



*HIV Prevalence Survey 2008 (and  
Educators Study 2005): Implications  
for the Department of Basic  
Education?*

**Presenter: Prof LC Simbayi  
Executive Director,  
Social Aspects of HIV/AIDS & Health  
HSRC, Cape Town**

**Presentation to the National Department of Basic  
Education's Seminar Series held at Sol Plaatjie  
House in Pretoria on 15 June 2010.**

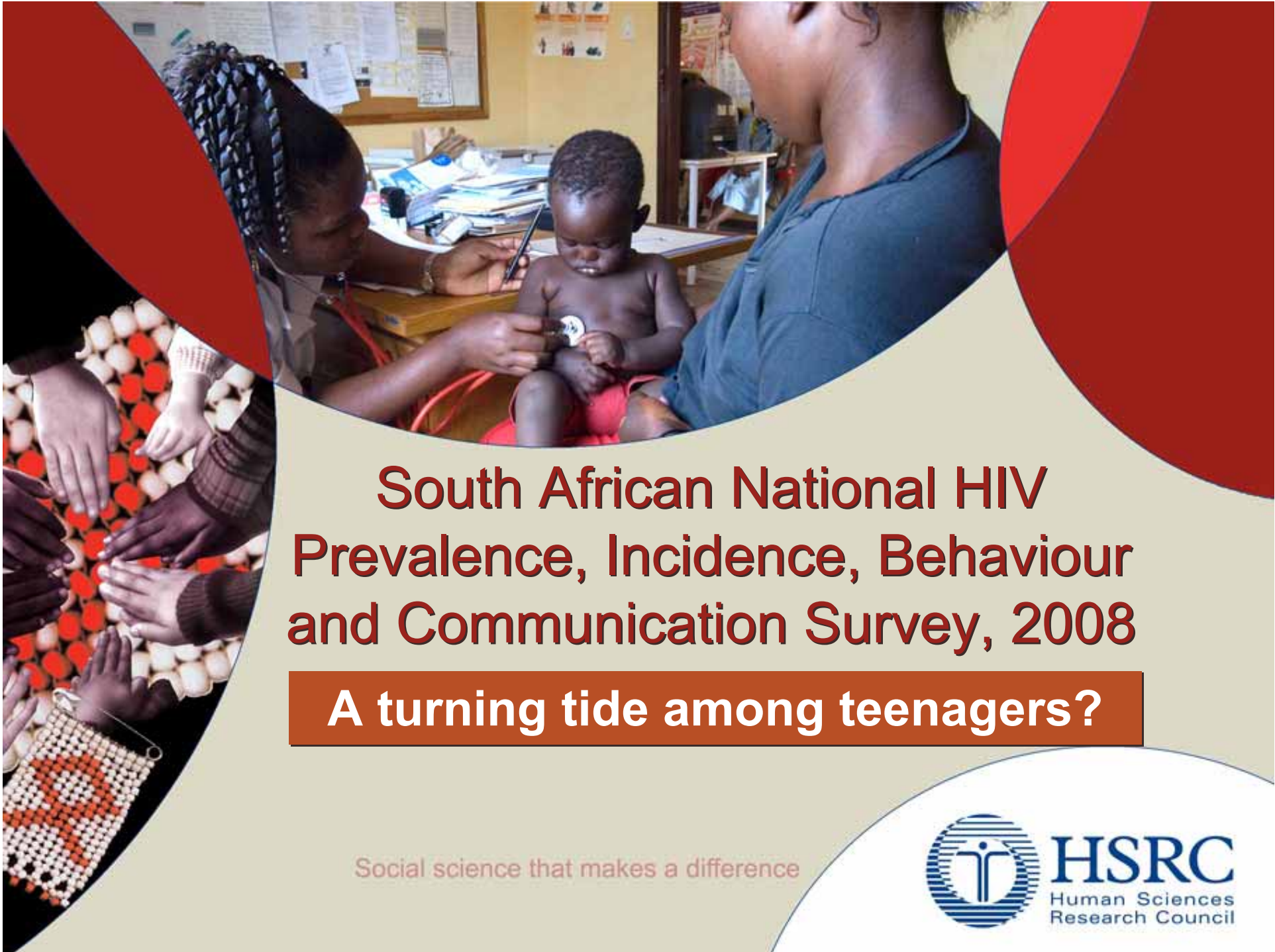
Social science that makes a difference





# Outline of seminar

- **Part I: Presentation of HIV Prevalence Survey 2008 results**
- **Discussion**
- **Part II: Presentation of some ELRC Educators Study 2005 results**
- **Discussion**
- **General discussion**
- **Conclusions and way forward**



# South African National HIV Prevalence, Incidence, Behaviour and Communication Survey, 2008

**A turning tide among teenagers?**

Social science that makes a difference

# Outline of the presentation



- **Objectives of the report**
- **Ethics**
- **Results**
- **Conclusions**
- **Recommendations**
- **Methods**

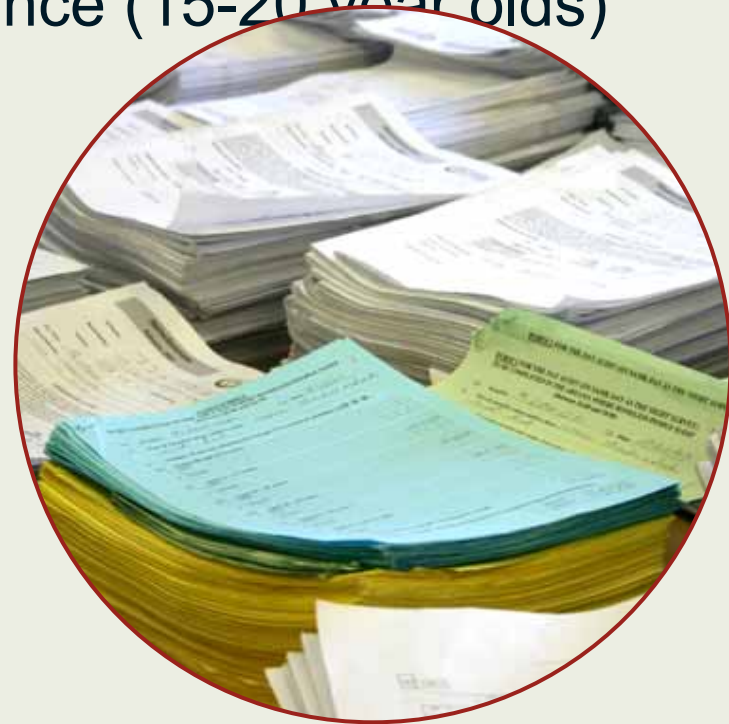


# Objectives of the report

- To present data for mid-term review of SA NSP 2007-2011
- To describe trends in HIV prevalence, HIV incidence, and risk behaviour in SA 2002-2008
- To assess exposure to major national HIV communication programmes
- To propose indicators to be used to monitor the South African HIV & AIDS epidemic and its management

# Results

- Response analysis
- Prevalence and incidence (15-20 year olds)
- Behaviour
- Knowledge
- Communication



# Response analysis

## *Household Response Rate*

- Of the 15 000 households (visiting points) sampled, 13 440 were valid, occupied households. 1 560 visiting points were invalid or clearly abandoned households/visiting points.
- Of the valid 13 440 households/visiting points, 10 856 (80.8%) were interviewed.

## *Individual Interview Response Rate*

- In the 13 440 valid visiting points/households that agreed to participate in the survey.

# Response analysis (contd)

## *Individual Interview Response Rate (contd)*

- 23 369 individuals (no more than 4 per household, including infants under 2 years) were eligible to be interviewed.
- A total of 20 826 individuals (**89.1%**) completed the interview.

## *HIV Testing Response Rate*

- Of the 23 369 eligible individuals, 15 031 (**64.3%**) agreed to provide blood specimen for HIV testing and were anonymously linked to the behavioural questionnaires.
  - **5 795 (24.8%) who were interviewed but refused HIV testing**



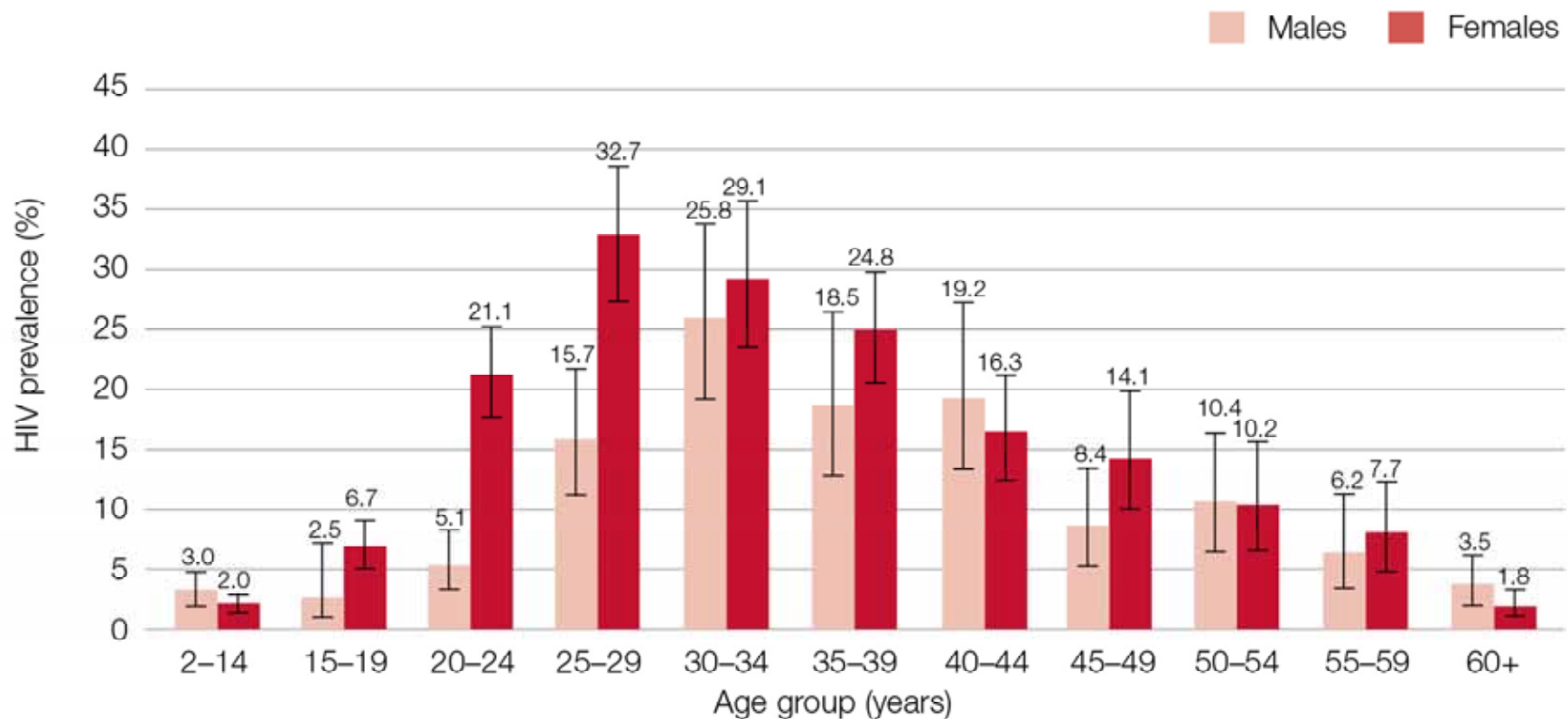
# HIV Prevalence and Incidence Results



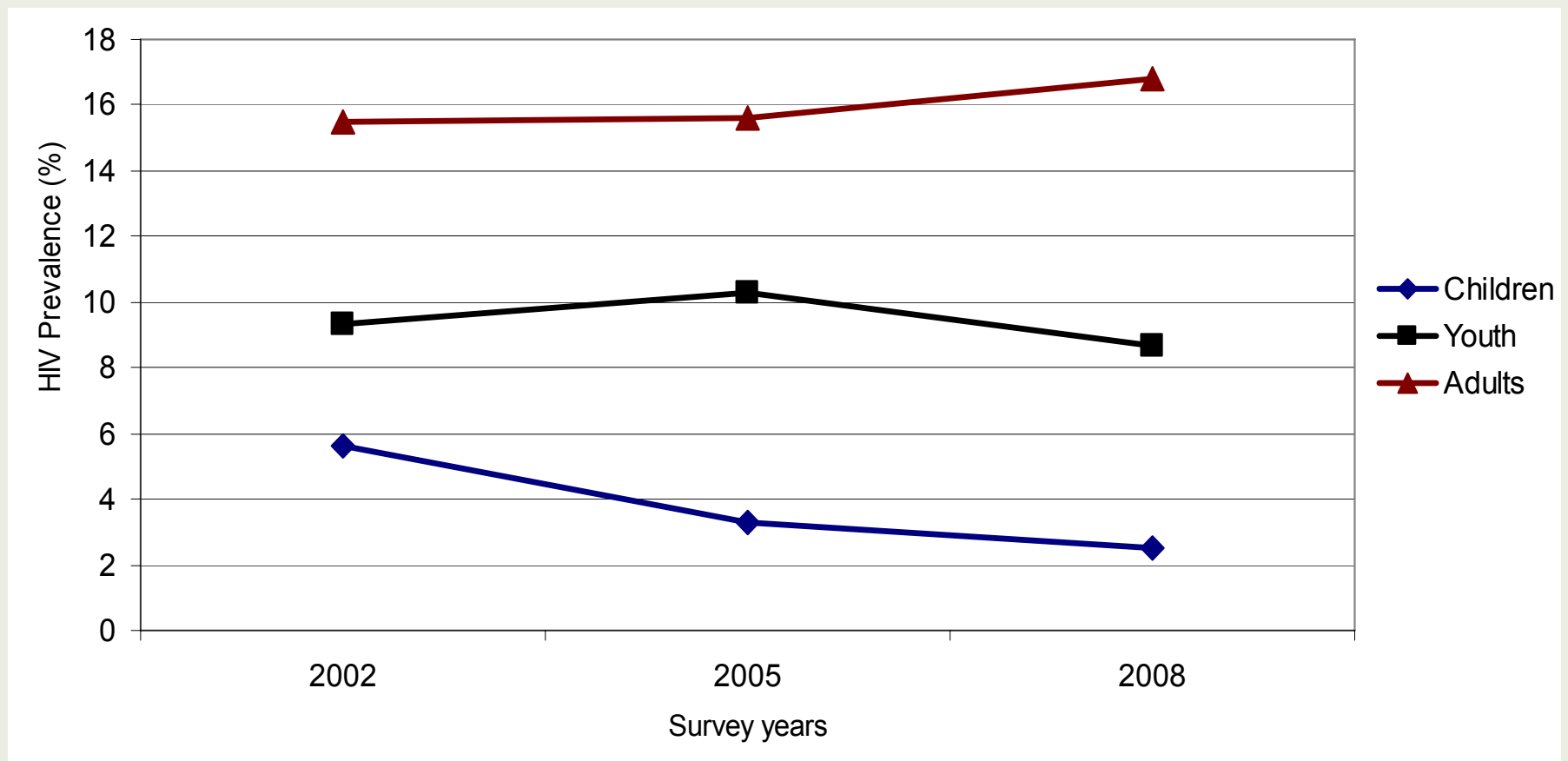
# HIV Prevalence

Year	HIV Prevalence (%)	95% CI
2002	11.4	10.0-12.7
2005	10.8	9.9-11.8
2008	10.9	10.0-11.9

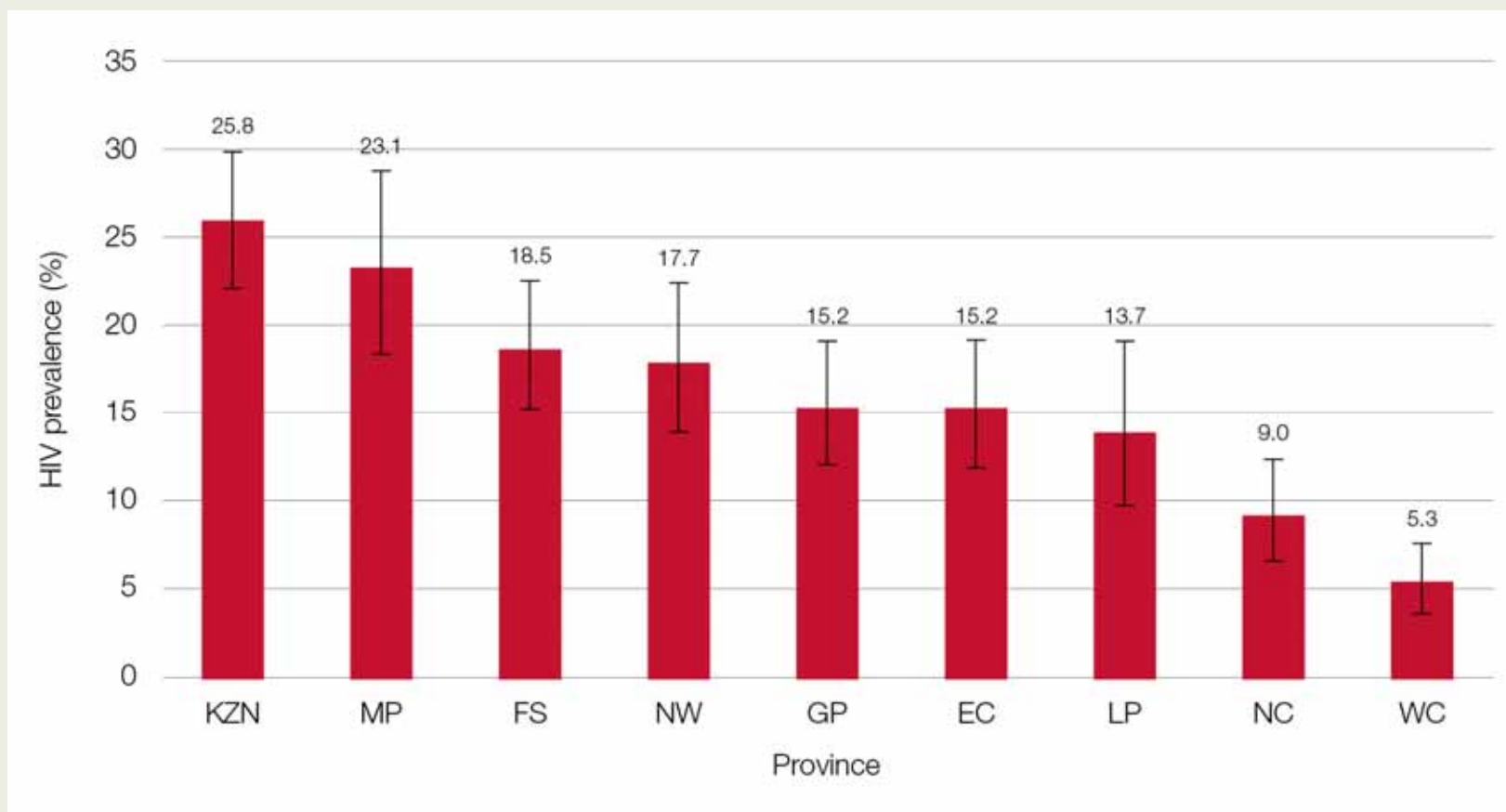
# HIV prevalence, by sex and age, South Africa, 2008



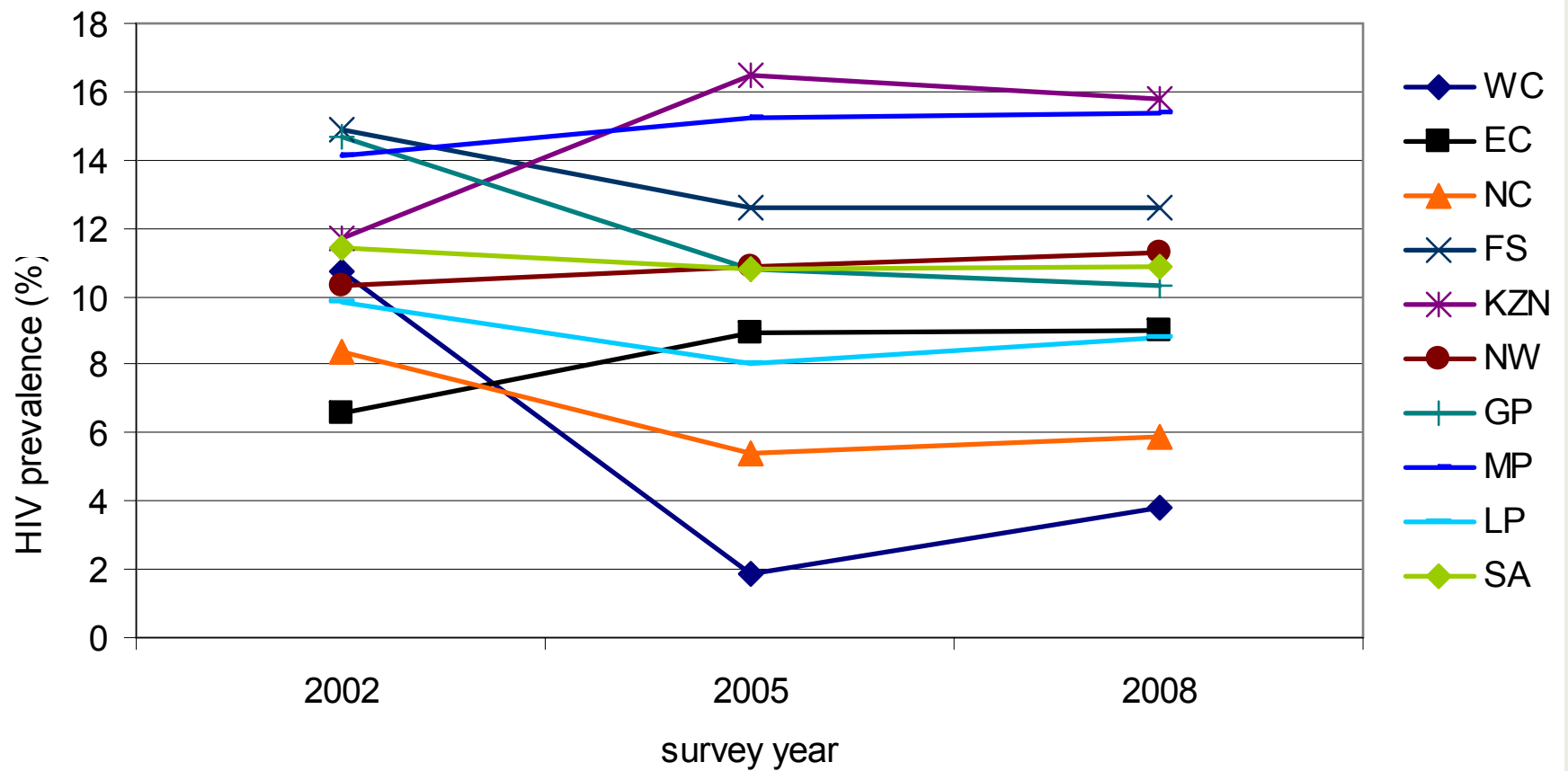
# Trends in HIV prevalence (%) by age, 2002-2008



# HIV prevalence among 15 - 49 year olds by province, South Africa 2008



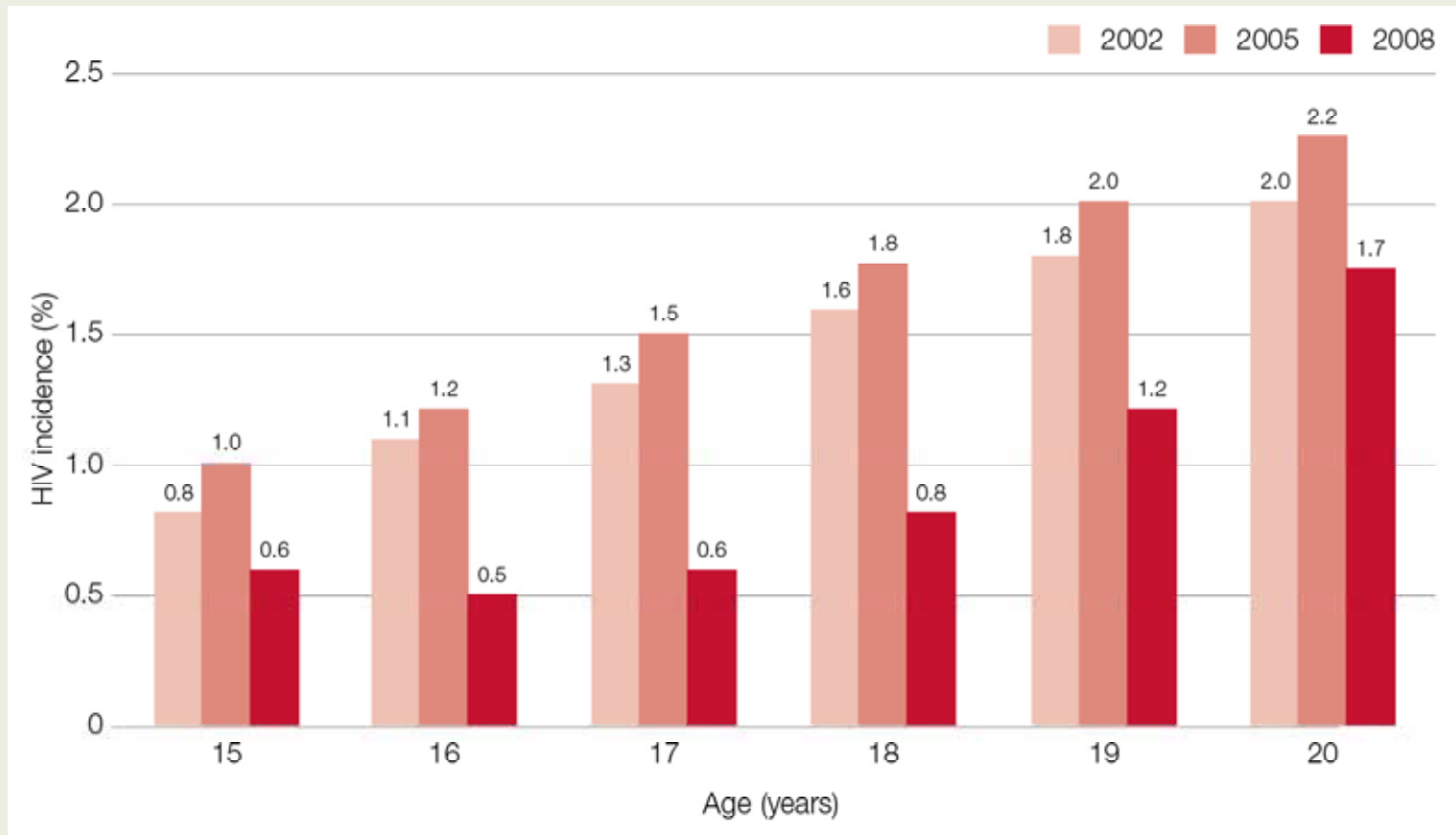
# HIV prevalence by province, South Africa 2002-2008



# HIV prevalence among the most-at-risk populations, South Africa 2008

Most-at -risk population	n	HIV + %	95% CI
African females 20-34	1395	32.7	29.7-36.0
African males 25- 49	944	23.7	20.1-27.7
Males 50 years and older	946	6.0	4.4-8.1
Men who have sex with men	86	9.9	4.6-20.2
People who are high-risk drinkers	965	13.9	10.4-18.2
Persons who use drugs for recreational purposes	490	10.8	7.2-15.8
People with disabilities	458	14.1	9.9-19.6

# Comparison of HIV incidence among 15 - 20 year olds, South Africa 2002, 2005 and 2008

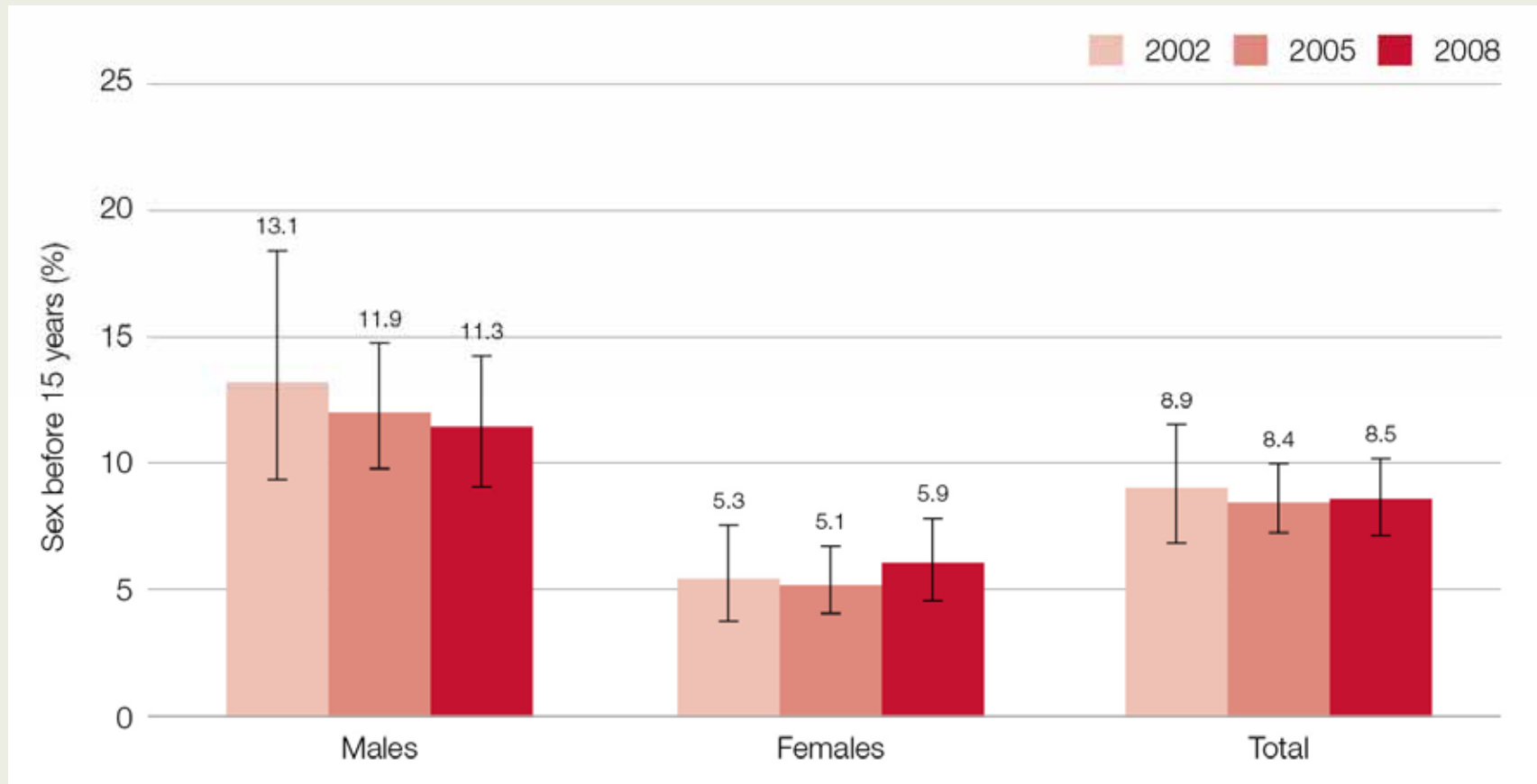




# Behavioural Results



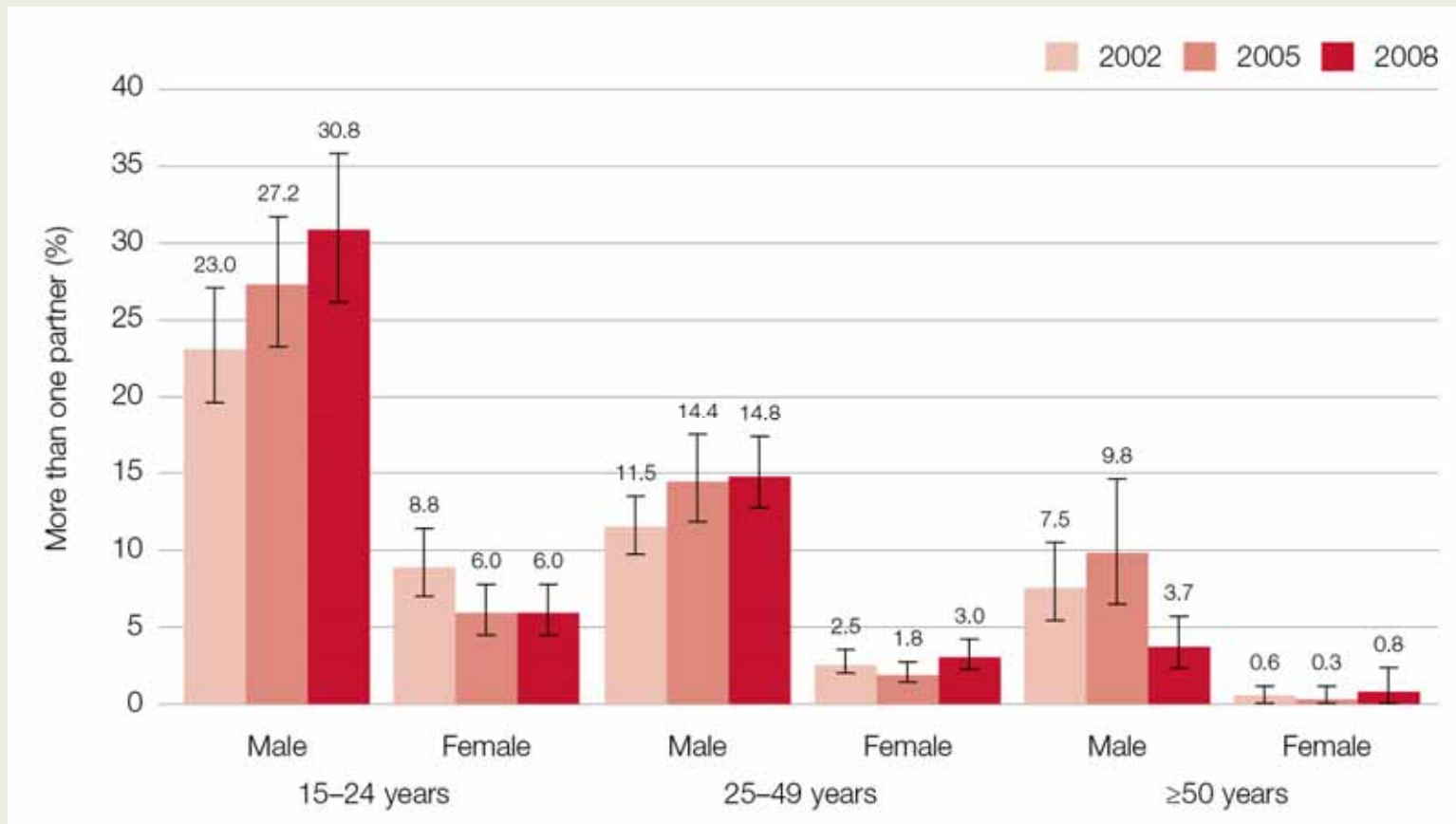
# Sexual debut by sex among 15-24 year olds, South Africa 2002, 2005 and 2008



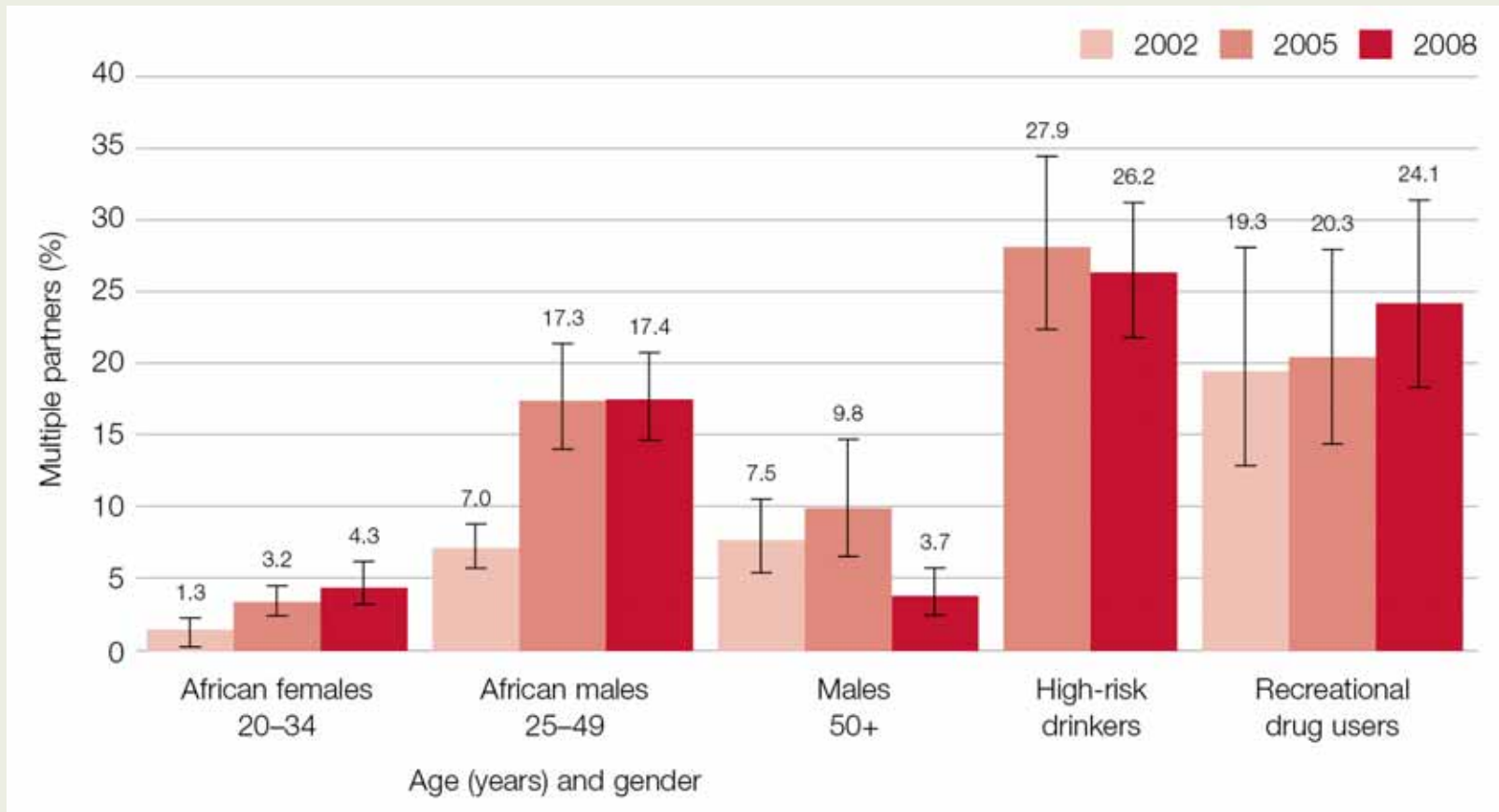
## Intergenerational sex among 15-19 year olds, South Africa 2005 and 2008

<b>2005</b>	<b>Within 5 years of own age (%)</b>	<b>Partner is 5+ years older (%)</b>
Male	98.0	2.0
Female	81.4	18.5
Total	90.4	9.6
<b>2008</b>		
Male	98.5	0.7
Female	72.4	27.6
Total	85.1	14.5

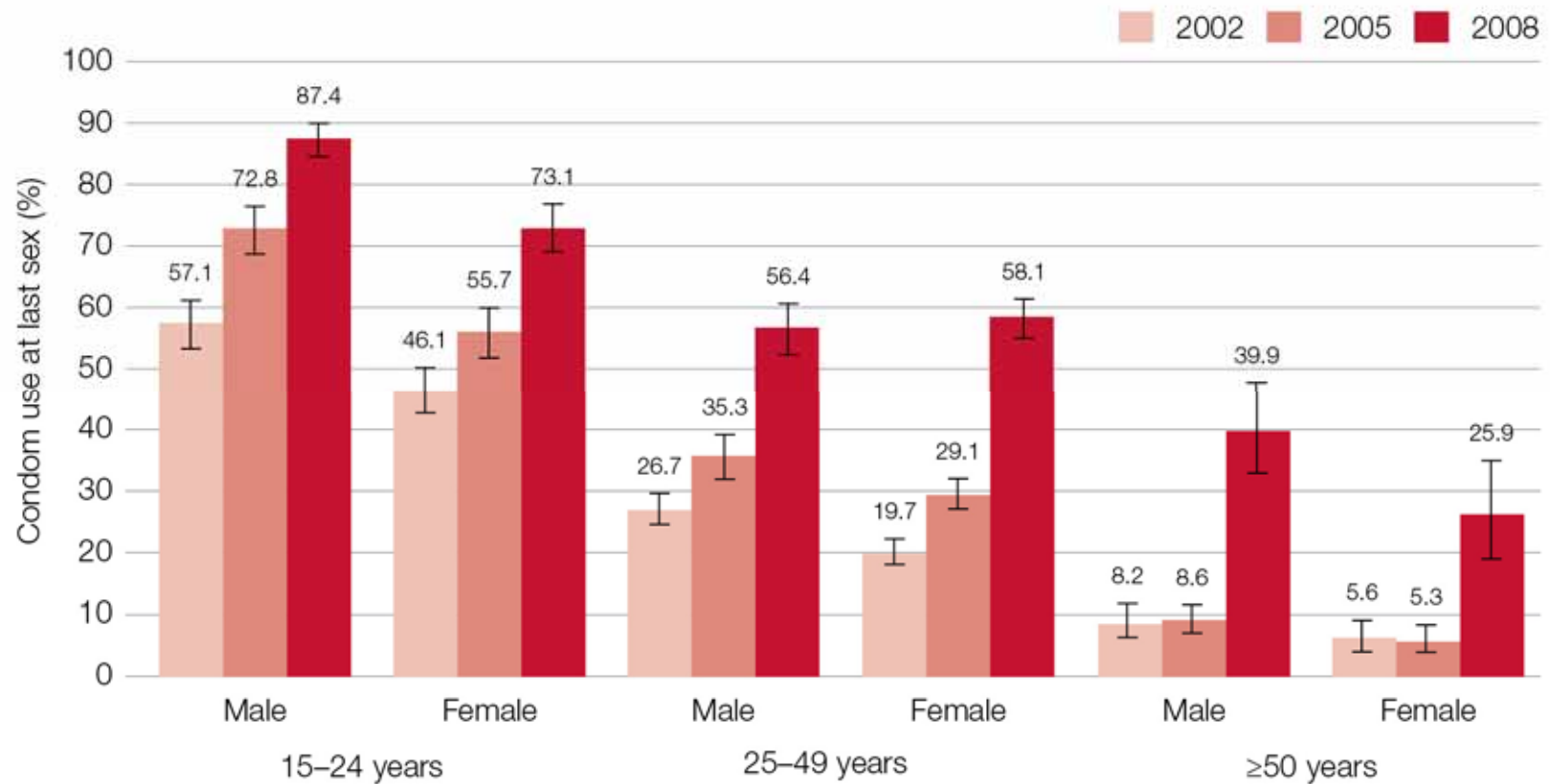
# Multiple sexual partners, South Africa 2002, 2005 and 2008



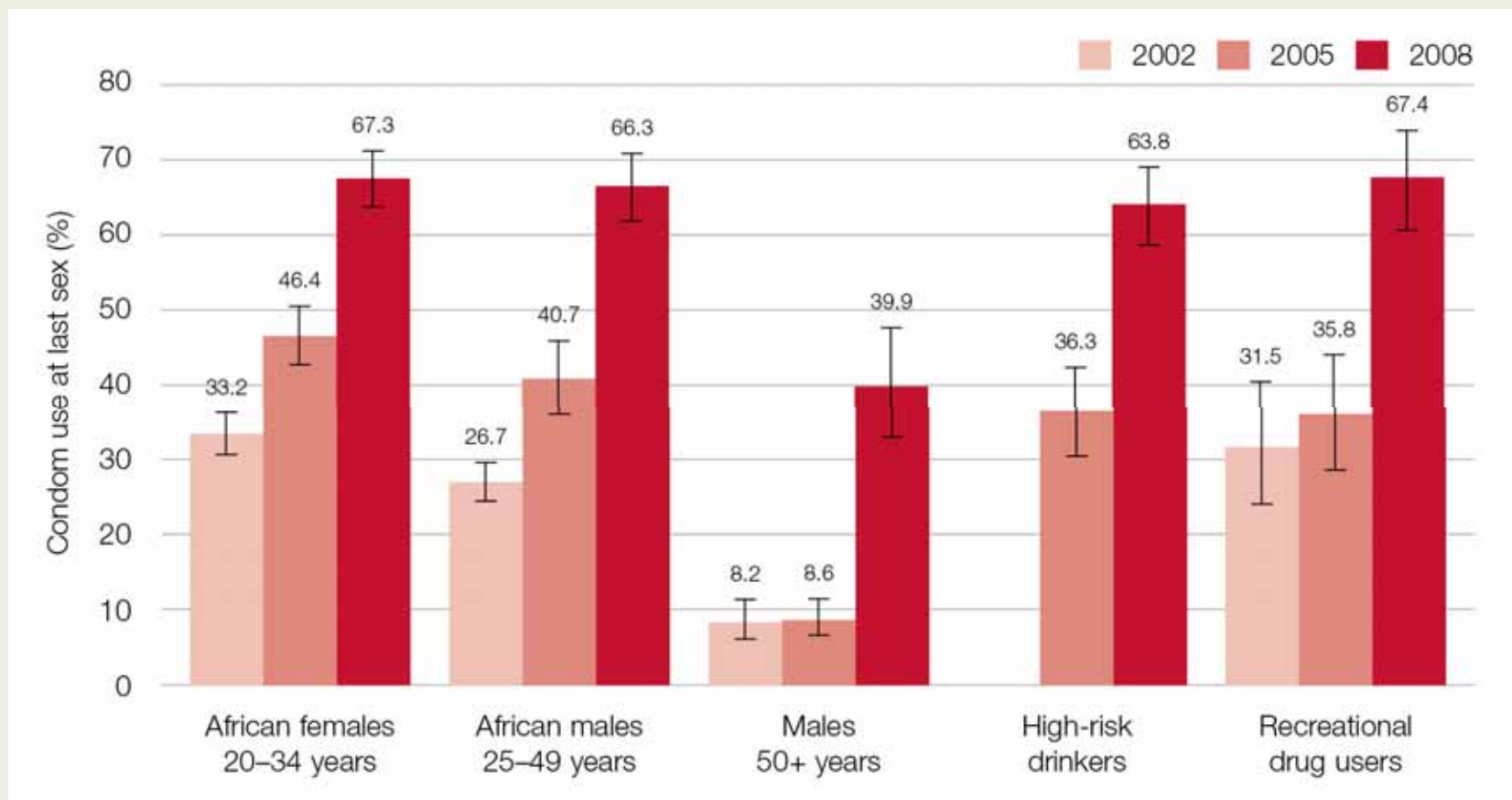
# Most-at-risk population with multiple sexual partners, South Africa 2002, 2005 and 2008



# Condom use by age group and sex, South Africa 2002, 2005 and 2008



# Condom use by most-at-risk populations at last sex, South Africa 2002, 2005 and 2008



# Respondents aged 15 years and older who ever had an HIV test, South Africa, 2002, 2005 and 2008

<b>2002</b>	<b>Yes %</b>
Male	21.4
Female	21.4
Total	21.4

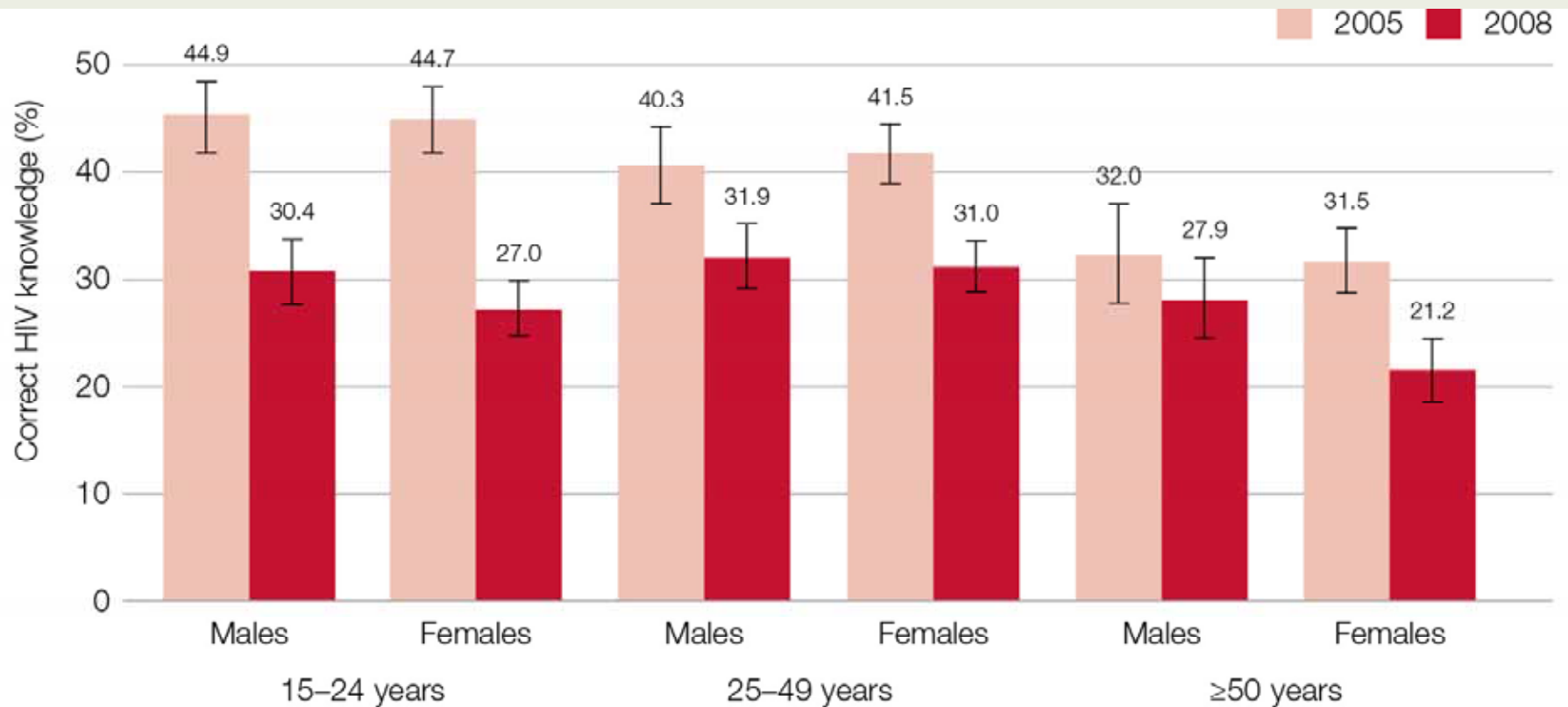
<b>2005</b>	
Male	27.6
Female	32.9
Total	30.5

<b>2008</b>	
Male	43.0
Female	56.7
Total	50.8



# HIV knowledge by sex and age group, South Africa 2005 and 2008



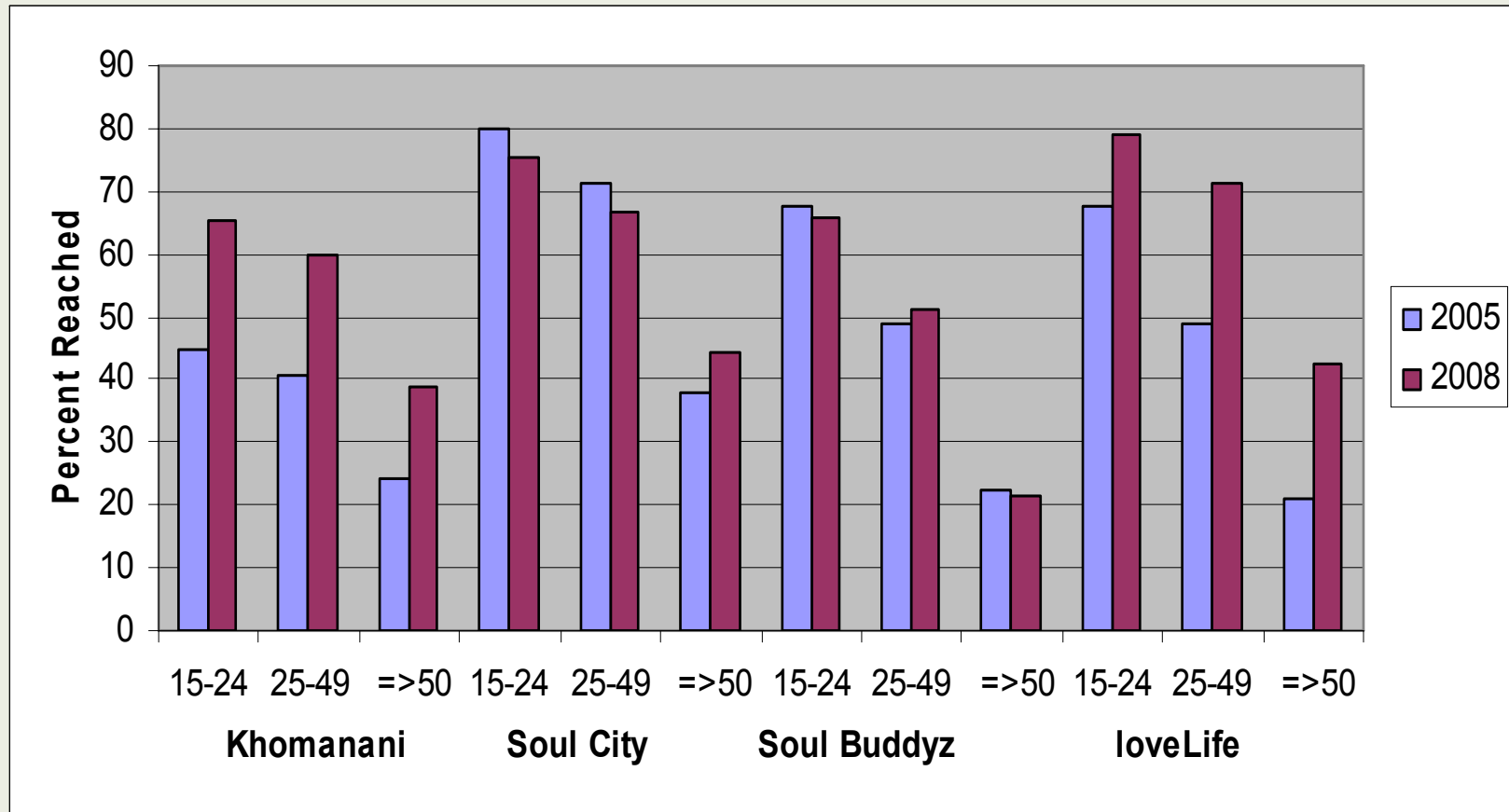
# Exposure to HIV Communication Programmes



## Reach of HIV/AIDS communication by age, South Africa, 2005 and 2008

Age	2005(%)	2008(%)
Youth (15-24 years)	86.3	90.2
Adults (25-49 years)	77.8	83.6
Adults ( $\geq 50$ years)	47.2	62.2
Total	74.0	80.9

# Reach of HIV/AIDS communication by programme and age, South Africa 2005 and 2008



# Conclusions: successes

- Reduction in HIV prevalence among children
- Reduction in the new infections among teenagers aged 15 to 19 years
- Slight reduction of HIV in the youth
- Increased awareness of HIV sero-status
- Substantial increase of condom use among youth and all other age groups
- Increase in the population reached by communication programmes



# Conclusions: challenges

- Continued rising HIV prevalence among adults in KwaZulu-Natal and Eastern Cape
- HIV prevention knowledge has declined- Multiple sexual partners
- Khomanani campaign has a low reach compared to the other programmes





## Suggested new additional MARPs country specific indicators

- African females aged 20-34 years
- African males aged 25-49 years
- Males older than 50 years
- People who are high risk drinkers
- People with disabilities

# Recommendations

- 1. Need for targeted interventions programmes, particularly in KZN, Mpumalanga and Eastern Cape**
- 2. Need for programmes to help people to have pregnancy without risking HIV**
- 3. Implement anti-multiple and intergenerational sexual partnerships like community driven anti-smoking campaigns**
- 4. Address high sexual partner turnover and intergenerational sex by changing community norms**





# Recommendations cont'd

- 5. Implement provider-initiated routine HIV testing in all health care facilities**
- 6. Increase communication programme reach**
- 7. Define country specific indicators including MARPs**



# Methods

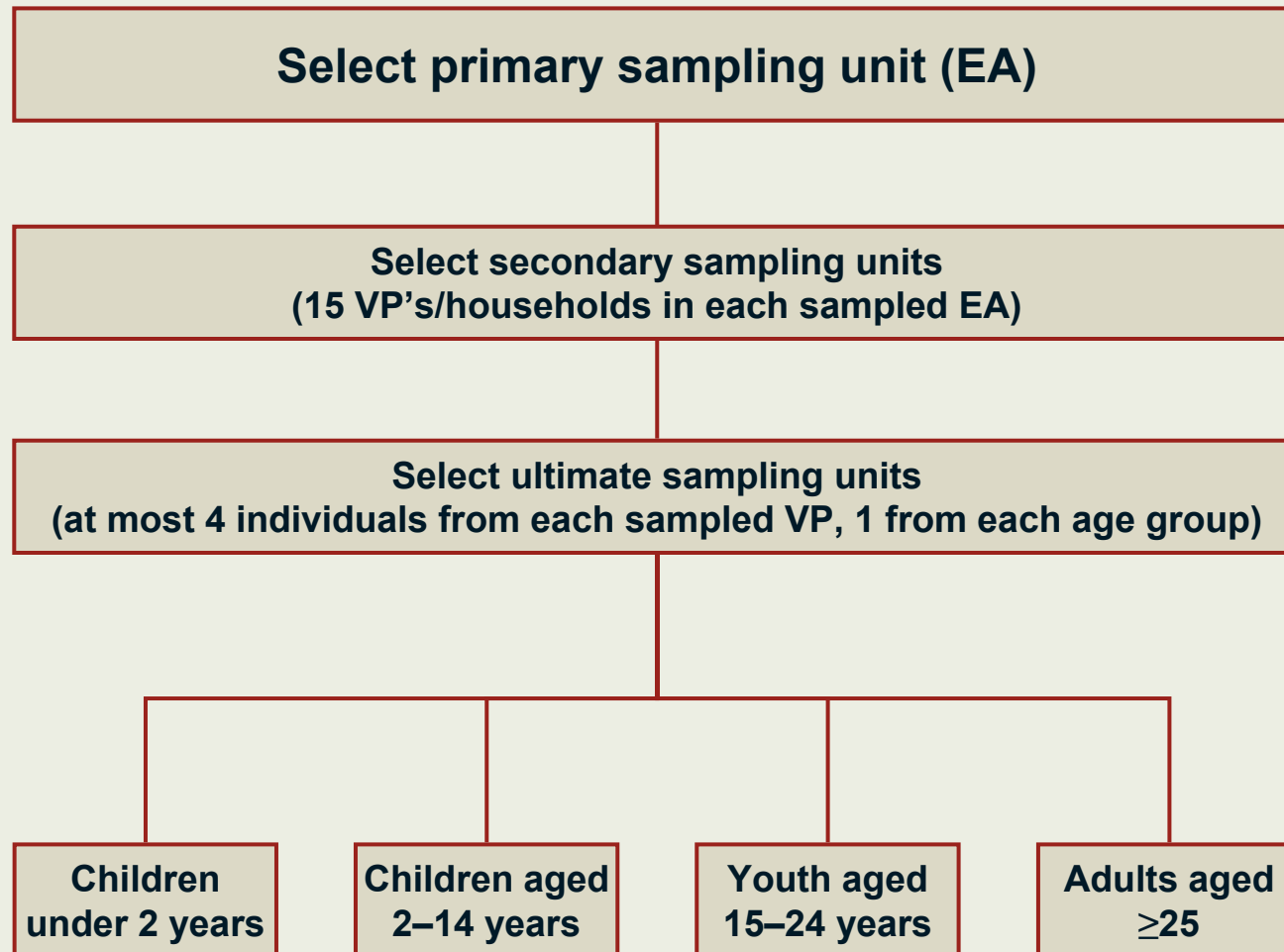
- **Study Design:** Cross-sectional national population survey
- **Population:** All in 2008; 2002 & 2005:  $\geq 2$  years
- **Sampling:** a multi-stage disproportionate, stratified sampling approach, 1000/86 000 EA
- Mapped the EAs

# 2007 Master Sample used in 2008





# Sampling participants



# Questionnaires

1. Visiting Point Questionnaire
2. Questionnaire for parent/guardian of children aged under 2 years
3. Questionnaire for parent/guardian of children aged 2-11 years
4. Questionnaire for children aged 12-14 years
5. Youth Questionnaire for persons aged 15-24 years
6. Adult Questionnaire for persons aged  $\geq 25$  years



# Blood specimens



- DBS specimens taken
  - Tested for HIV antibodies – prevalence
    - Confirm all positives
    - Confirm 10% of negatives
- Used BED for incidence (not reported in this study)
- Detected ARVs (also not reported in this presentation)

# Ethics



- Ethics approval
  - HSRC's Research Ethics Committee (REC 2/23/10/07)
  - US Centres for Disease Control and Prevention (CDC) Global AIDS Programme's Human Subjects Review
- Informed consent and child assent
- Linked anonymous HIV testing



# Funded by

US Centers for Disease Control and Prevention (CDC)  
through Funding Opportunity Announcement Number:

CDC-RFA-PS06-614

(Catalog of Federal Domestic Assistance Number:  
93.067) Program to Improve Capacity of an Indigenous  
Statutory Institution to Enhance Monitoring and  
Evaluation of HIV/AIDS in the Republic of South Africa  
as Part of the President's Emergency Plan for AIDS  
Relief (PEPFAR)



# Research consortium

- Human Sciences Research Council (HSRC)
- Medical Research Council (MRC)
- Centre for AIDS Development, Research and Evaluation (CADRE)
- National Institute for Communicable Diseases (NICD)





## Reference source

Shisana, O., Rehle, T., **Simbayi, L. C.**, Zuma, K., Jooste, S., Pillay-van-Wyk, V., Mbelle, N., Van Zyl, J., Parker, W., Zungu, N. P., Pezi, S., & The SABSSM III Implementation Team. (2009). *South African national HIV prevalence, incidence, behaviour and communication survey 2008: A turning tide among teenagers?* Cape Town: HSRC Press

Is available for downloading free of charge from [www.hsrc.ac.za](http://www.hsrc.ac.za) or [www.hsrcpress.ac.za](http://www.hsrcpress.ac.za).

# Study of determinants of supply of and demand for Educators in Public Schools

## “Education for Life Project”

**Presenter: Prof LC Simbayi**  
Project Scientific Director & Research Director, HSRC

**Principal Investigator: Dr Olive Shisana**  
Executive Director, HSRC

*Funded by*





# Introduction

- In 2004, the ELRC commissioned the HSRC, MRC and MTT on behalf of the unions and DoE to investigate several issues including, among others, what impact does health have on the attrition of educators?
- The study focused on, among other issues, HIV/AIDS in both primary and secondary public schools and students training to be teachers both at universities and in FET colleges.
- In 2005, we released a set of eight different reports including one which focused on HIV/AIDS.



# The Health of our Educators

A focus on HIV/AIDS in South African public schools

Edited by O Shisana ScD, K Peltzer PhD, N Zungu-Dirwayi MA and J Louw BA



Report funded by and prepared for the  
Education Labour Relations Council



# The Health of our Educators

A focus on HIV/AIDS in South African public schools

PUBLIC SCHOOLS SURVEY 2004/5

Edited by O Shisana ScD, K Peltzer PhD, N Zungu-Dirwayi MA and JS Louw MA

Report prepared for the  
Education Labour Relations Council



**elrc**

EDUCATION LABOUR  
RELATIONS COUNCIL

Report prepared by a research consortium  
comprising the Human Sciences Research Council  
and the Medical Research Council of South Africa



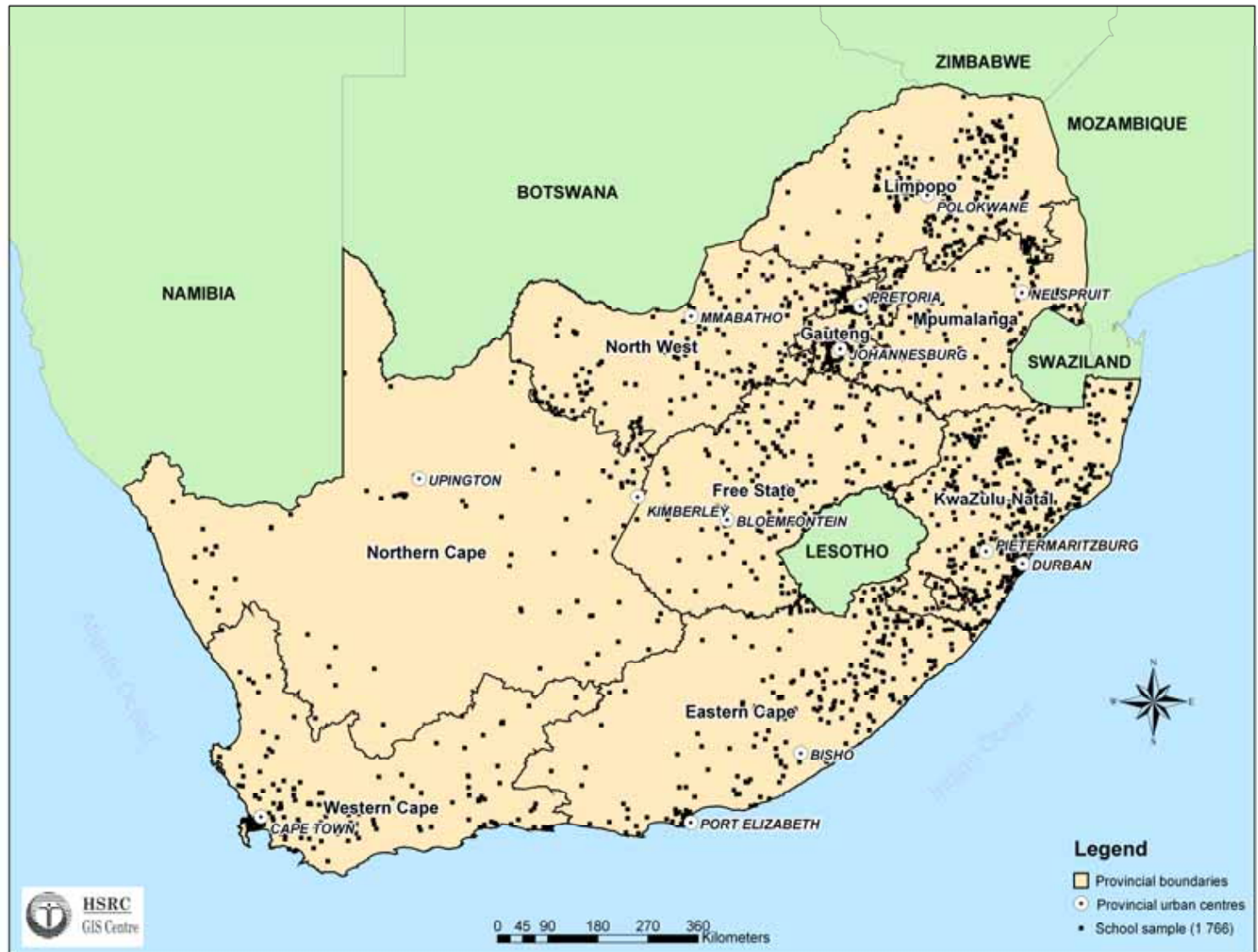
HUMAN SCIENCES  
RESEARCH COUNCIL



# Methodology

- National survey: random selection of 1 766 schools out of 26 713 schools
- 21 358 educators were present on research day
- 97% agreed to be interviewed; 83% gave a specimen for HIV testing
- Questionnaires: institutional and individual
- HIV test: choice of blood or oral; CD4 count
- Anonymous, bar-coded questionnaire and HIV test results

# Distribution of selected schools





## Demographics characteristics of the sample of educators who participated in the study

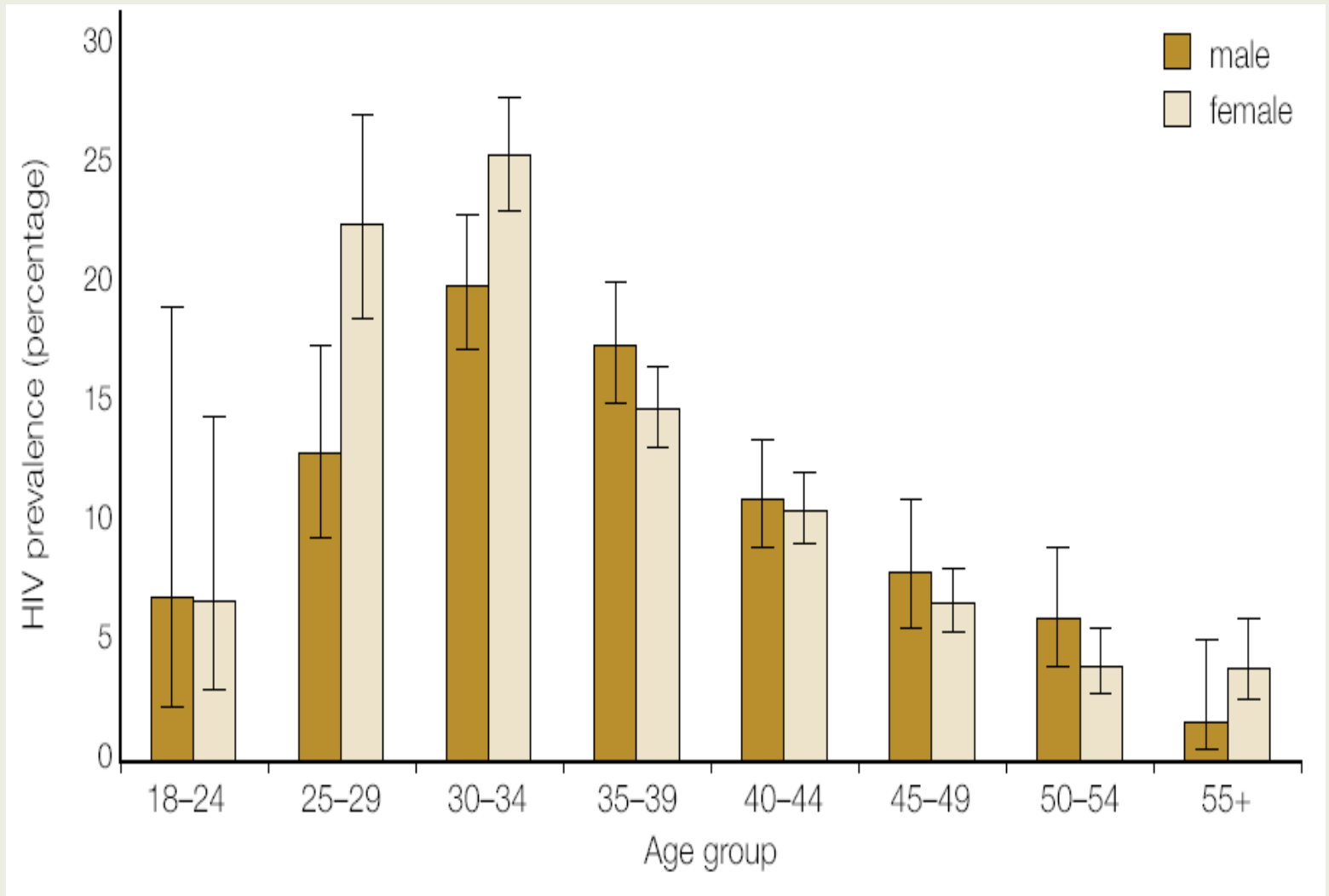
Demographics	n	(%)
<b>Sex</b>		
Male	6 580	32.2
Female	14 018	67.8
<b>Race</b>		
African	14 439	77.4
White	2 778	10.1
Coloured	2 705	8.1
Asian	623	4.4
<b>Age in years</b>		
18–24	272	1.1
25–34	5 135	25.4
35–44	8 965	44.5
45–54	5 189	23.9
55 and above	1 040	5.0



## ***HIV prevalence among educators***

<b>CHARACTERISTICS</b>	<b>N</b>	<b>HIV positive (%)</b>	<b>95% CI</b>
<b>Total</b>	<b>17 088</b>	<b>12.7</b>	<b>12.0–13.5</b>
<b>Sex</b>			
Men	5 455	12.7	11.6–13.9
Women	11 621	12.8	12.0–13.6
<b>Race</b>			
African	12 022	16.3	15.5–17.1
White	2 165	0.4	0.2–0.8
Coloured	2 309	0.7	0.4–1.3
Indian	533	1.0	0.5–2.1
<b>Age</b>			
<24	240	6.5	3.4–12.0
25-34	4 282	21.4	19.9–23.0
35-44	7 443	12.8	11.8–13.8
45-54	4 274	5.8	5.0–6.7
55 and above	842	3.1	2.1–4.6

## HIV prevalence among educators by age and gender



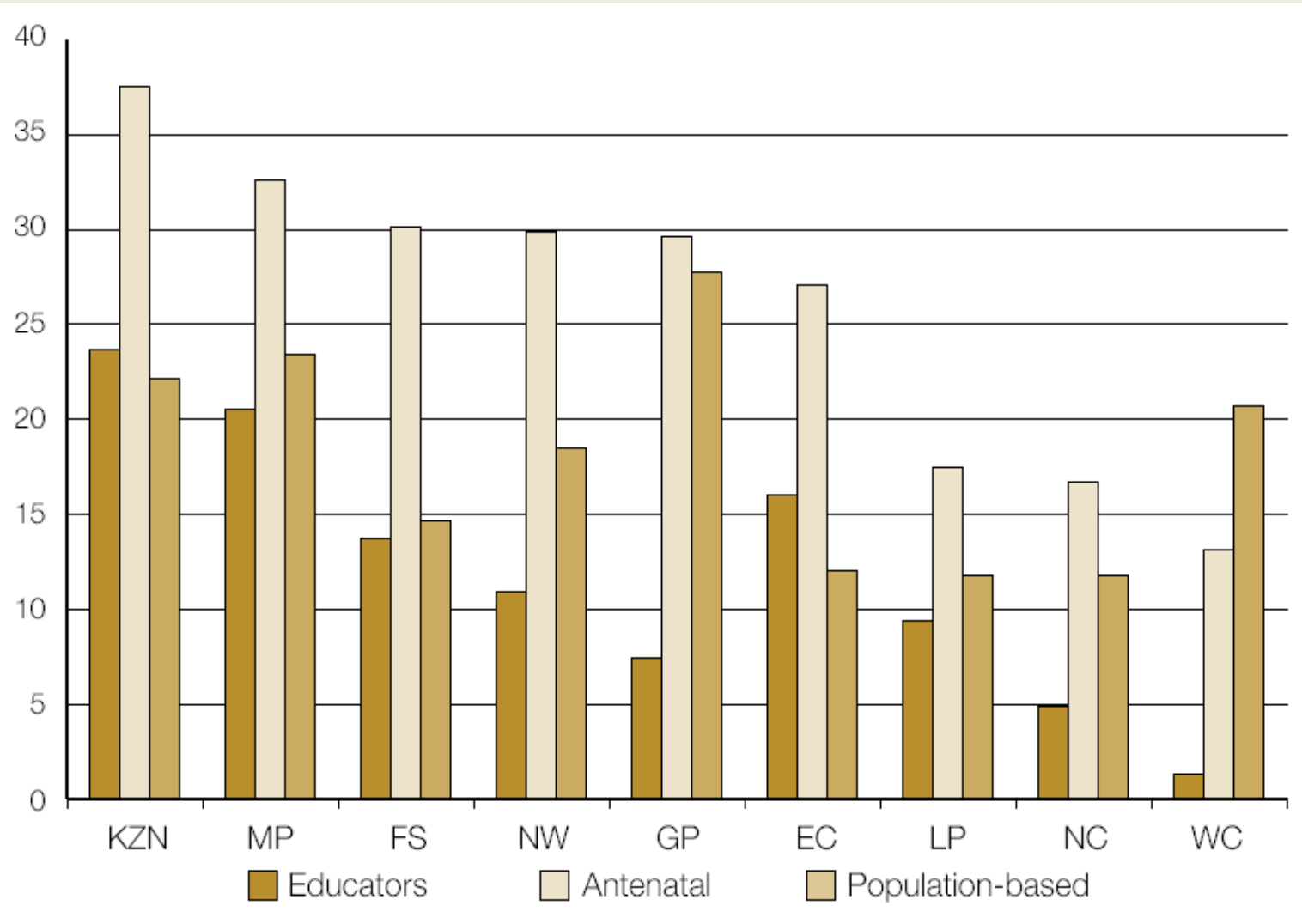
# *HIV prevalence among educators by socio-economic status*

<b>SOCIO-ECONOMIC STATUS</b>	<b>n</b>	<b>HIV POSITIVE (%)</b>	<b>95% CI</b>
<b>Level of qualification</b>			
First degree and above	8 551	10.0	9.1–10.9
Diplomas	7 094	15.9	14.8–17.0
Grade 12 and under <sup>1</sup>	420	14.0	11.9–16.4
<b>Annual income</b>			
Low	2 915	17.5	16.0–19.2
Medium	13 231	12.1	11.3–12.9
High	813	5.4	4.0–7.4
<b>Household economy</b>			
Not enough money	1 253	15.5	13.3–18.0
Money for food etc	8 588	14.7	13.8–15.6
Have most important things	5 880	10.7	9.6–11.9
Some extra money	1 250	3.9	2.7–5.6

## *HIV prevalence among educators by province*

PROVINCE	N	HIV POSITIVE (%)	95% CI
WC	2 134	1.1	0.6–2.0
EC	1 855	13.8	12.0–15.8
NC	891	4.3	2.9–6.5
FS	1 152	12.4	10.1–15.0
KZN	3 627	21.8	19.8–23.9
NW	1 437	10.4	8.7–12.4
GP	2 772	6.4	5.4–7.7
MP	1 315	19.1	16.2–22.3
LP	1 905	8.6	7.3–10.1

## Comparison of HIV prevalence among women: educators, antenatal and population survey data, South Africa



## *HIV prevalence among educators by learning area taught, (trained in), South Africa, 2004*

LEARNING AREAS	N	HIV POSITIVE %	95% CI
Foundation phase	10552 (3871)	12.9 (12.7)	11.6-14.2 (10.7-14.9)
Foundation languages	9922 (22044)	11.2 (11.5)	10.0-12.6 (10.5-12.5)
Additional languages	1086 (2215)	23.6 (24.0)	19.2-28.7 (20.1-28.4)
Arts and culture	2777 (2349)	13.2 (10.8)	9.7-17.6 (6.6-17.0)
Economics and management sciences	4059 (3108)	14.1 (15.3)	11.7-16.9 (12.3-18.9)
Social sciences	2255 (8860)	11.8 (11.8)	9.3-15.0 (10.0-14.0)
Life orientation	8814 (6167)	13.4 (11.3)	11.4-15.7 (8.6-14.7)
Mathematics	6129 (7978)	12.9 (13.8)	11.5-14.4 (12.4-15.4)
Natural sciences	5752 (7464)	12.6 (13.9)	10.3-15.2 (11.7-16.4)
Technology	5429 (1708)	7.4 (8.2)	4.7-11.7 (5.7-11.5)
Special	59 (298)	0.0 (11.9)	-- (4.1-30.5)
Other	233 (5589)	13.8 (13.4)	11.9-16.1 (10.9-16.5)

***HIV prevalence among educators by type of institution, position in education system and years of teaching experience***

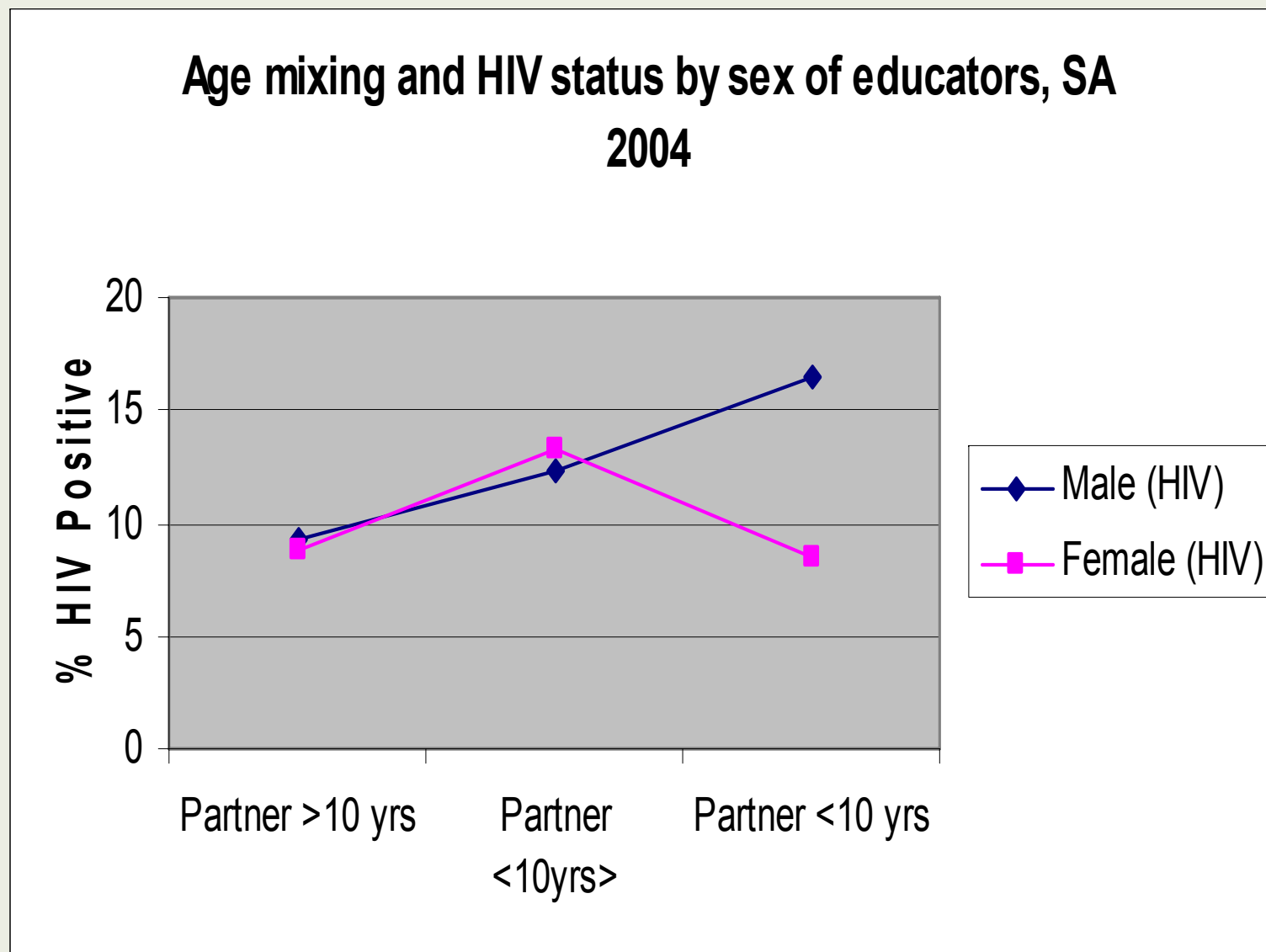
TYPE OF INSTITUTION	N	HIV POSITIVE (%)	95% CI
Primary school	9528	12.29	11.38-13.26
Combined/Intermediate	1447	16.51	13.74-19.70
Secondary/high school	6006	12.51	11.22-13.93
Position in education system			
Teacher	12669	14.06	13.24-14.92
Senior Teacher	1846	9.63	8.08-11.44
Education Specialist	534	9.95	7.50-13.09
Deputy Principal/Principal	1709	7.25	5.97-8.78
Years of teaching experience			
<b>0-4</b>	2031	21.12	19.05-23.34
<b>5-9</b>	2724	19.53	17.77-21.43
<b>10-14</b>	4484	14.76	13.45-16.17
<b>15-19</b>	2712	8.79	7.57-10.17
<b>20-24</b>	2416	6.99	5.89-8.28
<b>25-29</b>	1494	5.44	4.13-7.13
<b>30 +</b>	1105	2.60	1.80-3.75



**Frequency of condom use with regular partner in the past year amongst HIV-positive- and those who do not know their status among South African educators, 2004**

<b>Aware- ness of HIV Status</b>	<b>Consistency of condom use among those who are HIV Positive</b>				
	<b>Every time</b>	<b>Almost every time</b>	<b>Sometimes</b>	<b>Never</b>	<b>Don't know</b>
Know HIV status (%)	29.8	7.3	36.4	26.5	0
Don't Know status (%)	26.1	5.7	33.9	34.2	0.3

## Age mixing and HIV status by sex of educator, South Africa



## ***Mobility and HIV status among educators***

	<b>HIV POSITIVE</b>		
<b>MOBILITY</b>	<b>n</b>	<b>%</b>	<b>95%CI</b>
<b>In past 12 months been away from home for more than one month</b>			
<b>Yes</b>	<b>328</b>	<b>17.8</b>	<b>15.8-20.0</b>
<b>No</b>	<b>1710</b>	<b>12.1</b>	<b>11.4-12.9</b>
<b>Number of nights per week usually stay away from home</b>			
<b>None</b>	<b>203</b>	<b>8.6</b>	<b>7.2-10.4</b>
<b>1-2 days</b>	<b>77</b>	<b>16.5</b>	<b>12.8-21.0</b>
<b>3-4 days</b>	<b>87</b>	<b>16.7</b>	<b>13.5-20.5</b>
<b>5 days</b>	<b>122</b>	<b>20.5</b>	<b>19.9-24.7</b>
<b>6 and more days</b>	<b>107</b>	<b>27.6</b>	<b>23.0-32.7</b>

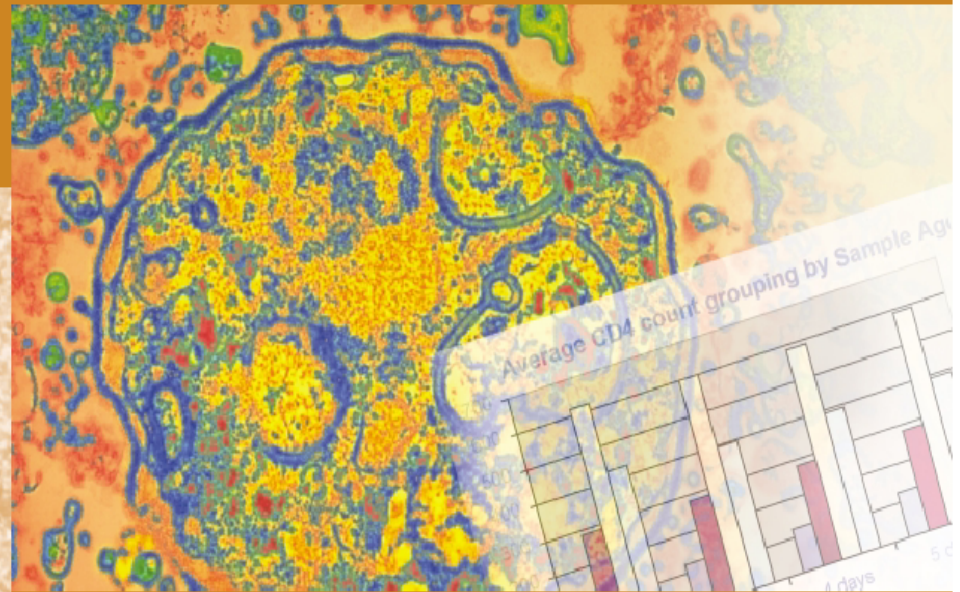
# HIV-positive educators in South African public schools

Predictions for prophylaxis and antiretroviral therapy

The HIV/AIDS epidemic in South Africa is severe and it is to be expected that various sectors, including the education sector, will be affected negatively. It is well known that those living with the virus are able to continue being productive for years. However, once illness sets in and the immune system is compromised, absenteeism for both short and long periods may become common and without antiretroviral therapy (ART) intervention, many will die. In our schools, the illness and death of one educator has serious implications for other educators, the school and learners. Increased workload, loss of skills and experience, overcrowded classes and learner adjustment problems are just some of the consequences that can be expected. While it has long been suspected that HIV prevalence among educators is high, there has been no scientific study to assess this. Responding to the need for empirical evidence, the Education Labour Relations Council (ELRC) commissioned the Human Sciences Research Council-led consortium to conduct this nation-wide research assessing the prevalence of HIV/AIDS, as well as issues such as the health status and attrition of our educators. The results of the research suggest that the high number of our educators living with AIDS is cause for serious concern. This report is part of a broader report and presents predictions for prophylaxis and antiretroviral therapy. The ELRC, as representative of both employer and unions, is best suited to facilitate the means to address the recommendations of this study.

This report can be downloaded at:  
[www.elrc.org.za](http://www.elrc.org.za)  
[www.hsrcpress.ac.za](http://www.hsrcpress.ac.za)  
[www.sahara.org.za](http://www.sahara.org.za)

ISBN 0-7969-2103-2



# HIV-positive educators in South African public schools

Predictions for prophylaxis and antiretroviral therapy

Thomas Rehle MD, PhD, Olive Shisana ScD,  
 Deborah Glencross MBChB and Mark Colvin MBChB, MS



Report funded by and prepared for the Education Labour Relations Council



## Percent of educators eligible for ART

CD4(cells/mm <sup>3</sup> )	No. of samples	% eligible for ART
<200	99	22% (old national guideline/WHO criteria)
≤ 350	232	52% (new national guideline/WHO/US DHHS 2004 guidelines)

## ***Number of educators eligible for ART***

- **HIV-positives eligible for ART under previous national guidelines was 2.8 %.**
  - **10 000 of the total 356 749 educators were eligible for immediate antiretroviral therapy.**
- **Now taking a CD4 cell count of  $\leq 350$  cells/mm<sup>3</sup> as the new level required for the initiation of ART, this increases the proportion of eligible HIV-positive educators to more than 23 500.**

# The impact of antiretroviral treatment on AIDS mortality

A study focusing on educators in South African public schools

One of the key determinants for the loss of public educators in South Africa is mortality due to AIDS. This report presents an estimate of the number of educators who died from AIDS in 2004, including the projected distribution of AIDS deaths by age group. While antiretroviral treatment cannot avert AIDS deaths entirely, it can delay AIDS-related mortality. This report estimates the extent to which the provision of antiretroviral treatment might reduce AIDS mortality among our educators.

This report can be downloaded at:  
[www.elrc.org.za](http://www.elrc.org.za)  
[www.hscpress.ac.za](http://www.hscpress.ac.za)  
[www.sahara.org.za](http://www.sahara.org.za)



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# HIV Incubation Period (Adults)

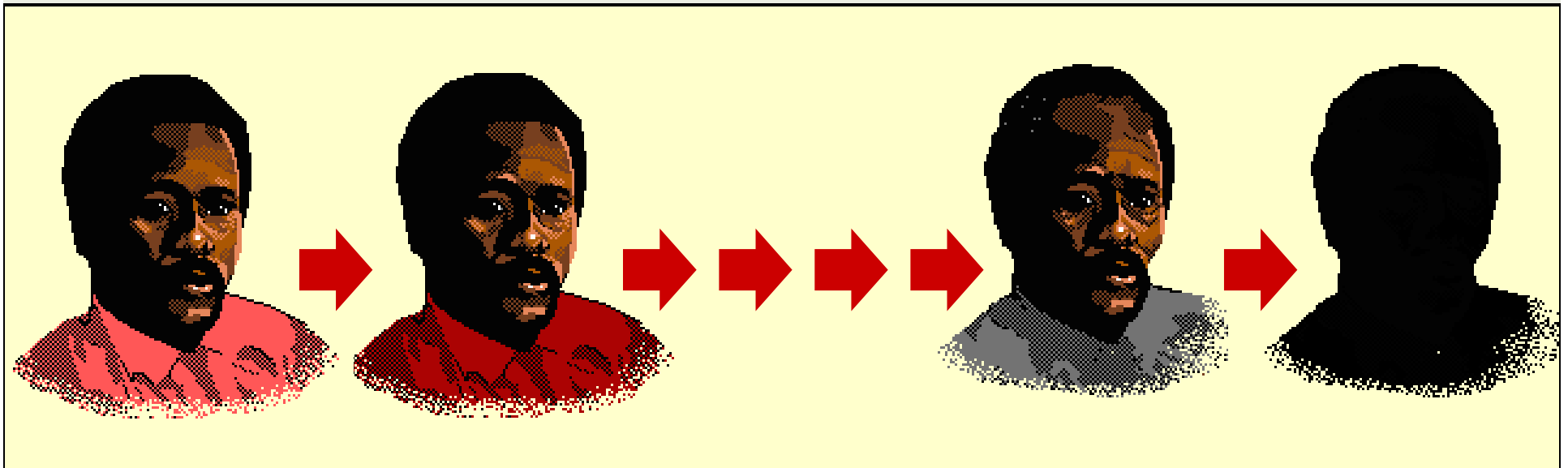
**Not  
Infected**

**Infected**

**Infectious**

**AIDS**

**Death**



-- survival 9 years---- - 1-2 years after  
developing AIDS with  
no ART  
(On Average)



## ART impact on reduction in AIDS deaths by age in 2010

AGE GROUP	ART1	ART2
20-24	31.8 %	64.8 %
25-29	26.0%	59.7 %
30-34	22.2 %	56.2 %
35-39	18.7 %	52.9 %
40-44	18.1 %	52.3 %
45-49	16.5 %	50.8 %
50-54	16.7%	50.9 %
55-59	13.4%	48.0 %
60-64	7.9 %	42.7 %



## Provision of ART is critical

- To reduce morbidity and mortality
- Improve the quality of life of educators
- Prolong educators' stay in the profession and availability to teach

## Conclusions

- There is a need for a comprehensive workplace health care programme which includes HIV/AIDS prevention.
  - The DoBE and unions should embark on a targeted positive prevention and ART programme for educators.
    - Indeed ELRC, SADTU and SAMA have been running a PEPFAR-funded programme promoting testing and treatment for teachers in some districts (hotspots) found in KZN, MP and EC for the past few years with HIV prevalence of over 20%.
- The mobility of teachers should be discouraged.

Thank you for your attention

