

# **CURRENT THINKING ABOUT BEHAVIOR CHANGE AND PREVENTION OF SEXUAL TRANSMISSION OF HIV**

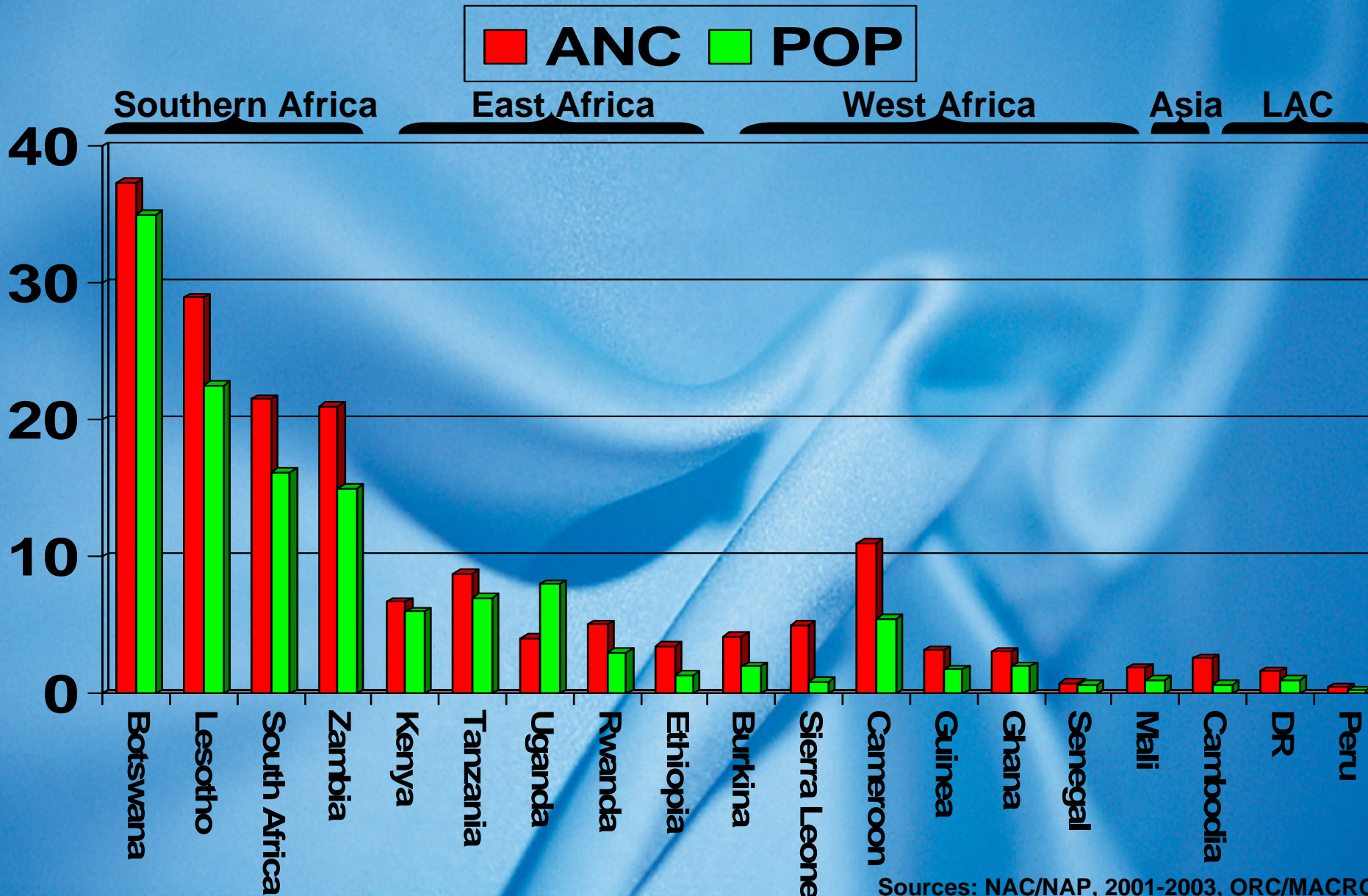
**David Wilson  
The Global HIV/AIDS Program  
World Bank**

**25 September, 2006**

# INTRODUCTION<sup>(1-1)</sup>

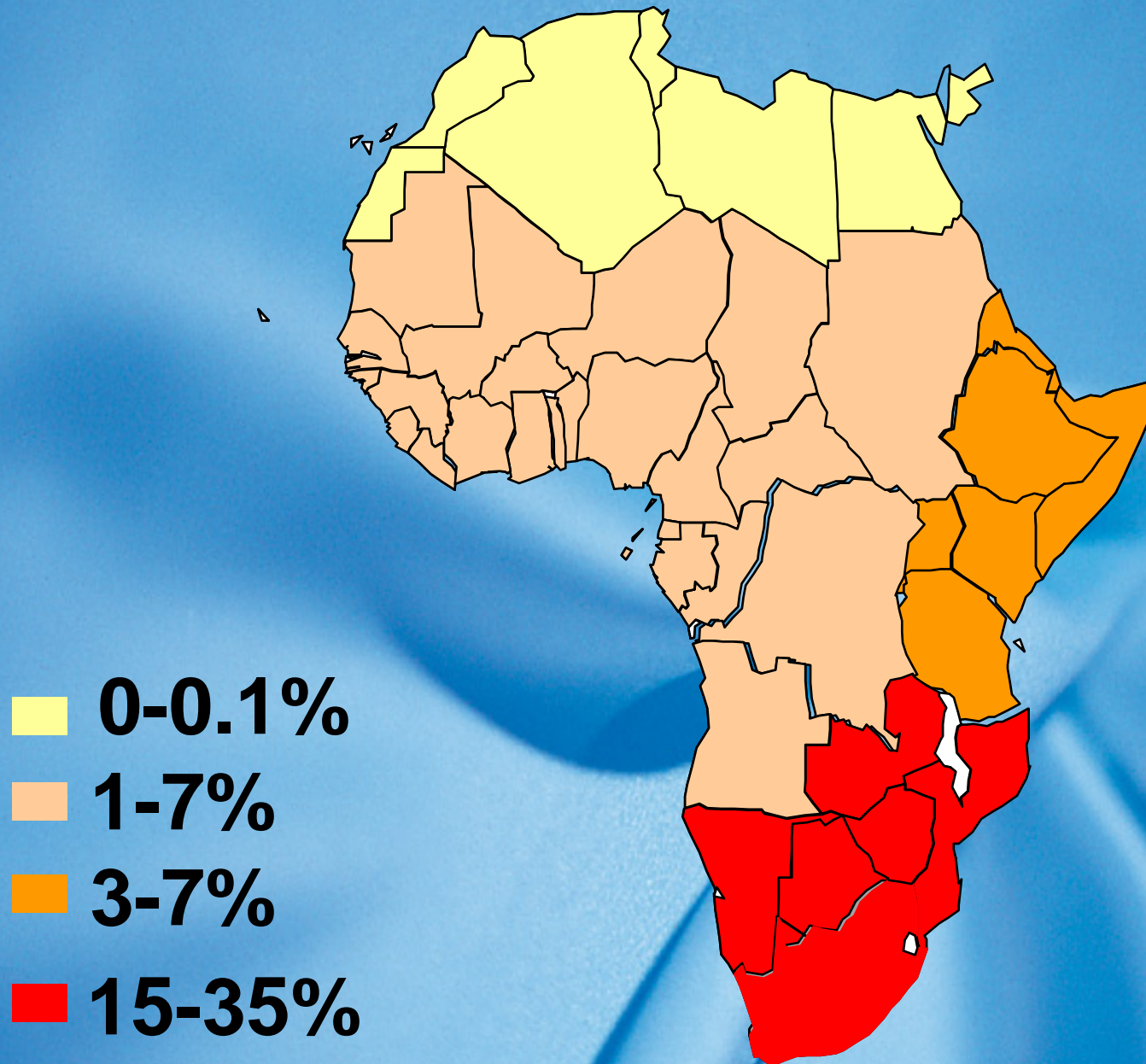
- **Global - and African - HIV epidemics far more heterogeneous than initially recognized**

# NATIONAL ANTENATAL AND POPULATION HIV ESTIMATES



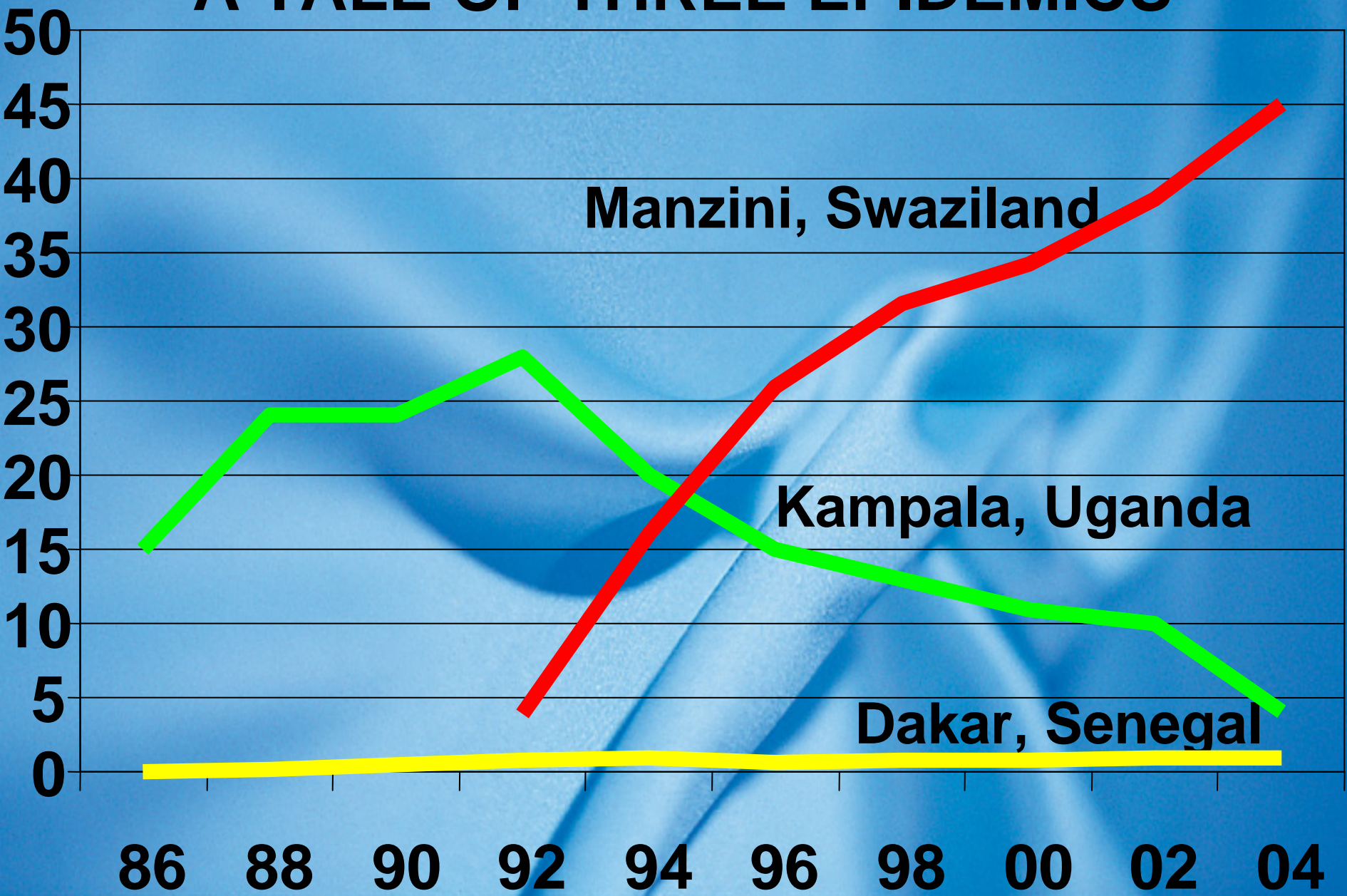
Sources: NAC/NAP, 2001-2003, ORC/MACRO

# HETEROGENEITY OF HIV IN AFRICA

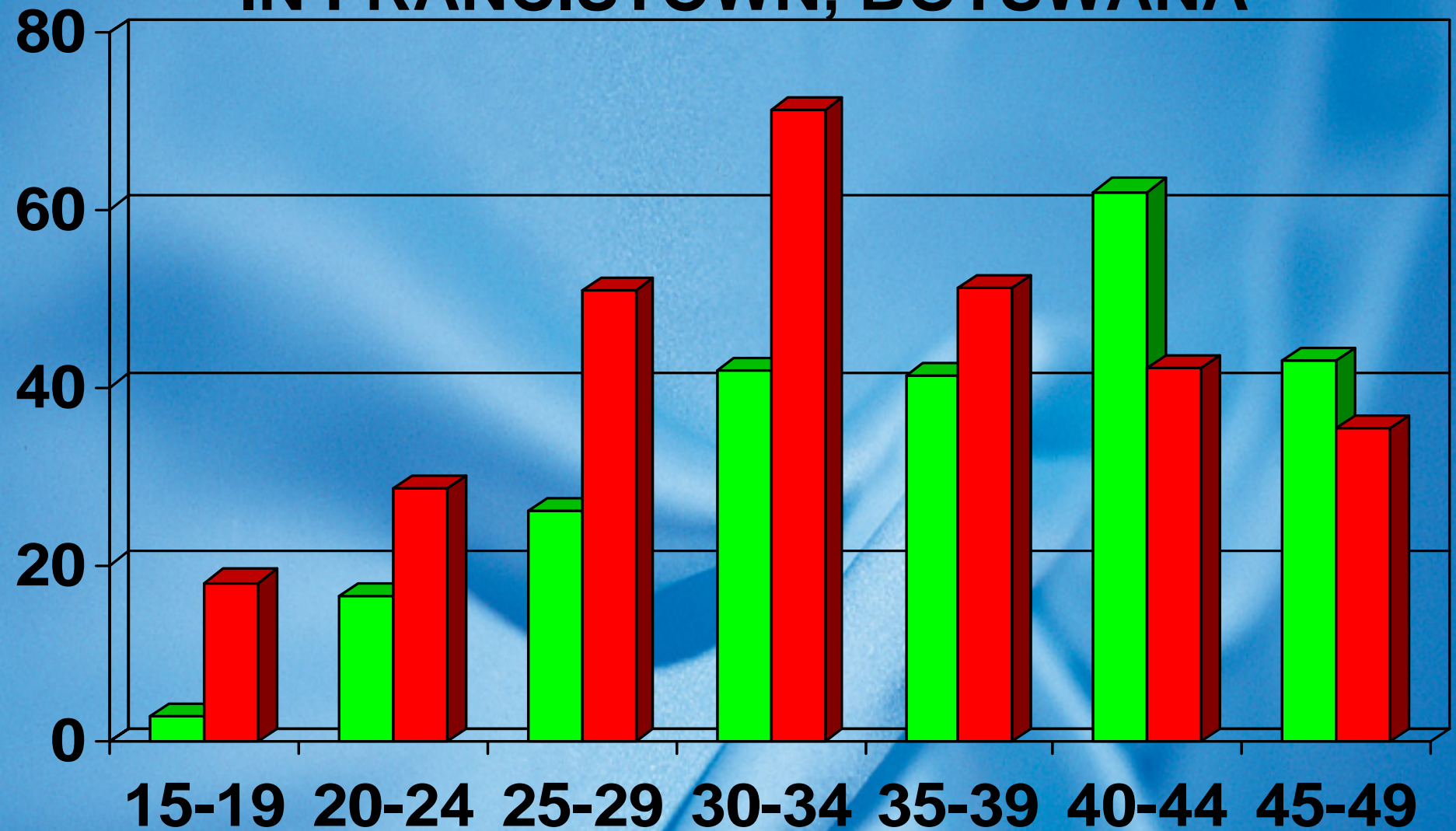


Sources: UNAIDS 2004 estimates used unless recent national population-based HIV survey available

# HETEROGENEITY OF HIV IN AFRICA A TALE OF THREE EPIDEMICS



# POPULATION-BASED HIV PREVALENCE IN FRANCISTOWN, BOTSWANA



■ Male ■ Female

# **HETEROGENEITY OF HIV: AFRICAN EVIDENCE<sup>(1-1)</sup>**

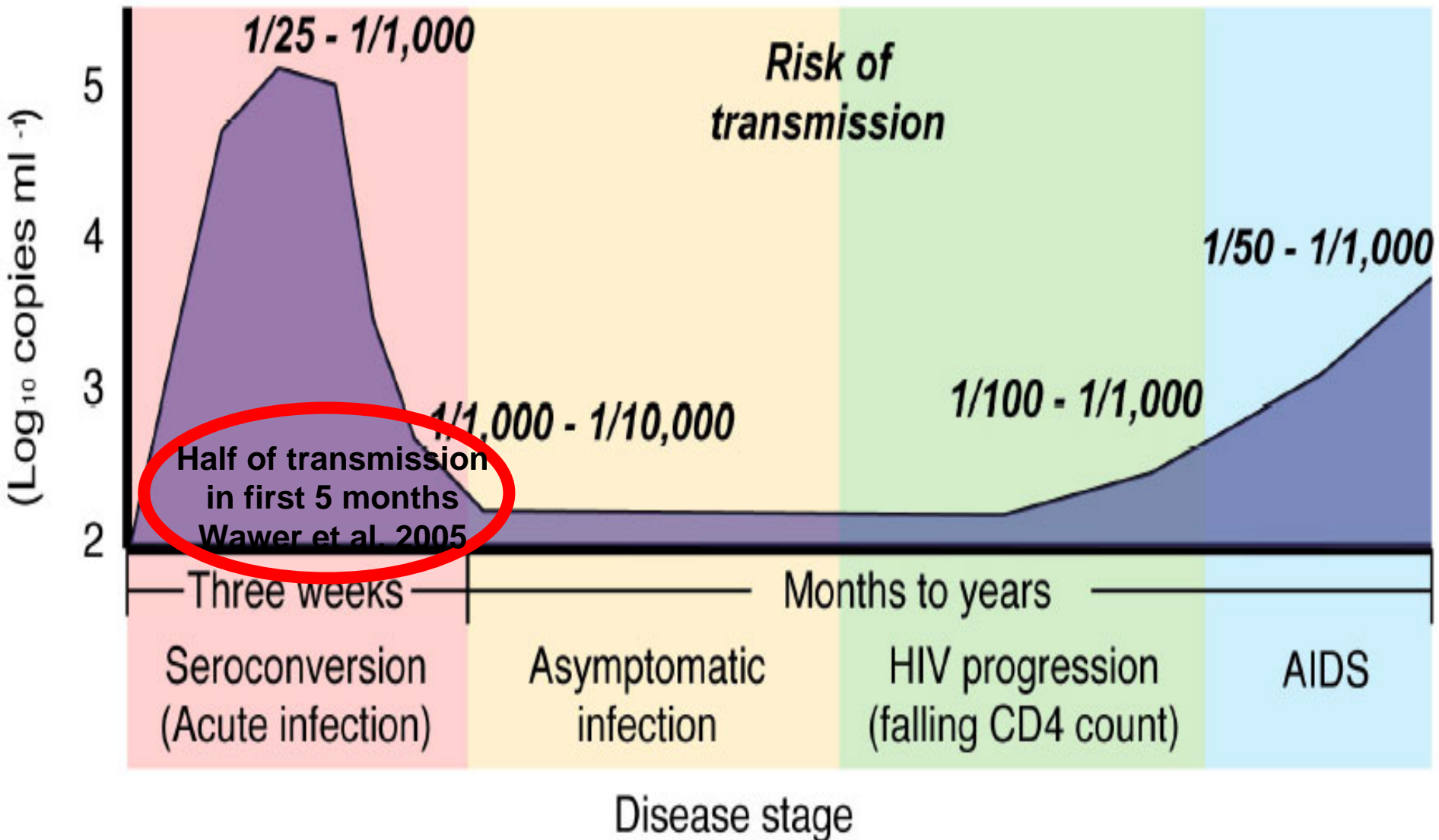
**□ Why is HIV so diverse in Africa?**

# **HETEROGENEITY OF HIV: CONCURRENT SEXUAL PARTNERSHIPS<sup>(1-1)</sup>**

**□ Acute infection and concurrent sexual partnerships critical?**



# HIV TRANSMISSION RISKS

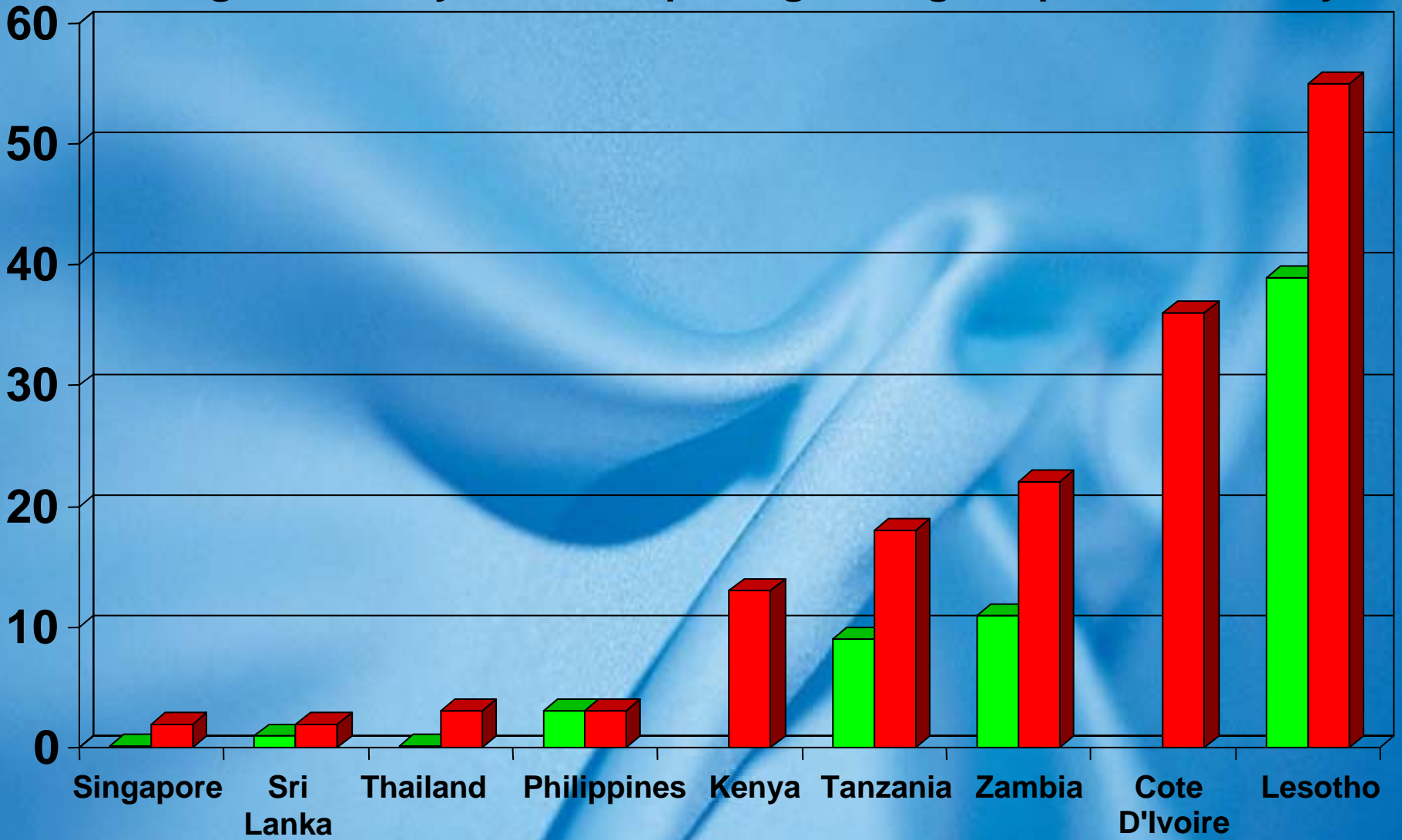


Source: Galvin, S.R. & Cohen, M.S. (2004) The role of sexually transmitted diseases in HIV infection. *Nature Reviews Microbiology*, 2(1).

# CONCURRENT PARTNERSHIPS GLOBALLY

Female Male

Percentage of 15-49 year olds reporting > 1 regular partner in last year



Sources: Halperin et al, 2005

# HETEROGENEITY OF HIV: MALE CIRCUMCISION<sup>(1-1)</sup>

- Meta-analyses - circumcised men 50-70% less likely to get HIV
- Ecological studies - circumcision major factor in variations in Africa and Asia's HIV epidemic
- Randomized trial in South Africa - circumcision reduced HIV transmission by 60-76%

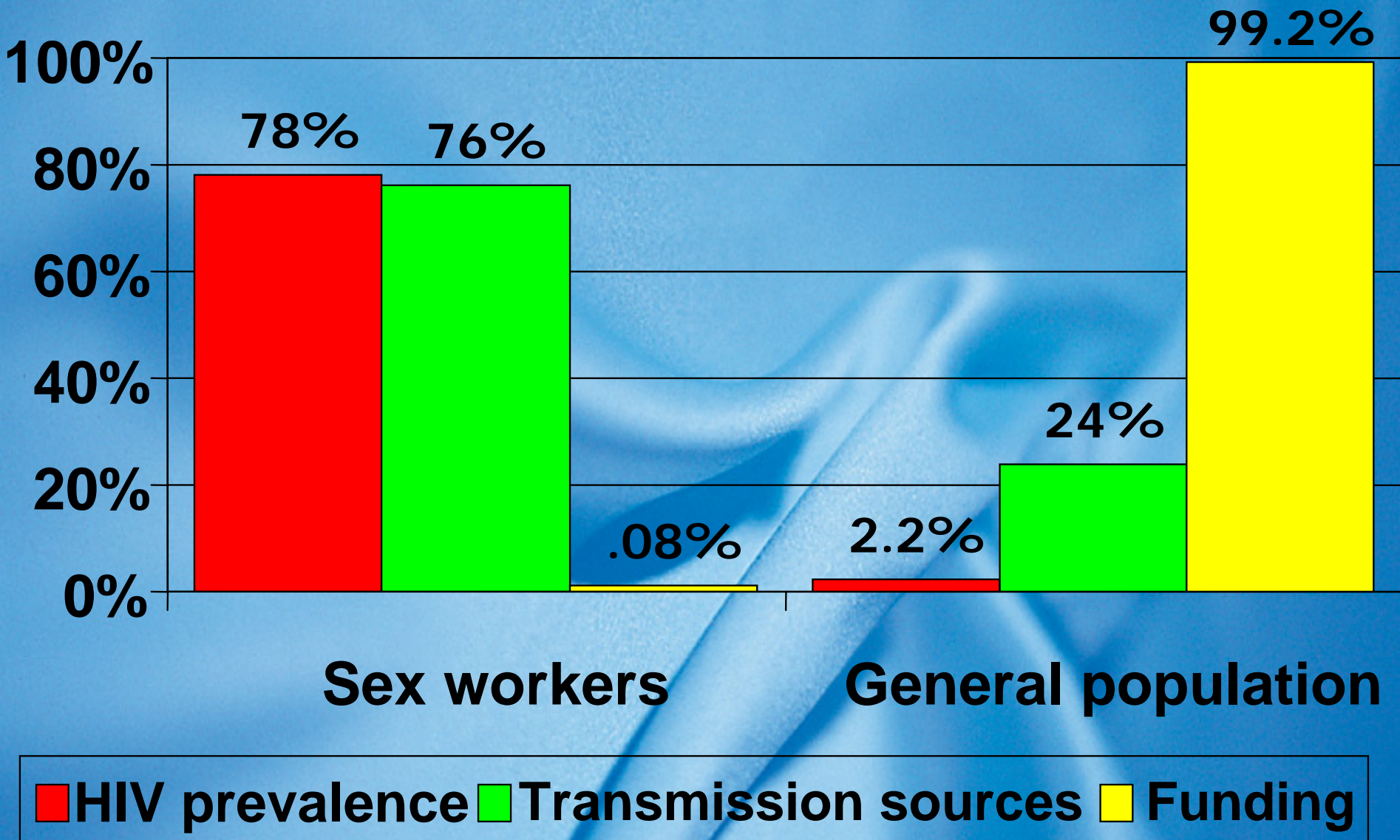
# **HETEROGENEITY OF HIV: THE LETHAL COCKTAIL<sup>(1-1)</sup>**

- Concurrent sexual partnerships and limited male circumcision fuel and match that lit Southern Africa's unique hyper-epidemics – together, these factors may increase HIV transmission 30-fold – explaining much heterogeneity in HIV epidemic potential**

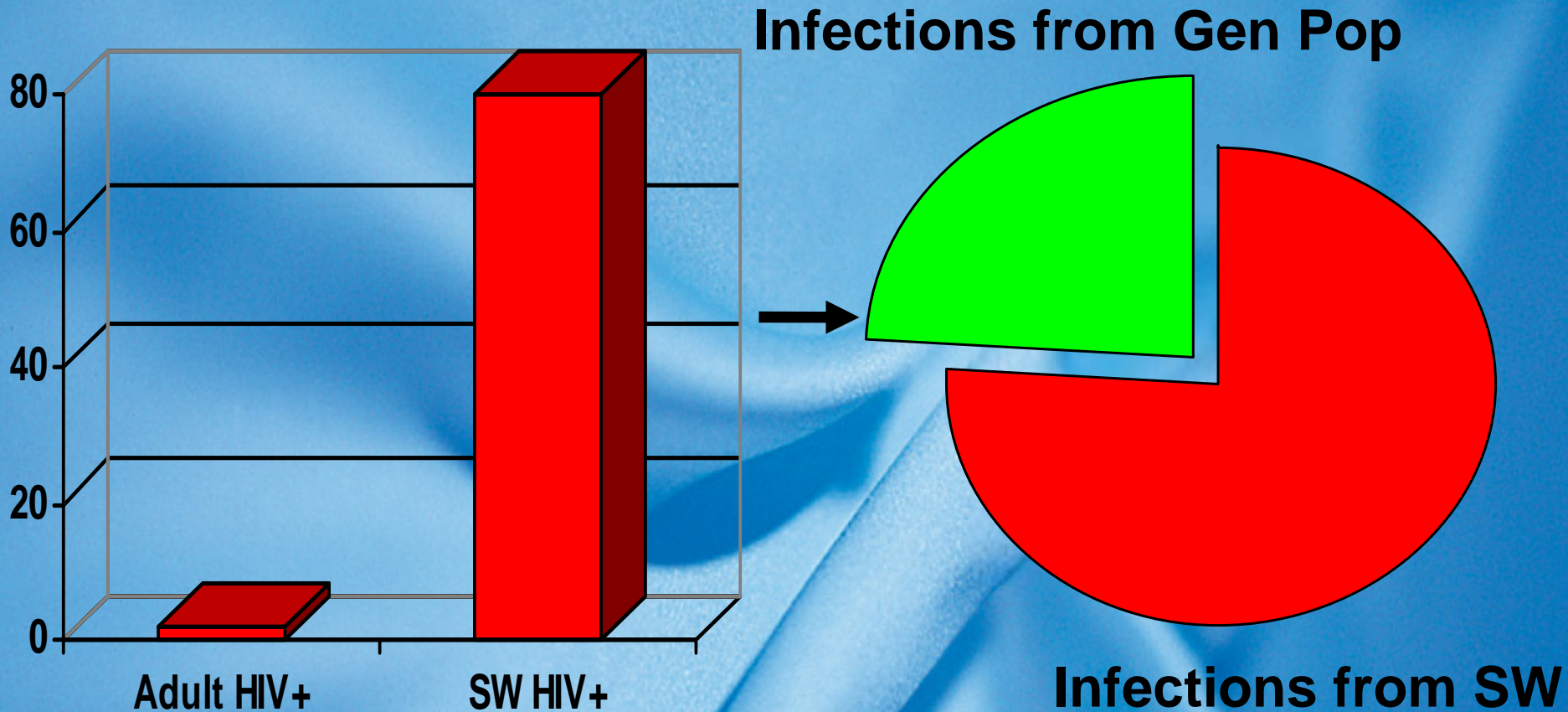
# **CONCENTRATED AND GENERALIZED EPIDEMICS FUNDAMENTALLY DIFFERENT<sup>(1-1)</sup>**

<b>Concentrated epidemics</b>	<b>Generalized epidemics</b>
<b>Driven by sexual and injecting practices, especially among HIV-vulnerable groups, including sex workers, men-having-sex-with-men and injecting drug users</b>	<b>Driven primarily by sexual behavior in the general population</b>
<b>Require large-scale interventions to protect HIV-vulnerable groups</b>	<b>Require large-scale, fundamental changes in community norms and sexual values and practices</b>
<b>Expanding coverage of proven interventions vital</b>	<b>Social and community change processes critical</b>

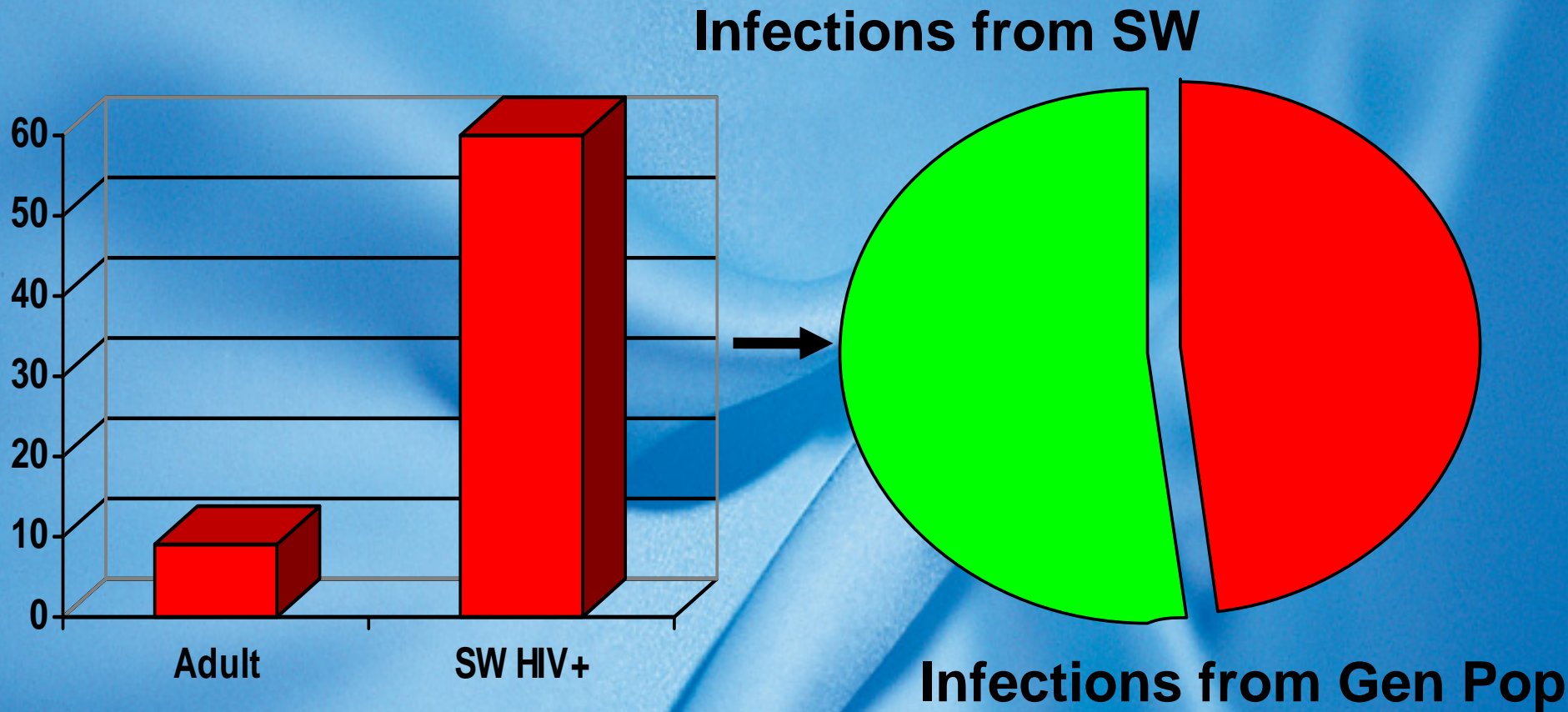
# HIV PREVALENCE, TRANSMISSION SOURCES AND FUNDING IN ACCRA, GHANA



# HIV PREVALENCE AND TRANSMISSION SOURCES IN ACCRA, GHANA



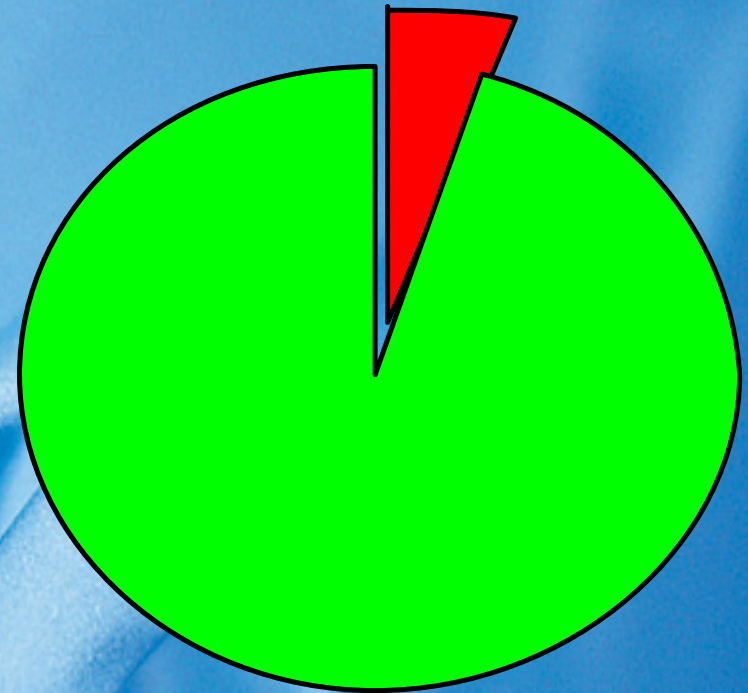
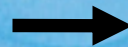
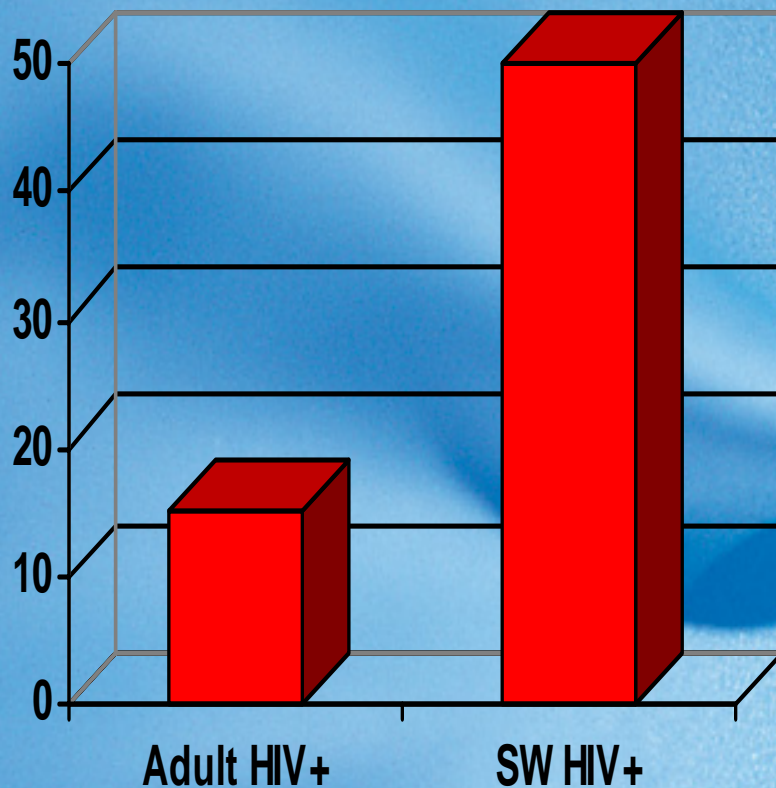
# HIV PREVALENCE AND TRANSMISSION SOURCES IN NAIROBI, KENYA





# HIV PREVALENCE AND TRANSMISSION SOURCES IN ZAMBIA

Infections from Vulnerable Groups



Infections from Gen Pop

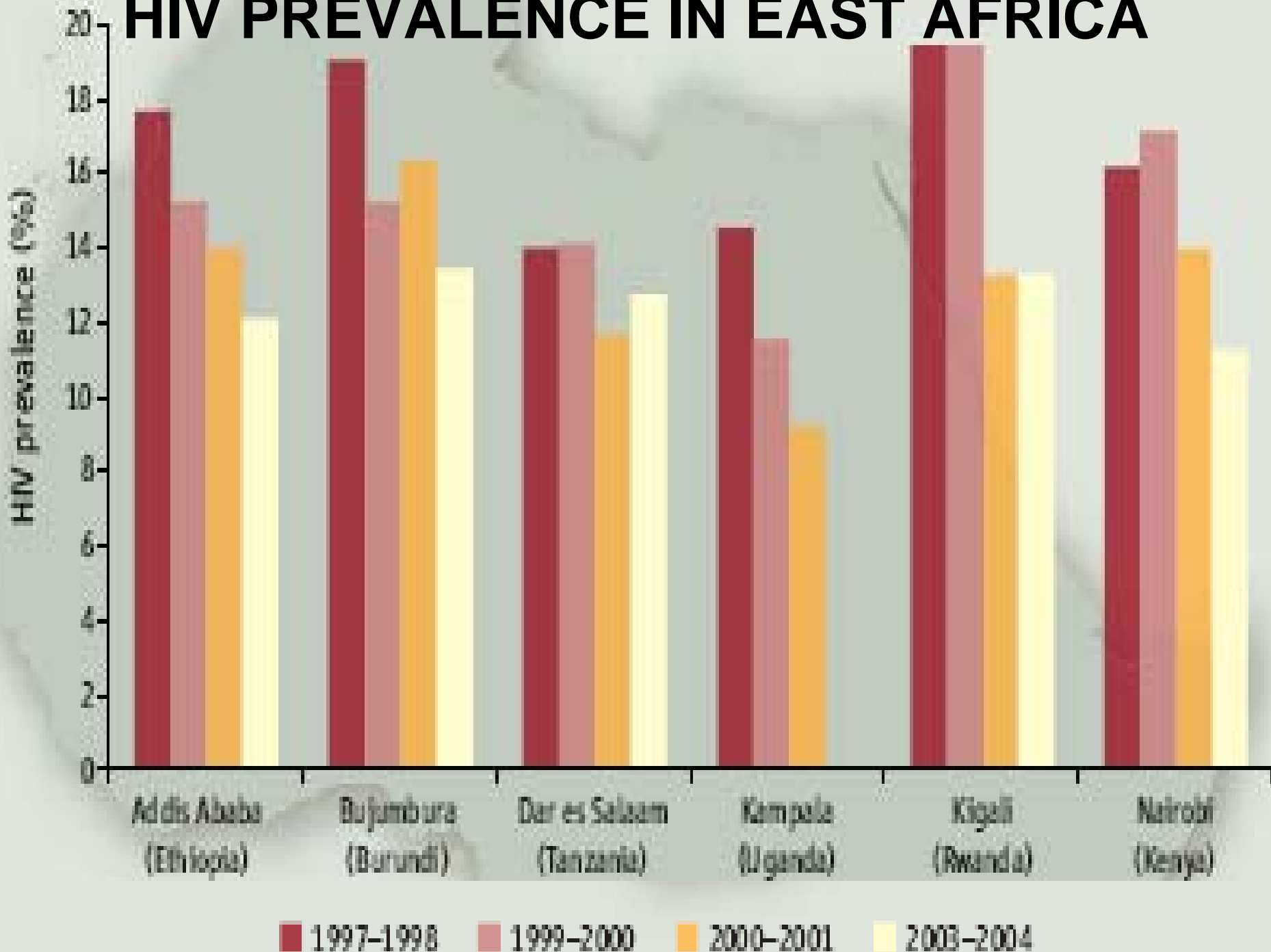
# **HIV TRENDS AND THEIR IMPLICATIONS (1-1)**

- National HIV responses about two decades old**
- HIV prevalence declining in growing number of countries**
- What's emerging from countries with declining national prevalence – what mightn't we have expected two decades ago?**

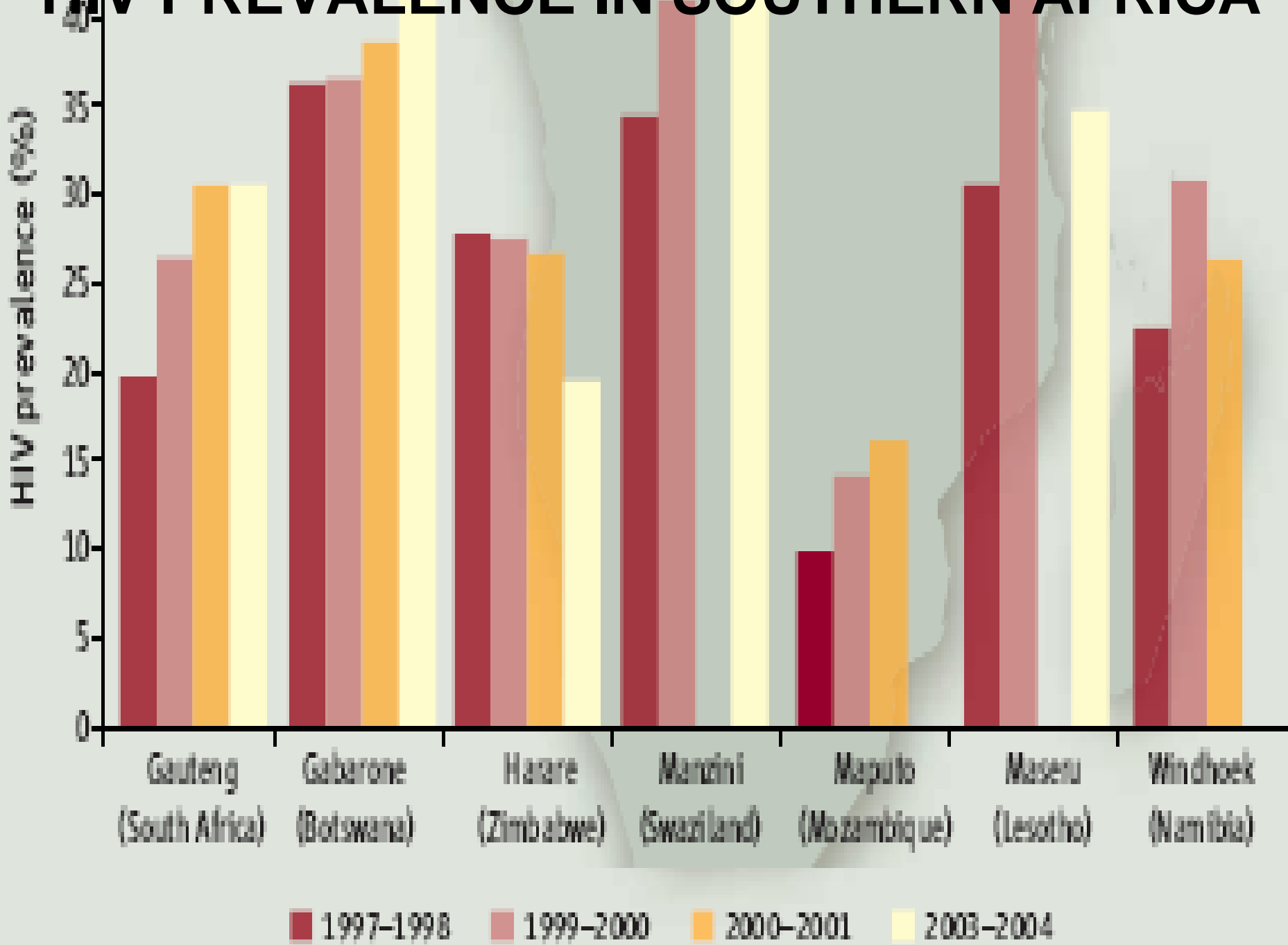
# DECLINING HIV PREVALENCE IN *GENERALIZED* EPIDEMICS (1-1)

- National HIV prevalence declines reported in Uganda, Kenya and Zimbabwe
- HIV prevalence declines also reported in *urban* Burkina Faso, Burundi, Ethiopia, Malawi and Rwanda
- Declining HIV prevalence also observed in Haiti, Barbados and Bahamas

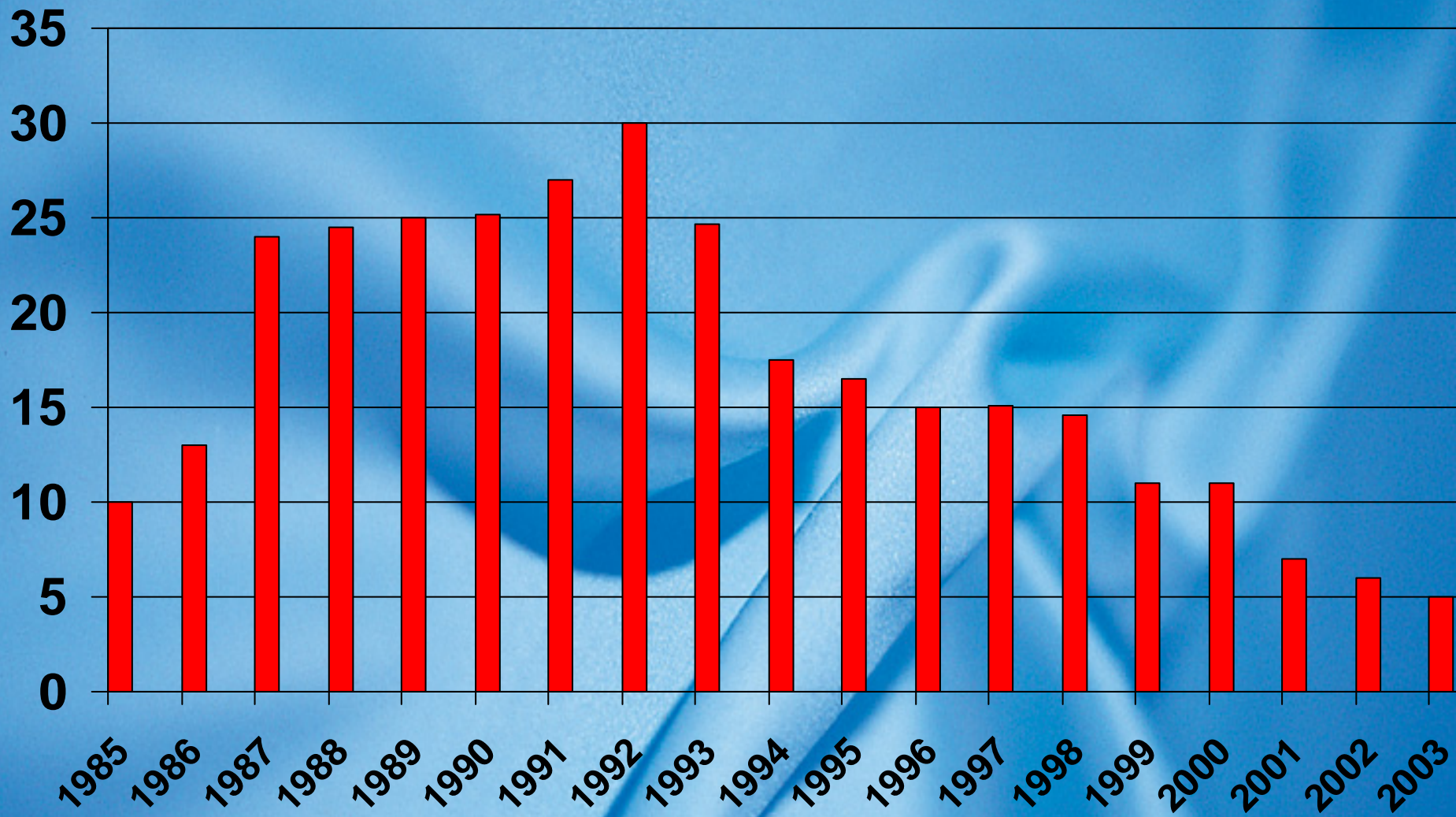
# HIV PREVALENCE IN EAST AFRICA



# HIV PREVALENCE IN SOUTHERN AFRICA



# ANTENATAL PREVALENCE IN KAMPALA, 1985-2003



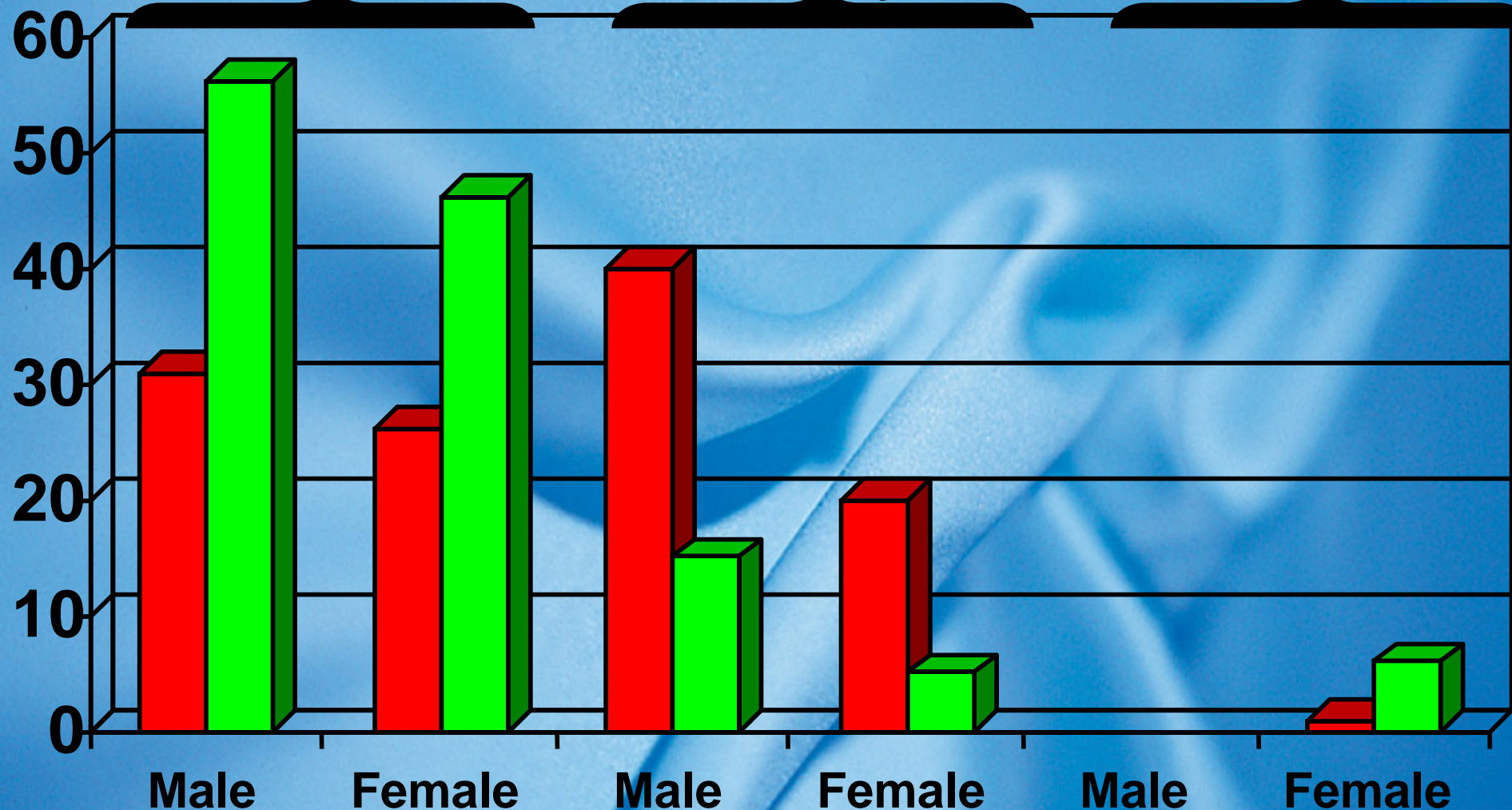
# BEHAVIOR CHANGE IN UGANDA

1989 1995

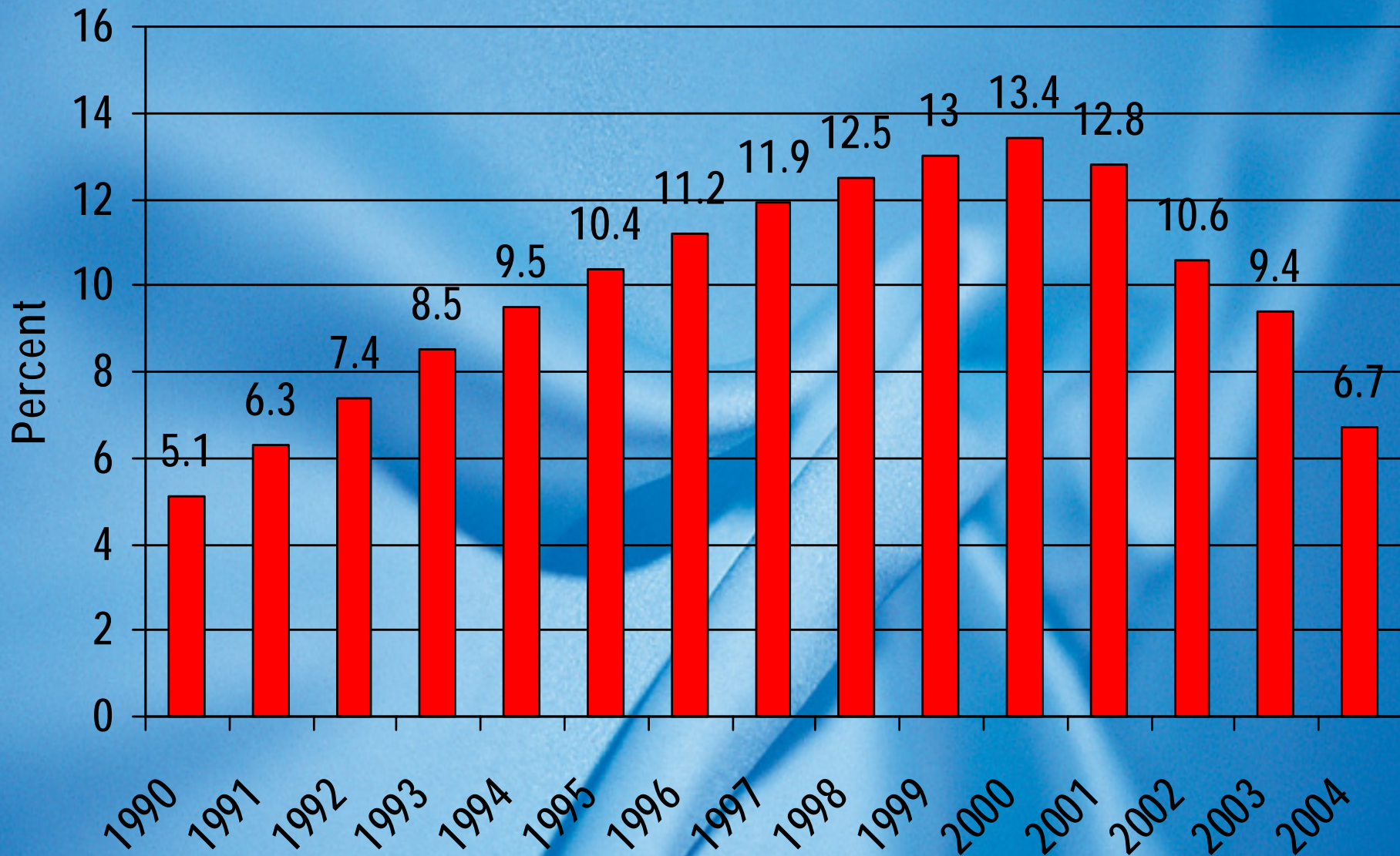
Never had sex

>1 sexual partner  
in last year

Ever used  
condom

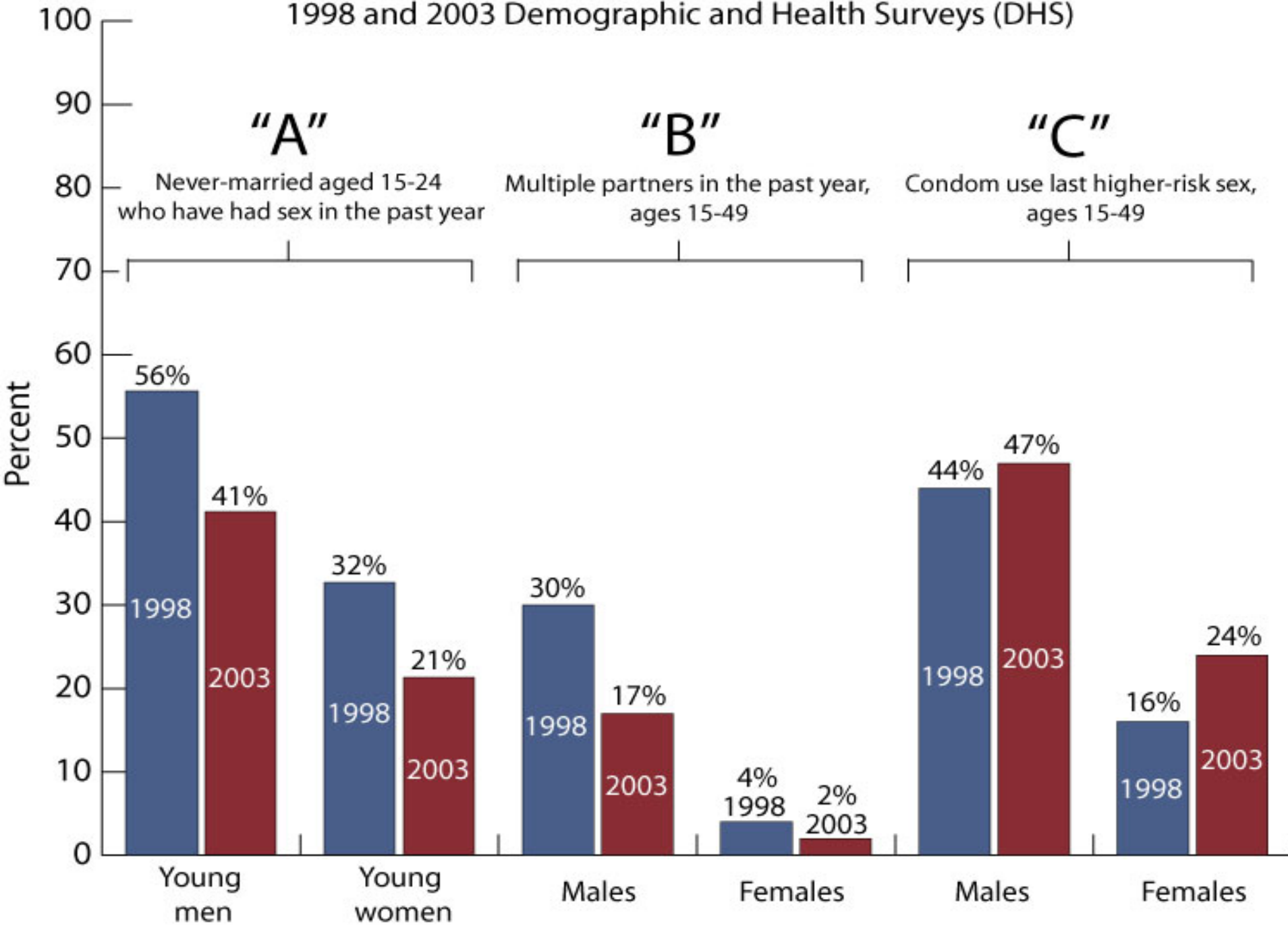


# ANTENATAL HIV PREVALENCE IN KENYA: SENTINEL SURVEILLANCE 1990-2003

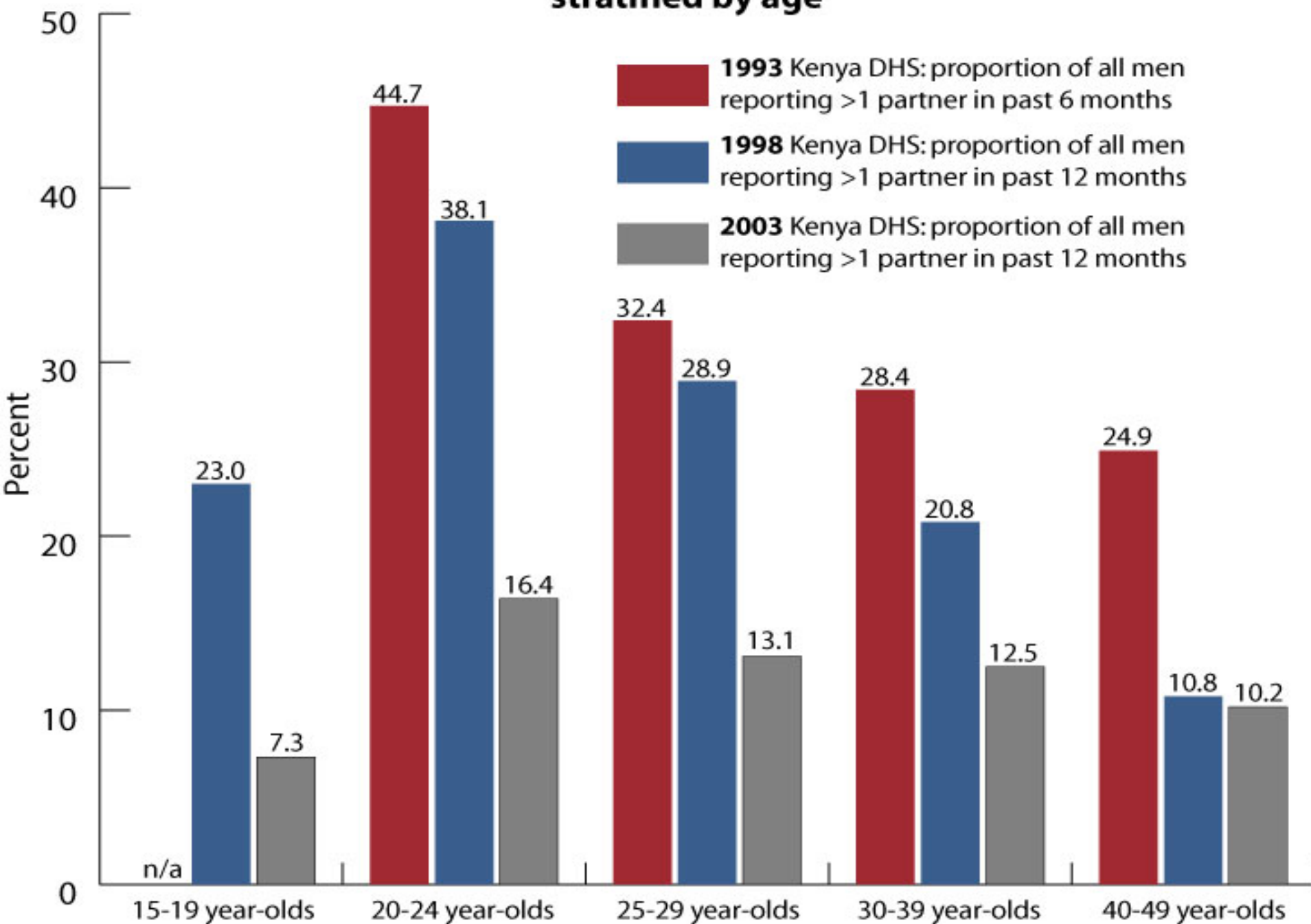




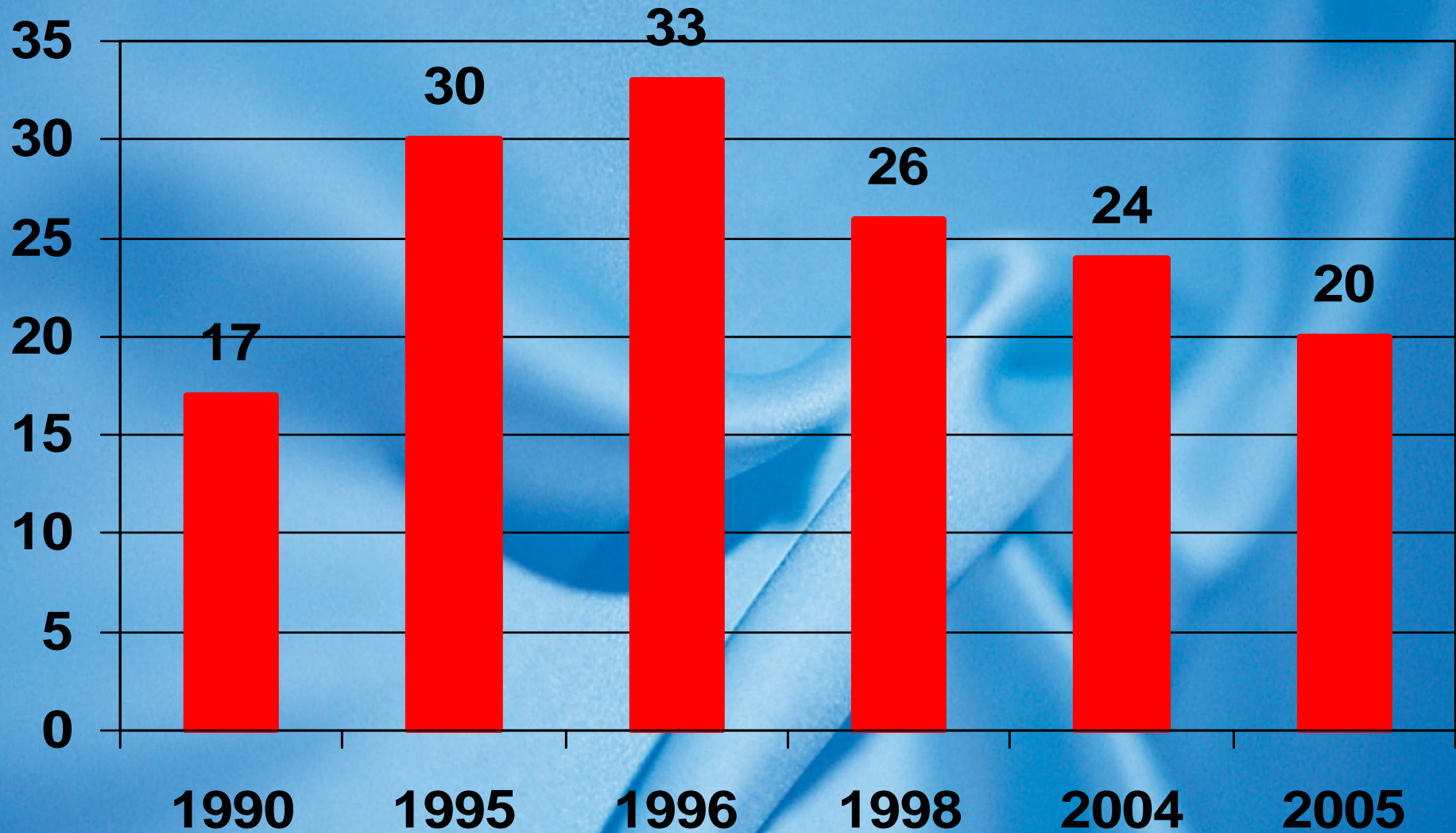
Kenya: Changes in "ABC" indicators between the 1998 and 2003 Demographic and Health Surveys (DHS)



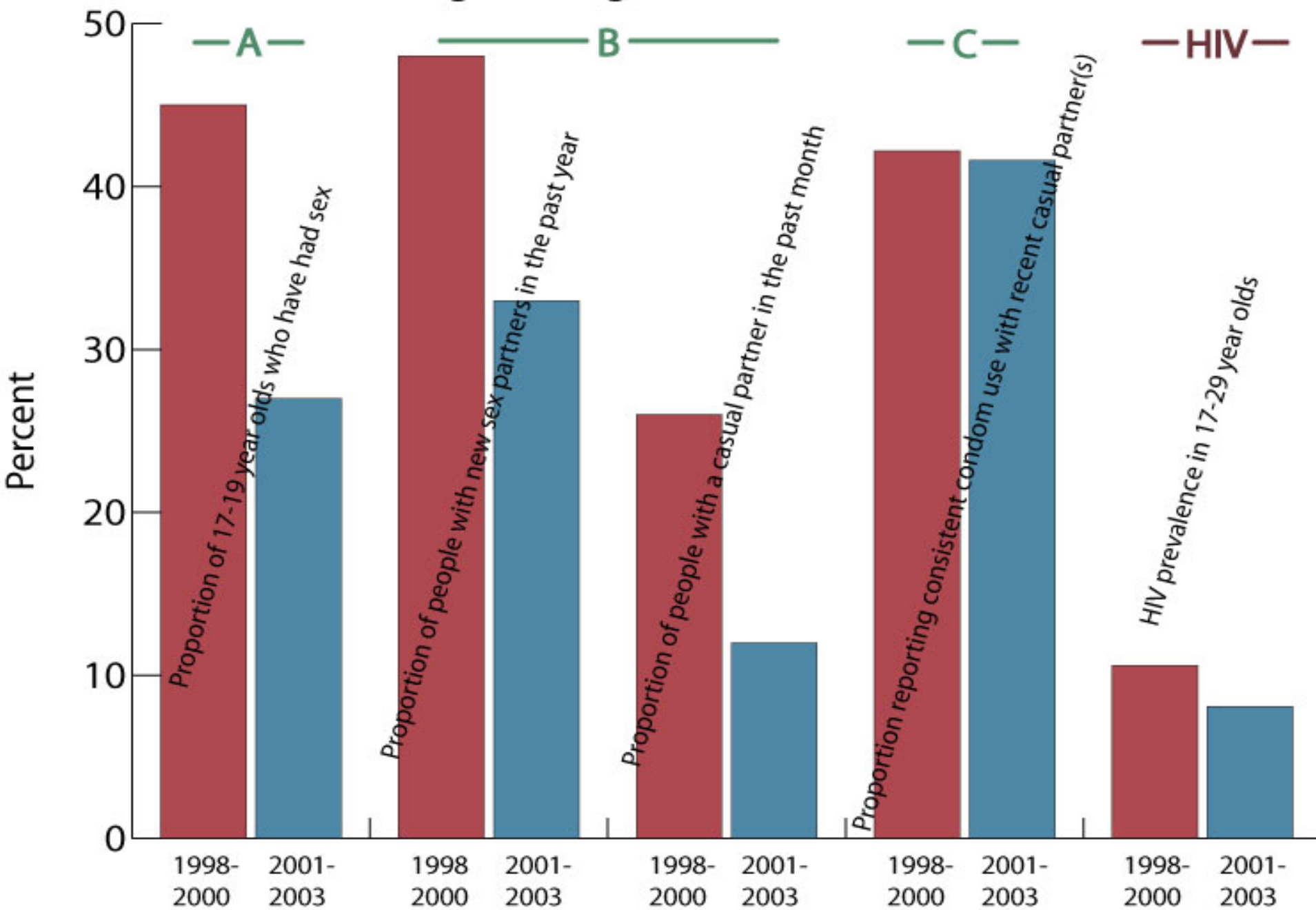
# Kenya: proportion of males reporting multiple sexual partners, stratified by age



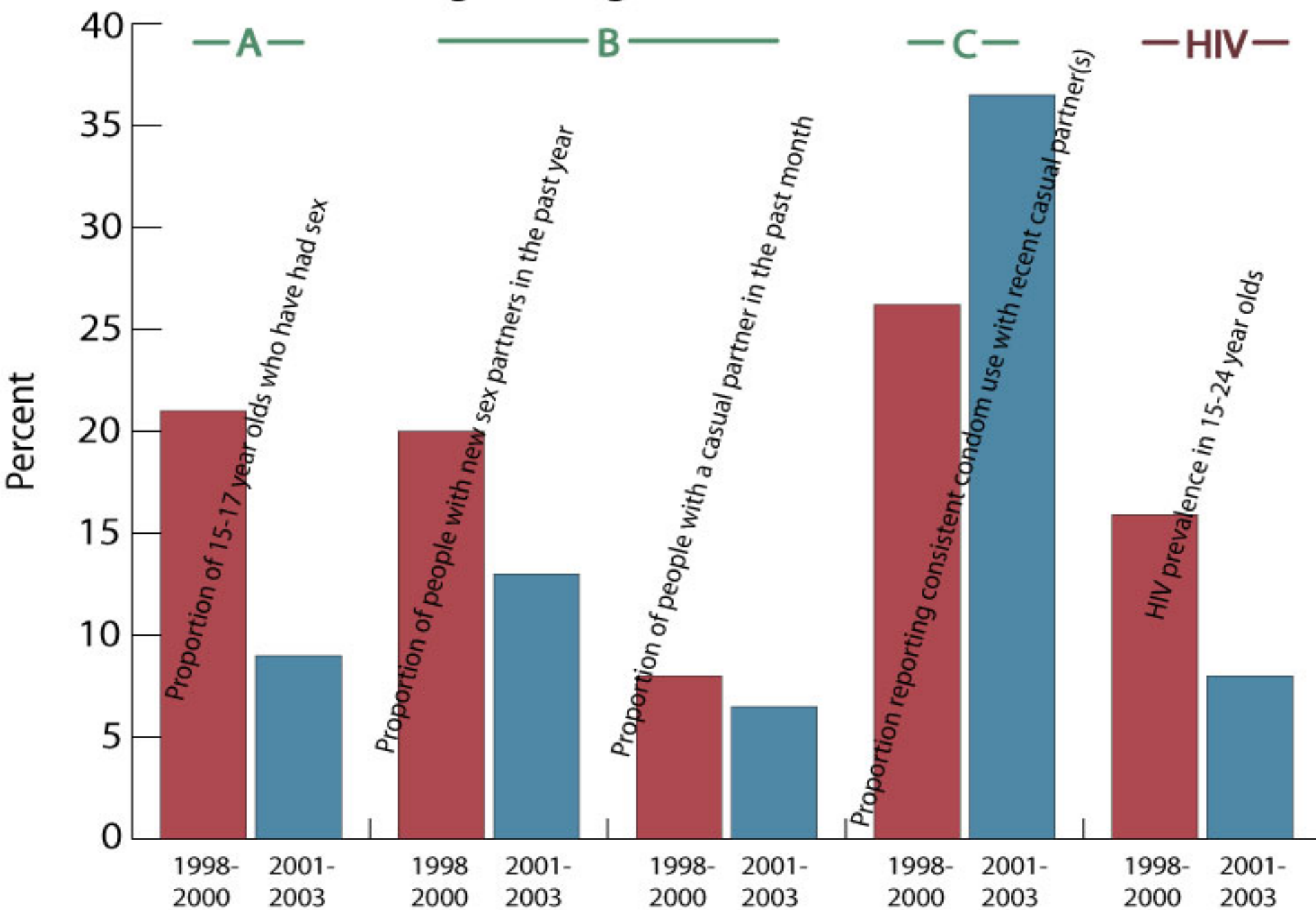
# ANTENATAL HIV PREVALENCE IN ZIMBABABWE: SENTINEL SURVEILLANCE 1990-2005



# Behavior change among males in Manicaland, Zimbabwe



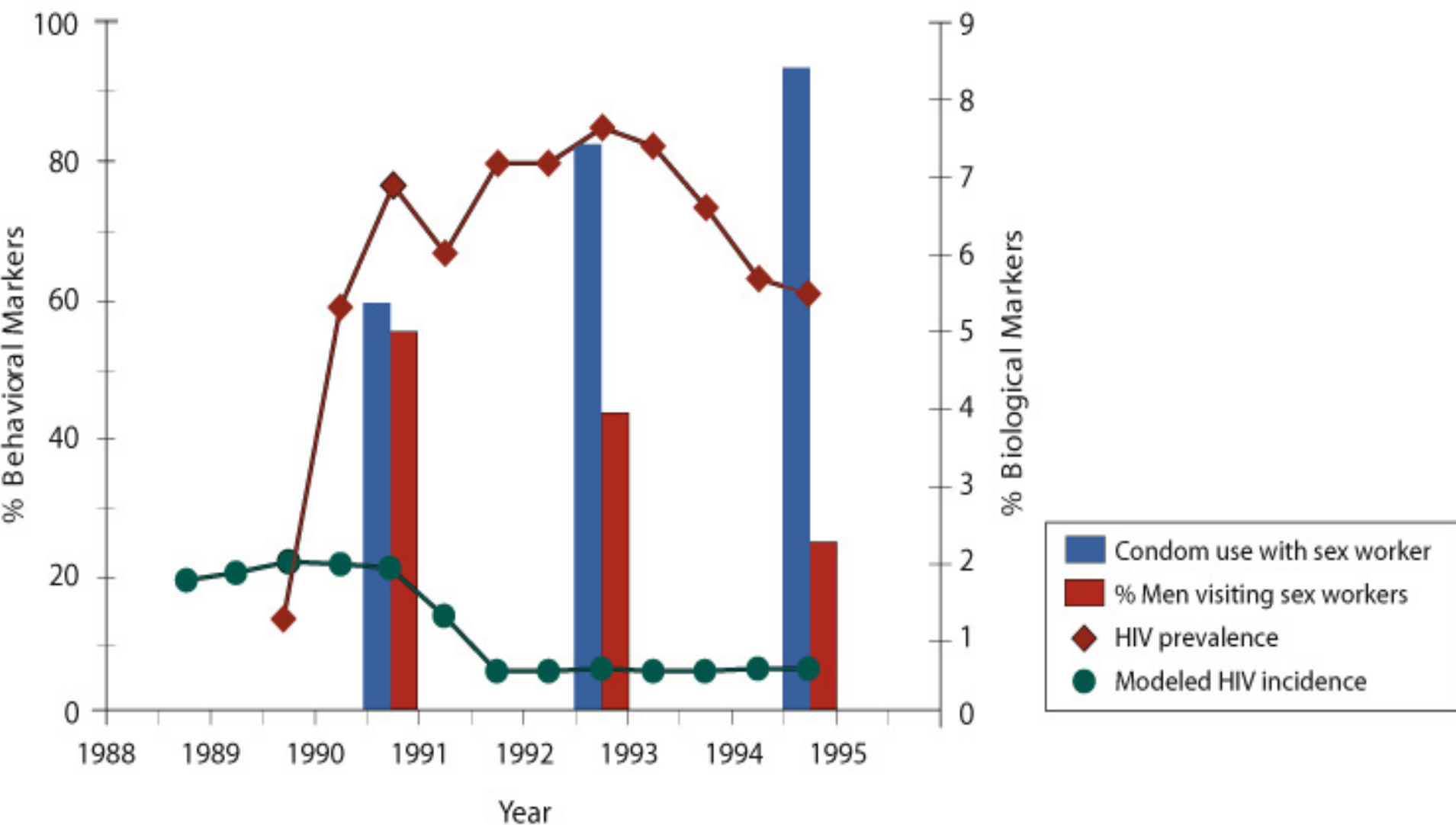
# Behavior change among females in Manicaland, Zimbabwe



# **DECLINING HIV PREVALENCE IN CONCENTRATED EPIDEMICS (1-1)**

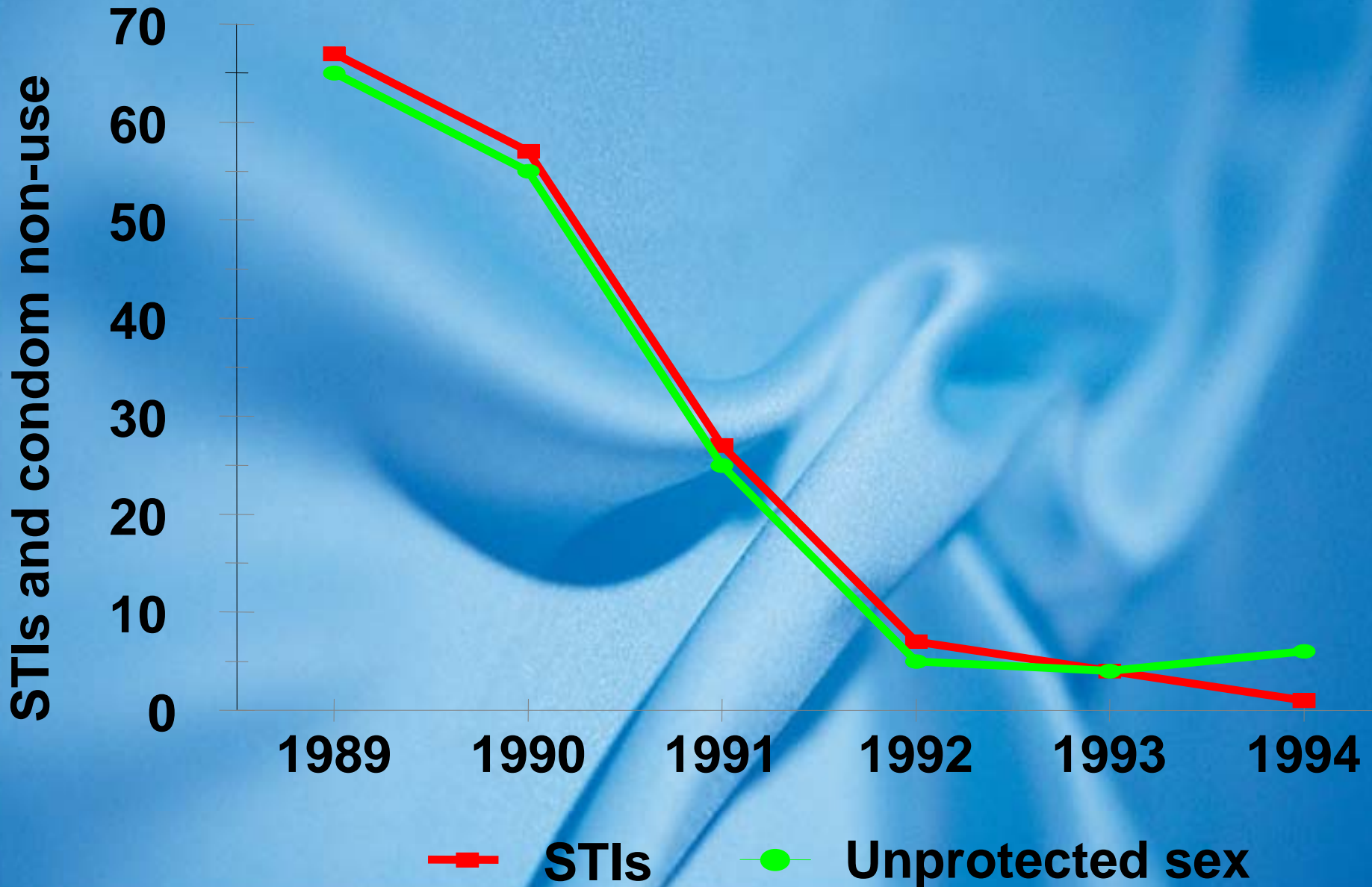
- Declining HIV prevalence reported in Thailand, Cambodia and South India**

# Behavioral Changes and HIV Infection, Thailand 1990–1995



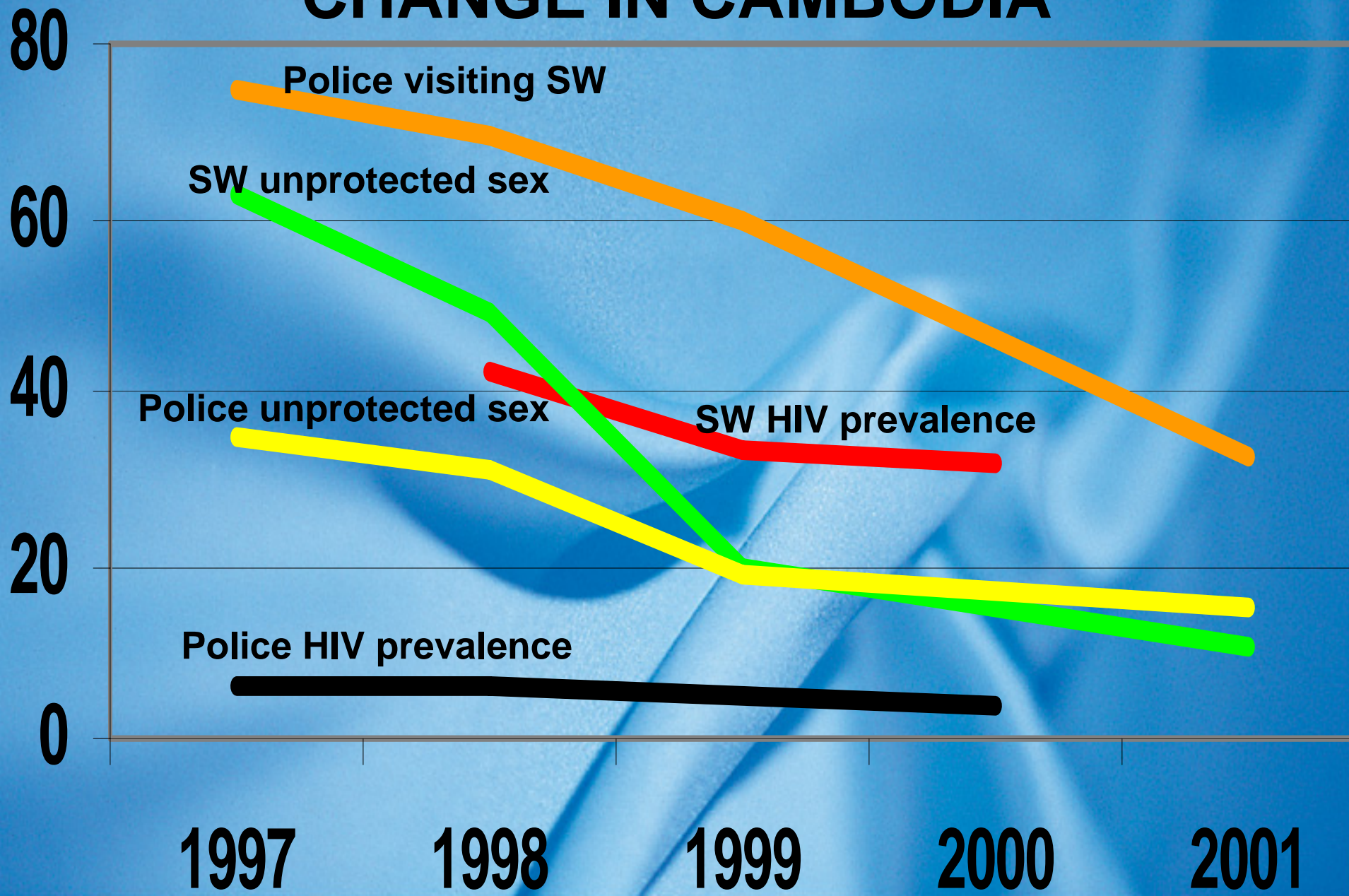
Adapted from Stoneburner and Low-Beer: "Epidemiological elements associated with HIV declines and behavior change in Uganda: Yet another look at the evidence"

# CONDOM USE AND MALE STIS IN THAILAND, 1989-1994

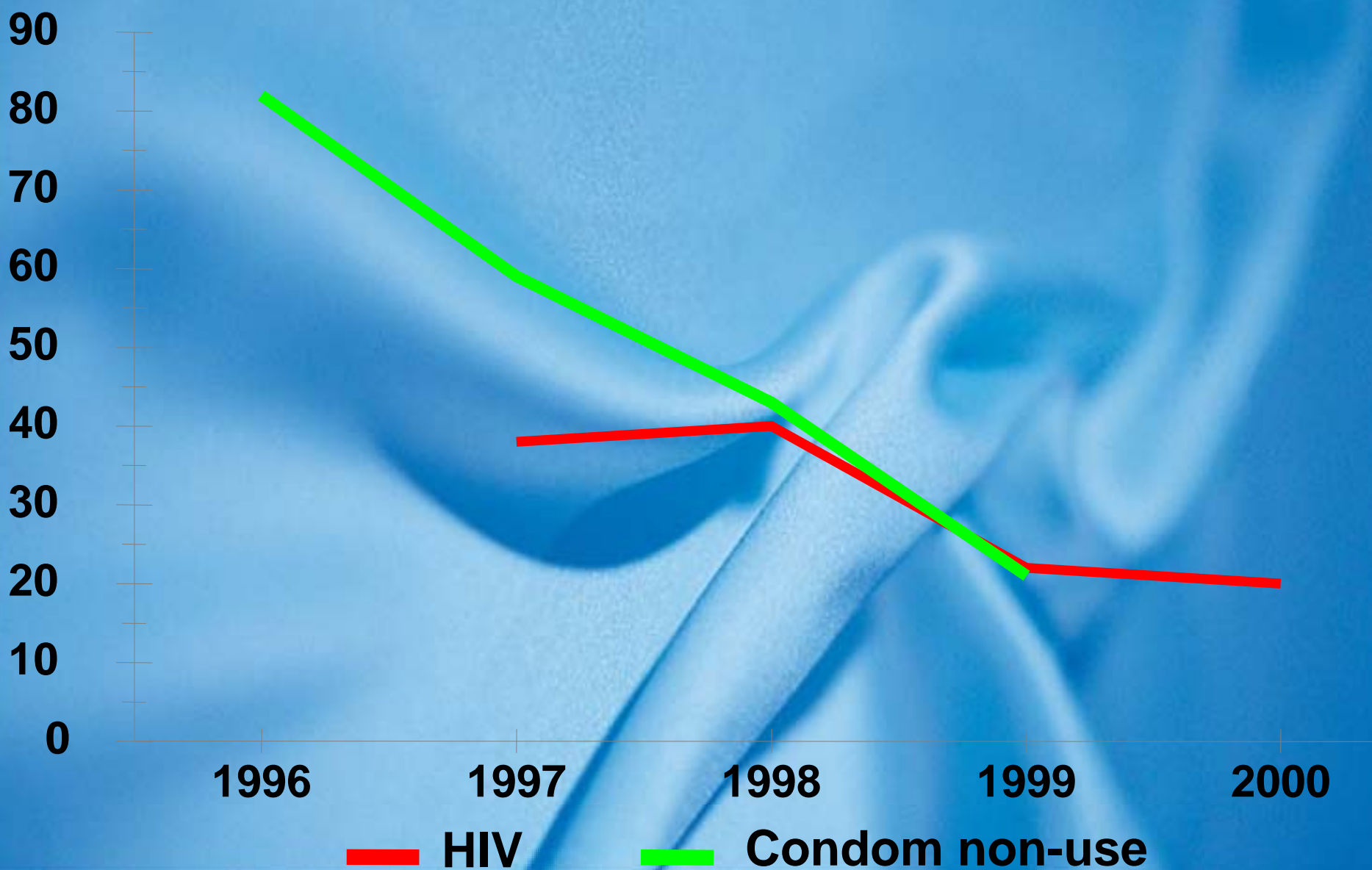




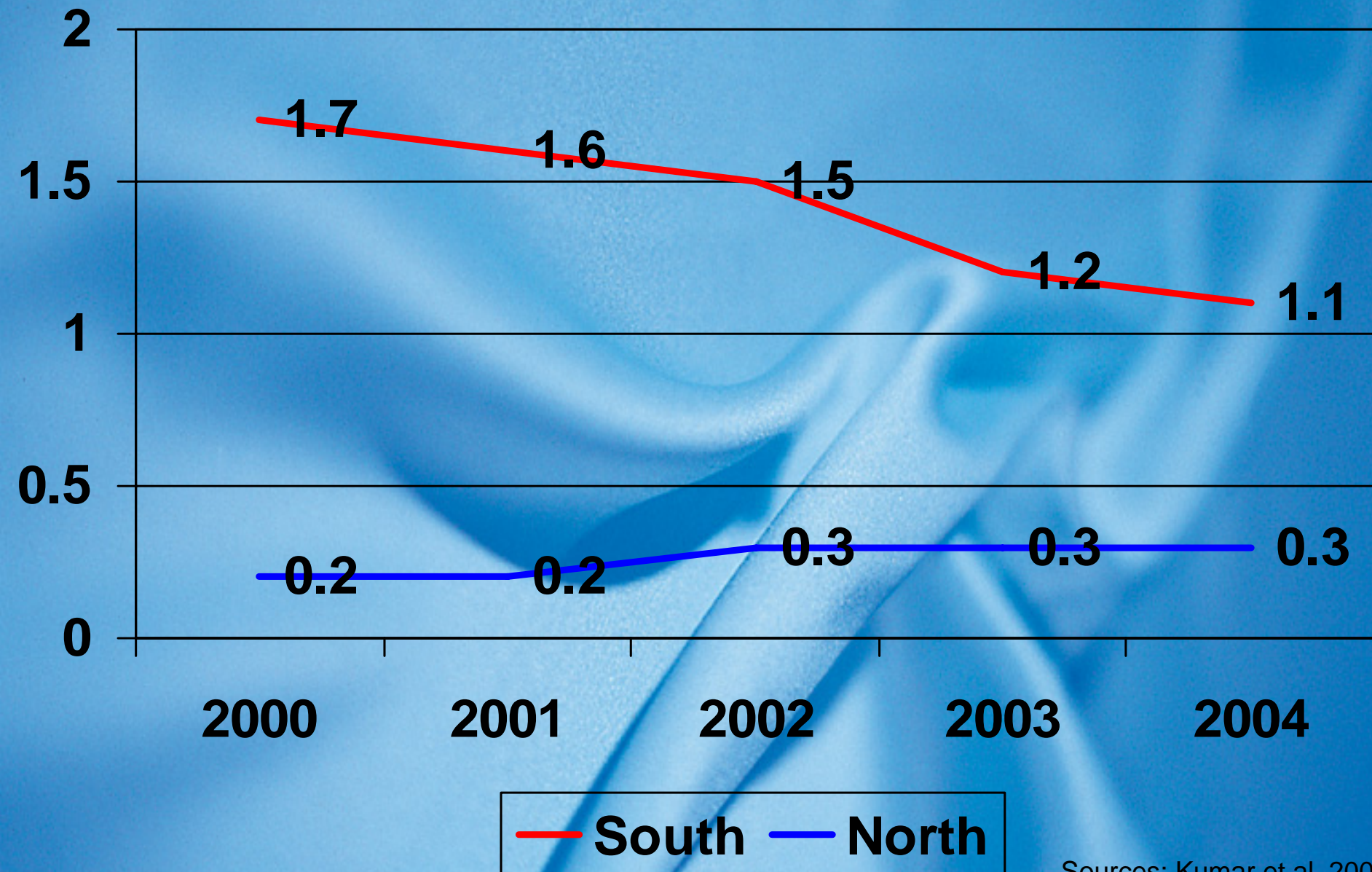
# HIV TRENDS AND BEHAVIOR CHANGE IN CAMBODIA



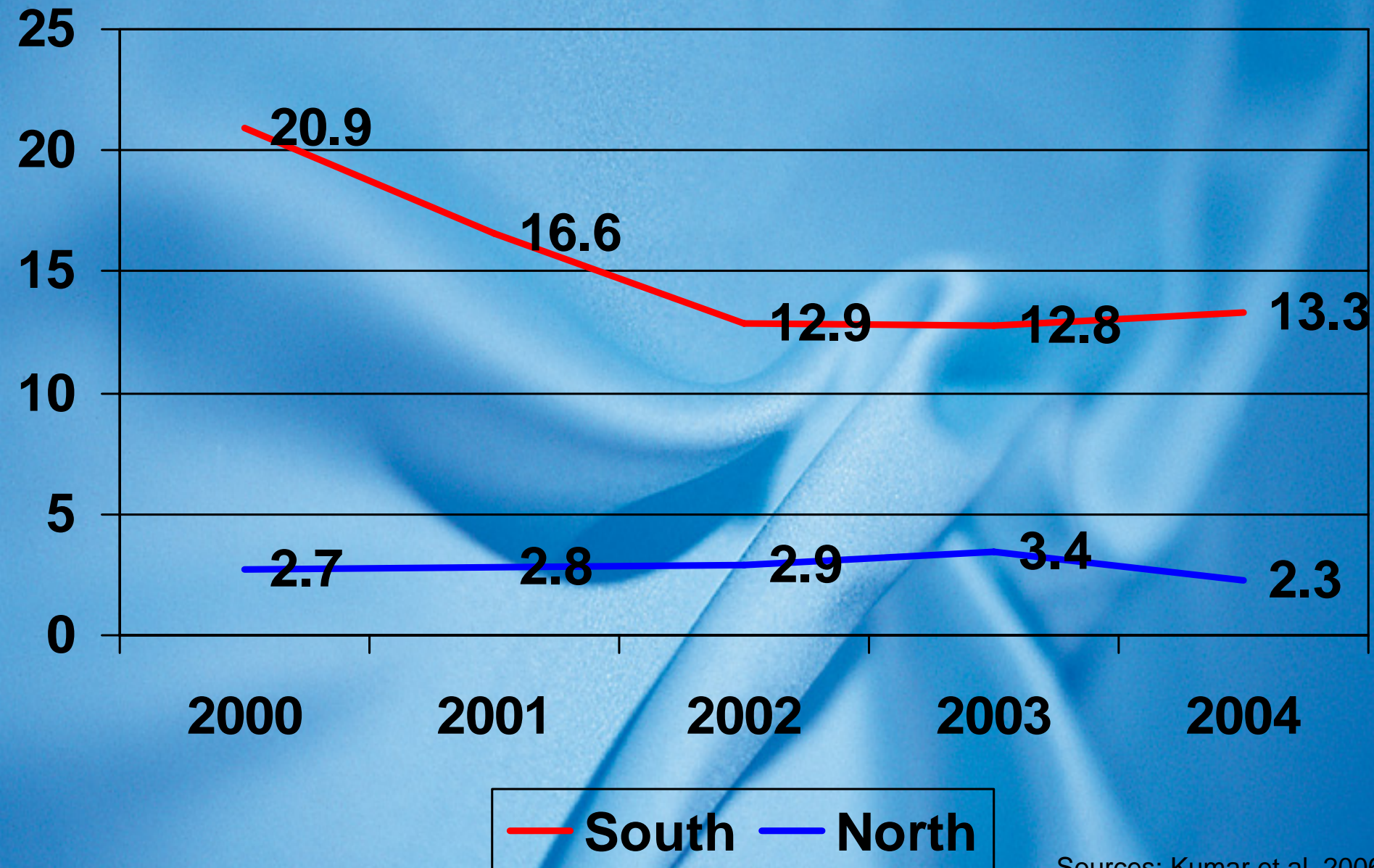
# SEX WITHOUT CONDOM AND HIV PREVALENCE AMONG CAMBODIAN SEX WORKERS, 1996-2000



# HIV PREVALENCE IN INDIAN ANC CLIENTS AGED 15-24



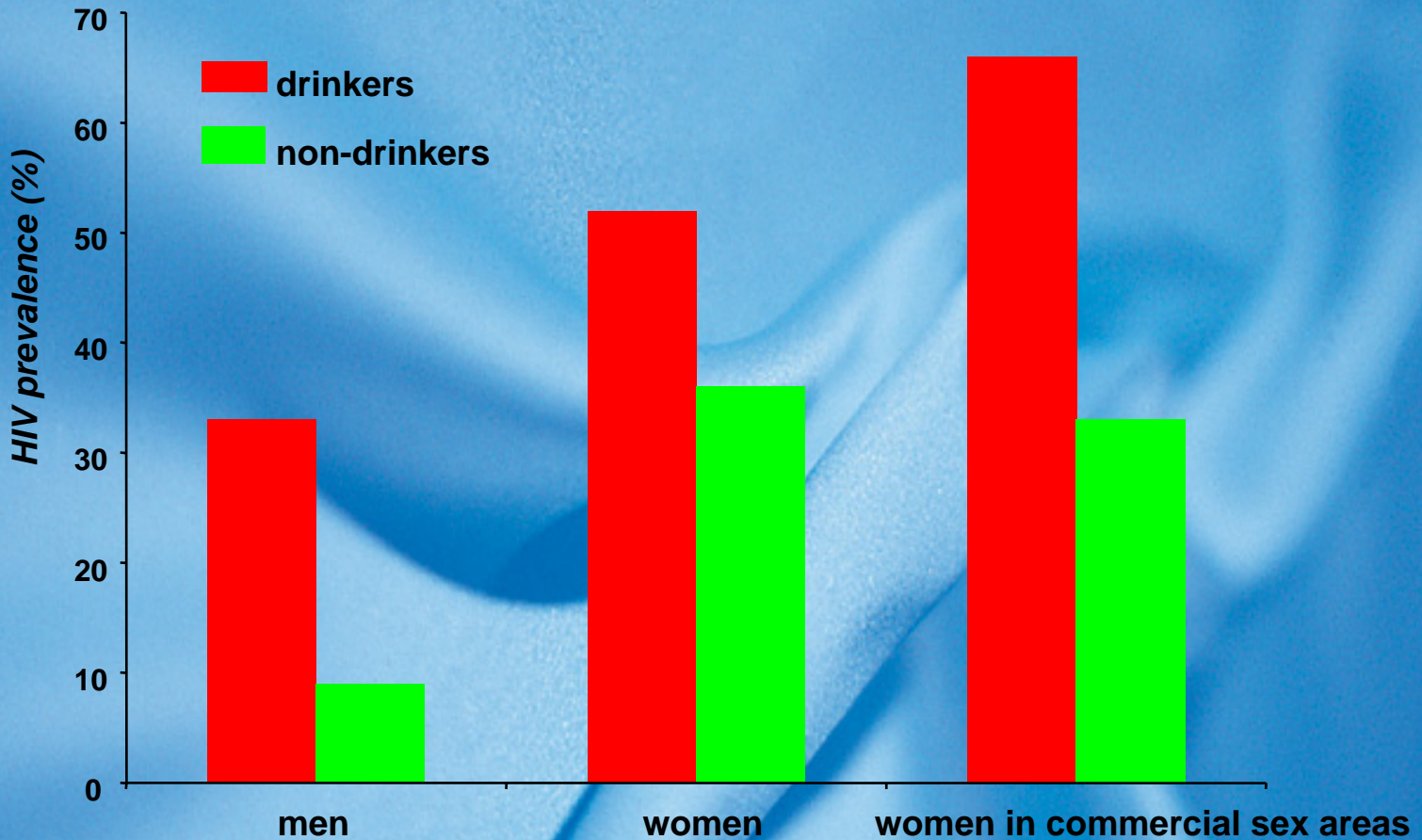
# HIV PREVALENCE IN INDIAN STI CLIENTS AGED 20-29



# **MALE RESPONSIBILITY IS CRITICAL<sup>(1-2)</sup>**

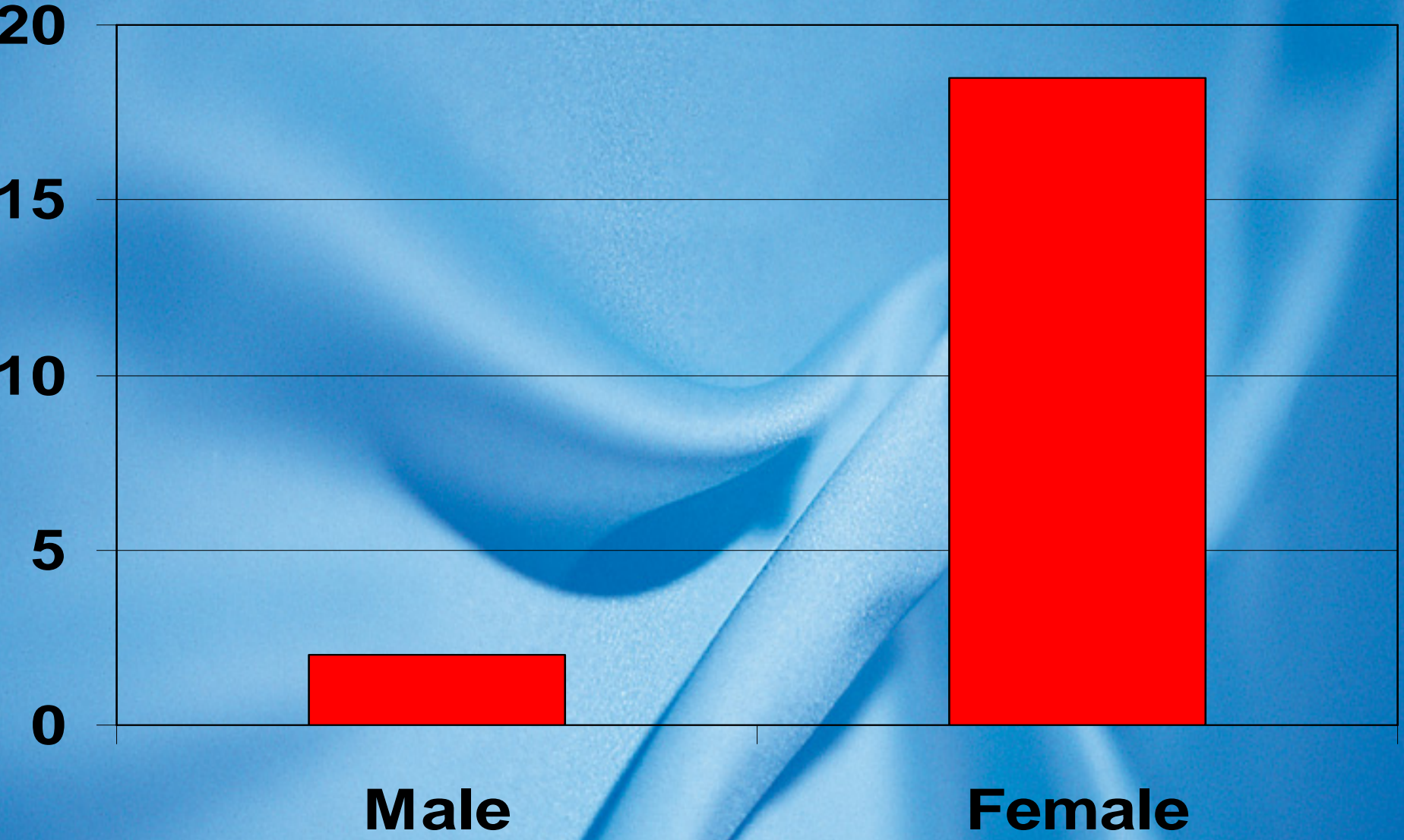
- Community and normative change and greater male responsibility critical**

# HIV PREVALENCE AMONG DRINKERS AND NON-DRINKERS, CARLETONVILLE, SOUTH AFRICA



Source: Campbell et al. (2004)

# PROPORTION OF 15 - 19 YEAR OLDS IN SOUTH AFRICA WITH SEX PARTNERS 5 OR MORE YEARS OLDER



Source: South African National HIV Prevalence, HIV Incidence, Behaviour and Communication Survey, 2005

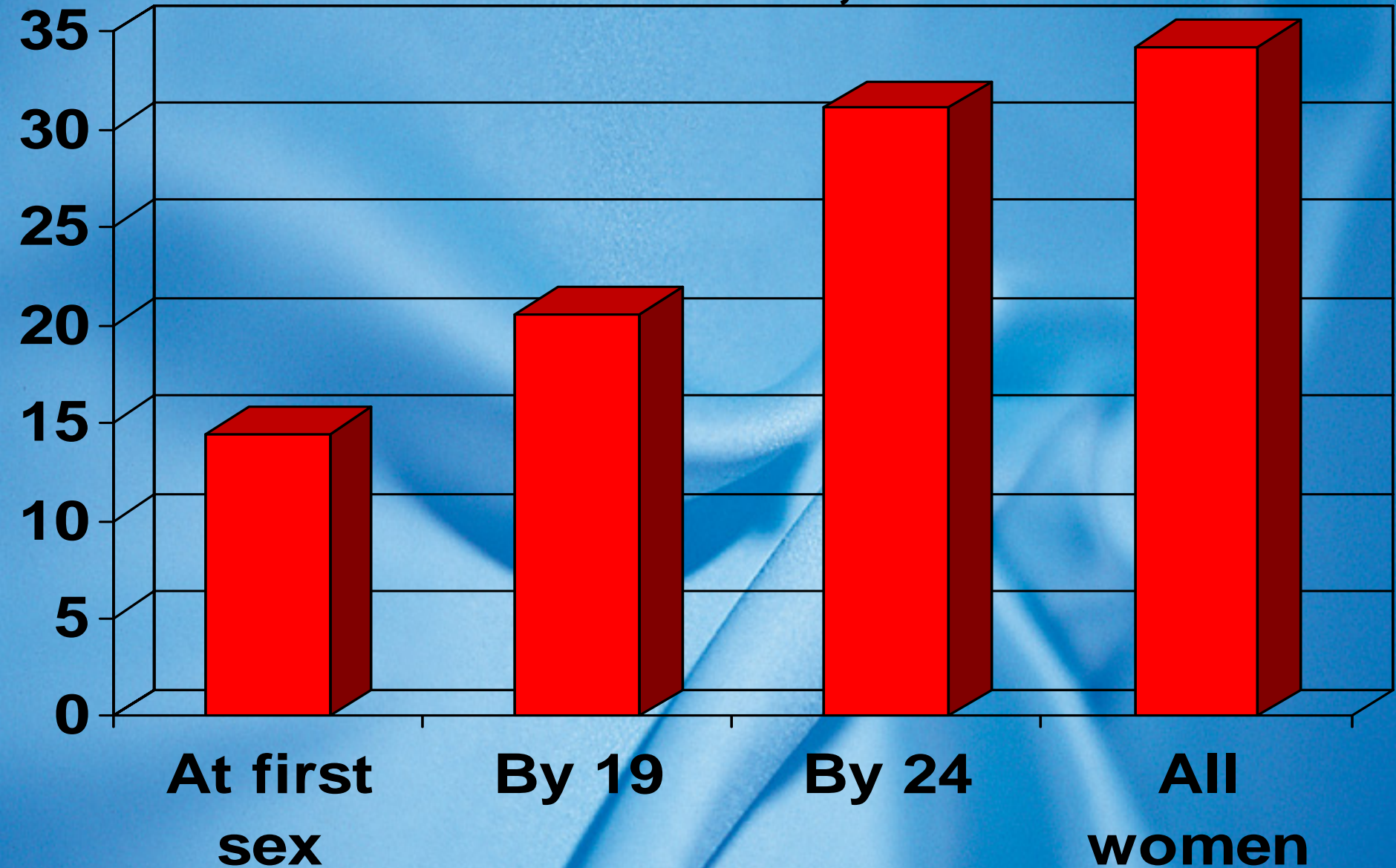
# HIV PREVALENCE AMONG 15 - 19 YEAR OLDS IN SOUTH AFRICA WITH SEX PARTNERS 5 OR MORE YEARS OLDER



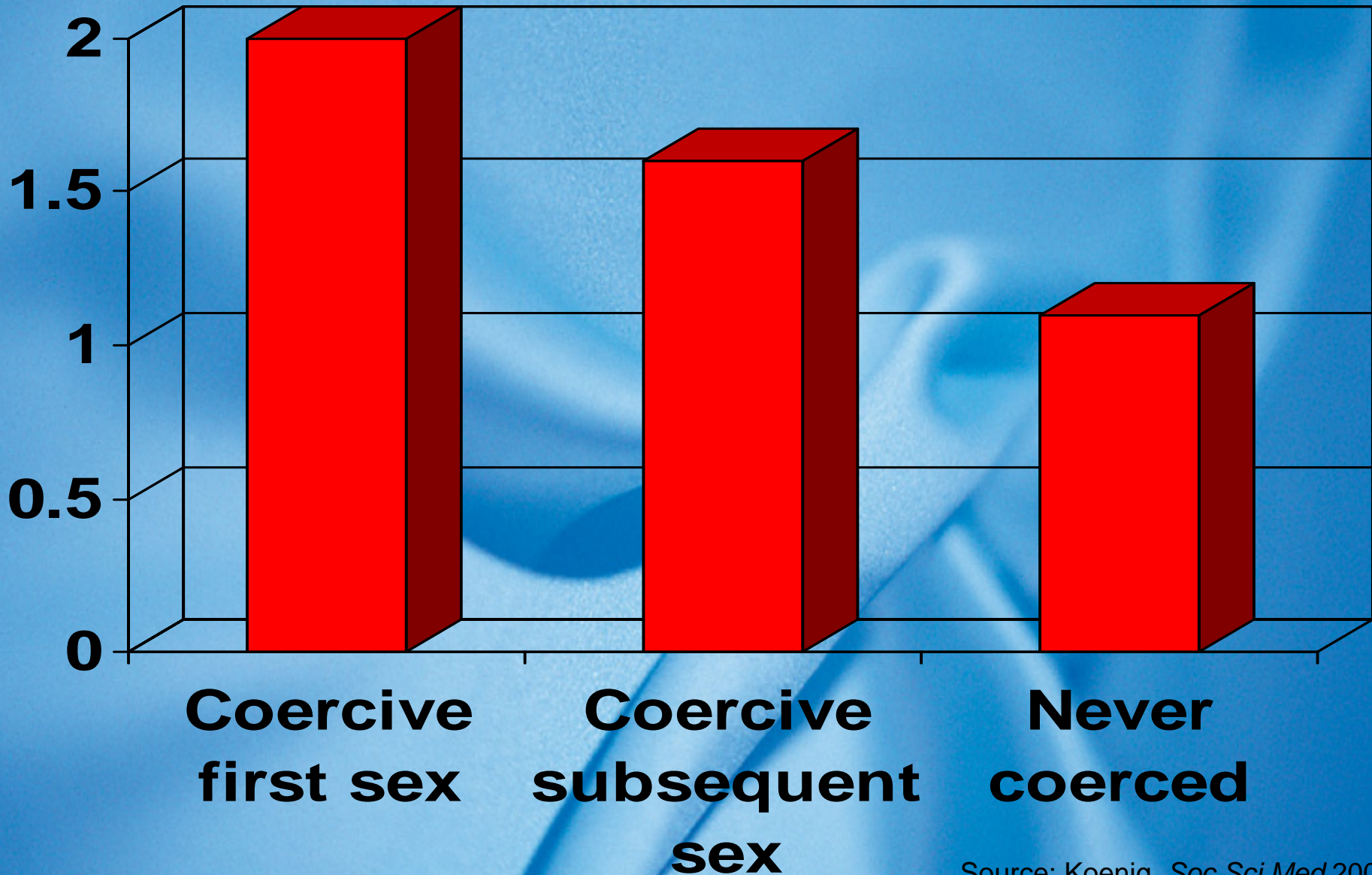
Source: South African National HIV Prevalence, HIV Incidence, Behaviour and Communication Survey, 2005



# SEXUAL COERCION REPORTED BY WOMEN IN RAKAI, UGANDA



# SEXUAL COERCION AND HIV INCIDENCE AMONG WOMEN < 25 IN RAKAI, UGANDA



# **MALE RESPONSIBILITY CRITICAL (1-2)**

- ☐ Reduce multiple, concurrent sexual partnerships**
- ☐ Reduce inter-generational sex**
- ☐ Reduce sexual coercion**
- ☐ Reduce vulnerability of married women**
- ☐ Reduce alcohol/substance abuse**

# CONCLUSION (1-1)

- HIV more diverse than initially recognized
- Concurrent sexual partners and absence of male circumcision perhaps the lethal cocktail that fuelled Southern Africa's unique hyper-epidemics
- HIV declining in many regions – little decline in Southern Africa
- Behavior change major cause of declines in HIV epidemics
- Partner reduction major cause of HIV reduction in generalized epidemics
- Condom use AND partner reduction major causes of HIV reduction in concentrated epidemics
- Large-scale changes in risk-disposing behaviors fundamental to declining HIV prevalence
- Analogy with smoking cessation – have to de-norm smoking (multiple partners, unprotected sex) in general population before other focused interventions have supportive effect
- Male responsibility the key to HIV prevention