

Overview of the Satellite Session:

The Sharpest HIV Decline in Southern Africa: Experiences from Zimbabwe



International AIDS
Conference,

4 August 2008

Session Outline

- **Part 1: Why did HIV prevalence decline in Zimbabwe?**
 - Results from epidemiological modeling
 - Results from qualitative research and historical mapping
- **Part 2: What to do with the evidence? Programming experiences**
 - The making of the National Behaviour Change Strategy
 - Comprehensive condom programming
- **Conclusions: What lessons have we learned for building HIV prevention responses?**

Acknowledgements – HIV Decline Study

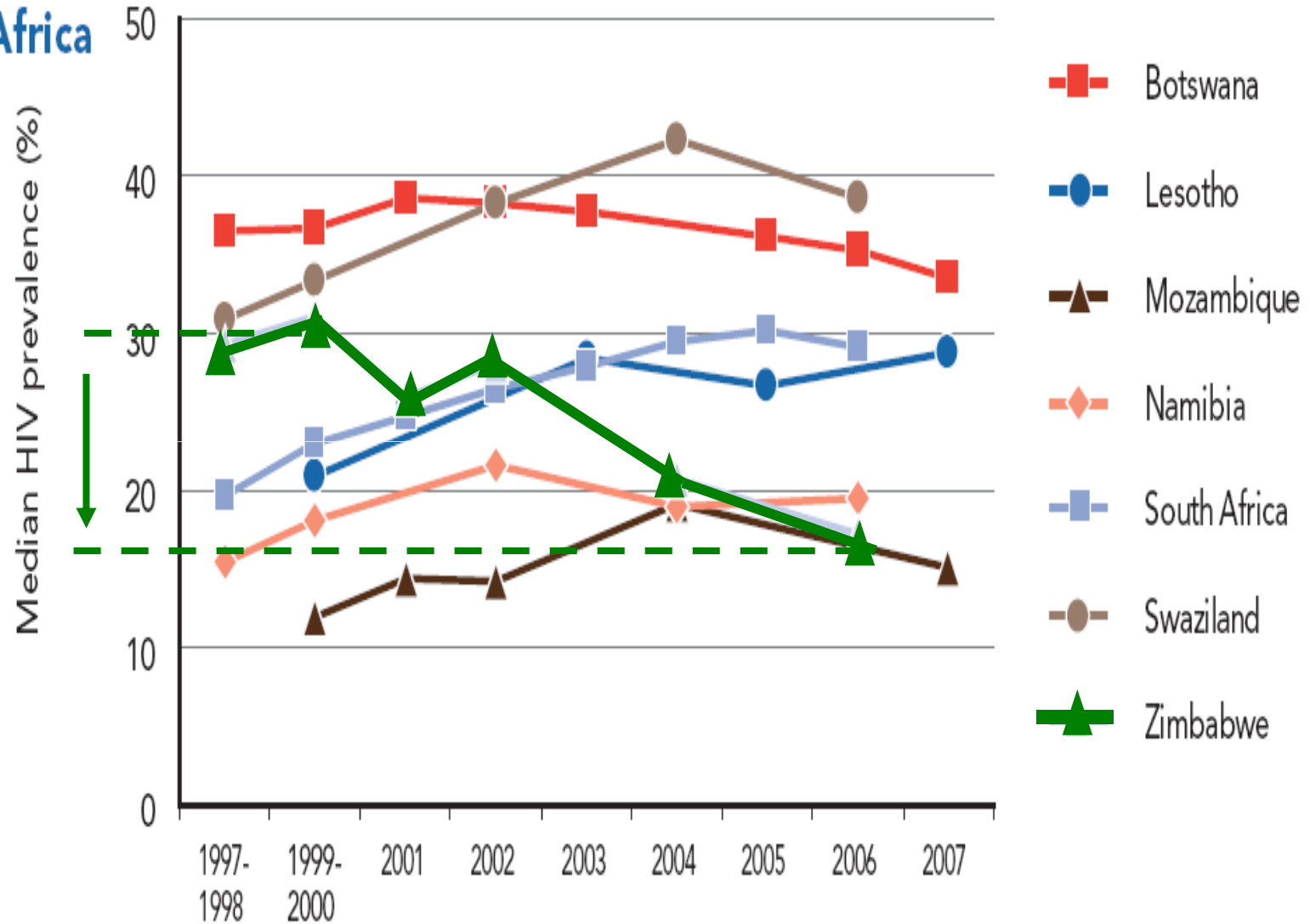
(in alphabetical order)

- Backson Muchini, consultant
- Daniel Halperin, Harvard School of Public Health
- Exnevia Gomo, University of Zimbabwe
- Kevin Kelly, CADRE, South Africa
- Leonard Maveneke, Policy Development Consultants, Harare
- Rekopantswe Mate, University of Zimbabwe
- Simon Gregson, Imperial College London/ BRTI Harare
- Timothy Hallett, Imperial College London

- Steering Group (including National AIDS Council, Ministry of Health and Child Welfare, CDC Zimbabwe, UNAIDS, UNFPA, UNICEF)
- All key informants
- All providers of data
- All members of the National Technical Support Group on Behaviour Change and the Steering Group of the Epi-Review

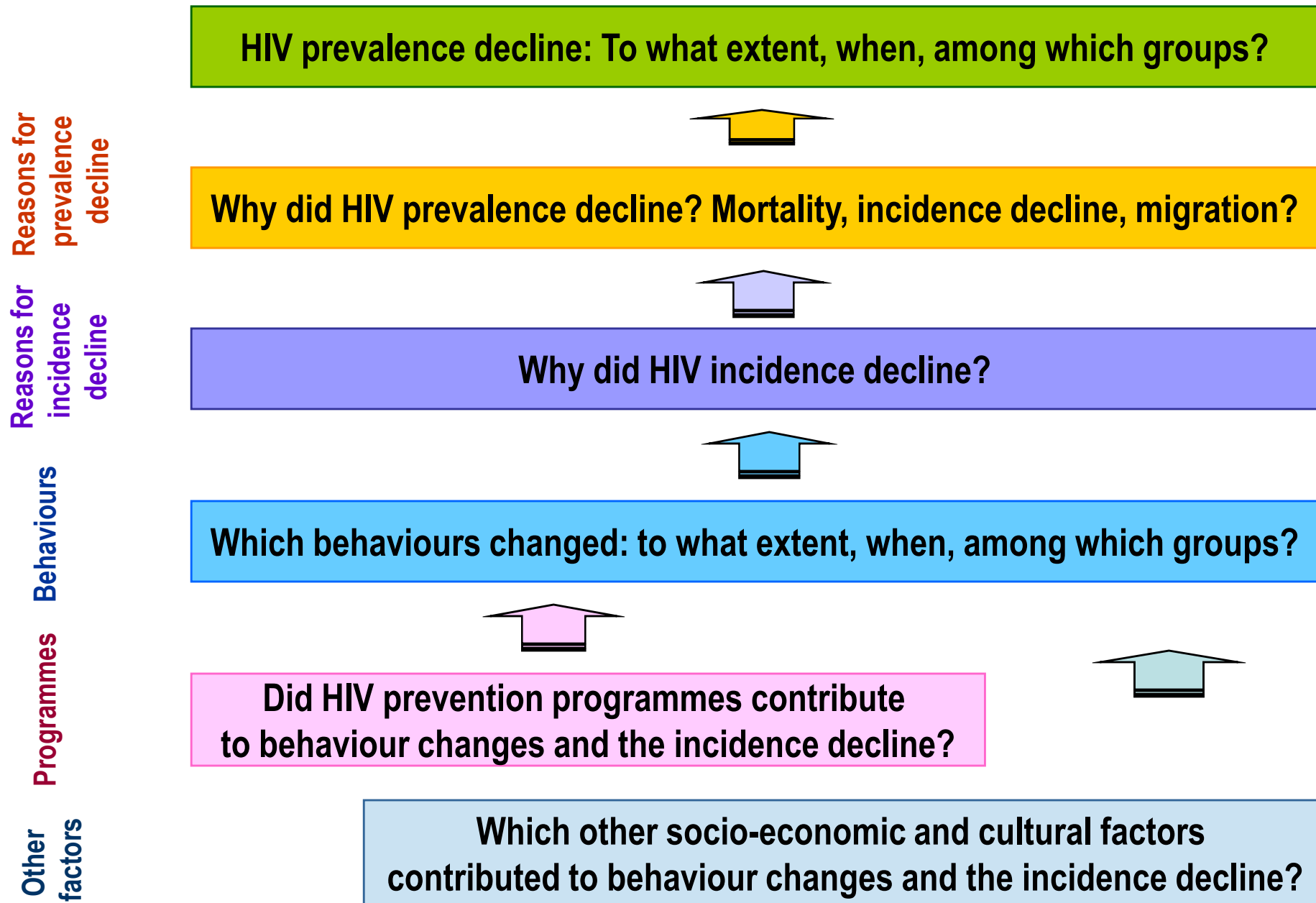
Zimbabwe: The Sharpest HIV Decline in Southern Africa

Southern Africa



Source: 2008 Report on the Global Epidemic (UNAIDS)

PART 1: Why did HIV prevalence decline? Framework for analysis



What caused HIV prevalence to decline in Zimbabwe?

Update on results from epidemiological review

Tim Hallett & Simon Gregson
Imperial College London

timothy.hallett@imperial.ac.uk

Analytic Approach

Qs: Is there evidence that changes in risk behaviour have affected the natural course of the epidemic...? When did these changes occur...? What types of sexual behaviour change mediated reductions in risk...?

→ Attempt to fit a model without behaviour change to see if it is consistent with observational data.

→ Estimate timing of reduction in risk through fitting model that represents changes in risk behaviour.

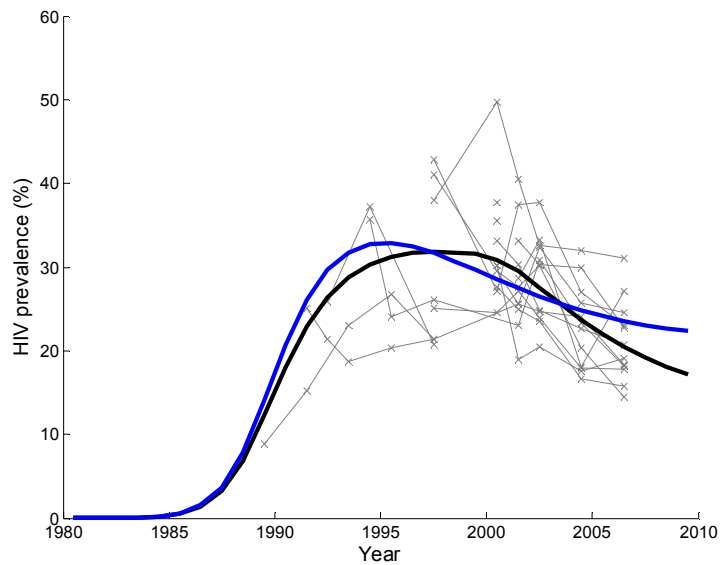
→ Examine available survey data for plausible association between changes in sexual behaviour and estimated timing of reduction in risk.

Model comparison

Model with behaviour change: M_1

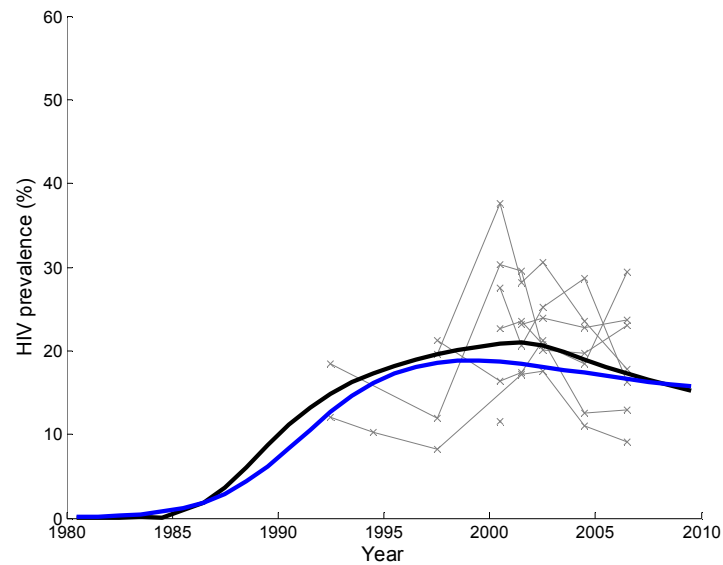
Model with no behaviour change: M_0

Urban and semi-Urban areas



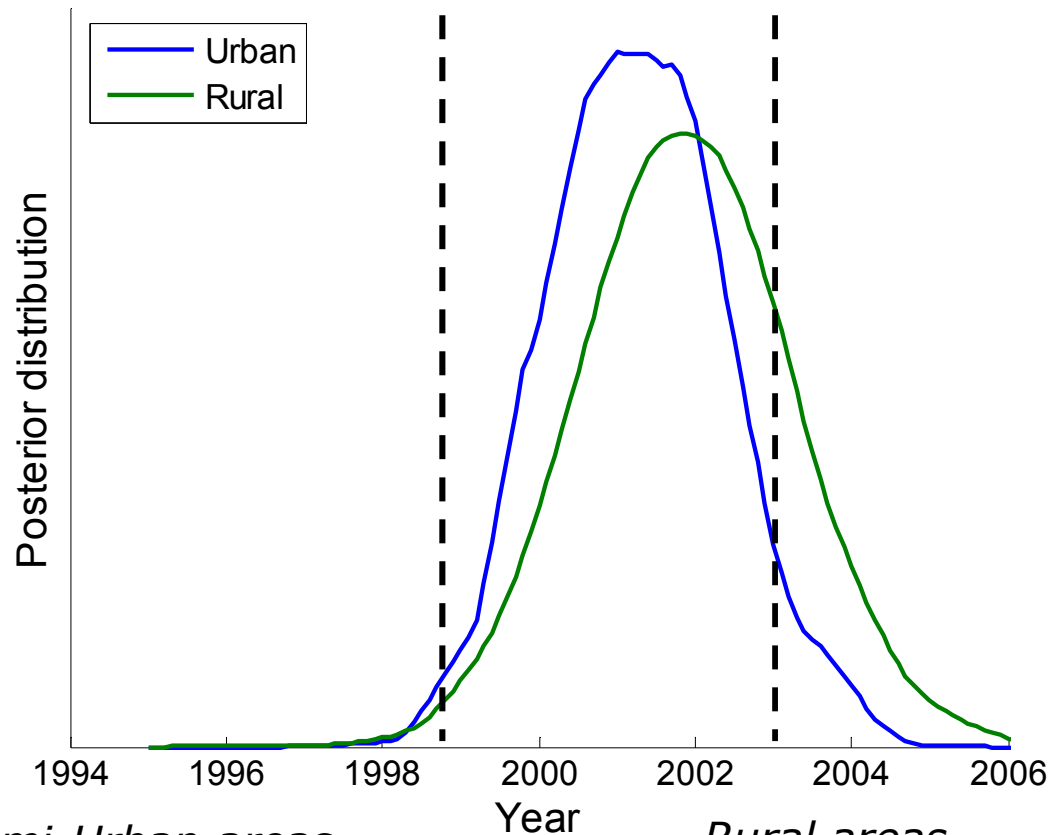
$2\log(\text{BayesFactor}) = 58$
 $P\text{-value (LR Test)} < 0.0001$

Rural areas



$2\log(\text{BayesFactor}) = 9$
 $P\text{-value (LR Test)} = 0.0039$

Timing of behaviour change: 1999-2003 incl.



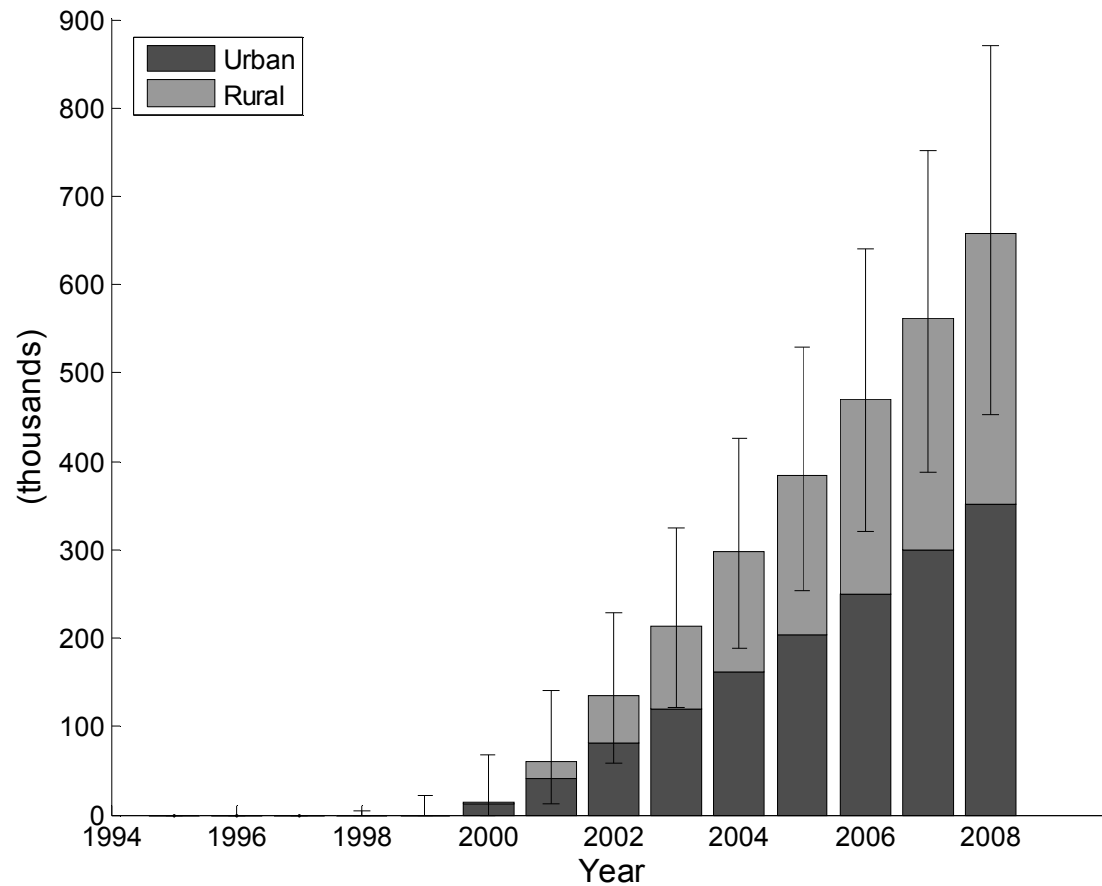
Urban and semi-Urban areas

Median (95% interval): 1999 (1998-2002)

Rural areas

Median (95% interval): 2000 (1999-2003)

Infections Averted



Total infections averted up to 2008: 660,000 (460,000 -860,000)

Bars show median; whiskers show 2.5th-97.5th percentile of posterior distribution.

Behavioural trends in Survey

Demographic and Health Surveys (DHS)

National-level, macroscopic

Manicaland cohort study

Regional-level, microscopic

Demographic and Health Surveys (DHS)

- Indicators examined:

1. **“A”**: **Abstinence**

- Percent of 15-19s that have started sex.

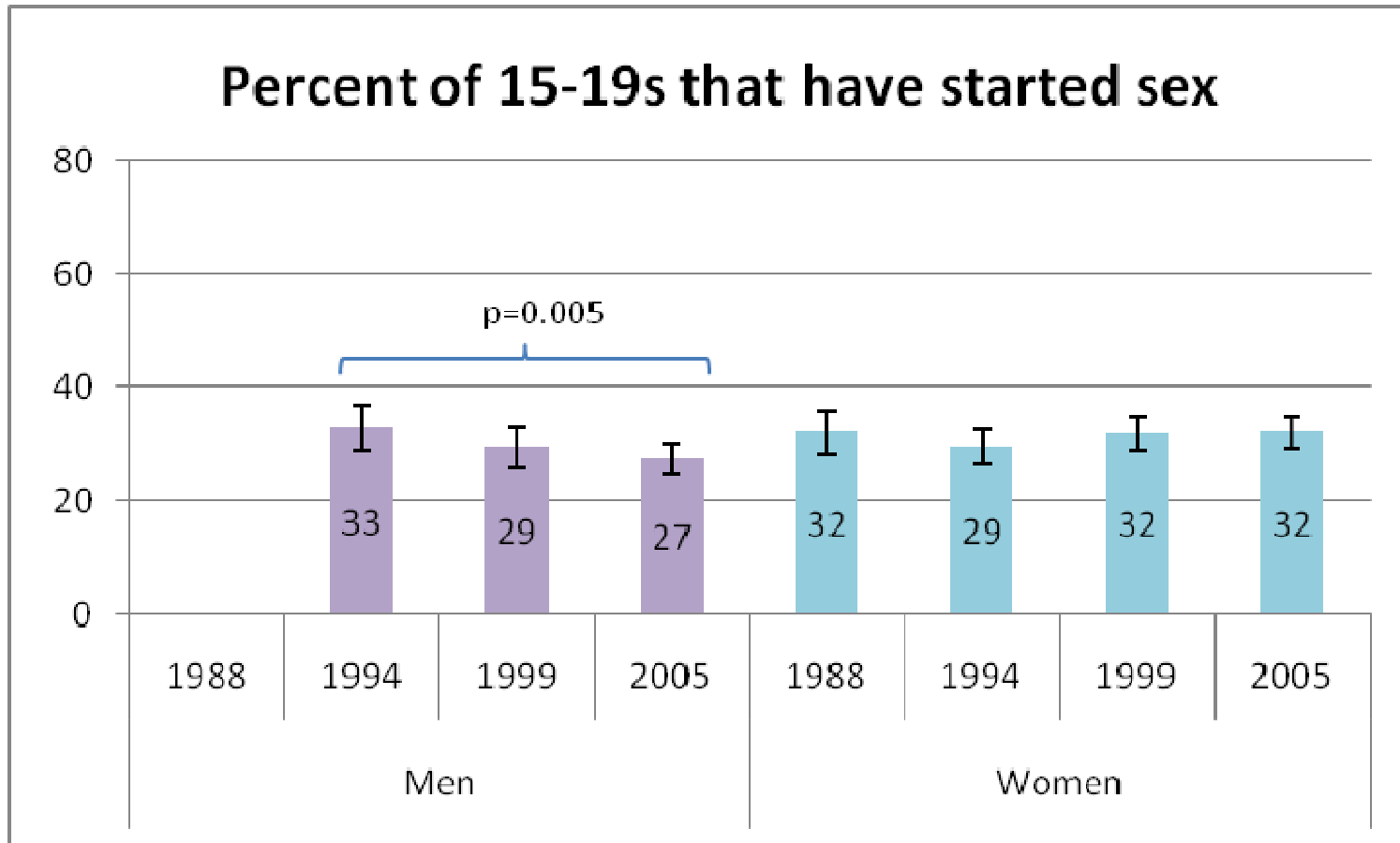
2. **“B”**: **Being faithful**

- Mean number of partners in last year.
- For married people: Fraction with extra-marital partnerships
- For young people (15-24s): Fraction with non-regular partners
- For men: Fraction that have paid for sex in last year

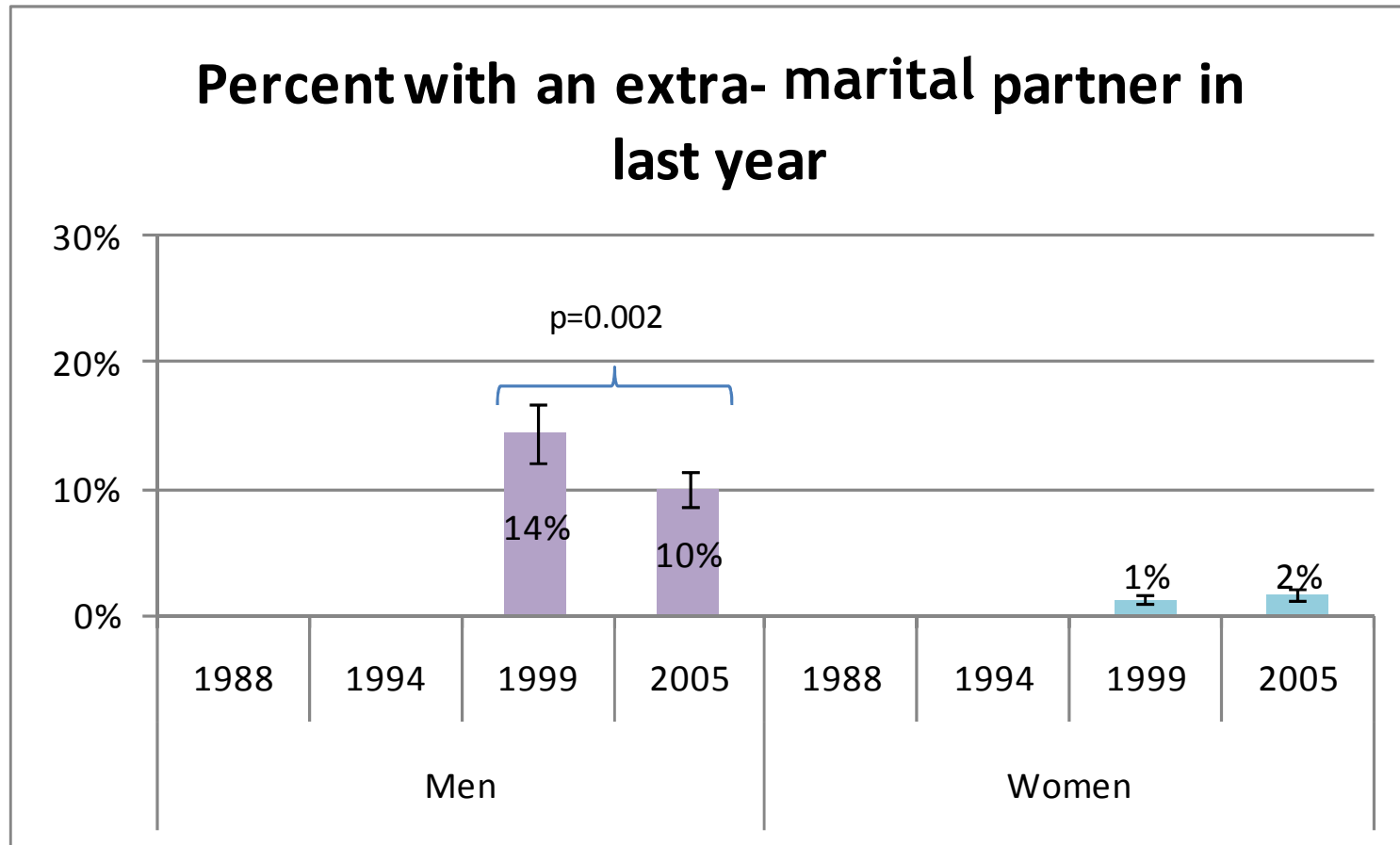
3. **“C”**: **Using condoms**

- Used condom last time had sex with non-regular sex partner.

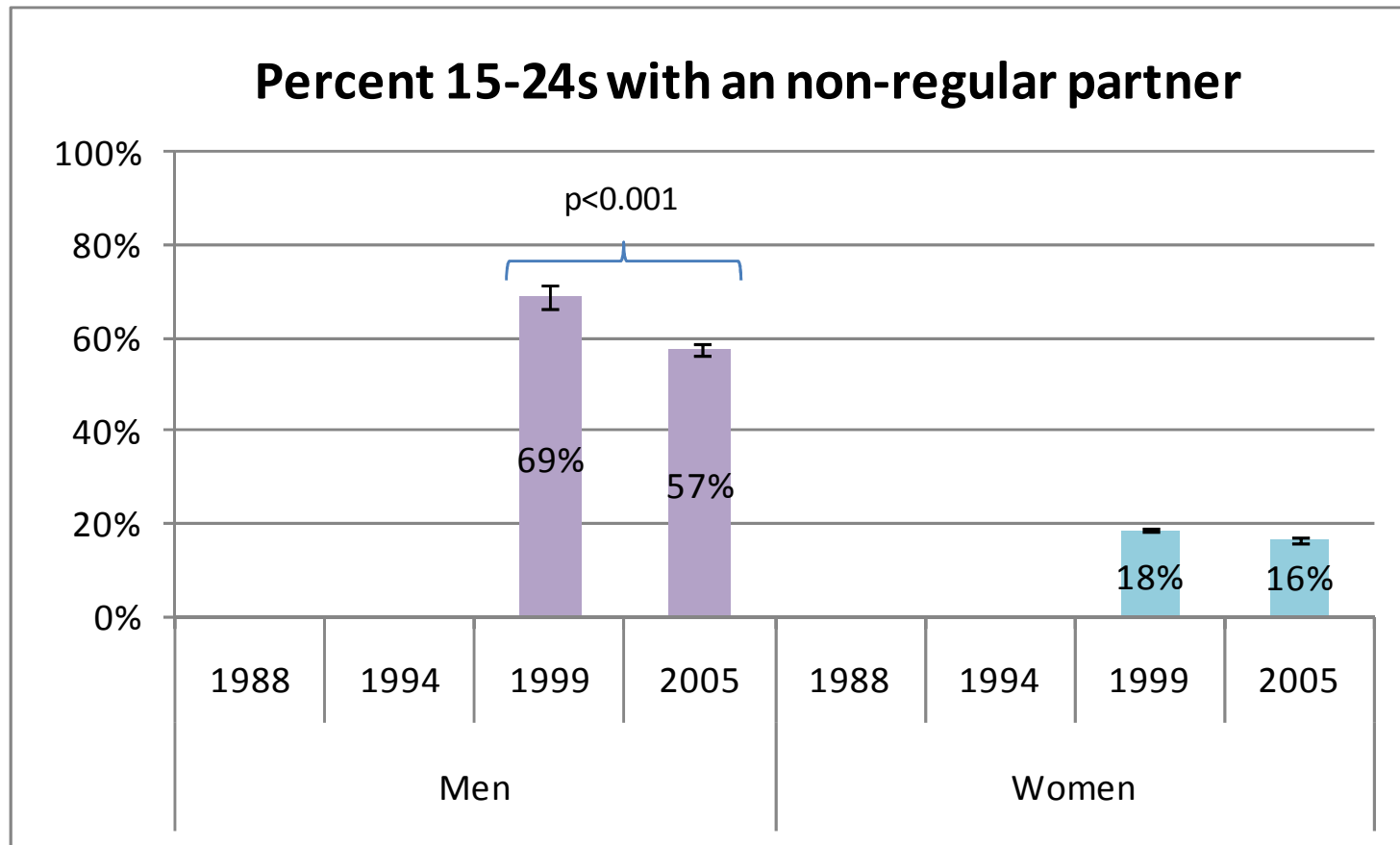
“A”: Abstinence



“B”: Partner numbers



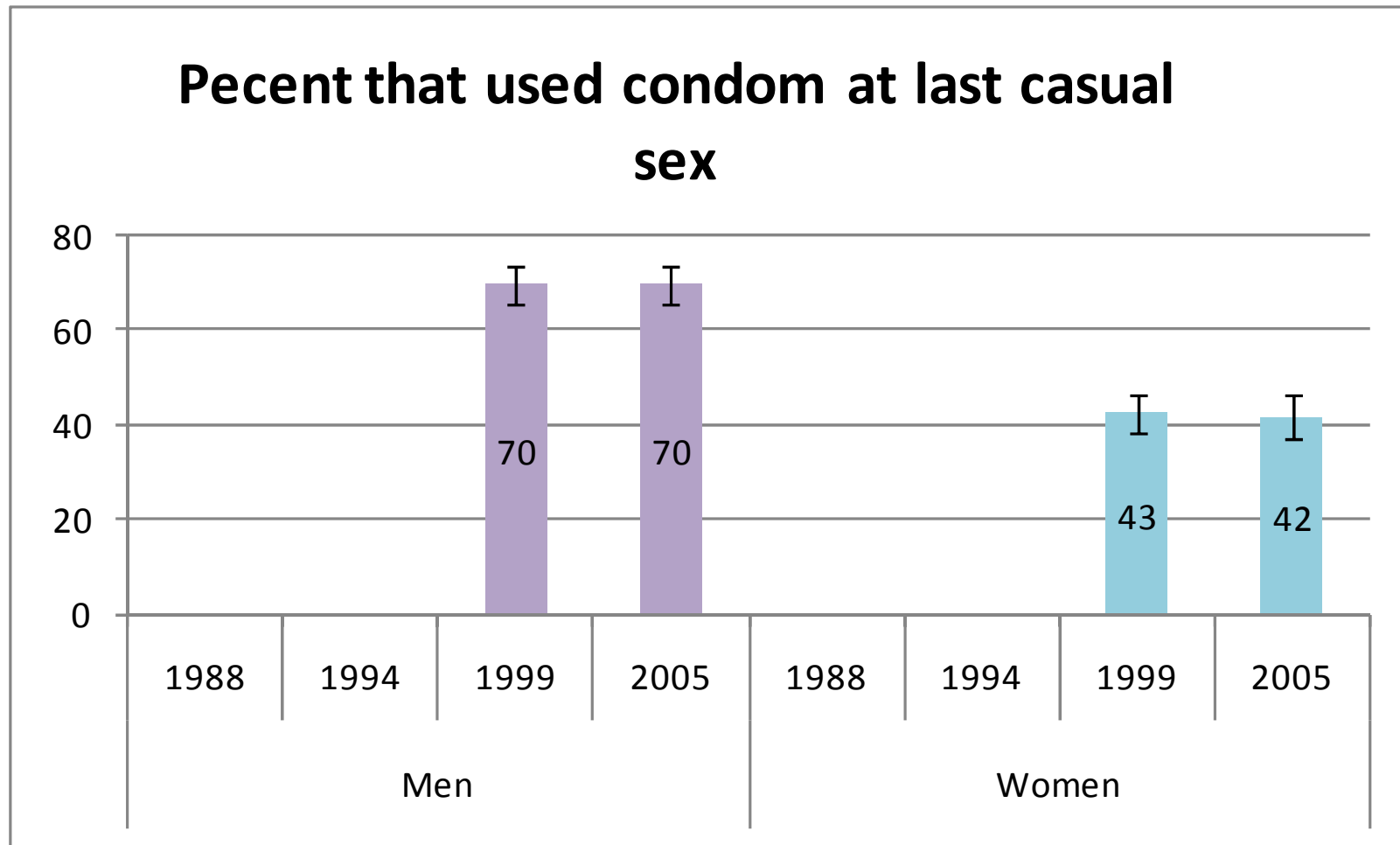
“B”: Partner numbers



“B”: Paid for sex



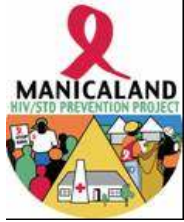
“C”: Condoms



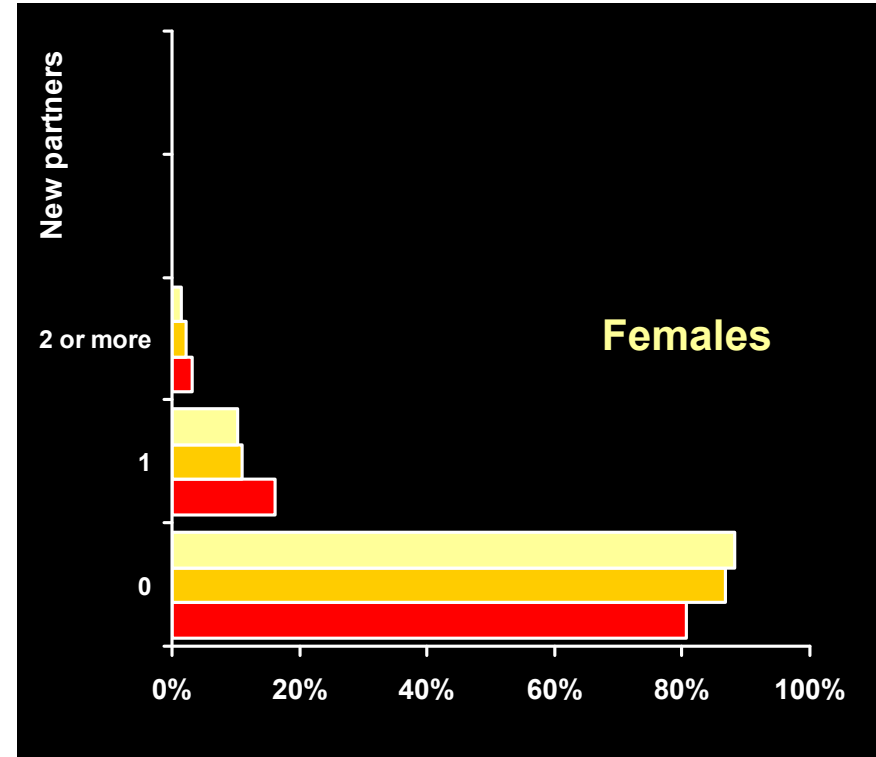
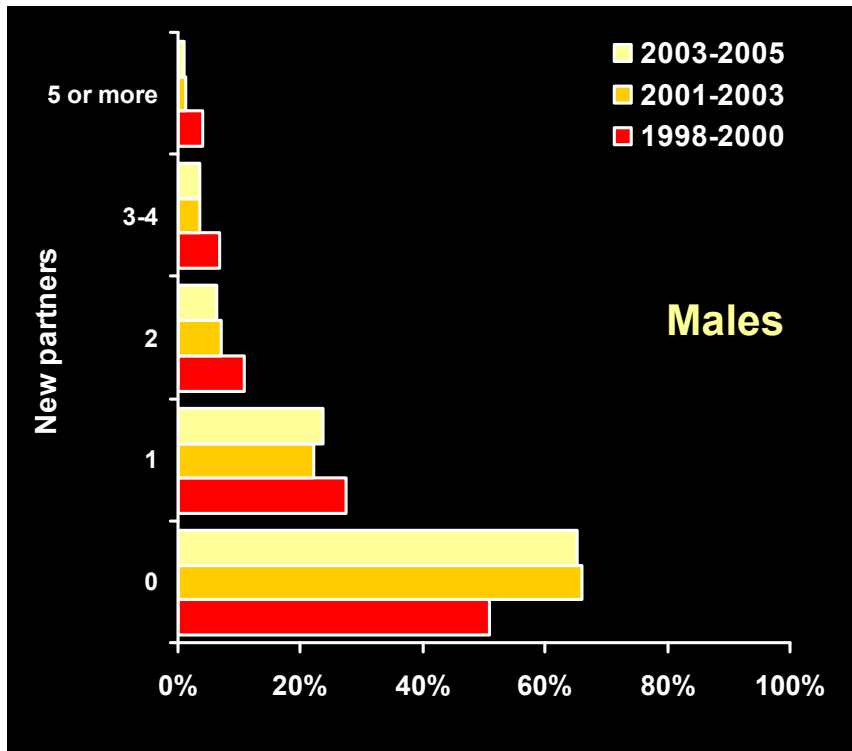
Interactions with wealth, location and education

- Generally the **most educated** men and women taking the steps to reduce risk or are better maintaining lower levels of risk behaviour.
- The **Bulawayo** effect:

From higher original levels of risk, men in Bulawayo lead the decline in partner numbers, and women in Bulawayo lead the delays in starting sex and increases in condom use in casual partnerships.



BEHAVIOUR CHANGE – NEW PARTNERS IN LAST YEAR



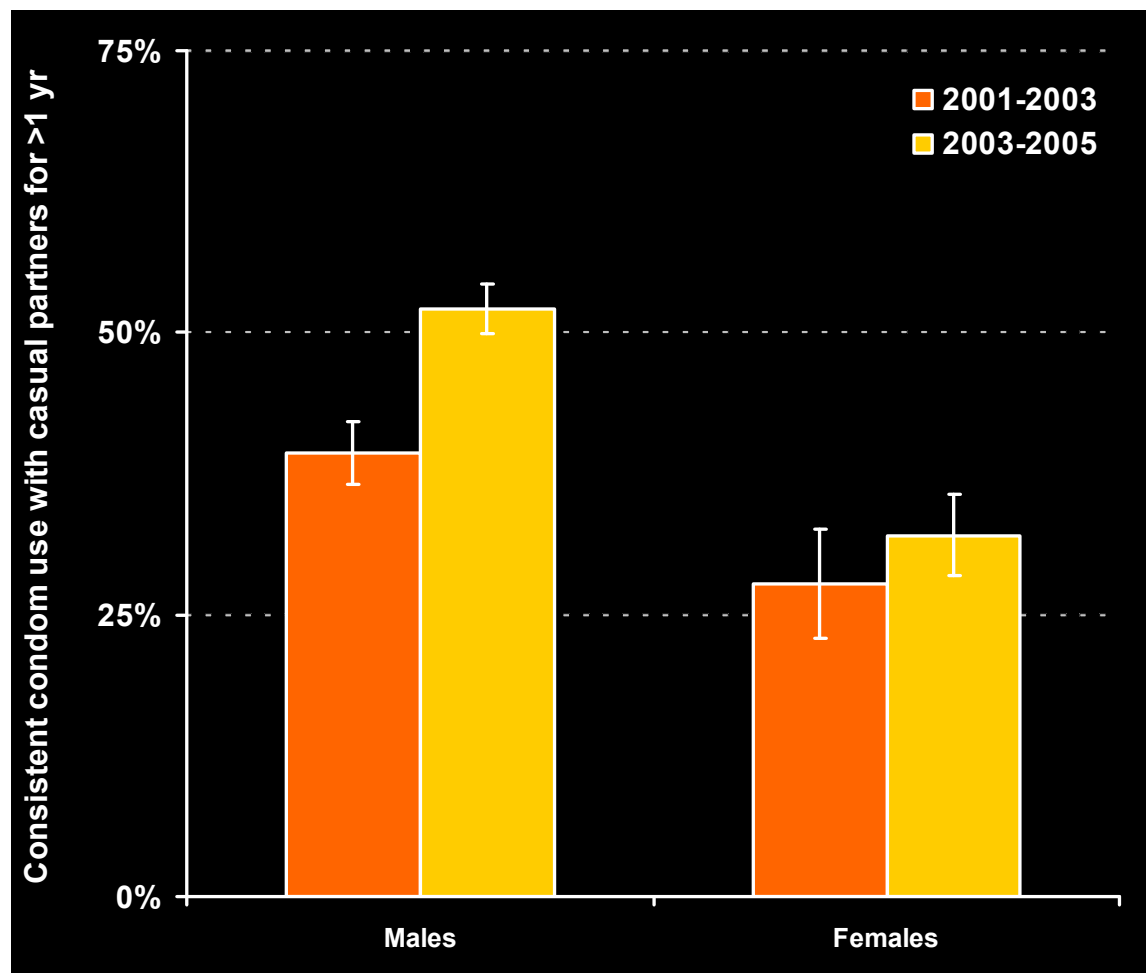
Mean	R1	1.12 (1.02-1.21)
	R2	0.57 (0.52-0.61)
	R3	0.57 (0.53-0.62)

Mean	R1	0.31 (0.25-0.38)
	R2	0.24 (0.16-0.32)
	R3	0.18 (0.14-0.22)



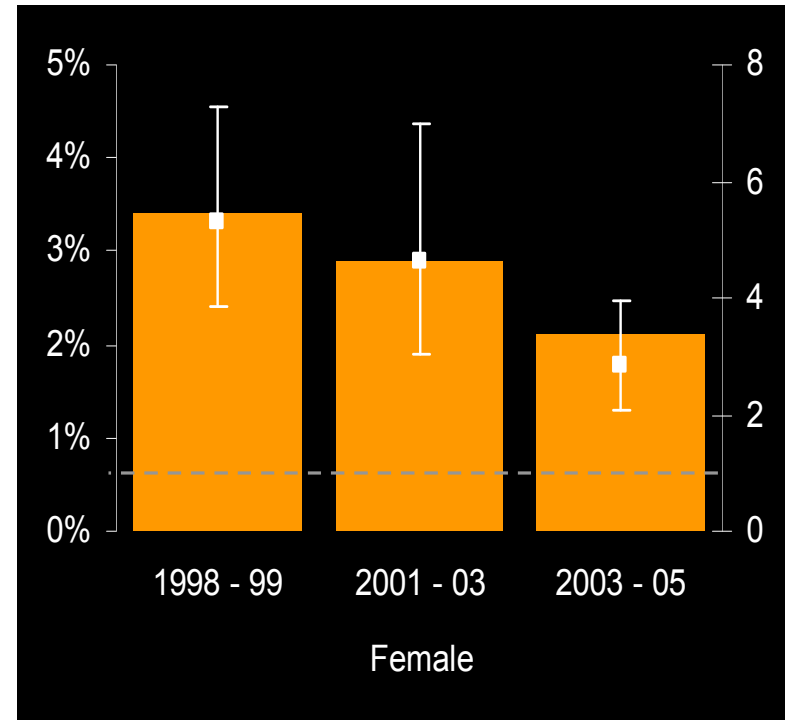
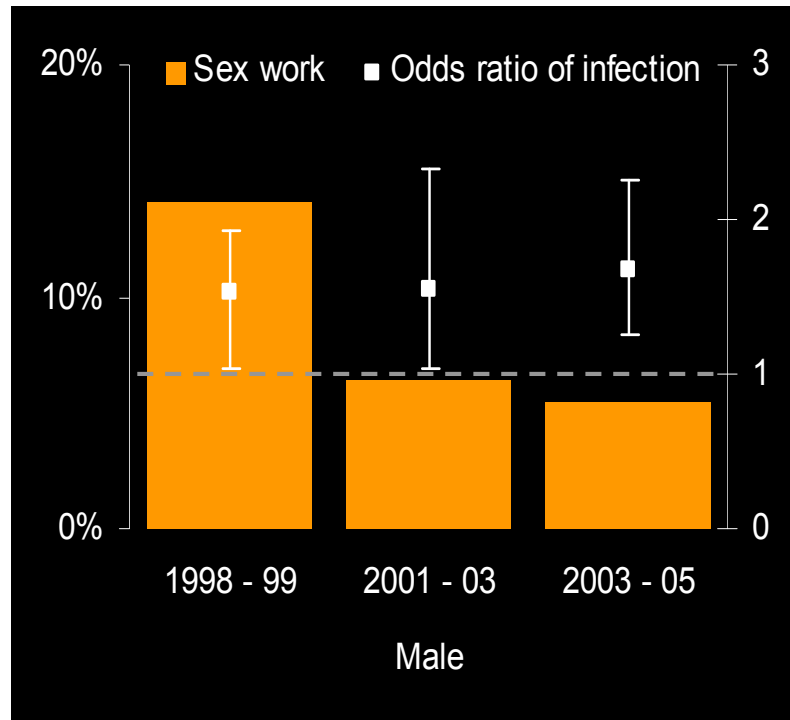
HIV PREVALENCE DECLINE IN ZIMBABWE

BEHAVIOUR CHANGE – **CONSISTENT** CONDOM USE WITH CASUAL PARTNERS





Proportion engaging in commercial sex & age-adjusted OR of HIV infection Manicaland, 1998-2005



- **Decreasing levels of commercial sex are statistically significant ($p < 0.0001$)**
- **In women, sex work becoming less risky through time ($p < 0.0001$)**

Conclusions from epidemiological modelling

1. Declines in HIV prevalence after epidemic maturation in urban and rural areas, provide **strong evidence** for changes in sexual risk behaviour affecting the course of the epidemic; ~660,000 infections averted since 1999, split equally between urban and rural areas.
2. Changes occurred between **1999 and 2003**:
 - In Urban areas slightly earlier than in rural areas.
 - Today's conditions might not be related to reasons for behavioural changes.
3. Survey data suggests these changes likely to be mediated by:
 - Reductions in **partner numbers & sex work**
 - Contribution of increased *consistent condom use* is plausible.

Qualitative Research Methodology

- Findings based on Focus Group Discussions with 90 males and 110 females aged 23 to 64, and several dozen key informant interviews.
- FGDs held with males and females of different social status: low-income workers, higher-income (up to senior bankers and company senior executives), self-employed entrepreneurs, vendors, middle-income workers, businessmen and rural farmers.
- FGDs held in big cities, high density suburbs, district centres, rural service centres.
- FGDs focused on sexual behavioural trends characteristic of three time periods: early 1990s, late 1990s/early 00s (around 1999-2001) and present time.

Focus group discussion outline

Time period	Sexual behaviour	Underlying factors	Programme activities
Early 1990s	-----	-----	----->
Around 1999	-----	-----	----->
Now	-----	-----	----->
Cross-check trends for each column			24

Conclusions from qualitative research

- Macro-level trends in line with quantitative data and modeling results:
 - Reduction in multiple partnerships
 - Change in behaviours and norms, particularly among men
- Personal experience of mortality and fear of AIDS a strong motivating factor
- Economic hardships mentioned for different periods, but particularly since 1999, both in terms of
 - driving women into transactional sex and
 - reducing men's ability to afford multiple partners
- A combination of awareness programmes, condom distribution and HIV services were mentioned by some participants, but no single programme was identified as being particularly important

Conclusions on historical mapping (1)

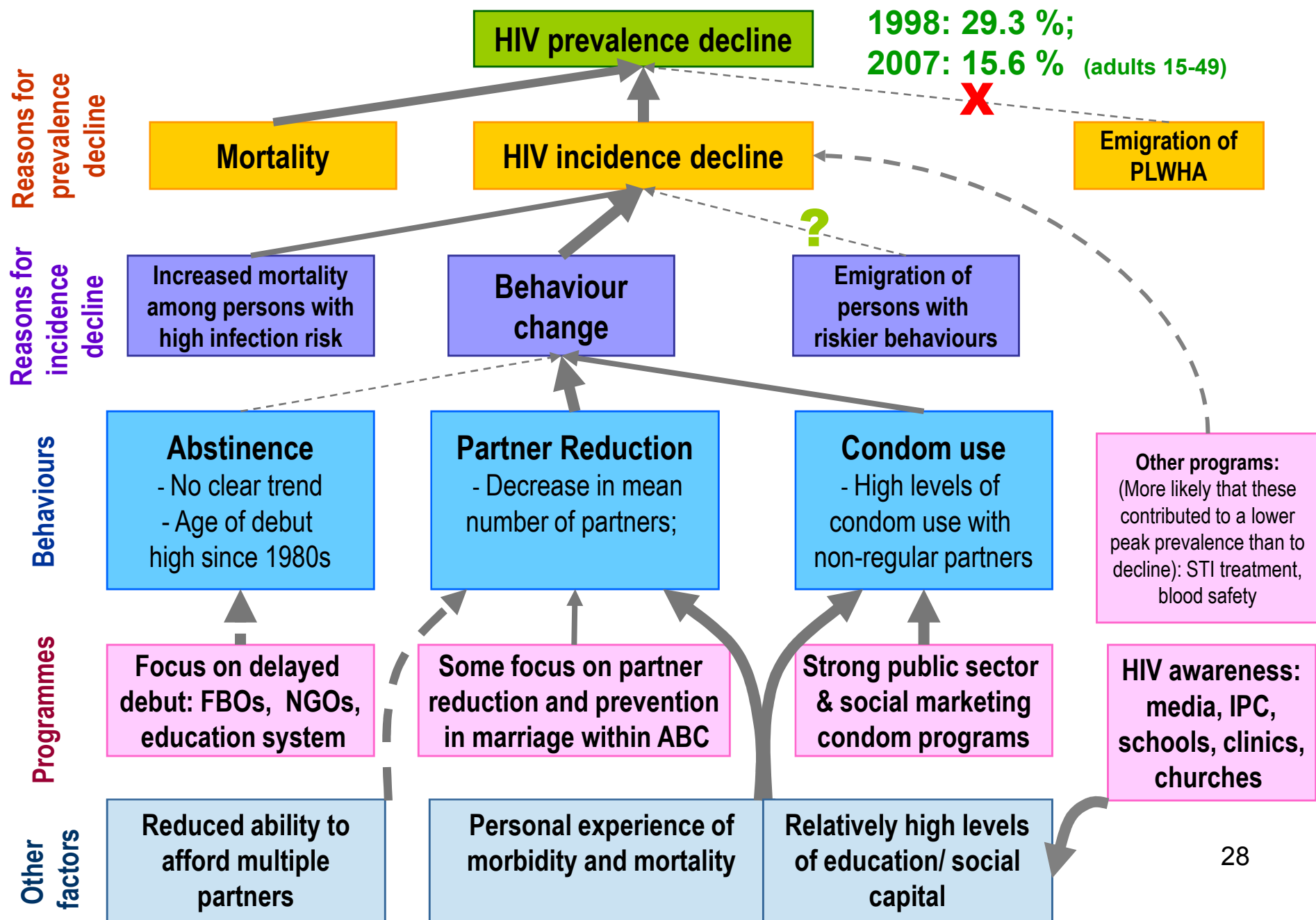
- Increasing programme coverage since 1990
- A number of programmes had high coverage before and during risk reduction (1999-2003):
 - Radio (urban TV)
 - School-based information (partially also other forms of IPC)
 - Condom programming

Coverage and design not necessarily unique to Zimbabwe, but condom promotion, media message more public health oriented rather than “sexy” life-style messages

Conclusions on historical mapping (2)

- No “magic bullet”, but a combination of programmes contributed to the decline at different levels
 - When personal experience of mortality started, awareness programmes contributed to understanding of modes of transmission and risk reduction (enhanced by relatively high education levels and existing social & religious norms)
 - Condom distribution and social marketing contributed to high-level of condom use with non-regular partners including consistency
 - Health sector programmes (STI control, blood safety) contributing to awareness through STI counselling
- Opportunities for further in-depth qualitative research and country comparison to further explore differences in programme design and reception

Declining HIV incidence/prevalence in Zimbabwe



Zimbabwe National Behavioural Change Strategy

2006 – 2010

For Prevention of Sexual Transmission of HIV



*A vision that requires all Zimbabweans to join –
women and men, youths and adults, HIV negative and HIV positive, unmarried and married*

Presented by C. Nyamayemombe on behalf of O. Mundida

National BC Strategy Overview

BC Strategy Outcomes

**Enabling environment:
Address gender relations
and stigma ...**

**Adoption of safer sexual
behaviours: Partner reduction,
consistent condom use ...**

**Increased uptake of
HIV prevention services:
T&C, PPTCT ...**

**Improved national and
sub-national institutional
frameworks**



Implementation channels

**Leadership, advocacy.
decentralized action plans**

**Community mobilization,
interpersonal communication**

Mass media programming

BC materials and tools

Behavioural change research

**Multisectoral action on BC
(education, health, workplace ...)**

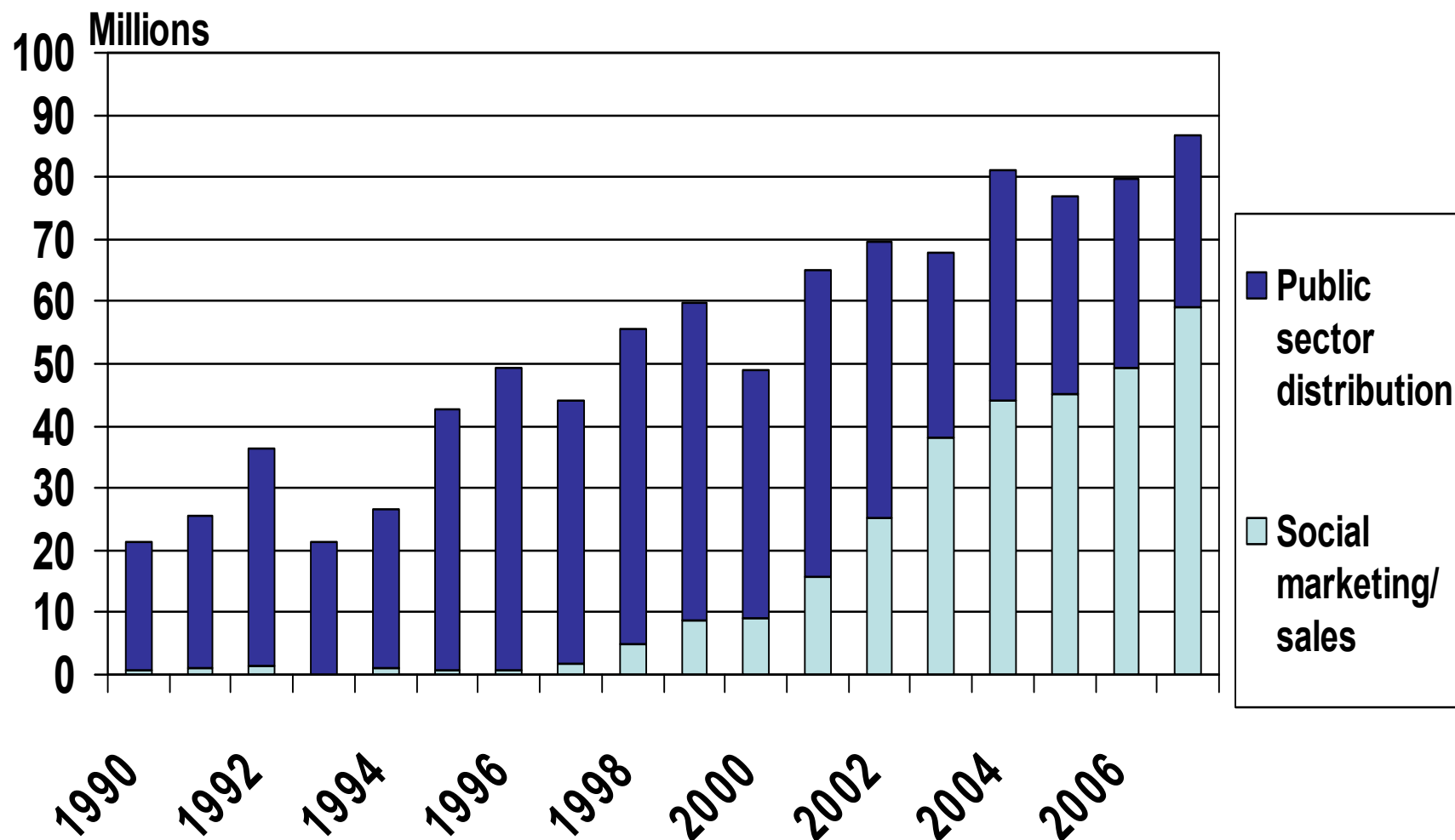
Comprehensive Condom Programming (CCP)

as a component of the
National HIV Prevention Response
in Zimbabwe

Daisy Nyamukapa,
UNFPA in Zimbabwe
and
Krishna Jafa,
PSI/Zimbabwe



Achievements: Male Condom Distribution By Year



Source: Data on social Marketing condoms is from PSI and Public sector condoms is from ZNFPC and JSI. Note: Figures for 2000 through 2004 for public sector condoms are based on the condoms issued direct from the warehouse by ZNFPC. From 2005 onwards, figures are based on DTTU consumption data (direct distribution to clients).

Overall conclusions - programming lessons

Evidence, focus, partnerships

- Reviews of **evidence** build consensus on what can work and what not
- **Focus** in strategy development and implementation is critical for investing in areas with highest potential for impact
- Commitment to **partnership** by government, civil society and bi-lateral and multi-lateral development agencies in a national response enables
 - More transparent decision-making on areas of focus, targeting and resource allocation
 - Enhanced understanding of mutual priorities
 - Innovative joint funding mechanisms (Zimbabwe Expanded Support Programme)

Overall conclusions – HIV decline: No “magic bullet” but very encouraging trends ...

- Evidence that nation-wide behaviour change in a generalized epidemic of Southern Africa is possible: (the HIV component of the MDG6 has been achieved)
 - Partner reduction (in various dimensions: casual partners, extra-marital partners, sex work, young people)
 - High and increasingly consistent condom use in non-regular partnerships
- Communities have the capacity to understand and react to the challenge of these HIV epidemics
- Zimbabwe was one of the earliest epidemics in Southern Africa ... will similar trends be observed elsewhere in the region?

Tatenda

Siyabonga

Thank you