

# **HIV/AIDS Prevalence Among South African Health Workers, 2002**

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# Introduction

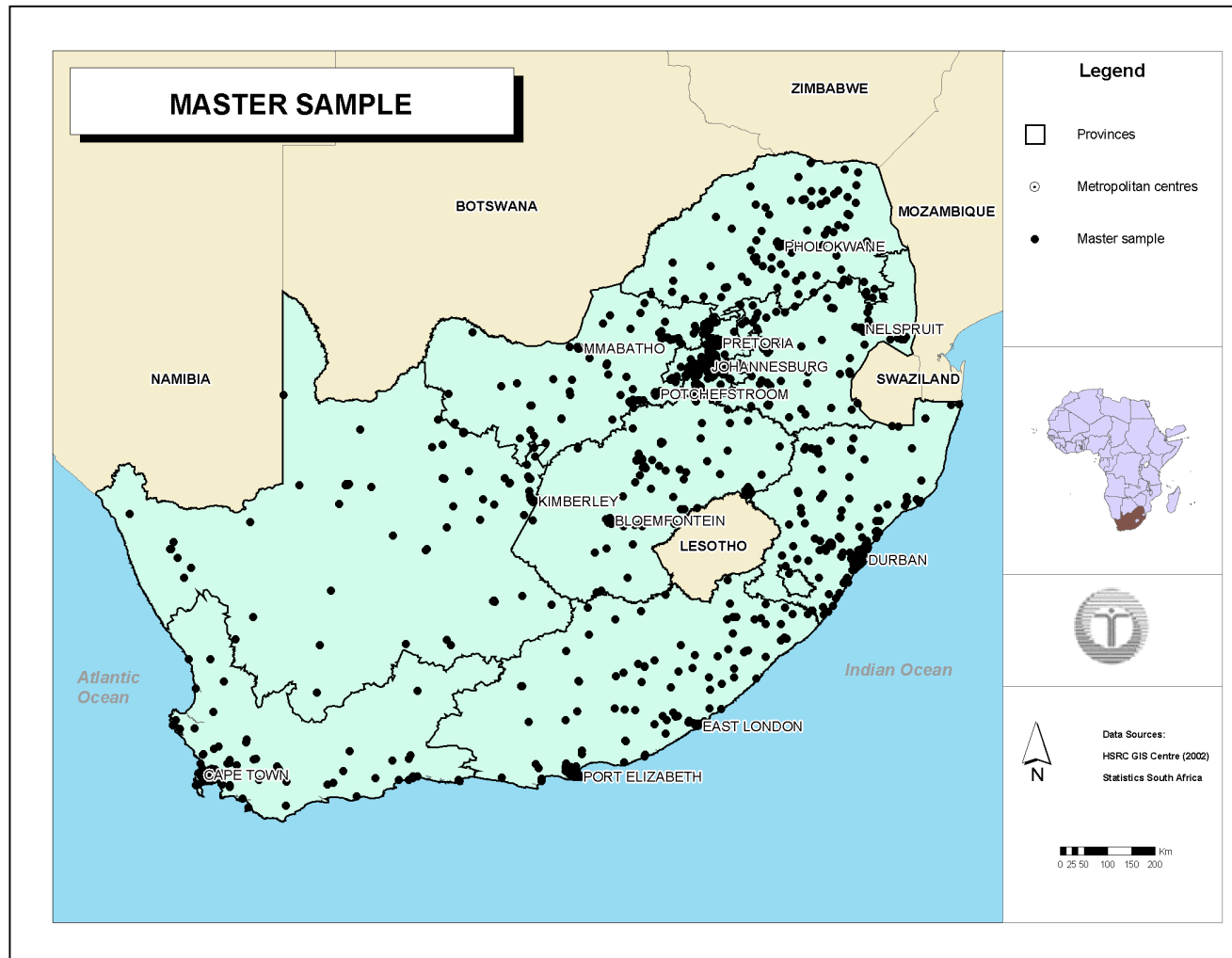
- The first systematically sampled national community-based survey of the prevalence of HIV in South Africa was undertaken in 2002.–Nelson Mandela/HSRC study of HIV/AIDS
- The survey reviewed risk, risk reduction, HIV/AIDS knowledge, mass media and communication

# Study Design

- A complex multi-stage sampling strategy used to create a master sample of 1 000 out of 86 000 census enumerator areas.
- Randomly selected 10 197 visiting points; 73.7% of 13 516 eligible persons agreed to be interviewed and 8 428 were tested for HIV.
- Cross-sectional survey design anonymously linking the HIV test results with questionnaire data.

# Survey Method

## ■ Location of master sample PSUs in South Africa



# National prevalence

- The HIV prevalence in the population of South Africa is 11.4% – (Confidence Interval (CI): 10.0%–12.7%)
- 15.6% of persons in the 15–49 age group were HIV positive (CI: 13.9%–17.5%)

# Percent who have taken HIV more seriously

<b>Of those who knew someone who died of AIDS</b>	<b>65.4%</b>	<b>they know someone who died of AIDS</b>
<b>Of those who knew someone who said he/she was HIV +</b>	<b>52.7%</b>	<b>they knew someone who is HIV+</b>
<b>Of television watchers</b>	<b>56.6%</b>	<b>of TV programme on AIDS</b>
<b>Of radio listeners</b>	<b>52.0</b>	<b>of radio program on HIV/AIDS</b>
<b>Of all respondents</b>	<b>40%</b>	<b>because of statistic</b>

# Results: accessibility and use of STI services

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## ✓ Accessibility to STI services

- 83.1% of SA know where to go for treatment of STI
- Urban = 86.5%
- Rural = 77.8% (p=0.001)

## ✓ Previous access to STI services

- 13.6% of SA previously used STI services
- 68.3% among those that reported having at least one STI over the past 3 months have used STI services
- HIV prevalence: With STI: 39.9% without STI: 13.2%**

# Results: Previous access to HIV testing

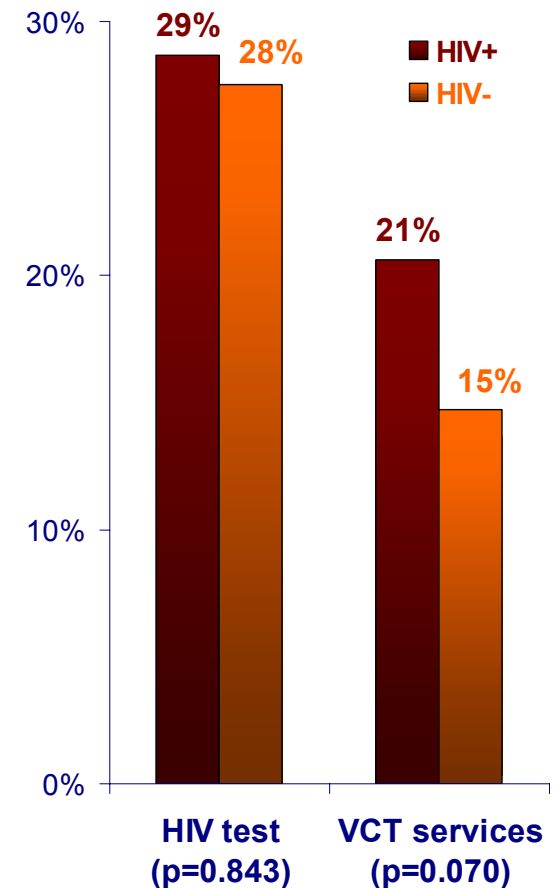
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## ✓ Accessibility to VCT

- 67.6% of SA know where to obtain VCT services
- Urban areas = 72.3%
- Rural areas = 60.4% ( $p < 0.001$ )

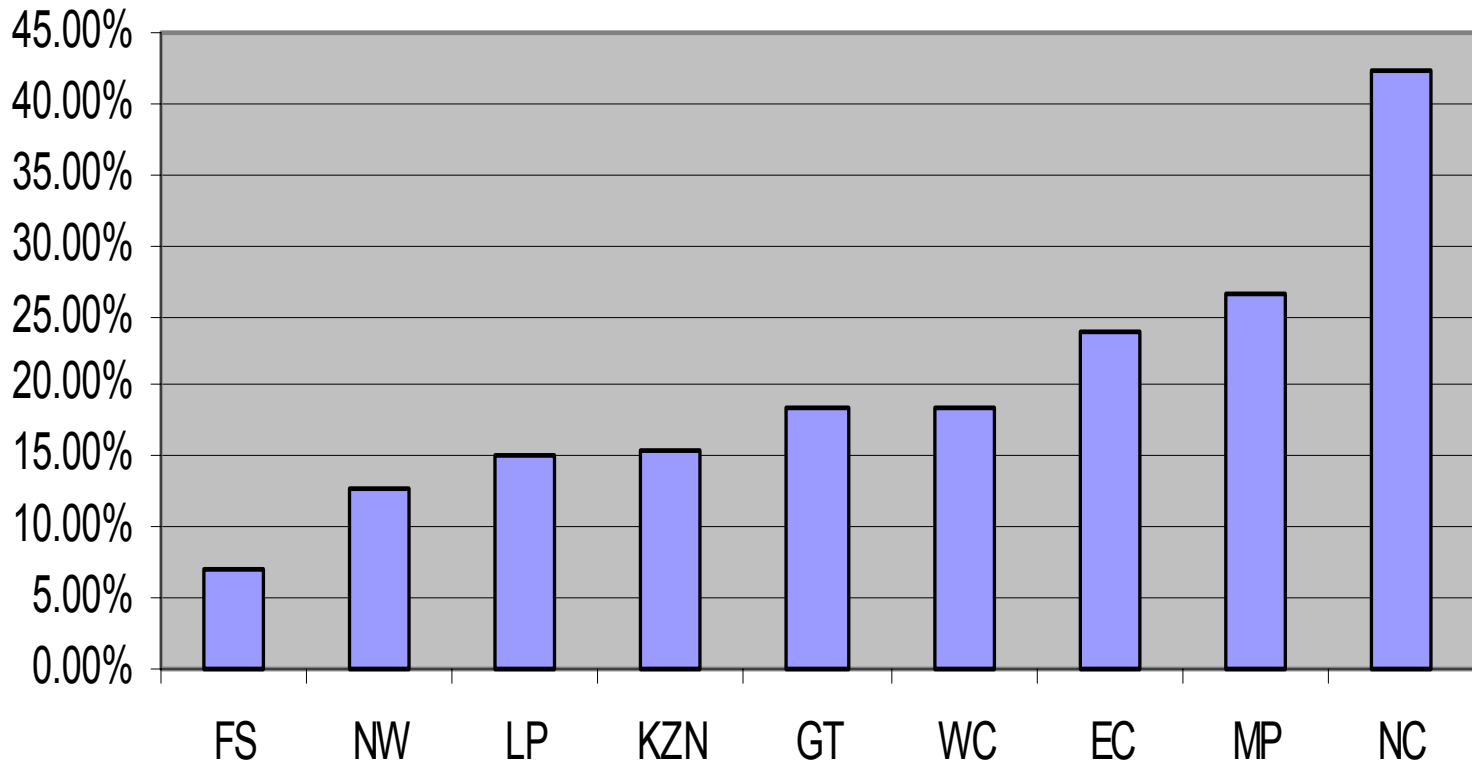
## ✓ History of access to HIV testing

- 27.4% of sexually active respondents had been previously tested for HIV
- Of whom 47.3% had already made use of VCT





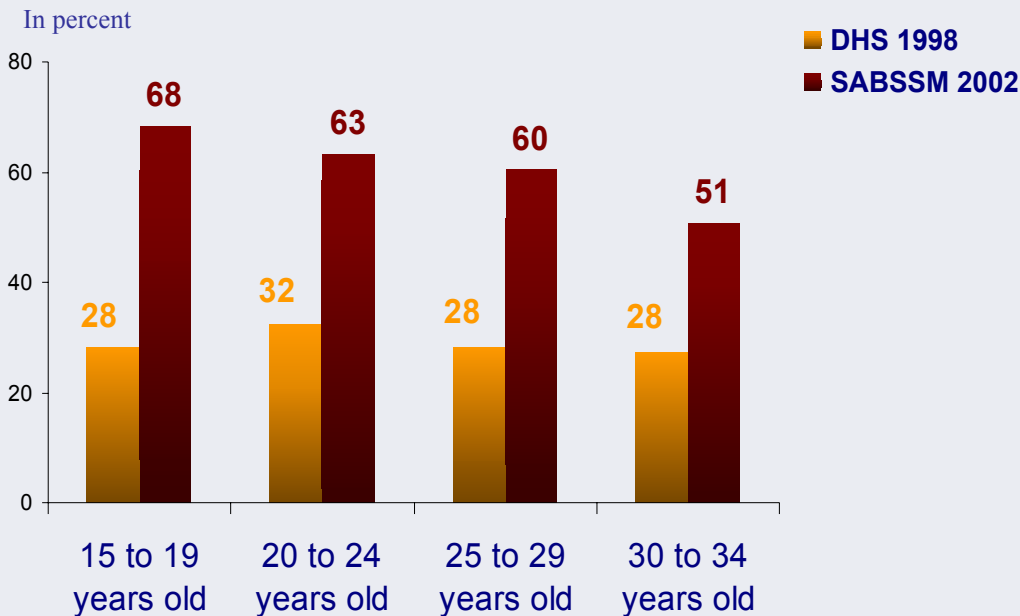
## Percent currently abstinent by province, persons 15-24 years



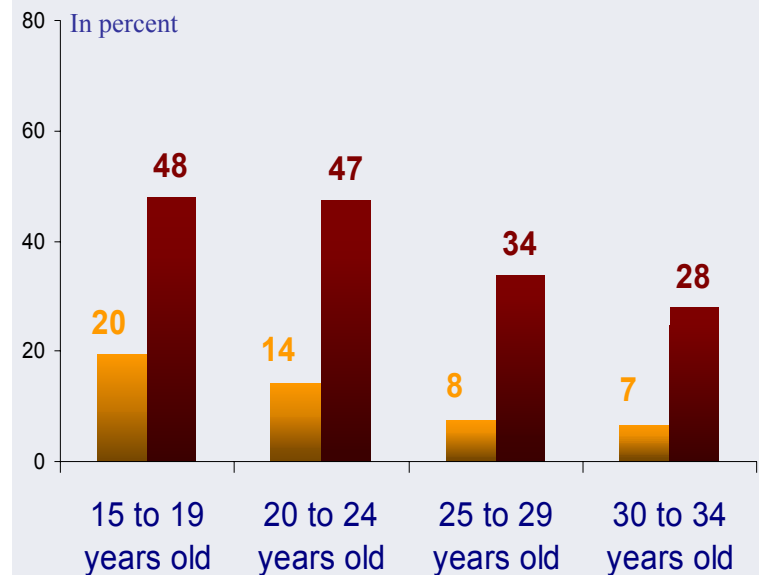
# Comparative condom use

- ✓ **Normalization of condom use as an appropriate barrier method to HIV infection: 90% have easy access to condoms**

**'Ever condom use'**

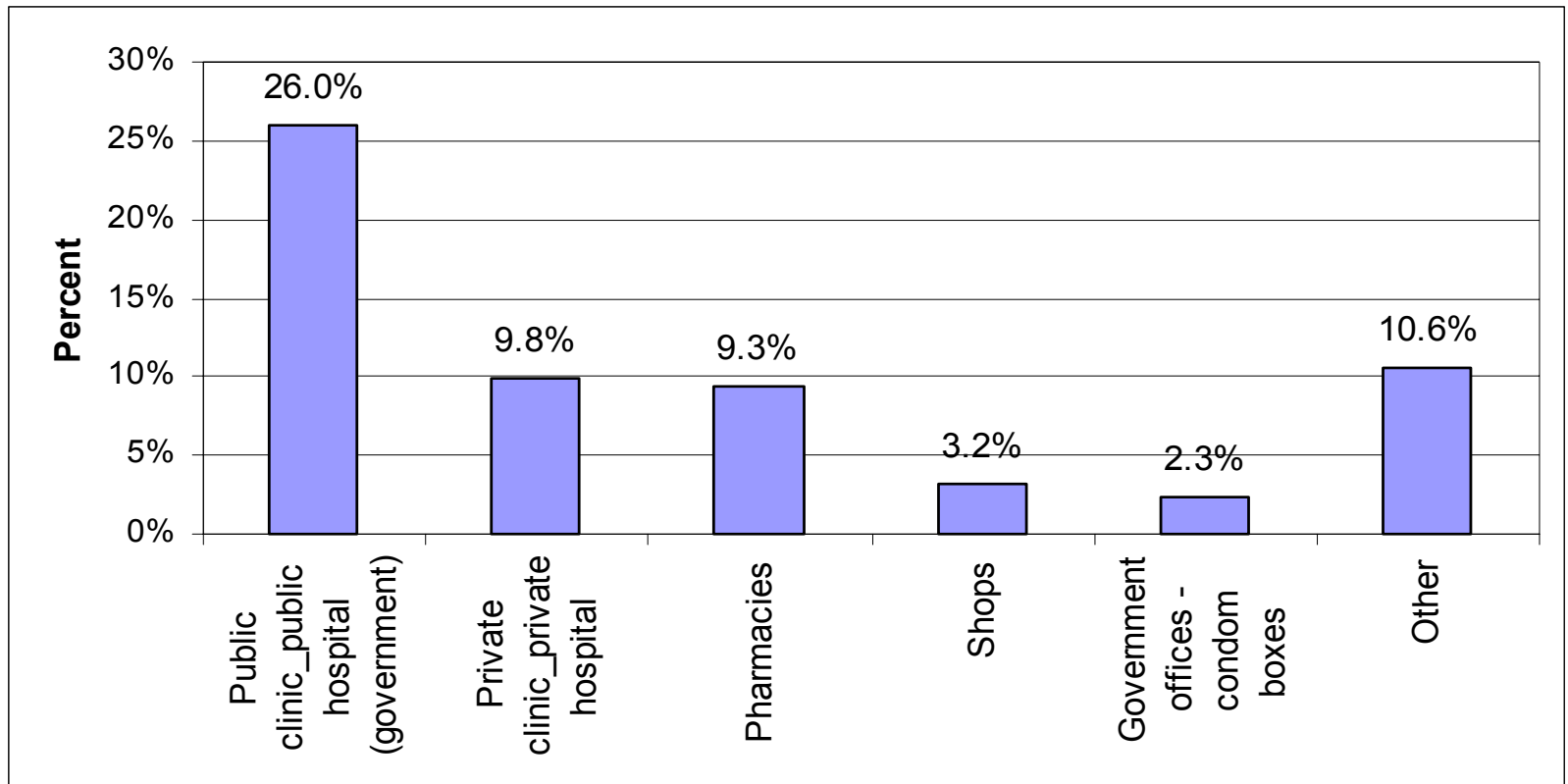


**'Condom use at last sex'**



Among sexually active females

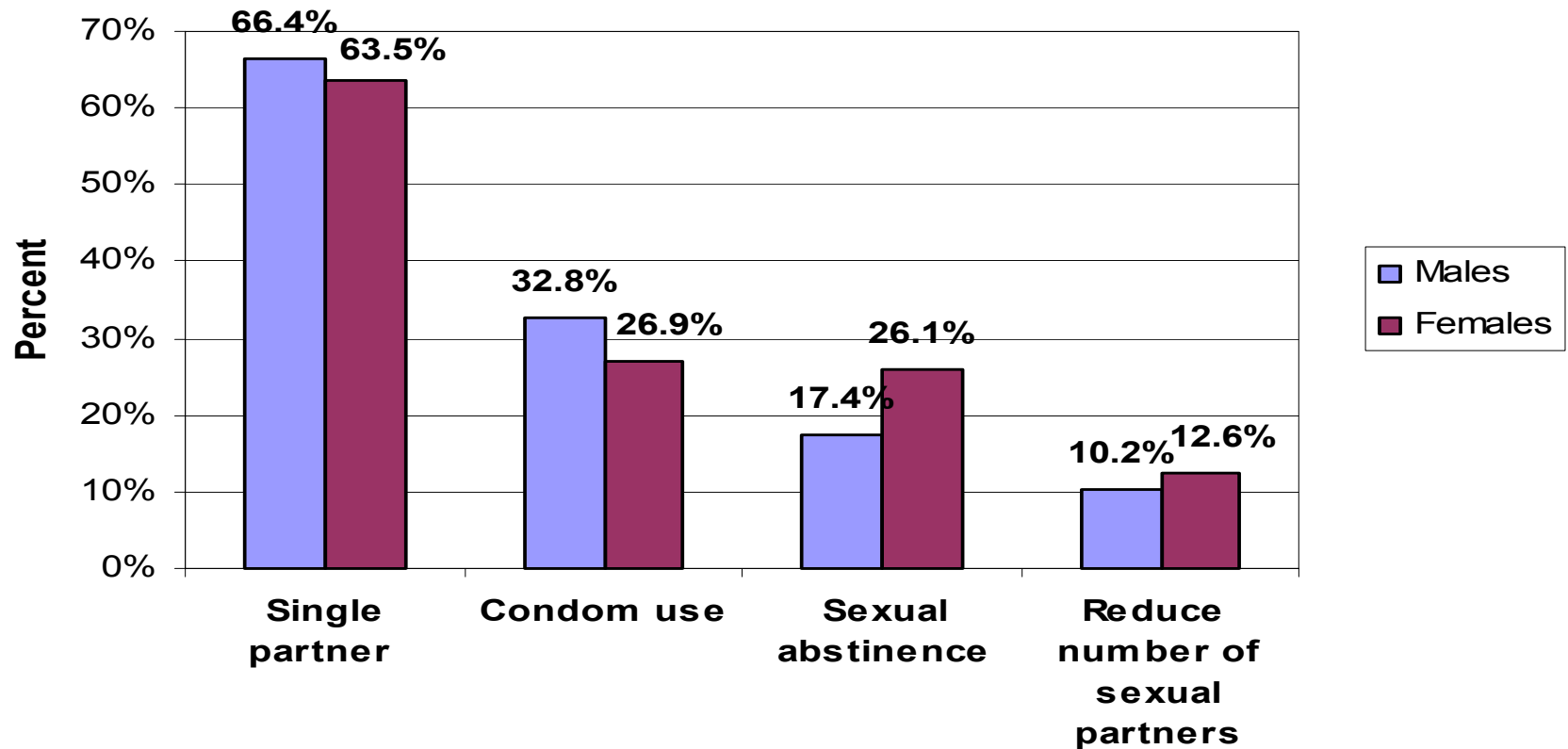
# Condom access



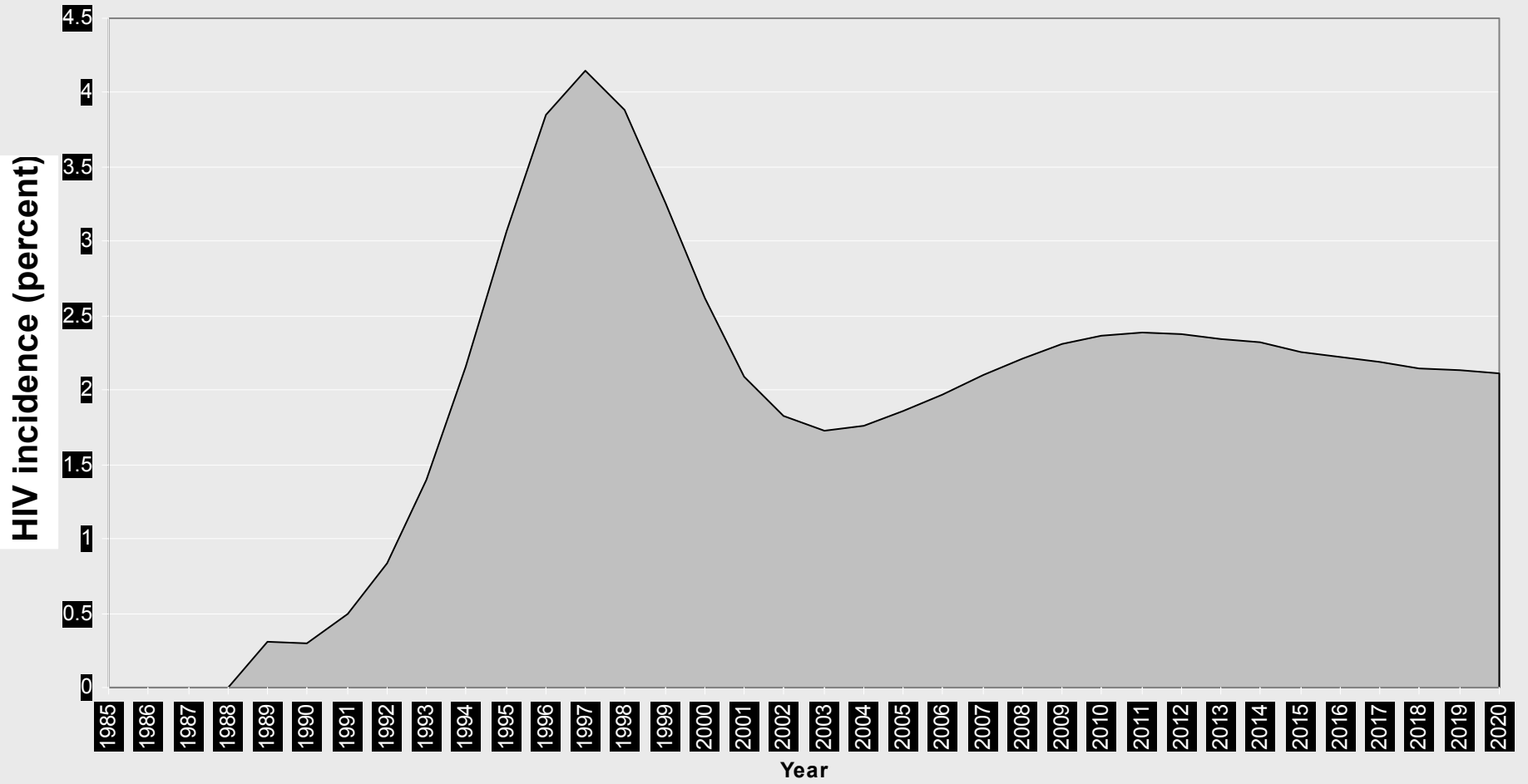
Primary sources of condoms, South Africa, 2002

# Self-reported behaviour change

## 40.2% of youth and adults reported changing their behaviour as a result of HIV/AIDS



## Estimated HIV incidence in adults (aged 15-49)



# Nelson Mandela/HSRC study of HIV/AIDS tells us that:

- HIV/AIDS is a serious problem in SA
- South Africans are responding to prevention campaigns
- The epidemic and mass media are making South Africans to take AIDS seriously
- South Africans are changing their behaviour
- There is hope for the country to deal with HIV/AIDS

# What is the story among health workers?



- South Africa: Prior to this study, it was not known what % of health workers in selected provinces were HIV positive
- USA: Between the time that the epidemic started up until December 2002, 5.1% of AIDS patients, had worked in the health sector (CDC)
- Zambia: 44% of female nurses and 39% of nurse midwives were HIV positive (Siziya and Hakim, 1996)

# Modes of Transmission

- heterosexual or
- occupational exposure



# Objective

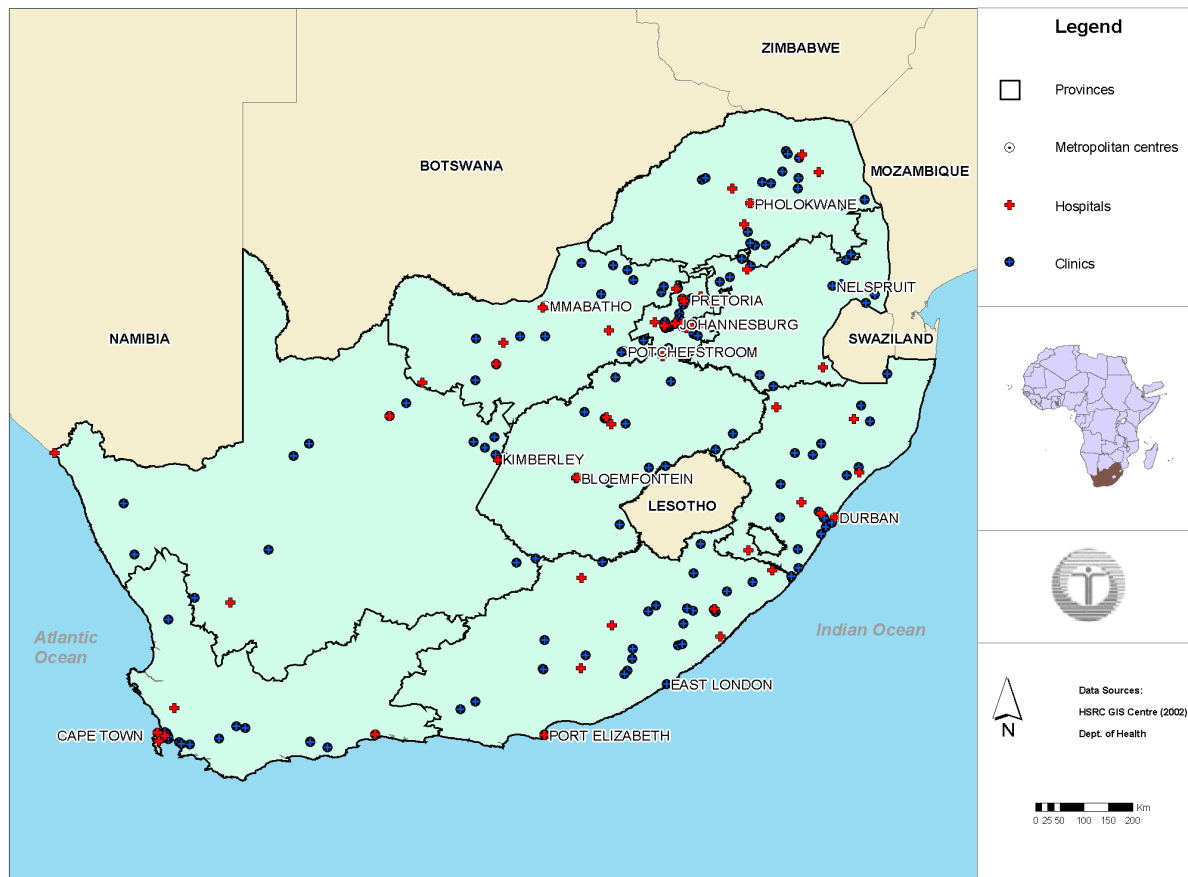
- Estimate HIV prevalence among South African health workers in four provinces

# Sampling Health Workers

- A complex multistage probability sample of 5% of medical professionals i.e., specialists and doctors, nursing professionals and other nursing staff, and other health professionals in Mpumalanga, Gauteng, Kwazulu/Natal and Free State.
- Includes public and private health sector (excluding GPs)
- Sample size=721



# Sampled health facilities



# DATA COLLECTION

- **Questionnaire: demographics**
- **Face-to-face interviews of**
  - Health Workers (N=721)
  - HIV testing



# HIV testing

- The OraSure<sup>®</sup> HIV-1 Oral Specimen Collection Device was used to collect oral mucosa transudate (oral fluid) specimens.
- Vironostika test kits were utilised for conducting antibody tests.
- Used since 1986, and in Africa since 1990.
- Approved by FDA for all clades.
- Studies on sensitivity and specificity show high correlations with blood results (98%-100%).

# Ethics

- Procedure & content approved by Research & Ethics Review Committee  
NSPH, MEDUNSA

## Participation –

- anonymous
- non-compulsory
- confidential
- Link interviews & specimens with bar codes

# Response rates health workers: HIV test

Prov	Total	Tests done		Refusals/ faulty specimens		Total
	(N)	(N)	%	(N)	%	%
KZN	<b>284</b>	<b>231</b>	<b>81.3</b>	<b>53</b>	<b>18.7</b>	<b>100</b>
Mpumalanga	<b>109</b>	<b>79</b>	<b>72.5</b>	<b>30</b>	<b>27.5</b>	<b>100</b>
North West	<b>156</b>	<b>143</b>	<b>91.7</b>	<b>13</b>	<b>8.3</b>	<b>100</b>
Free State	<b>172</b>	<b>142</b>	<b>82.6</b>	<b>30</b>	<b>17.4</b>	<b>100</b>
Total	<b>721</b>	<b>595</b>	<b>82.5</b>	<b>126</b>	<b>17.5</b>	<b>100</b>

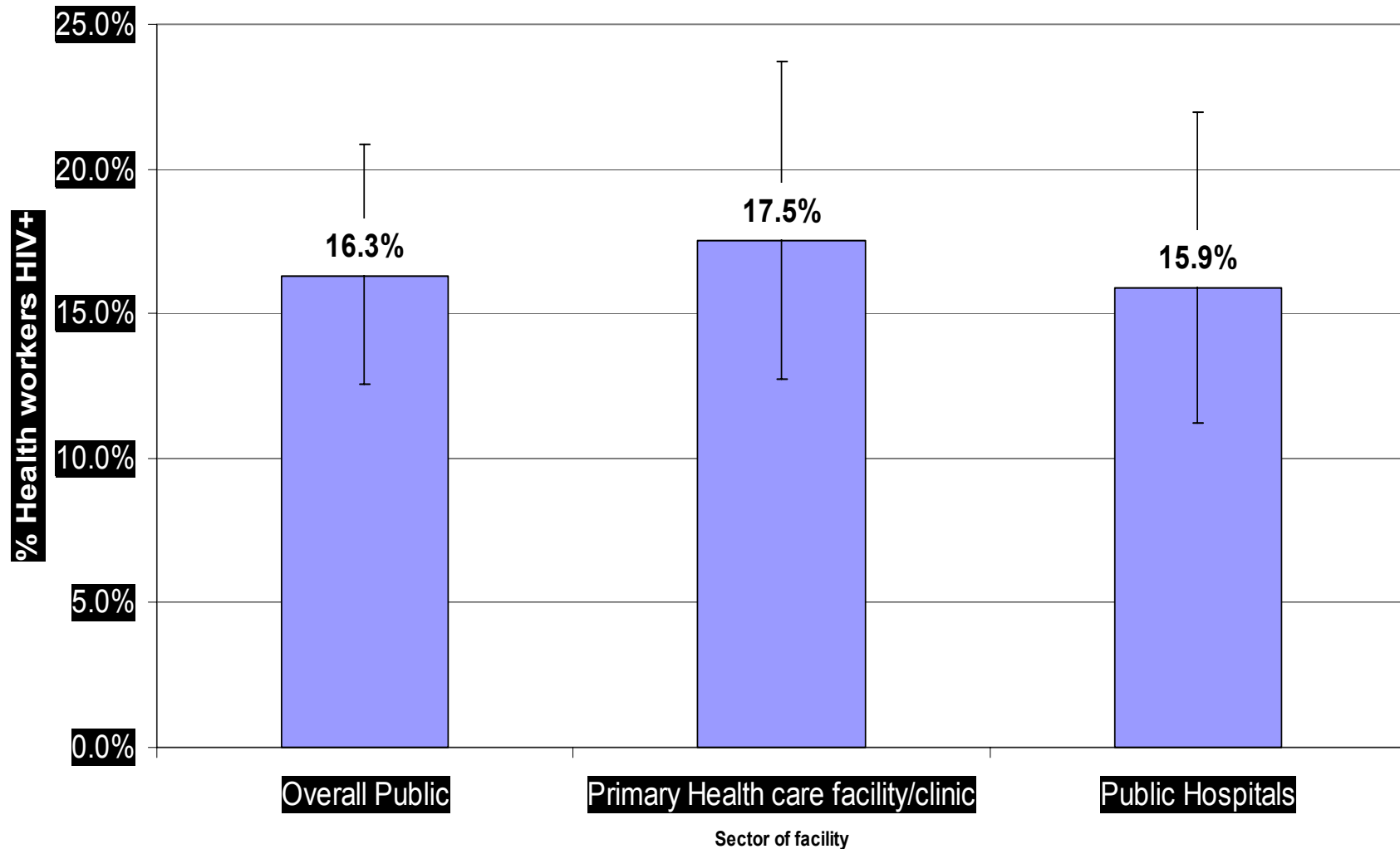
# Results



# Overall HIV Prevalence amongst health workers

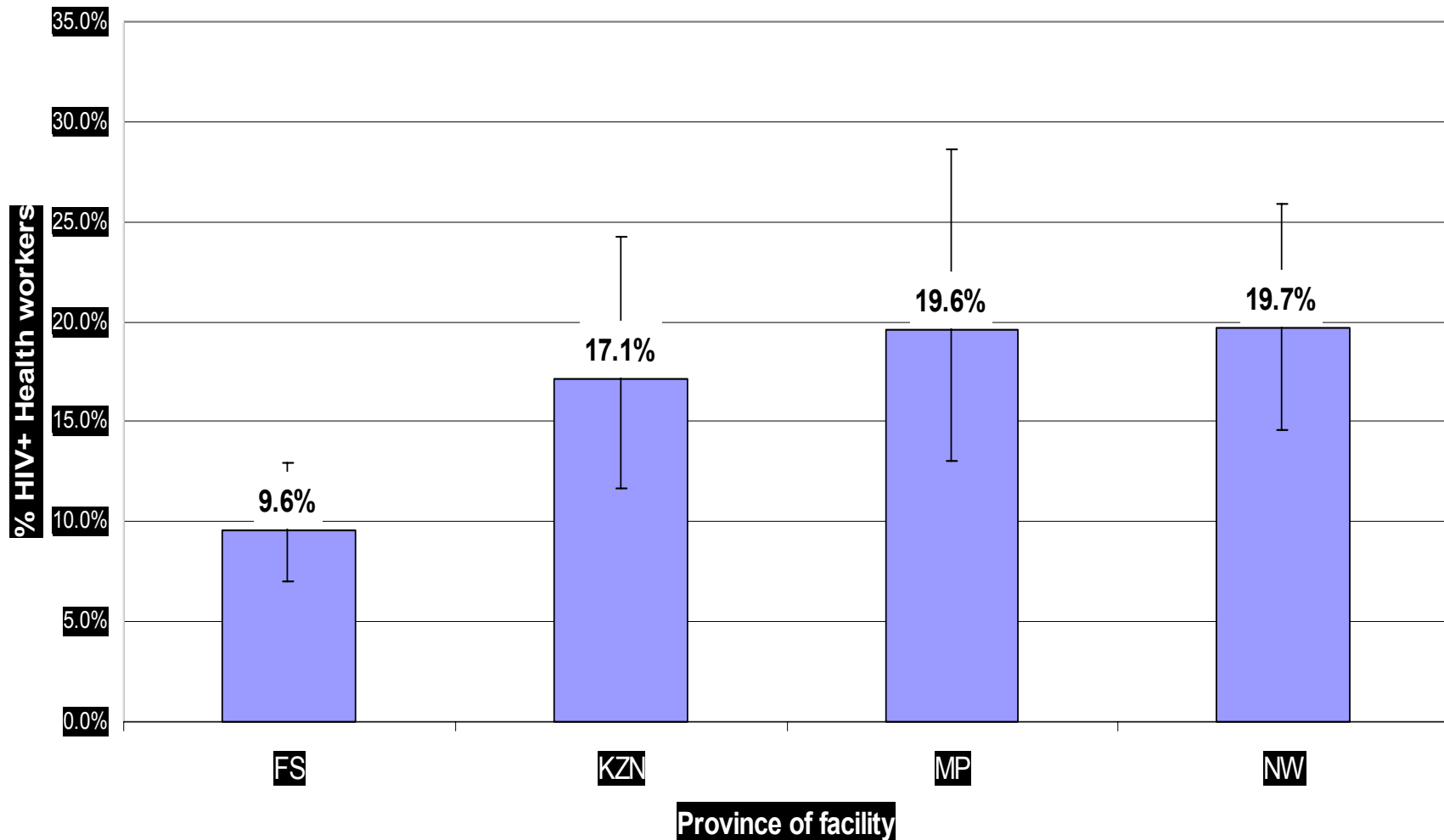
- 15.7% (CI: 12.2,19.9) of all health workers were HIV positive in 2002
- 16.7% (CI: 12.5,20.8) public sector health workers were HIV positive

# HIV prevalence among health workers by type of health facility



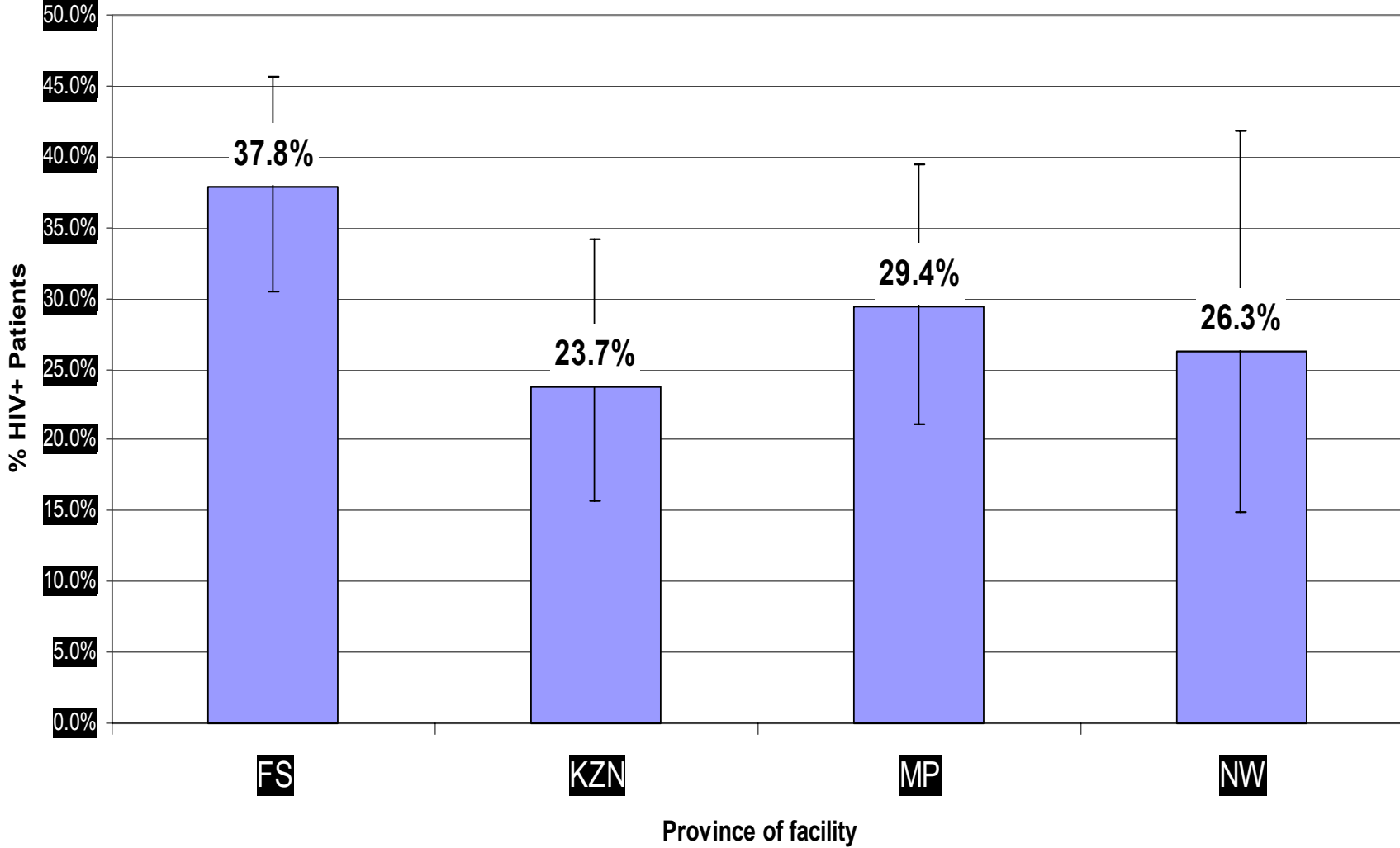
# HIV Prevalence among health workers

■ HIV+ Health workers by province

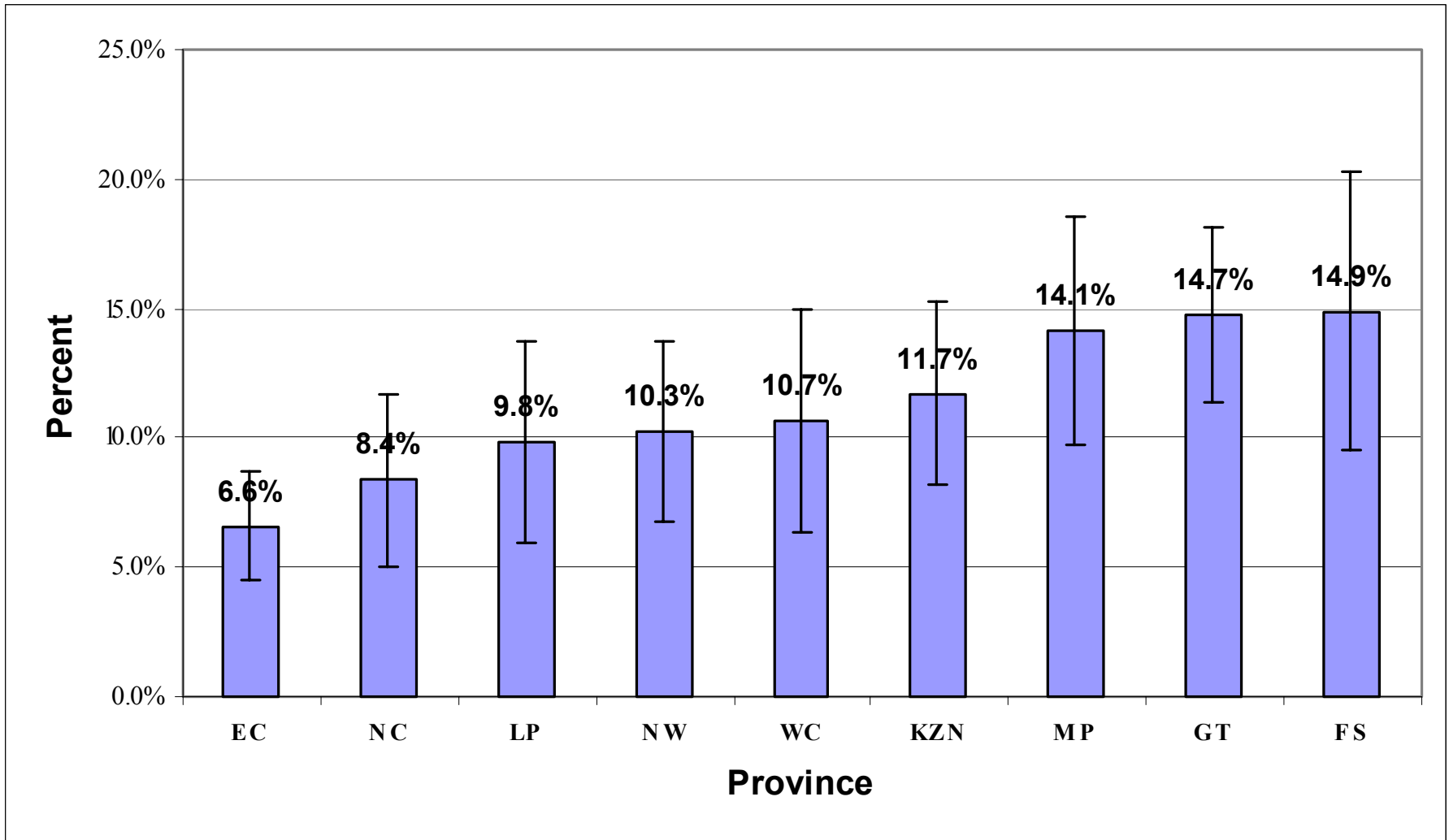


# HIV Prevalence among patients

## ■ HIV+ patients by province



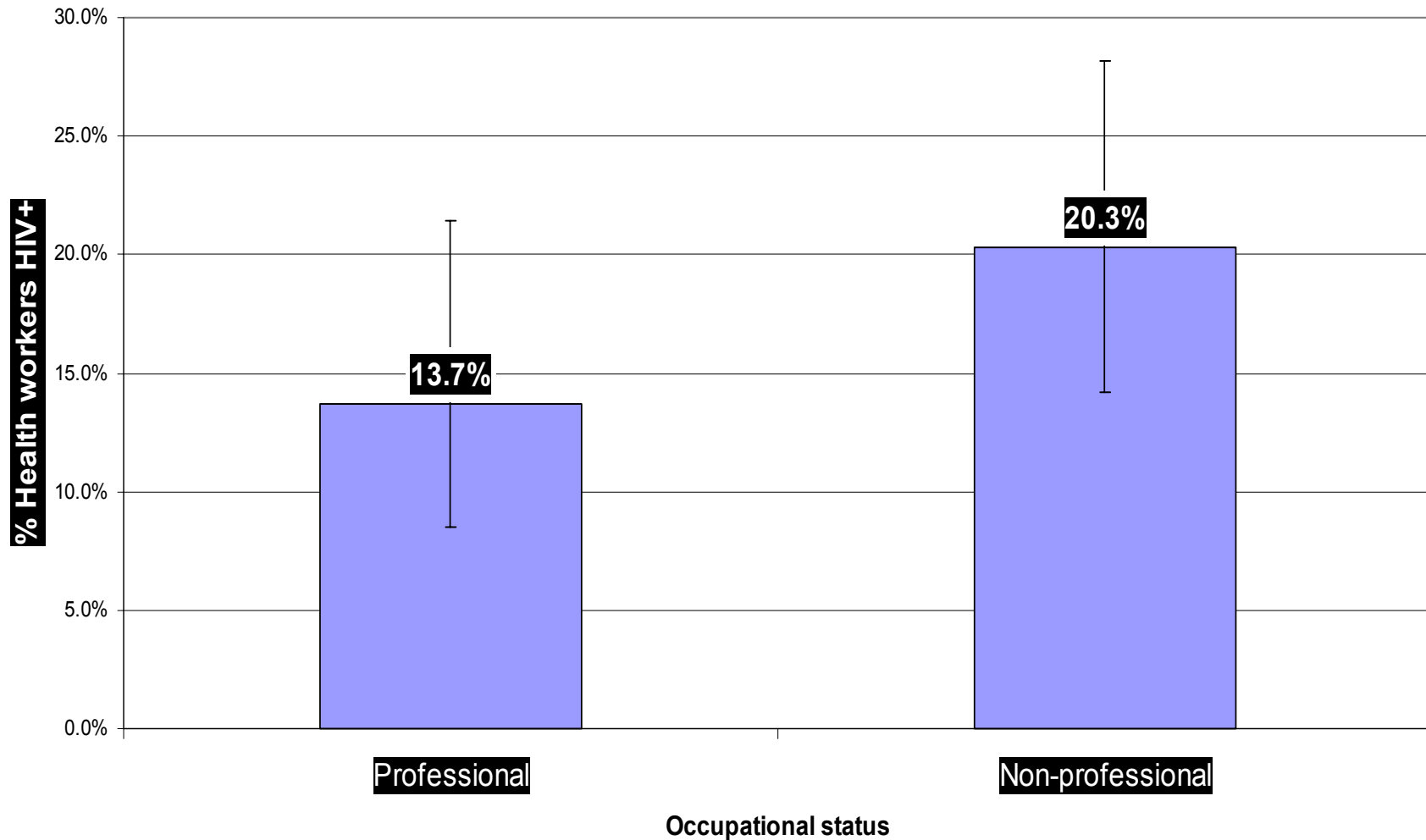
# Provincial HIV prevalence



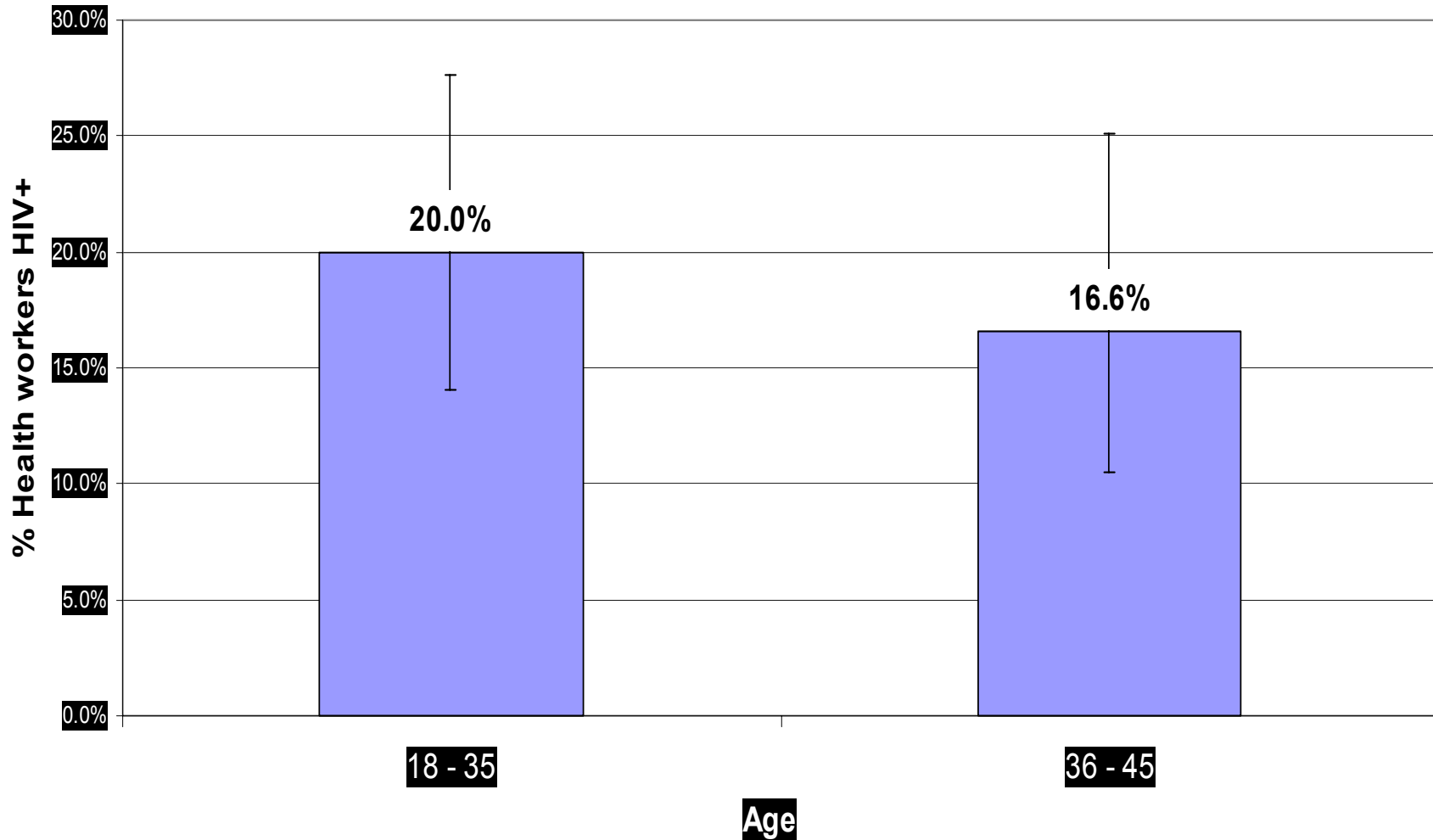
HIV Prevalence by province, South Africa 2002

# HIV Prevalence among health workers

## ■ HIV+ Health workers by occupation



# HIV Prevalence among health workers by Age



# Summary of findings on the health workers study

- HIV prevalence among health workers is 15.7%
- Prevalence differs substantially between non professional (20.3%) and professional health workers (13.7%)
- HIV prevalence appears to be higher for younger than older health workers.



# Meaning of the study results

- The observed HIV prevalence of 15.7% among health workers is high.
- Comparable to HIV prevalence among South Africans of reproductive age (15-49 years), --15.6% (Nelson Mandela/HSRC study of HIV/AIDS, 2002).
- Need to train more nurses to replace those who may be dying of HIV/AIDS
- With such high prevalence of HIV in the younger population of health workers, it is important to train more nurses

# Change in the number of registered professionals per 100,000 total populations between 1997 and 2001

<b>Category</b>	<b>Registered professionals per 100,000 pop</b>	<b>% change from 1997 to 2001</b>
<b>Doctors (all)</b>	<b>71.54</b>	<b>16.05</b>
<b>General practitioners</b>	<b>52.06</b>	<b>24.00</b>
<b>Specialists</b>	<b>19.48</b>	<b>-0.92</b>
<b>Dentists</b>	<b>10.82</b>	<b>16.40</b>
<b>Dental therapists</b>	<b>0.98</b>	<b>50.25</b>
<b>Nurses (all)</b>	<b>401.07</b>	<b>-6.86</b>
<b>Pharmacists</b>	<b>25.00</b>	<b>3.25</b>
<b>Occupational therapists</b>	<b>6.05</b>	<b>39.90</b>
<b>Physiotherapists</b>	<b>10.44</b>	<b>25.70</b>

# Implications of the findings

- In areas with the high HIV prevalence, perhaps --expect health workers to also have a high prevalence of HIV
- Non-professionals maybe at increased risk of HIV, but so are professionals: Therefore, need for training of more health workers
- A vigorous VCT service targeted at health workers may be necessary to afford them the opportunity to know their HIV status and then reassign the positives to work in non-TB patients wards.
- Need policy to encourage health workers to know their HIV status

# Acknowledgements

- Nelson Mandela Foundation
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- French ANRS
- Swiss Agency for Development

## *Health sector study*

- Department of Health – commissioning and funding study as well as input to the study
- Centers for Disease Control and Prevention—funding
- Health workers for agreeing to participate
- Retired nurses for data collection