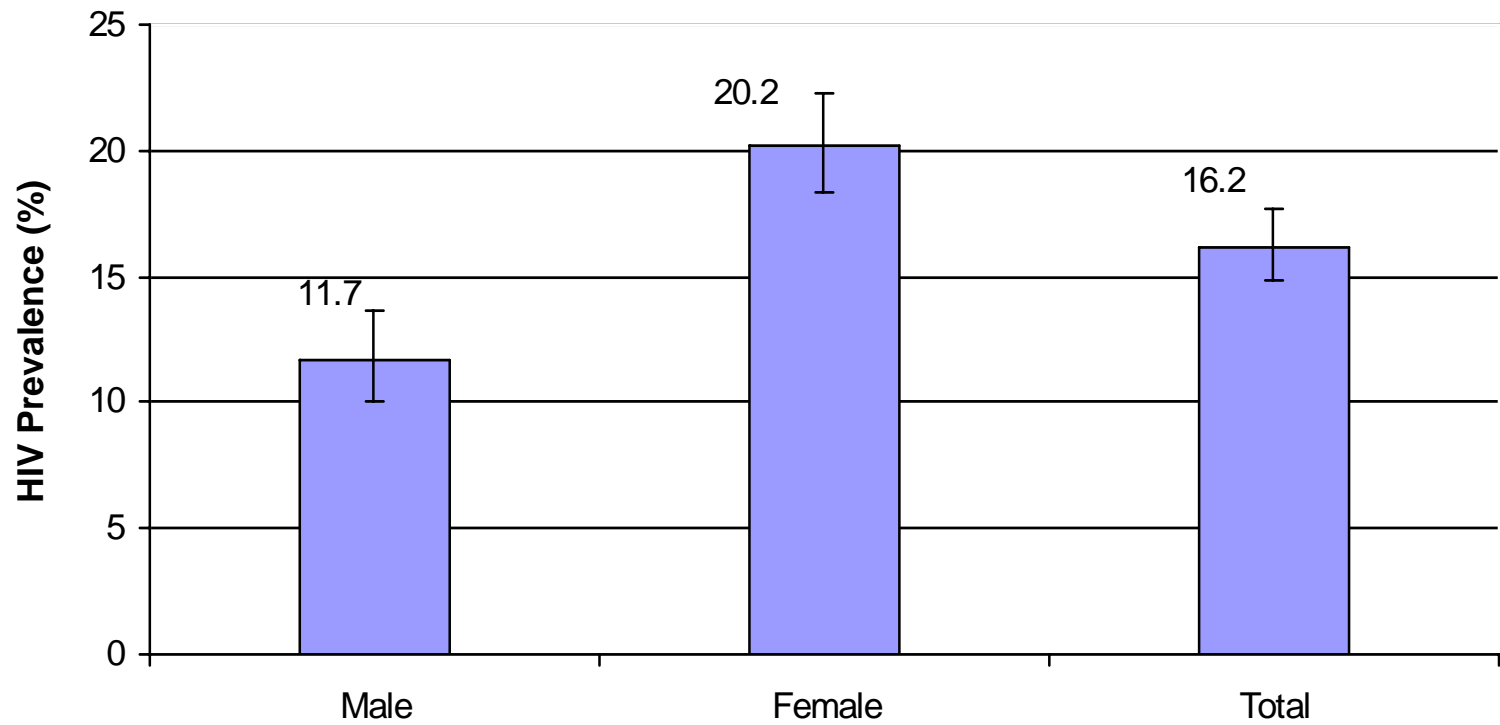
# HIV prevalence by province, $\geq 2$ : 2005



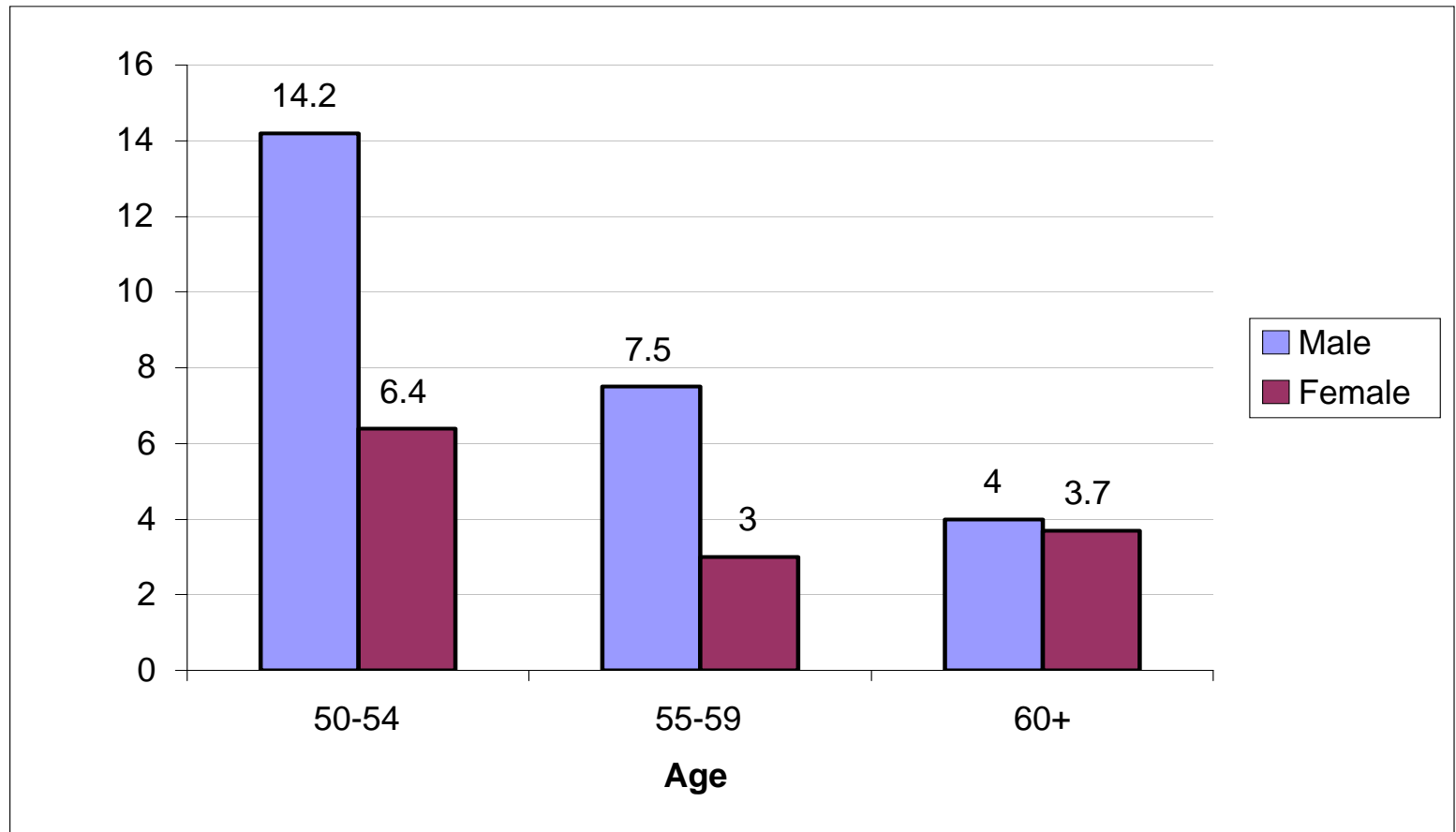
# HIV prevalence – youth 15-24 : 2005



# HIV prevalence – adults 25-49 : 2005



# HIV prevalence – adults $\geq 50$ : 2005



# Females 15-49 in 2005, compared to antenatal study 2004

Age group	African females 2005 • n=3,699	African females pregnant in the last 24 months 2005 • n=630	Antenatal survey 2004 n=15,976
	HIV+ % (n)	HIV+ % (n)	HIV+ % (n)
15 to 19	11.1 (766)	21.8 (58)	16.1 (3,130)
20 to 24	27.3 (819)	27.8 (215)	30.8 (4,991)
25 to 29	37.9 (435)	37.2 (126)	38.5 (3,702)
30 to 34	31.7 (454)	25.1 (98)	34.4 (2,510)
35 to 39	24.1 (458)	18.7 (84)	24.5 (1,261)
40 to 49	14.3 (767)	12.9 (49)	17.5 (382)
Total	24.4	26.8	29.5

# Estimation of HIV incidence

- New tests allow for identification of recent infection using blood samples (including from blood spots)
  - BED capture EIA
- Developed by Centers for Disease Control (CDC)
- Almost 16,000 specimens in survey allowed for identification of recent infection - ie. Past 180 days
- 181 samples with recent infection identified

# HIV incidence estimates : 2005

Age group	Number with recent HIV infection (past 6 months)	Estimate for annual HIV incidence in this group (weighted)
2 years and older	181	2.7%
Children (2-14)	11	0.9%
Youth (15-24)	70	3.3%
Males (15-24)	9	0.8%
Females (15-24)	61	6.5%
Adults ( $\geq 25$ )	100	3.6%
Male ( $\geq 25$ )	34	2.4%
Female ( $\geq 25$ )	130	6.3%

# Behavioural determinants

# Sexual debut

- Delayed onset of sexual activity (sexual debut) reduces incidence and prevalence of HIV in younger age groups
- Very few 12-14 year olds reported having had sex
- Amongst 15 year olds surveyed, 11.7% of males and 7.9% of females had previously had sex
- Amongst 20 year olds surveyed, 74.8% of males and 80.0% of females had previously had sex
- Of those who had not had sex before, 71% said they were not ready, and 22.9% said they were not interested in sex
- The current trend identified is that the average age of first sex is becoming younger with each generation

# Secondary abstinence

- Secondary abstinence refers to those individuals who have had sex before, but who have not had sex in the past year
- Secondary abstinence reduces HIV infection risk
- Secondary abstinence levels:
  - 23.0% of males and 20.0% of females aged 15-24
  - 9.8% of males and 21.3% of females aged 25-49
  - 30.3% of males and 71.3% of females aged  $\geq 50$

# Multiple sexual partnerships

- Having frequent sexual partner turnover, even if one is faithful to one's partner, increases HIV risk
- More than one partner in past year amongst those sexually active in past year:
  - 27% for males and 6% for females aged 15-24
  - 14.4% for males and 1.8% for females aged 25-49
  - 9.8% for males and 0.3% for females aged  $\geq 50$
- Overall rates were higher for informal settlements
  - 20.0% for males and 3.5% for females
- HIV prevalence for those with more than 1 partner in past year was higher
  - 20.6% for  $>1$  partner, 16.3% for 1 partner

# Age mixing

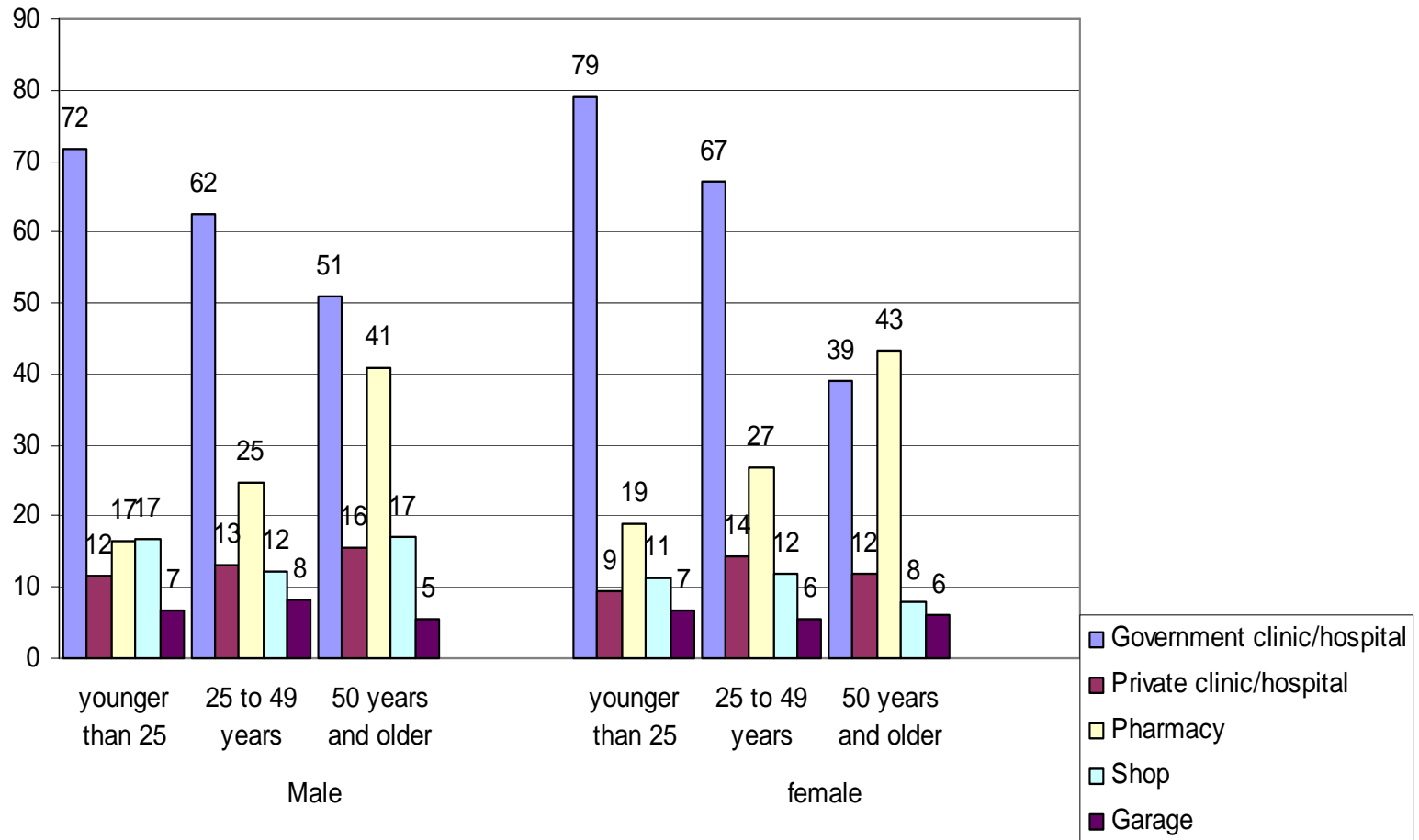
- Having a partner 5 years or older poses high HIV infection risk for youth, as it exposes them to a higher prevalence age group
- Only 2.0% of sexually active males aged 15-19 had female partners 5 or more years older
- 18.5% of sexually active females aged 15-19 had had male partners 5 or more years older
- HIV prevalence of 15-19 year olds
  - 29.5% for females with partner  $\geq 5$  years older
  - 17.2% for females with partner within 5 years of own age
  - 19.0% for males with partner  $\geq 5$  years older
  - 3.0% for males with partner within 5 years of own age

# Condom access and use

- Main source of condoms is the Department of Health's public sector condom programme
- Condom distribution has increased from 267 million in 2001 to 346 million in 2004

Condom Brand most recently used	%
Choice condom (government brand)	25.8%
Red ribbon (previous government brand)	17.9%
Lovers Plus (social marketing brand)	17.6%
Durex (commercial brand)	8.2%
Trust (social marketing brand)	3.4%
Other or don't know	27.2%

# Source of condoms



# Condom use at last sex

- Consistent condom use protects against HIV infection
- Condom use at last sex is used to measure uptake and impact of condom promotion programmes
- Reported condom use at last sex is high in South Africa
  - 38% of males and 32.8% of females  $\geq 15$  used a condom at last sex
  - 72.8% of males and 55.7% of females 15-24 used a condom at last sex
- Condom use rates are highest amongst Africans  $\geq 15$ 
  - 43.6% for males and 38.1% for females
- Rates for males were lowest amongst whites – 16.7%
- Rates were higher for those with  $>1$  partner in last year – 62.3%

# Contraception

- More than half (57%) of sexually active females 15-24 have never used contraception
- HIV prevalence amongst 25-49 year old females is high amongst non contraceptive users and injectable contraception users

Method used by 25-49 year old females	n	HIV+ %
Never used any contraceptive	934	22.6%
Not currently using any method	865	21.5%
Contraceptive pill	303	16.0%
Contraceptive injection	564	21.1%
Female sterilisation	287	13.3%

# Perceived vulnerability to HIV infection

- 66% of respondents think they are at not at risk for HIV
- 20.8% of those who thought they were at high risk were found to be HIV positive
- 51% of HIV positive respondents thought they would probably or definitely not get infected with HIV

# HIV testing

- Most people aware of VCT services nearby (78.8%)
- Of those who have never been tested for HIV, 12.8% are HIV positive
- Of those ever tested, over one third were tested in the past year
- Only 4.6% of those tested in government facilities were neutral or unsatisfied with the service
- Most people were tested because they wanted to know their HIV status, but other reasons included applying for insurance, being pregnant, or feeling ill
- The main reason for not testing was a perception of low risk to HIV infection

# HIV/AIDS knowledge and awareness

- Overall basic HIV/AIDS knowledge is high, and levels of condom use and VCT service uptake are also an indication of good awareness
- There are however gaps in knowledge:
  - Uncertainty about HIV causing AIDS
  - Uncertainty about a cure for AIDS
  - Uncertainty about condoms preventing HIV infection
  - Uncertainty about HIV transmission from mother to child
- High degree of uncertainty that having fewer sexual partners reduces HIV risk
- Awareness of Antiretrovirals is high, beliefs that AIDS can be cured persist
- Knowledge of research on vaccines low

# HIV/AIDS attitudes

- Overall positive perceptions towards people living with HIV/AIDS
- 90.7% are willing to care for a family member with AIDS
- 79.8% feel HIV+ children should *not* be kept separate from other children to prevent infection
- 74.7% believe it is *not* a waste of money to train or promote an HIV+ person
- 46.5% say it is *not* foolish to marry a person with HIV/AIDS
- 46.8% would have a problem having protected sex with an HIV+ person

# HIV/AIDS Communication

- Overall access to mass media is high – but only 83% of households had a working radio and 70% had a working television
- Radio and television access a few days a week or more is high >60%
- Newspaper and magazine access is low <40%
- Internet access is very low
- Radio and television emphasised in relation to taking HIV/AIDS seriously
- Knowing people who have died of AIDS, talking to friends and AIDS statistics also stimulate sense of seriousness

# National HIV/AIDS Campaigns

- Campaigns and programmes contribute to overall knowledge and awareness and impact in some areas (eg. Condoms, VCT)
- Measured awareness of campaigns, *not* impact
- Differ in terms of goals, scale and budgets
- Khomanani found to have lower reach than others
- Soul City highest overall, followed by loveLife and Soul Buddyz
- TV series, Takalani Sesame, Gazlam and Tsha Tsha had high awareness relative to budget
- All interventions have poor awareness amongst  $\geq 50$  age group
- Overall, most interventions have low reach into rural areas

# Other sources of HIV/AIDS information

- Health facilities most important overall for all age ranges and locales
- Schools perceived as useful for youth audiences
- Friends and other family important
- Workplaces useful over half of employed persons
- Parents important to around a third of youth age groups
- Faith-based organisations important for more than a third of all age groups
- Traditional healers rated relatively low

# Other sources of HIV/AIDS information

- Health facilities most important overall for all age ranges and locales
- Schools perceived as useful for youth audiences
- Friends and other family important
- Workplaces useful over half of employed persons
- Parents important to around a third of youth age groups
- Faith-based organisations important for more than a third of all age groups
- Traditional healers rated relatively low

# Mental health and HIV/AIDS

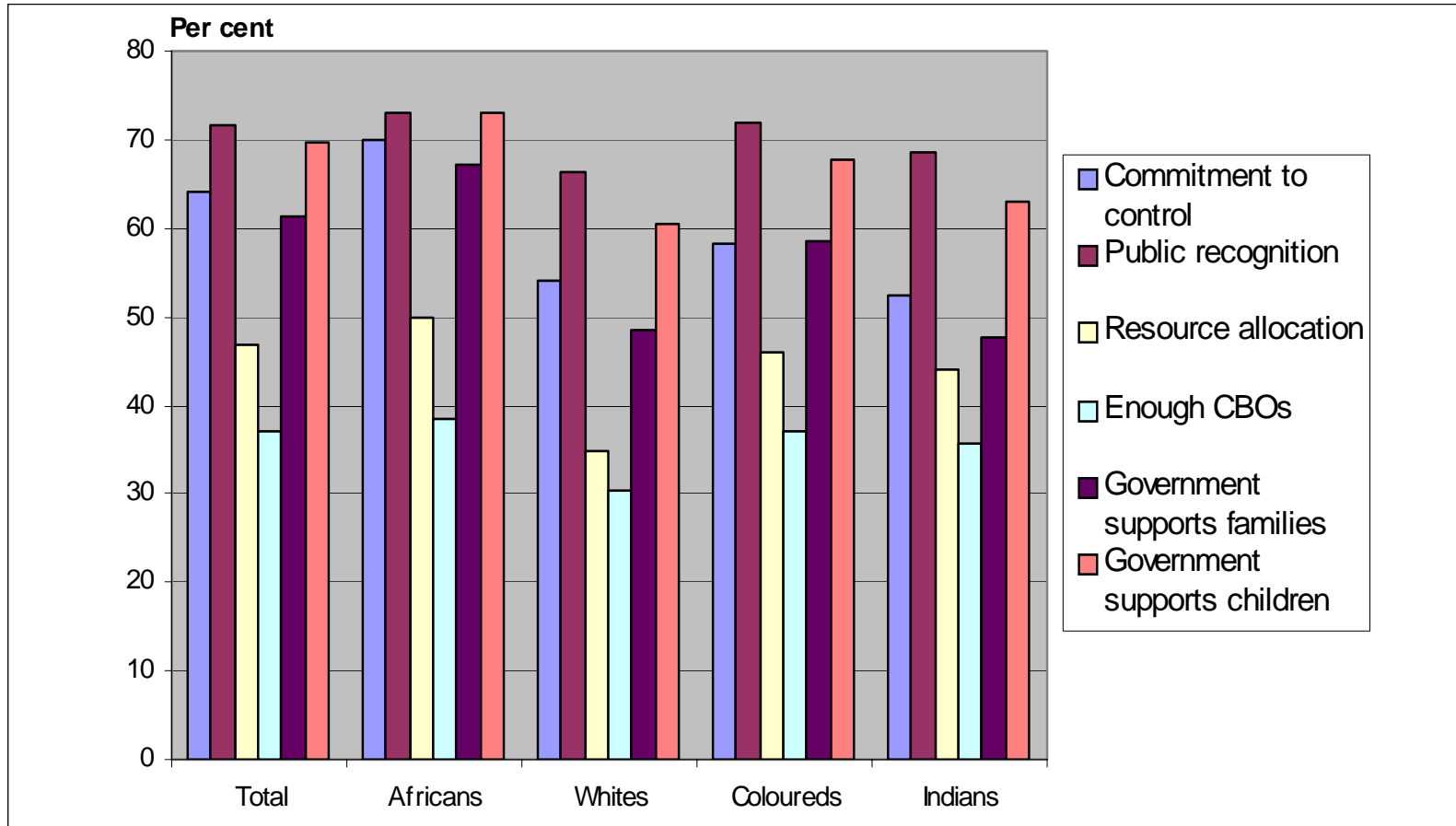
- Mental health of PLHA is an under-explored area
- Problems include depression, anxiety and fear of stigma
- Questions compared perceptions of HIV positive and negative respondents who knew their status
- Amongst HIV+, 41% felt sad empty or depressed, compared to 29.6% of HIV-
- Overall higher rates of sleeping, eating and anxiety problems

# Orphans

- Orphaning exacerbated by HIV/AIDS
- 2005 Estimate of Orphans in SA: 2.5 million
- Estimates are that there are 455,970 maternal orphans and that there are 330,125 double orphans
- 2.6% of children 12-18 identified themselves as heads of households

	Orphans % (n)	Maternal Orphans % (n)	Paternal Orphans % (n)	Double Orphans % (n)
Total	15.9 (1 277)	5.3(431)	12.4 (978)	2.0 (132)
Males	15.7 (588)	5.4 (209)	12.2 (445)	2.0 (66)
Females	16.1 (689)	5.2 (222)	12.8 (533)	2.0 (66)

# Perceptions of government



# Perceptions of hypothetical AIDS tax

- Some degree of willingness amongst employed persons to pay and AIDS tax

Race	n	%
African	4,594	51.4%
Coloured	1,636	53.1%
Indian	1,096	36.4%
White	1,312	30.0%

# Conclusions

- HIV prevalence has levelled off
- Females significantly more vulnerable to infection and incidence levels are high amongst children, women, youth, and younger adults and pregnant women
- HIV prevalence amongst people  $\geq 50$  confirmed
- Behavioural response is positive and increasing in relation to condoms and VCT
- Partner turnover is high and not perceived as a major risk
- Early sexual debut and sex with older partners are major risk factors for youth
- Good response in relation to non-stigmatising attitudes and involvement in community-level activities

# Recommendations

- Still a false sense of security needs to be addressed
- Reduction in stigma provides opportunity for HIV disclosure and community action
- Integration of family planning and HIV/AIDS
- Women encouraged to increase condom use
- Periodic HIV testing is crucial
- Young people should be encouraged to delay sexual debut
- Sexually active youth should avoid older partners
- Avoid high partner turnover and concurrent sexual partnerships
- Getting treated for STIs and never having sex when one has STIs

# Recommendations

- Warn older South Africans that they too are at risk of HIV
- HIV infection among children is real and needs emphasis
- Include children and older people in surveillance and modelling the HIV/AIDS epidemic
- Safe male circumcision is vital to prevent HIV in South Africa
- Positive Prevention is an important tool for HIV prevention
- Refocus communication strategy to expand areas of focus
- Study implications of ARVs
- Investigate dedicated tax for HIV/AIDS