

South African National HIV Prevalence,  
Incidence, Behaviour and  
Communication Survey, 2017



# Collaborators



- Background
- Research methods
- Findings
  - Response rates
  - HIV incidence
  - ART exposure
  - Viral load suppression
  - 90-90-90
  - HIV prevalence
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- Conclusions and recommendations

- South Africa has the biggest HIV epidemic in the world, with an estimated 7.1 million people living with HIV (UNAIDS Data, 2017)
- The country has the largest ART programme in the world, which has undergone even more expansion in 2016 with the implementation of ‘universal test and treat’ policy
- The national HIV response is coordinated by the South African National AIDS Council
- HIV surveillance has been key in monitoring the response to the epidemic

- To date, the HSRC and its partners have undertaken five population-based surveys in this regard
- Previous surveys were conducted in 2002, 2005, 2008 and 2012
- These surveys have provided an important gauge of the HIV epidemic of South Africa
- This presentation is on the fifth survey in the series conducted in 2017

## Survey design

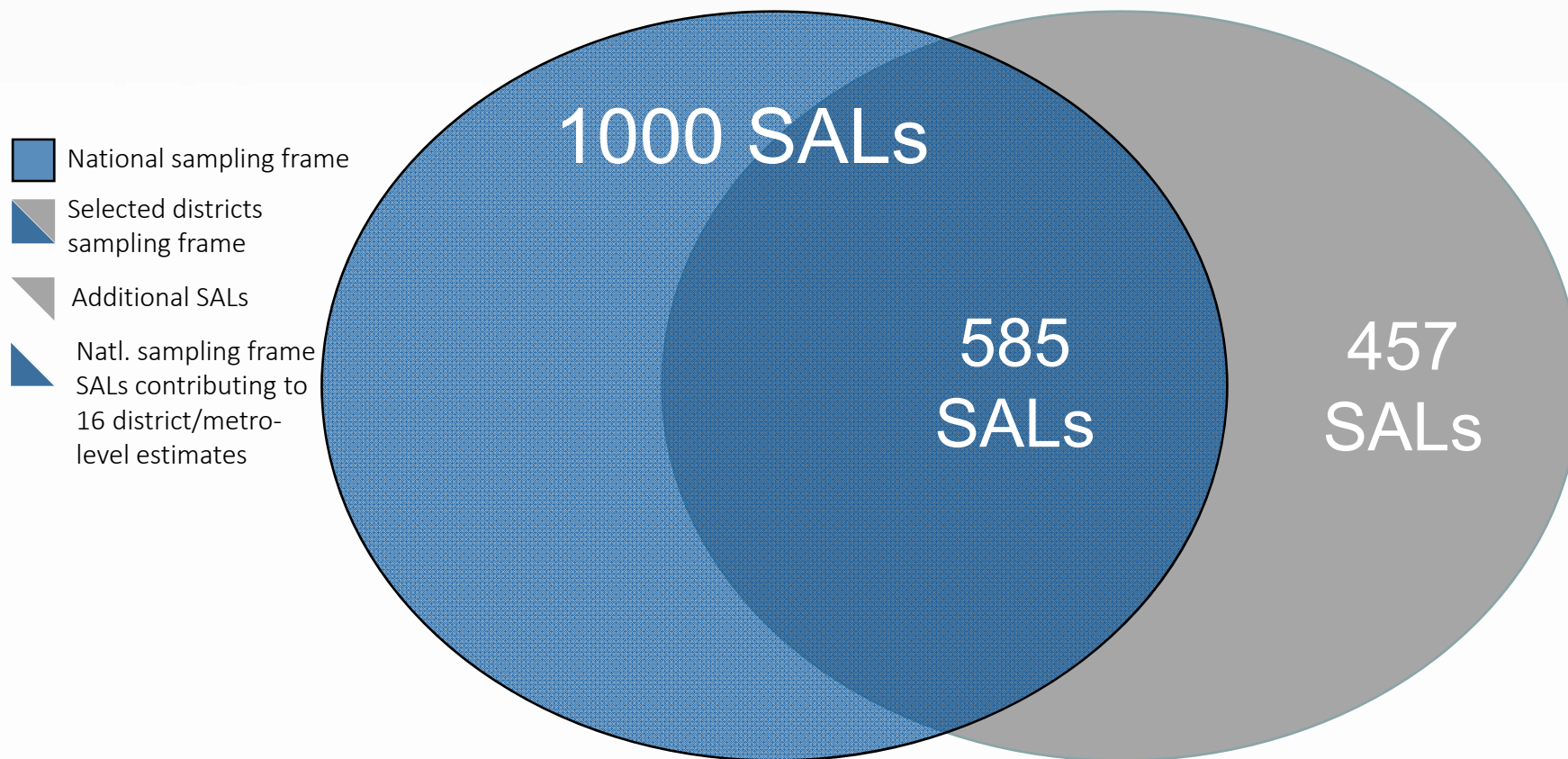
- A cross-sectional, population-based household survey was conducted using a multi-stage stratified cluster random sampling approach
- The study design was based on the methods used and validated in the four previous surveys carried out by HSRC in 2002, 2005, 2008 and 2012 including linked anonymous testing with informed consent

## Survey population

- This survey included persons of all ages living in South Africa.
- All members of the selected households were invited to participate, including those living in hostels

Sampling frame – SABSSM V

National + 16 District/metro-level estimates



## Questionnaires

Four questionnaires were used in this survey:

- Household Questionnaire
- Questionnaire for parent/guardian of children aged 0 to 11 years
- Questionnaire for children aged 12 to 14 years
- Questionnaire for persons aged 15 years and older

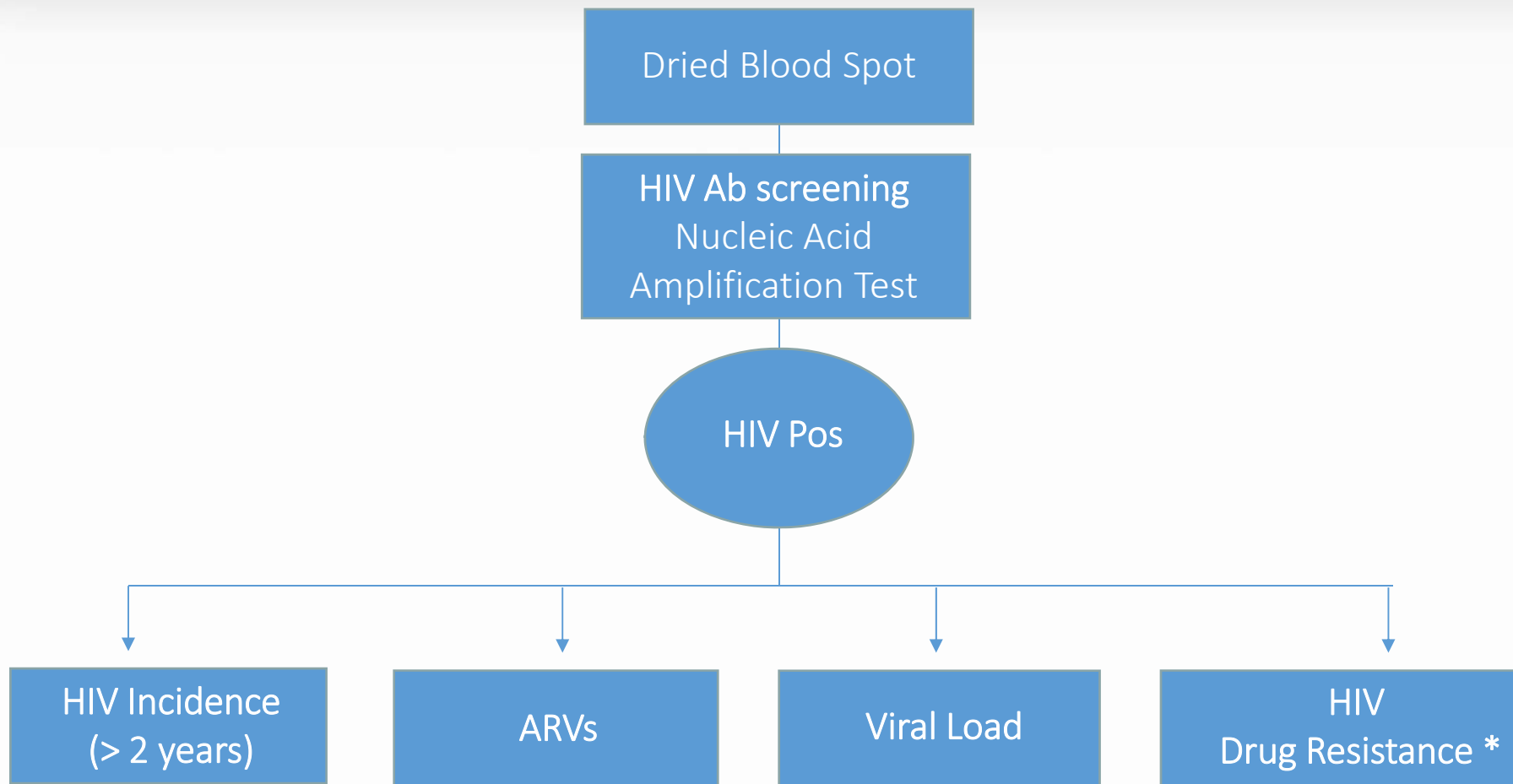
The main focus of the study was on knowledge, attitudes and behaviour. New modules were added: tuberculosis (TB), Inter-partner violence and exposure to various HIV communication campaigns



Valid households	11,743
Eligible individuals	39 132
Blood samples	23,923
Household level response (%)	82.2
Individual level response (%)	93.6
HIV testing response (%)	61.1

- All DBS samples were tested for HIV in the laboratory using approved methods
- Those found to be positive were confirmed by doing two additional tests
- One tenth of all specimens that were found to be negative were also tested once more using another test for quality assurance purposes

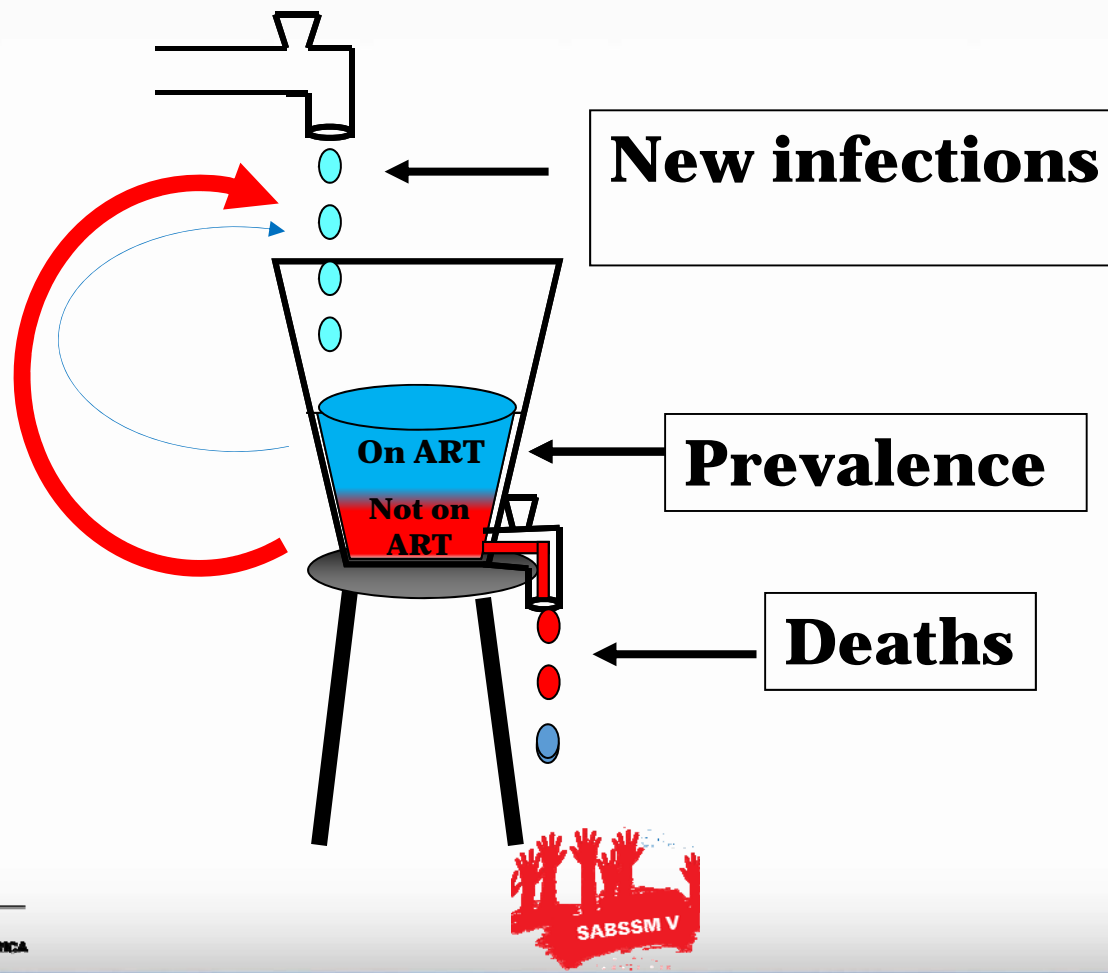
# Laboratory Testing: National HIV Household Survey South Africa 2017



\*Results still being finalised

- Ethics approval was received from both HSRC and CDC
- Participants had to provide informed consent in order for them to take part in the study

# Understanding the HIV epidemic

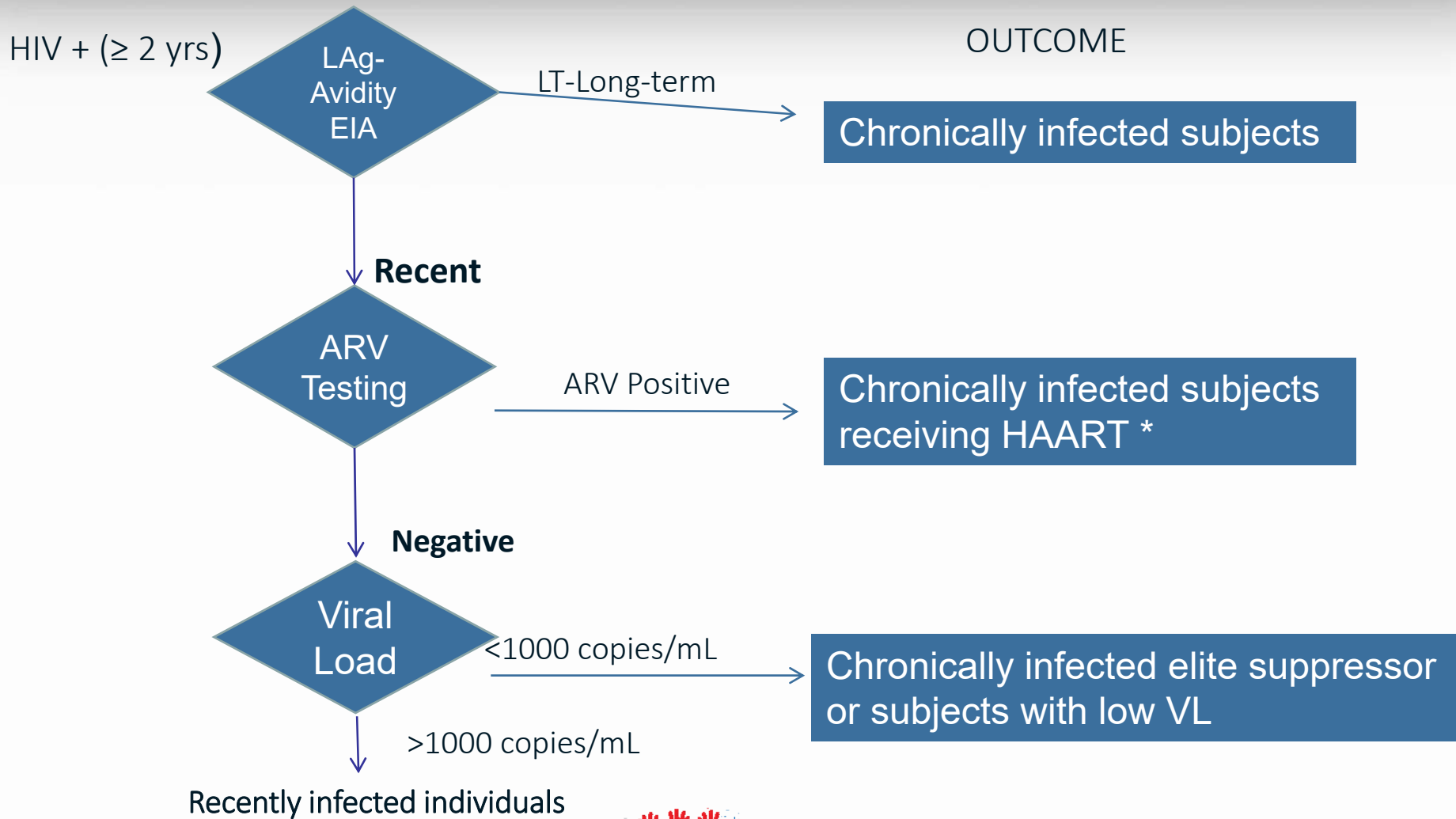




# HIV Incidence



# Recent Infection Detection Algorithm



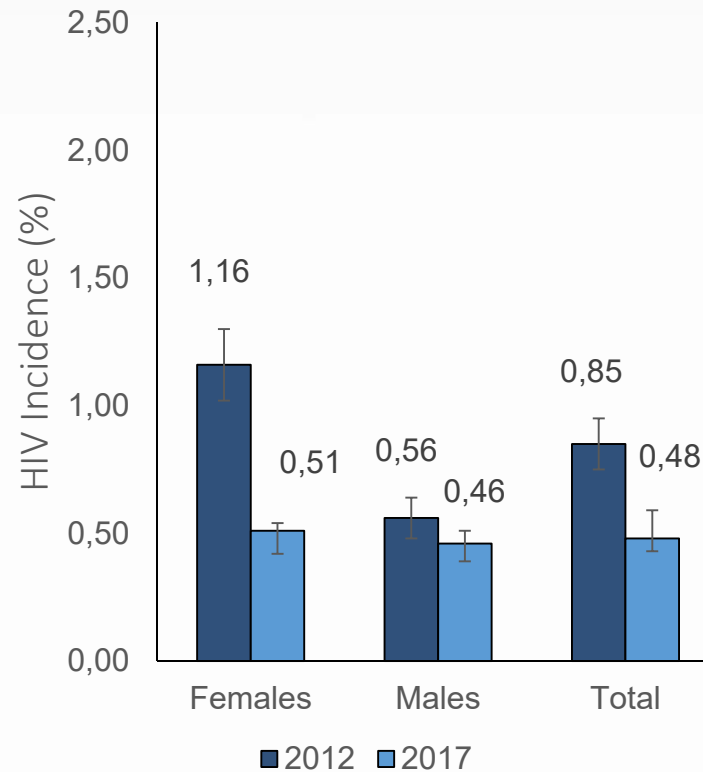
- The overall incidence rate was 0.48 % which translates to 231 000 new infections
- Incidence was higher among females (0.51% =>122 000 new infections) as compared to males (0.46% => 109 000 new infections)



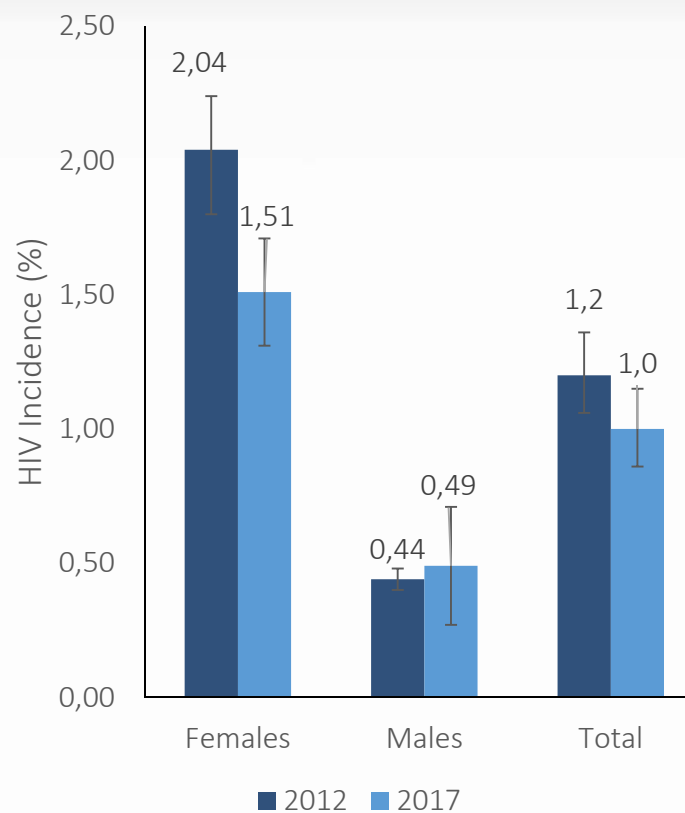
- Overall incidence was 1.0 % which translated to 88 000 new infections
- The incidence was three times higher among females (1.51% translating to 66 000 new infections) compared to males (0.49% translating to 22 000)
- Over a third (38.0%) of all new infections come from this age group

- Overall incidence in the reproductive age group was 0.79 % which translates to 200 000 new infections
- The incidence was higher among females (0.93% translating to 107 000 new infections) compared to males (0.69% translating to 92 000 new infections)

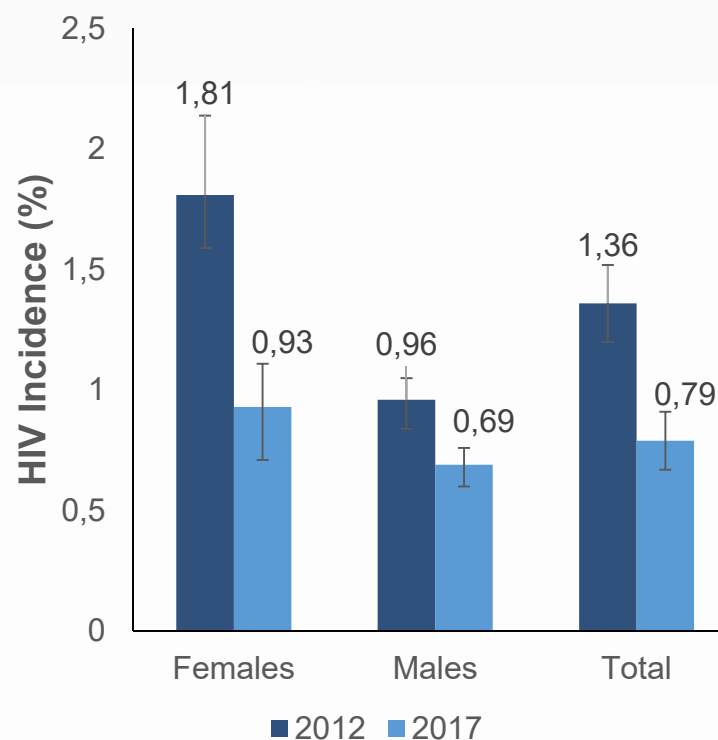
- NB. The 2012 results were re-calculated using the 2017 test parameters
- The overall HIV incidence has significantly dropped by 44%.
- The largest decline (56%) in incidence was among females.
- Among males the incidence declined by 18%



- The overall HIV incidence among youth declined by 17%
- The decline in incidence was only among females (26%)
- Whilst among males incidence increased by 11%



- The overall HIV incidence in the reproductive age group has dropped significantly by 42%
- The biggest decline (49%) in incidence was among females
- Among males the incidence declined by 28%



# ARV treatment & exposure



Variable	Estimated number of people on ART (n)	Proportion of people living with HIV on ART (%) 95% CI
National	4,401,872	62.3 (59.2-65.2)
Female	2,998,170	65.5 (62.4-68.4)
Male	1,403,702	56.3 (51.0-61.5)

# ART exposure by age group, South Africa, 2017

Age group (years)	Estimated number of people on ART (n)	Proportion of people living with HIV on ART (%) 95% CI
Total	4,401,872	62.3 (59.2-65.2)
0-14	131,052	50.0 (36.6-63.3)
15-24	273,981	39.9 (32.1-48.3)
25-49	3,243,819	63.1 (59.2-66.8)
50 and older	753,020	76.7 (71.3,81.4)
15-49	3,517,800	60.4 (57.0-63.6)



# Viral Load Suppression

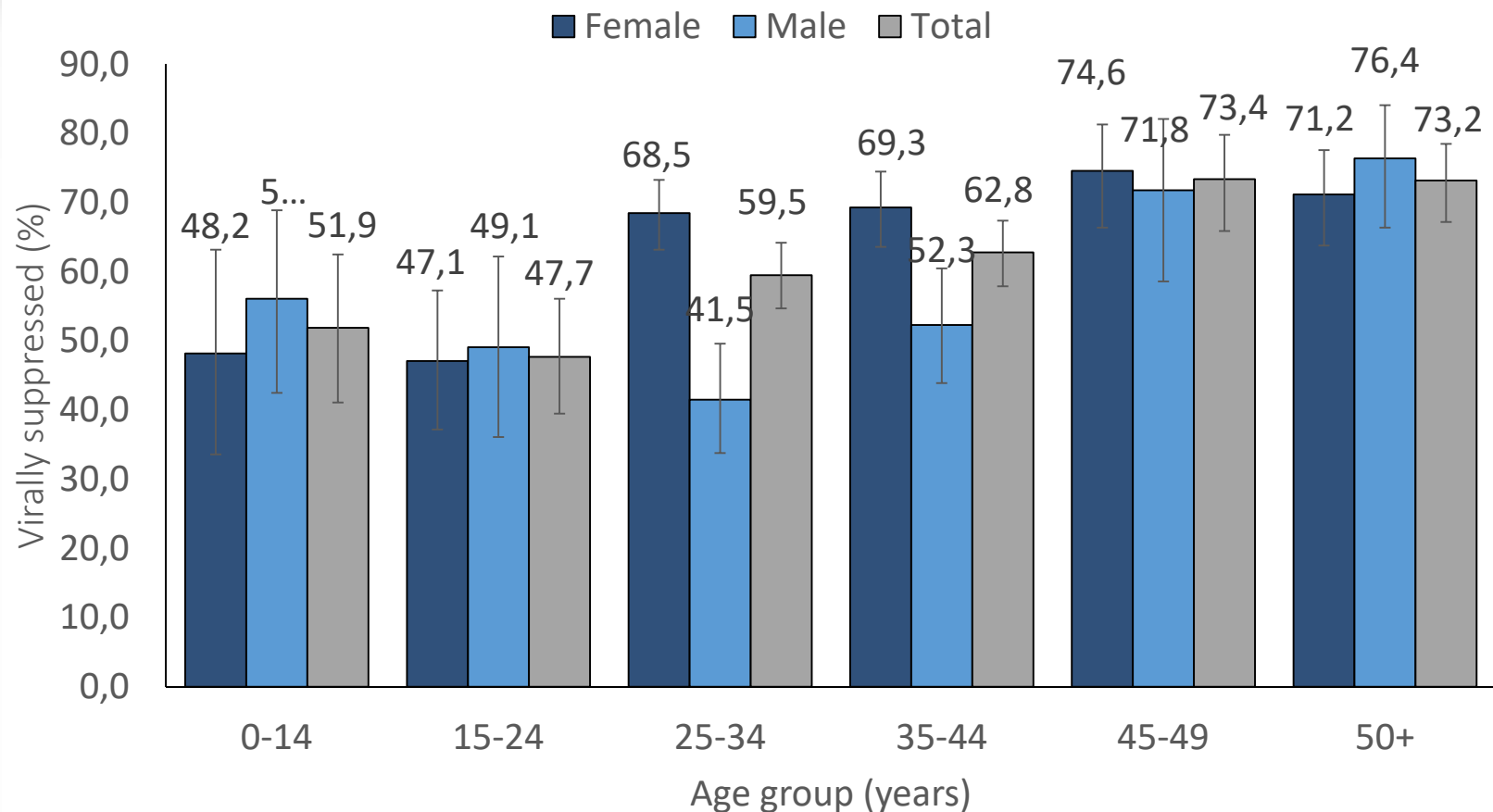


# Overall viral suppression by age, South Africa, 2017

- HIV viral load suppression, defined as a viral load threshold of <1000 copies HIV RNA/ml, is a measure of ARV therapy efficacy

- The current policy is to test and treat everyone who is HIV positive as soon they are diagnosed
- Overall viral suppression was 87.3% in PLHIV on treatment, in all age groups
- The lowest viral suppression levels in ART users were among males (82.4%), 0–14 year olds (81.9%), PLHIV on farms (82.6%) and those living in Mpumalanga (82.9%)
- However not everyone who is living with HIV is on treatment, and consequently it was found that only 62.3% of all PLHIV irrespective of treatment were virally suppressed

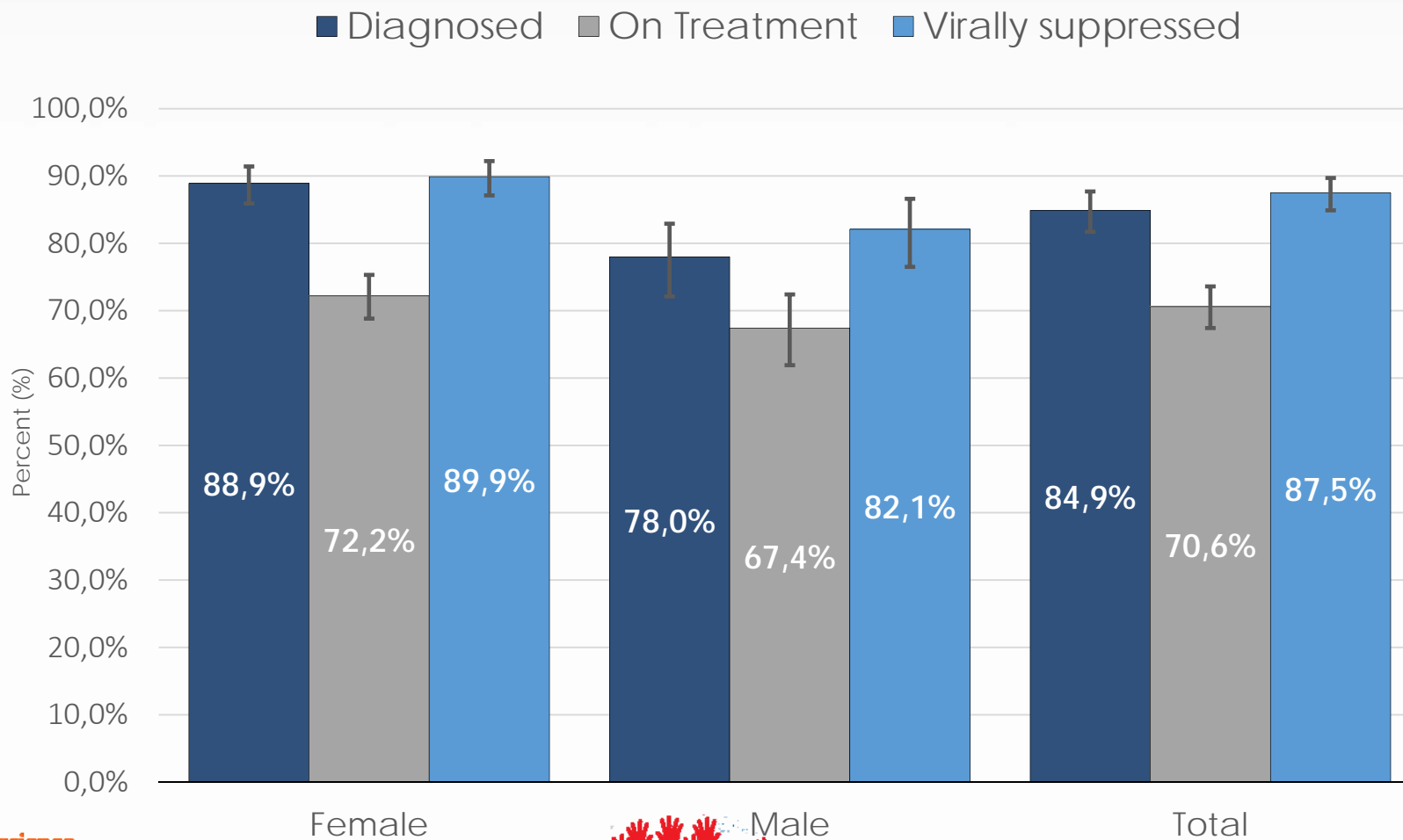
# Viral suppression among all PLHIV irrespective of treatment by age and sex, South Africa, 2017



**90-90-90**



# 90-90-90 - 15 to 64 years of age



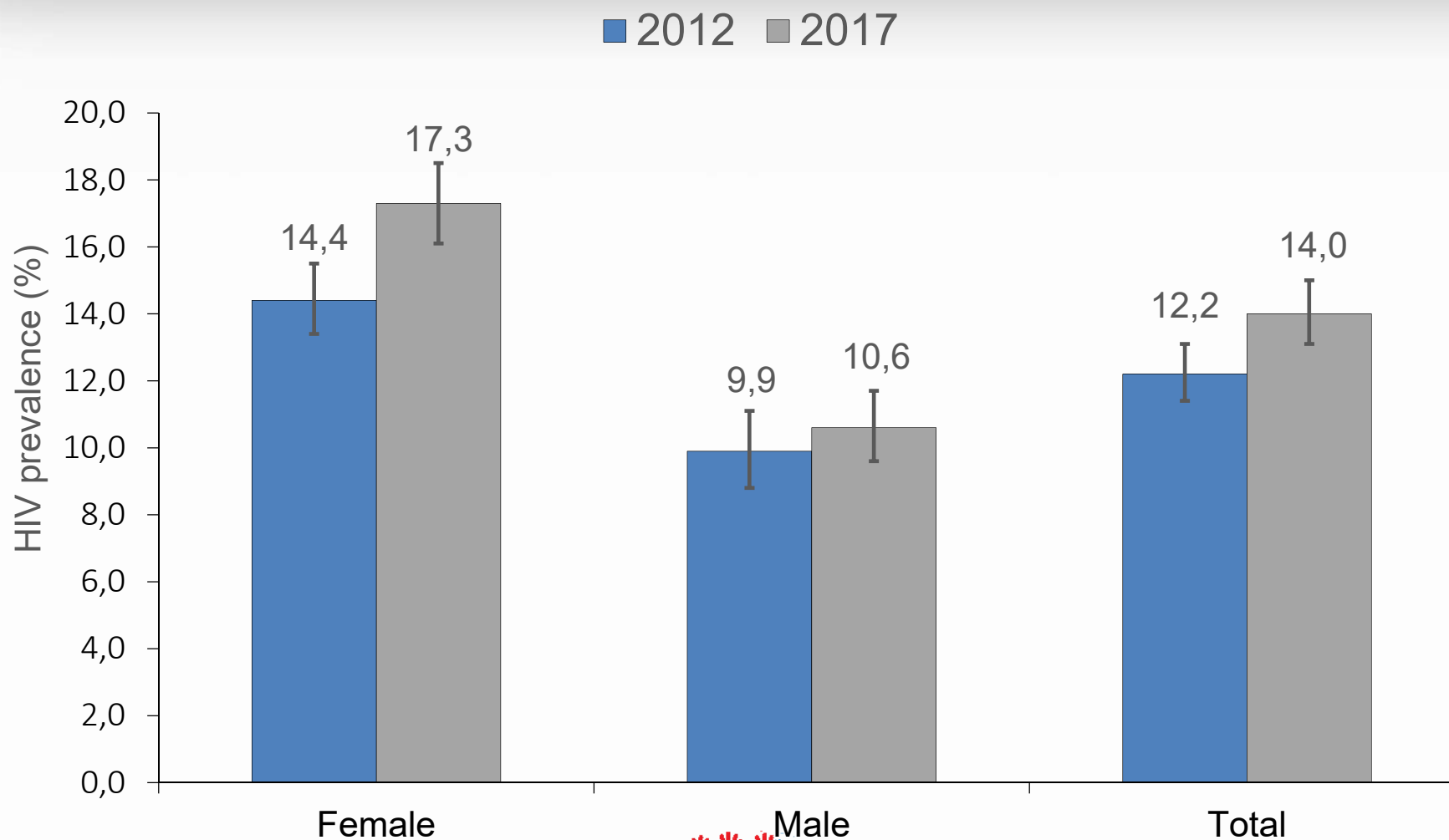
# HIV Prevalence



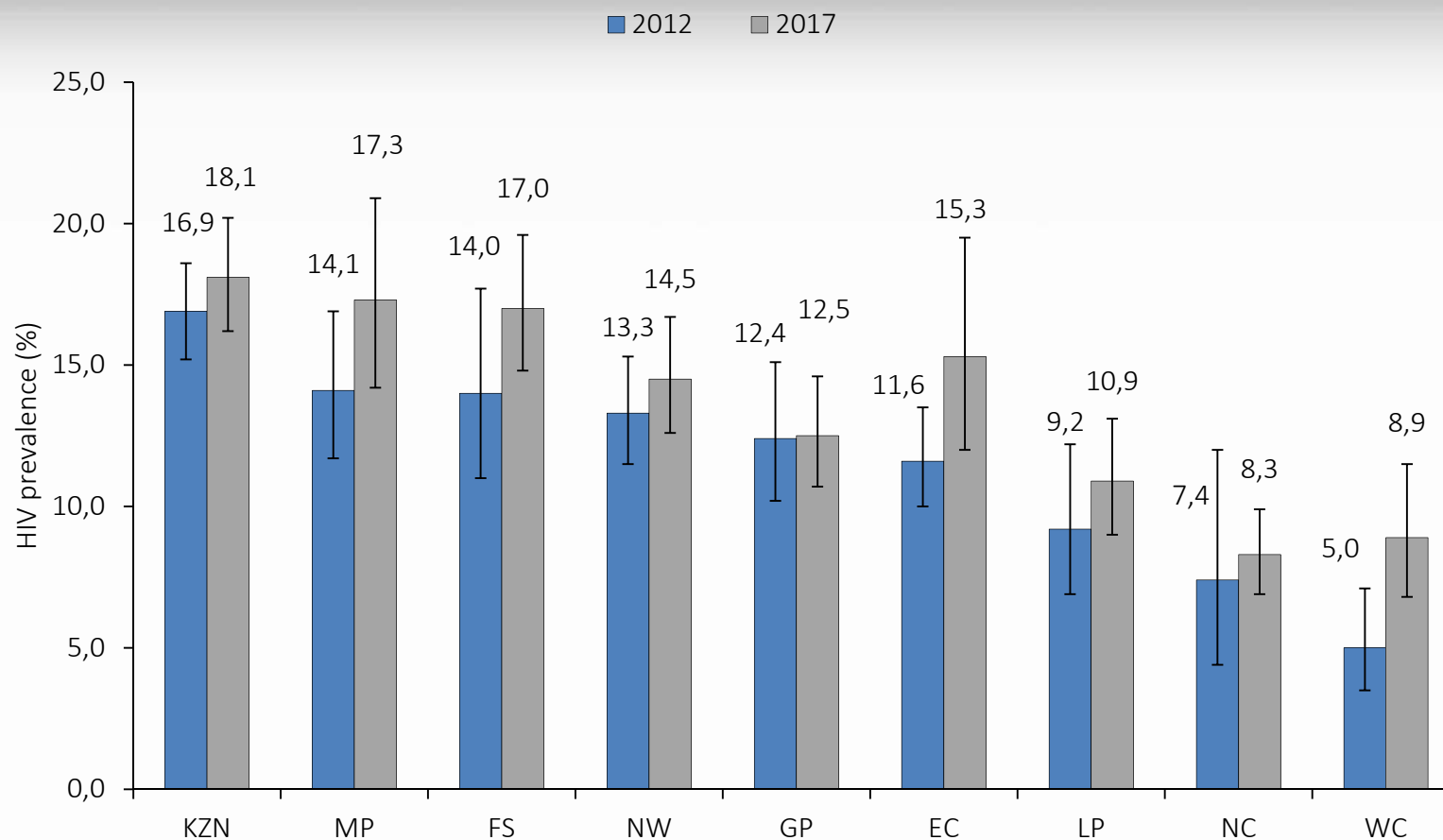
- The estimate of HIV prevalence among South Africans of all ages in 2017 was 14.0% (95% CI: 13.1-15.0)
- This translates to 7.9 million (95%CI:7.1 million - 8.8 million) PLHIV
- This increase is approximately 1.6 million more PLHIV when compared to 2012
- 2012 estimate of HIV prevalence among South Africans of all ages was 12.2% (95% CI: 11.4-13.1)



# HIV prevalence by sex, South Africa, 2017

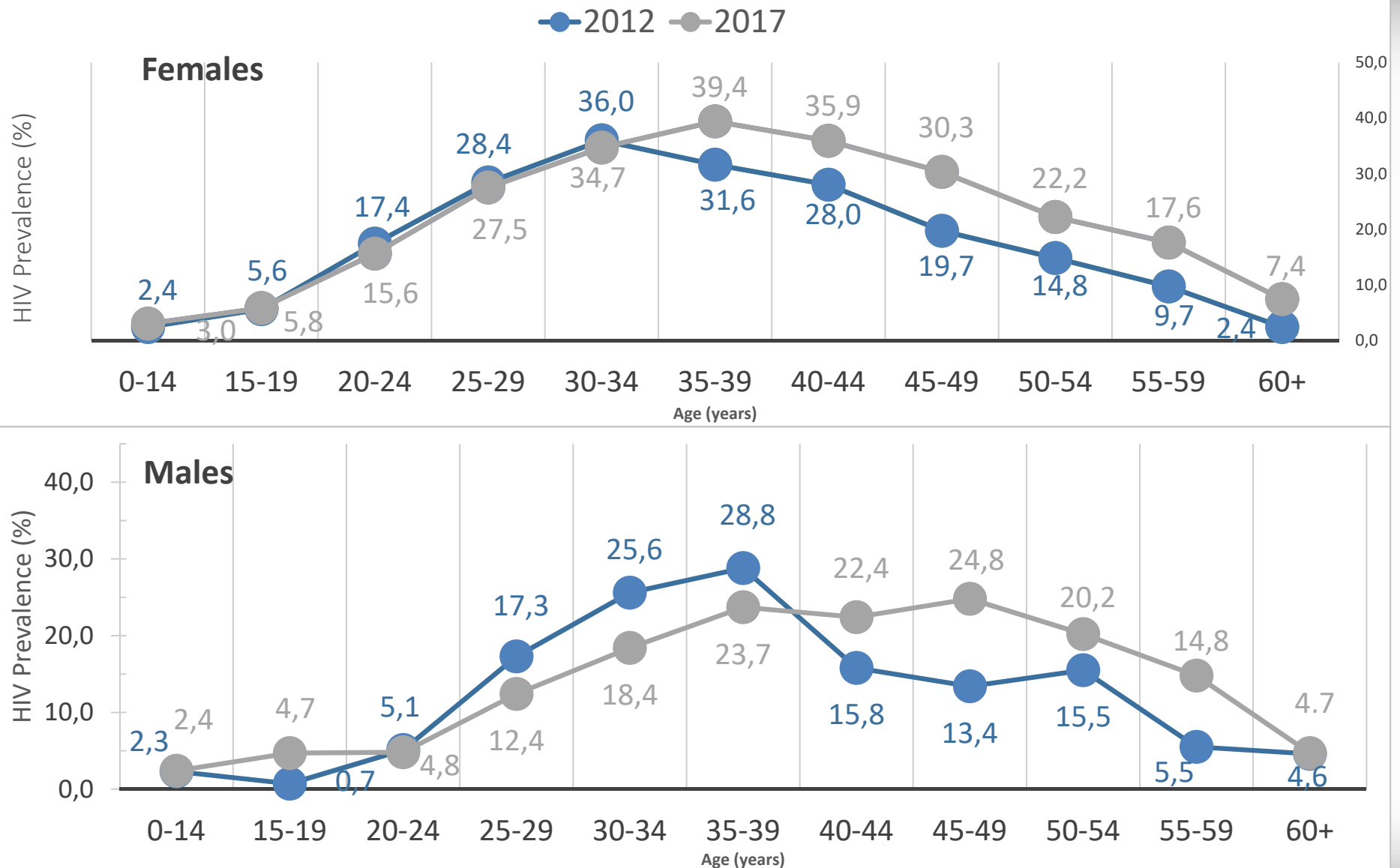


# HIV by province, South Africa, 2017



KZN – KwaZulu-Natal; MP – Mpumalanga; FS – Free State; NW – North West; GP – Gauteng

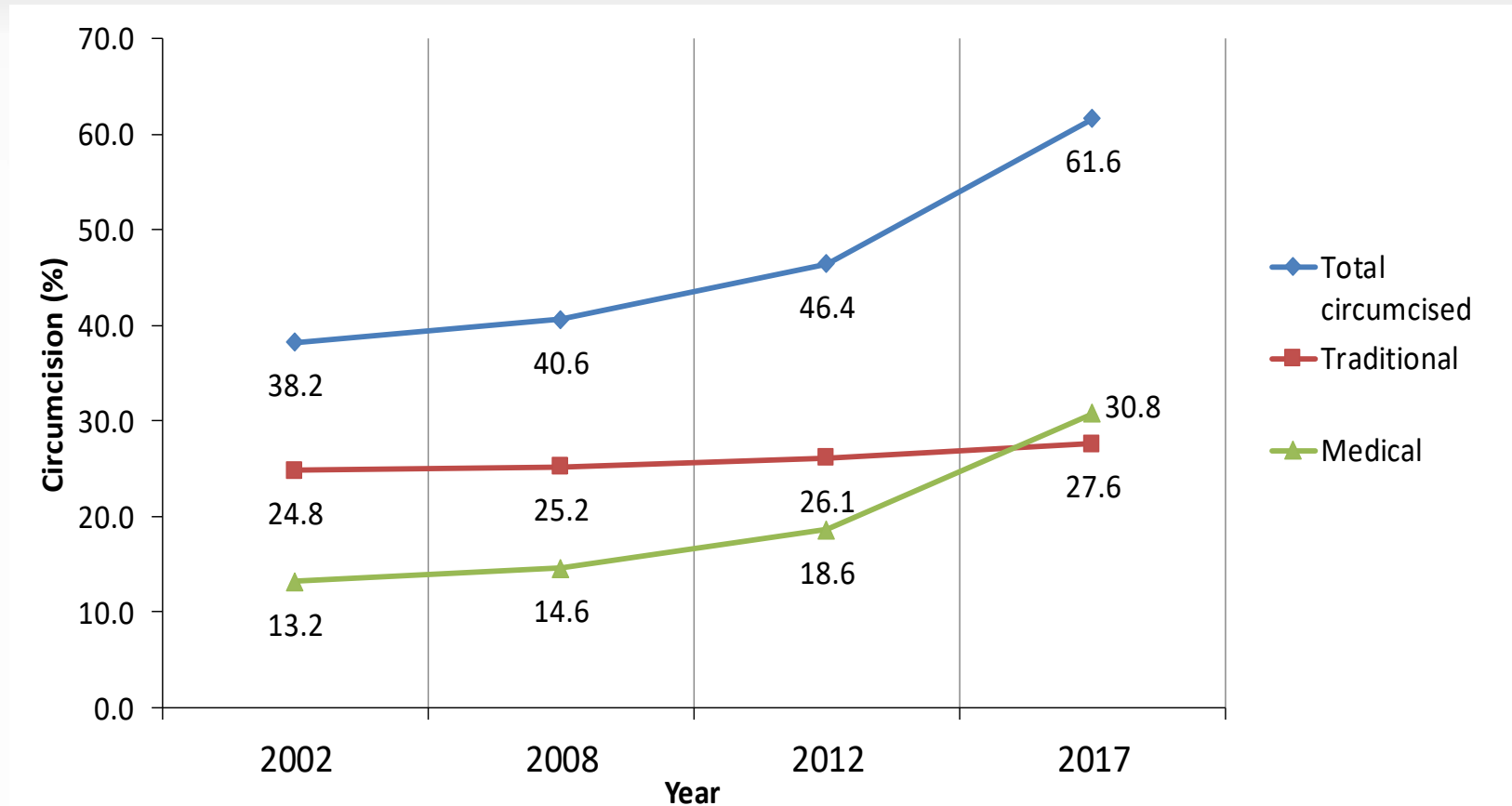
# HIV by Age and Sex, South Africa (2012 vs 2017)



# Circumcision



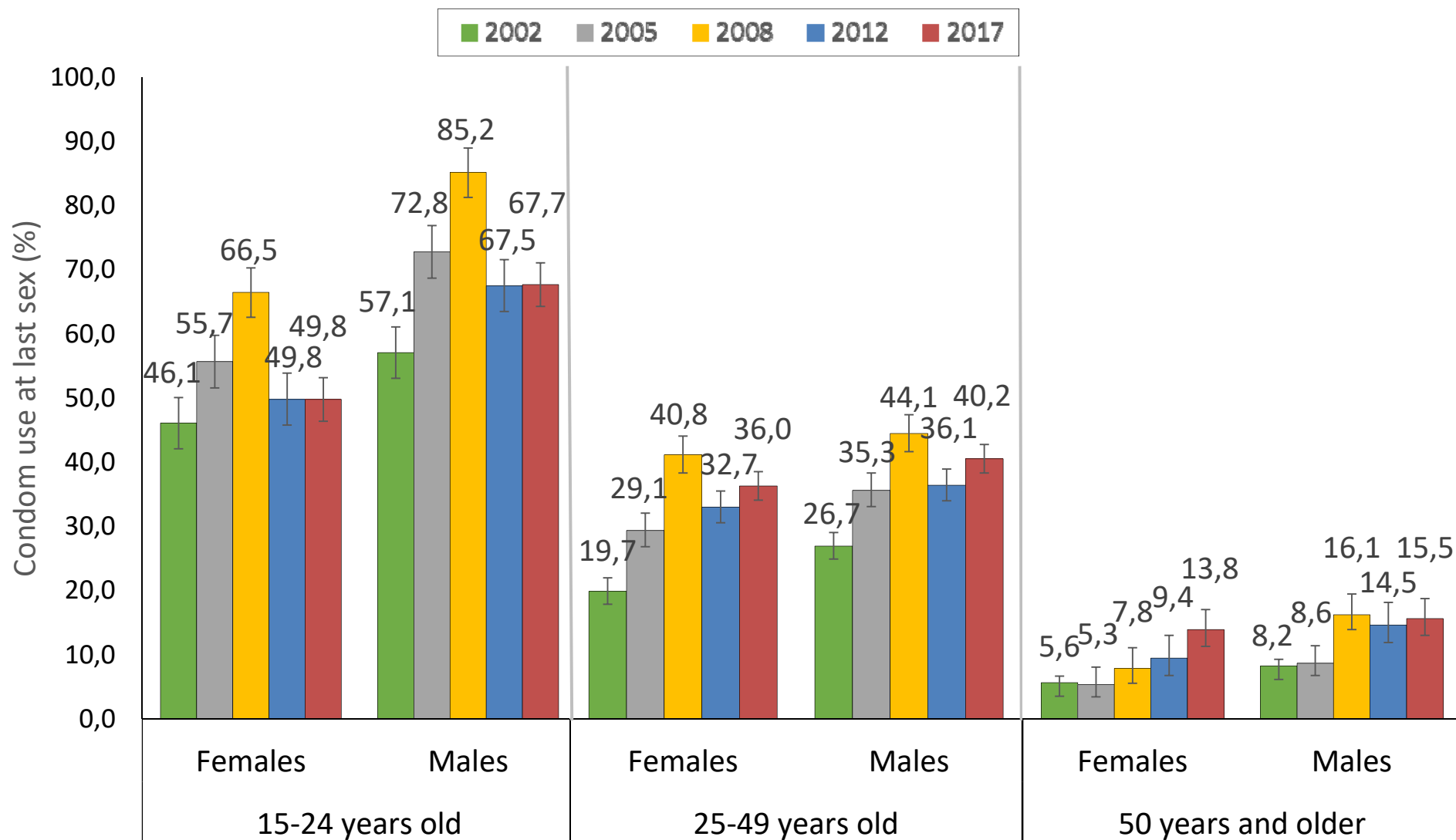
# Trends in adult male self-reported circumcision, South Africa, 2002-2017



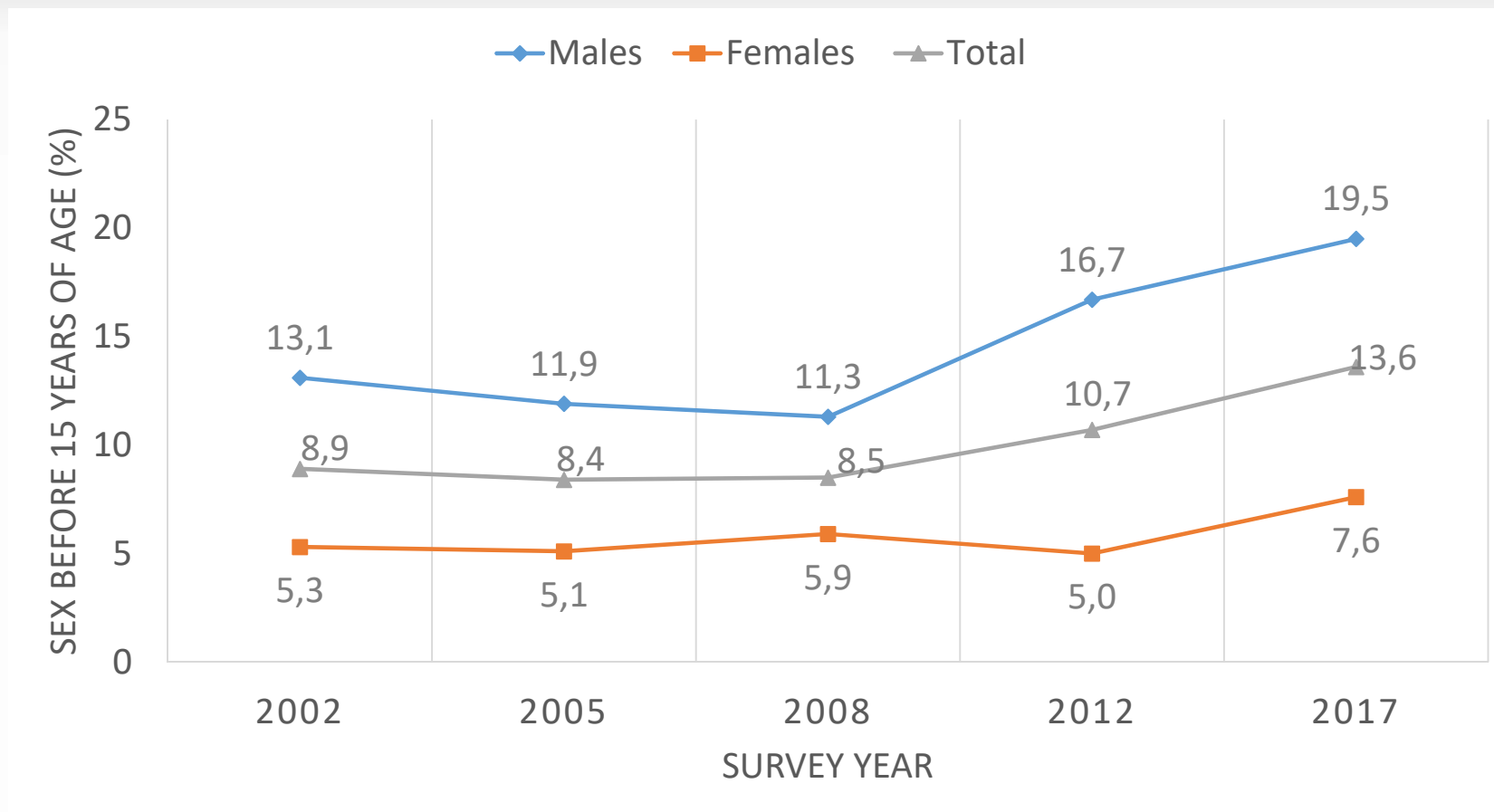
# Behavioural Measures:

Condom Use & Sexual  
Partnerships



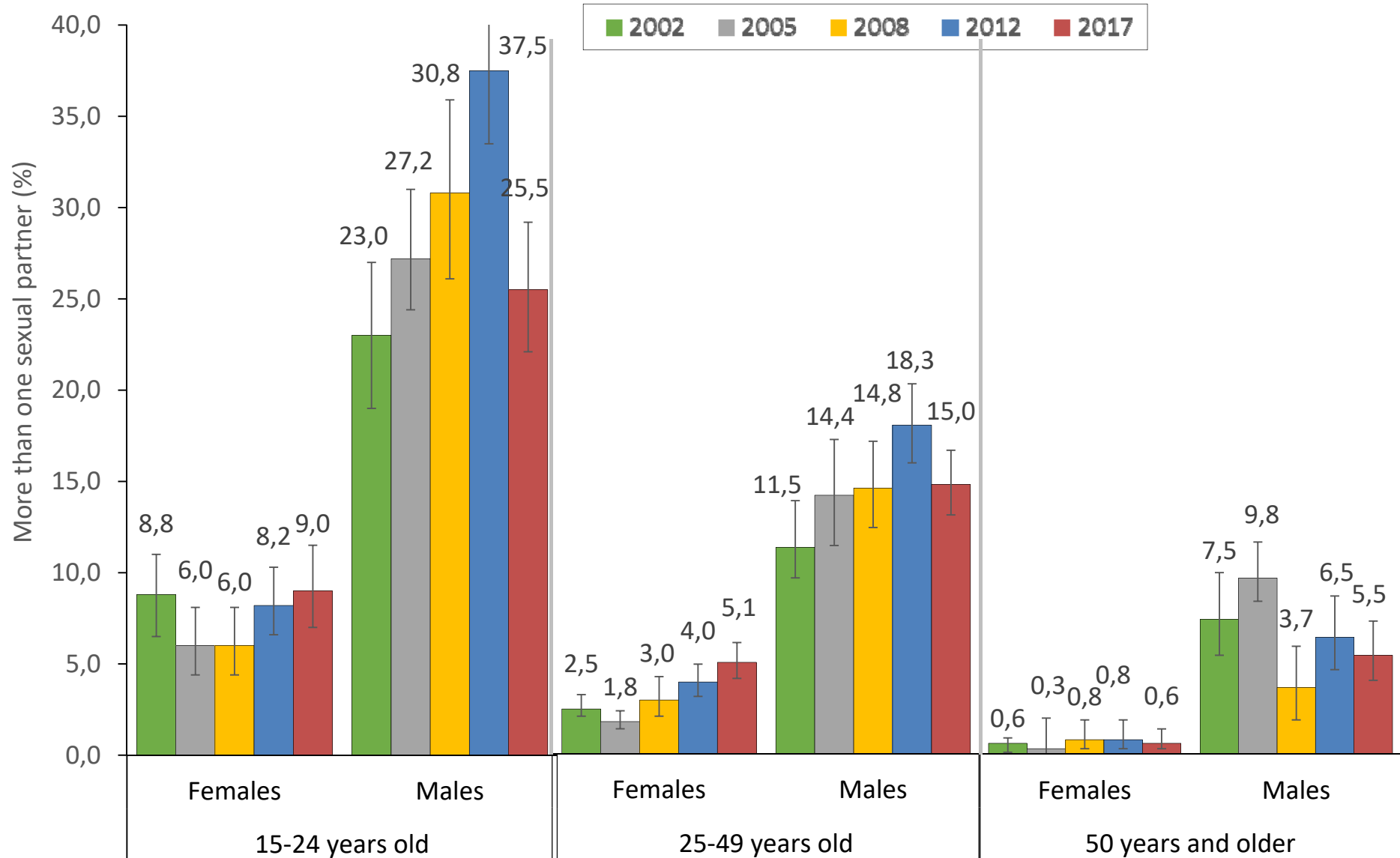


# Sexual debut among respondents aged 15–24 years, South Africa, 2002 - 2017

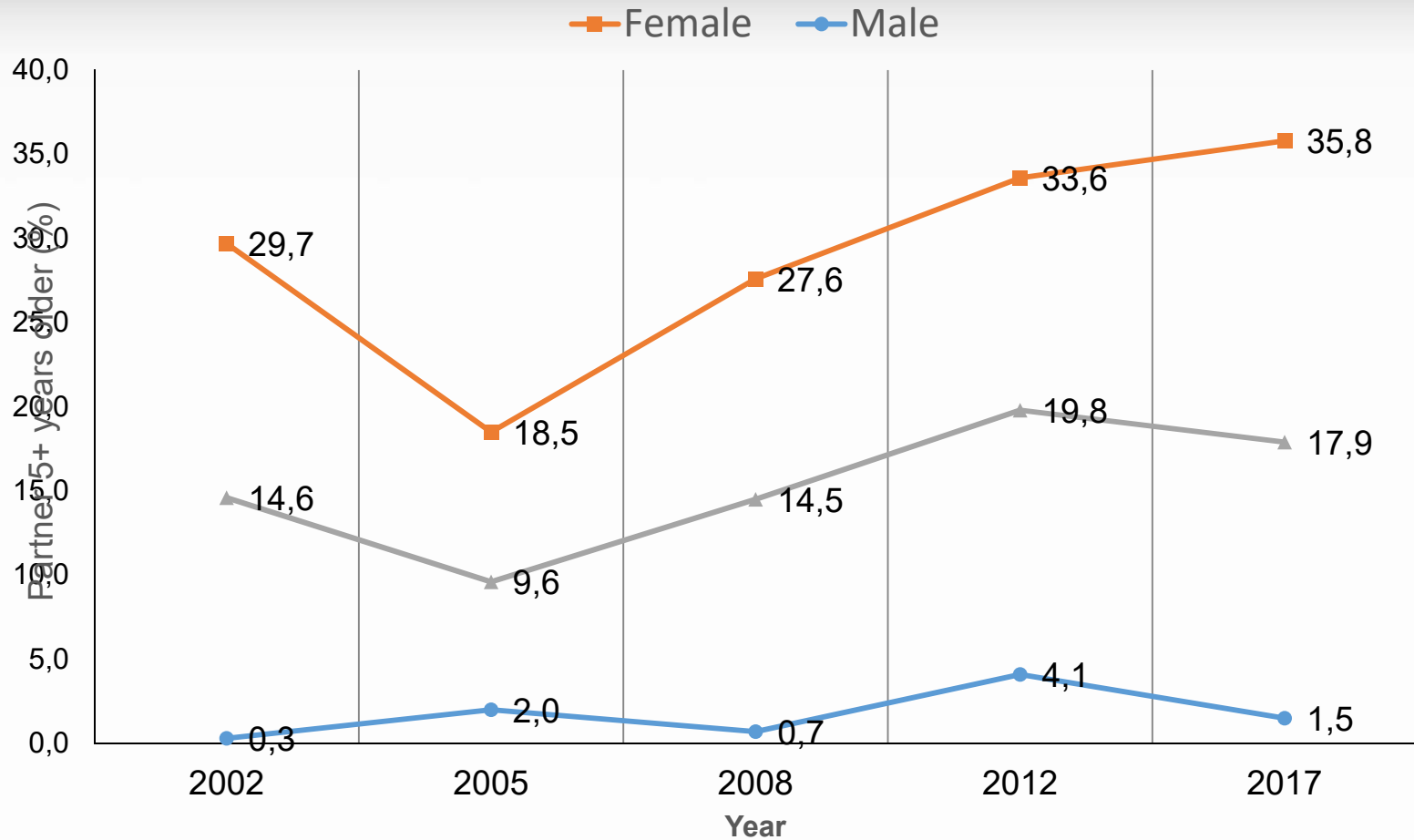




# Multiple partners in the last 12 months, South Africa, 2002-2017



# Age-disparate sexual relationships in 15-19 years age group by sex, South Africa, 2002-2017



\*Numbers reported for males with a partner 5 or more years older than them are few and should be interpreted with caution

# Behavioural Measures: Perceptions, Knowledge & SBCC

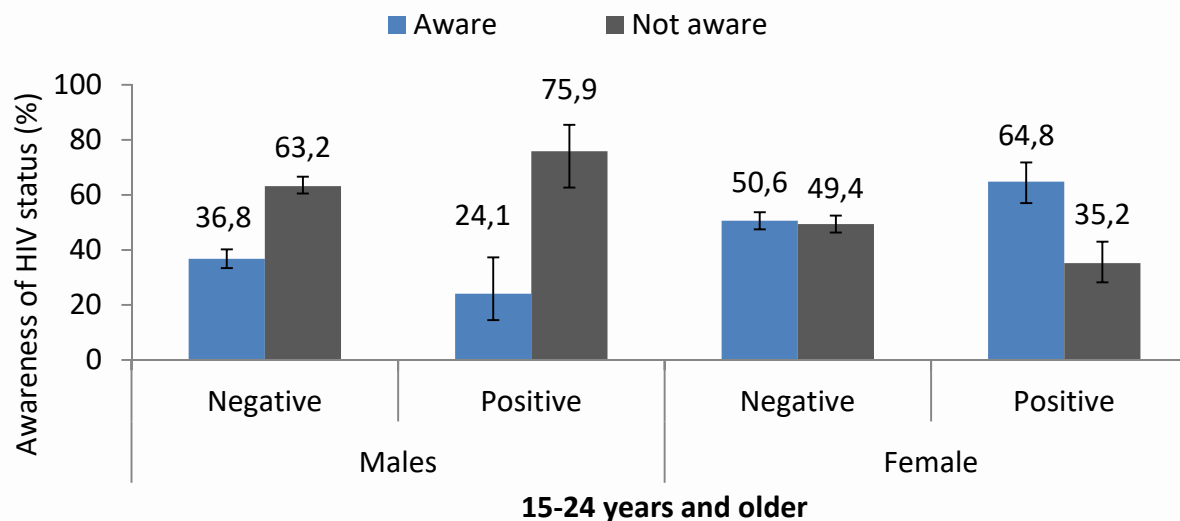


# HIV status by perceived risk of HIV, South Africa, 2017

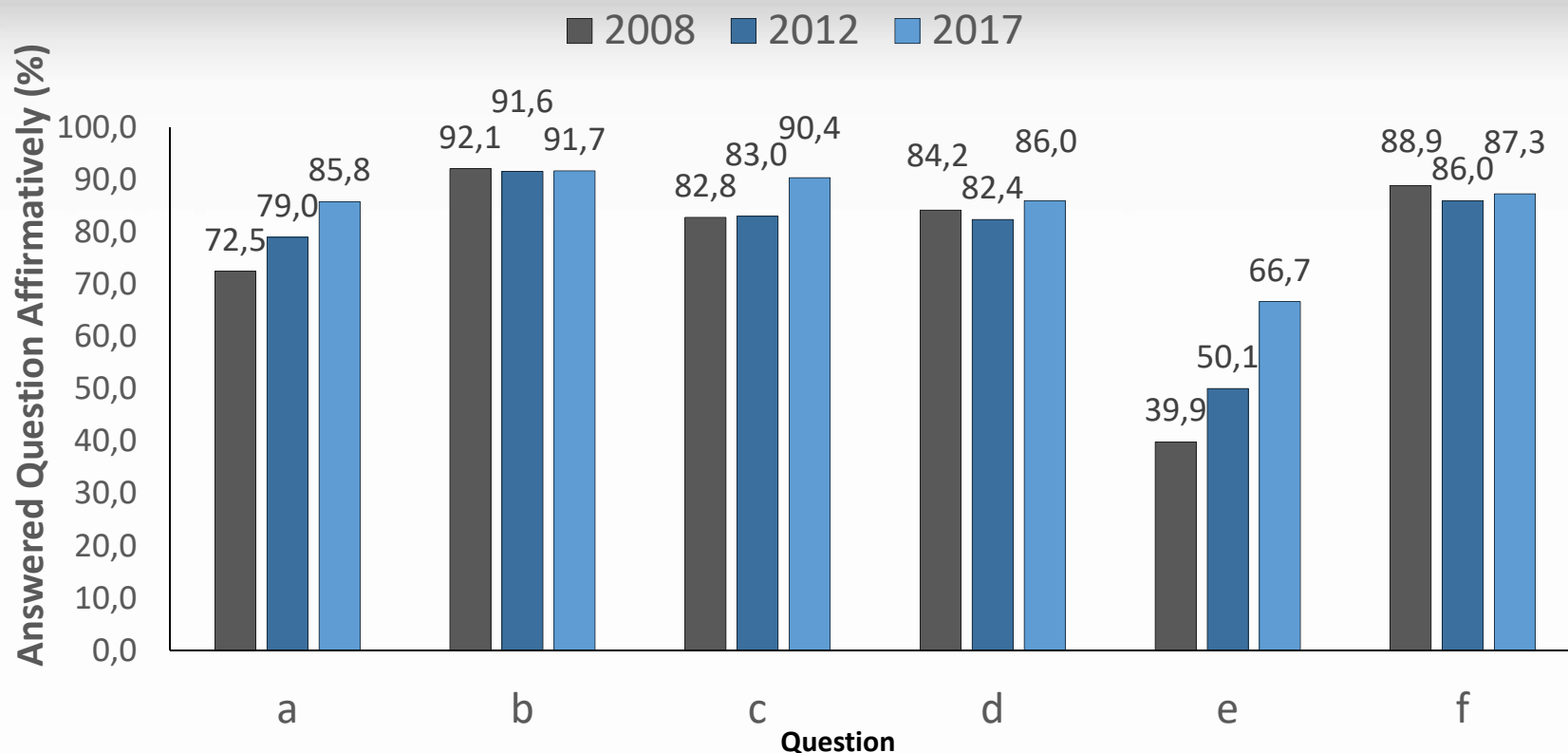
Sex	Low-risk perception			High-risk perception		
	n	HIV + (%)	95% CI	n	HIV + (%)	95% CI
Female	7953	11.2	10.0-12.5	1336	23.3	20.5-26.3
Male	5720	8.8	7.7-10.0	974	11.2	8.8-14.2
Total	13673	10.0	9.1-11.0	2310	17.2	15.3-19.3

# Awareness of HIV status, South Africa, 2017

- In total 75.2 % had been ever tested for HIV, with more females (79.3%) having done so than males (70.9%)
- Receiving HIV status in the last 12 months increased from 49.1% in 2008 to 66.8% in 2017
- HIV positive male youth were less aware of their status in the last 12 months as compared to females



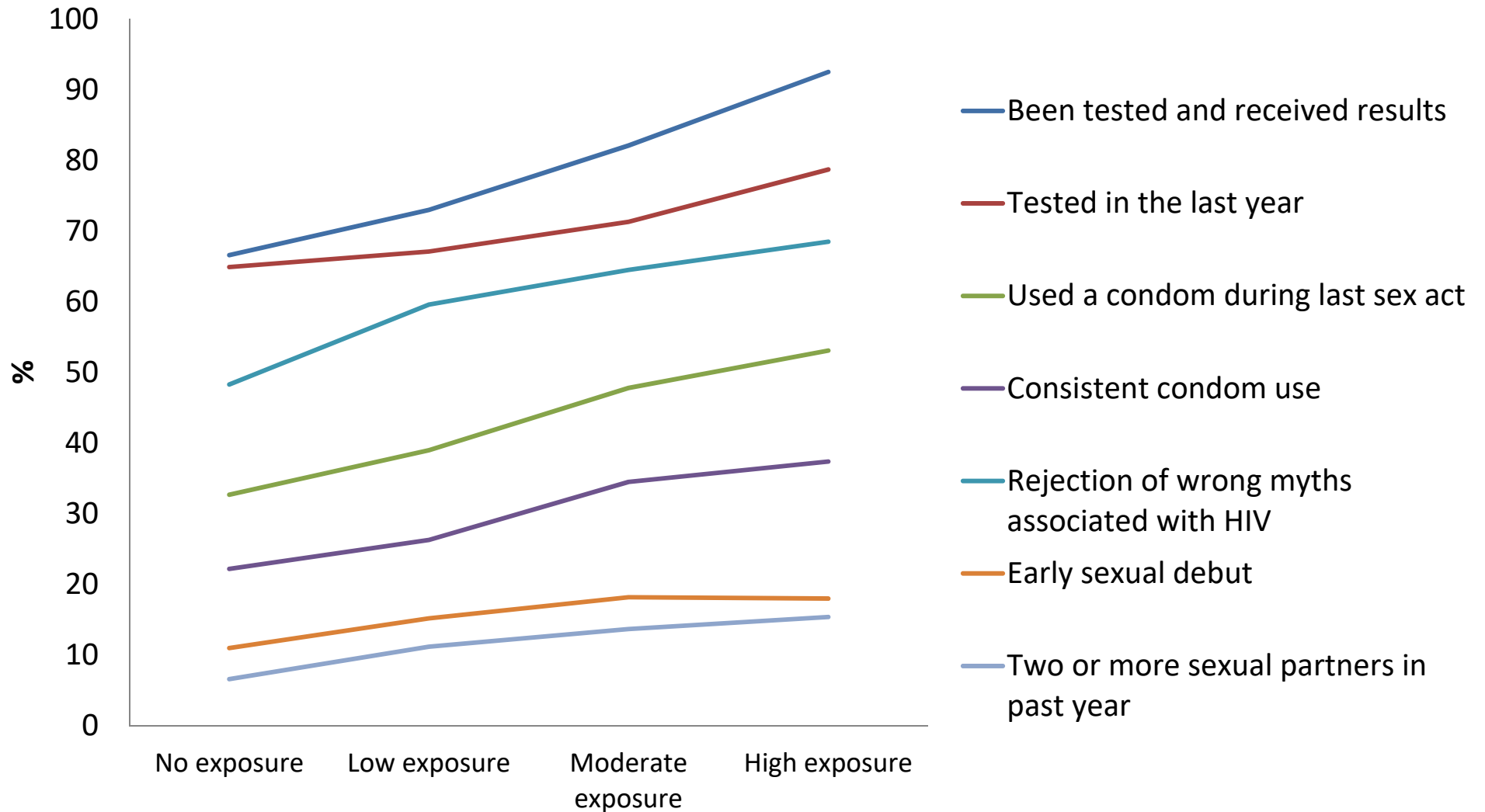
# Perceptions about PLHIV, South Africa, 2008-2017



- a. If you knew that a shopkeeper or food seller had HIV, would you buy food from them?
- b. Would you be willing to care for a family member with AIDS?
- c. If a teacher has HIV but is not sick, he or she should be allowed to continue to teach?
- d. It is not a waste of money to train or give a promotion to someone with HIV/AIDS?
- e. Would you want to keep the HIV positive status of a family member a secret?
- f. Are you comfortable talking to at least one member of your family about HIV/AIDS?

- Programmes covered
  - Soul City
  - Centre for Communication Impact (CCI)
  - LoveLife
  - Community Media Trust
- Target groups
  - Young women and girls/young people e.g. Rise clubs, ZAZI, LoveLife
  - Men e.g. Brothers for Life

# Sexual behaviour by SBCC exposure level, South Africa, 2017







# Conclusions and Recommendations

## Successes

- HIV incidence has significantly declined since 2012 by 44% (378,700 new infections in 2012 to 231,100 new infections in 2017)
  - The biggest decline was 56% among females
- Compared to the previous year estimates
  - Overall, from 2016 (270 000) to 2017 (231 000) the number of new HIV infections dropped by 14%
  - New infections among AGYW were 1 300 per week, which is 35% less than the estimated 2 000 weekly new infections in 2016 (NSP, 2017)
- ART uptake more than doubled from the 2012 survey
  - This increased access to ART contributes to an increase in life expectancy as seen in the aging profile among PLHIV
- Increases in medical male circumcision since 2012
  - Over two-thirds of males aged 15-24 years are circumcised, over half of these are medical circumcisions

## Successes continued

- Improvement in HIV testing, increasing awareness of HIV status
- The majority of respondents held positive attitudes toward PLHIV, which are consistent with low levels of stigma over time
- HIV communication campaigns are reaching South Africans
- Significant progress has been made towards the UNAIDS 90-90-90 targets. By 2017, South Africa had attained 85-71-86
- Compared to 2012 multiple sexual partnerships have decreased among young males, but still remain relatively high

## Challenges

- The number of new HIV infections are still high, especially among females aged 15-24 years(1.51%) and females aged 15-49 years (0.93%)
  - As a result of the above, HIV prevalence and number of PLHIV have increased
  - This increase was also seen in all provinces, with substantial increases in both EC and WC
- Not all PLHIV are aware of their status, especially males
- Not everyone who is HIV positive is currently on treatment and as a result overall viral suppression among all PLHIV population is 62.3%
  - Lower among males and younger age groups

## Challenges continued

- Consistent condom use continues to be low
- Sexual debut before the age of 15 years among male youth continues to increase
- The number of adolescents girls who had sexual relationships with older sexual partners continue to increase

The following recommendations are made to SANAC, all government departments, civil society, labour, business, donors, traditional leaders and, more importantly, individuals:

- There is a need to strengthen targeted and comprehensive evidence-based multi-sectoral response to the HIV and AIDS epidemic
  - Strengthen, expand and support the ART programme with focus on reaching males and the younger population
  - Make available proven combination prevention interventions, continuing emphasis on high-risk groups especially females aged 15-24 years
    - Condoms
    - PrEP
  - Revitalize and strengthen behaviour change interventions including on:
    - Risk perception highlighting the fact that everyone is at risk of HIV infection
    - Improving treatment literacy among population to drive demand and adherence

- Promote circumcision and create demand for VMMC with an immediate goal to saturate the 15-34 year old age group
- Promote the elimination of mother-to-child transmission (EMTCT) of HIV
- Existing and new evidence needs to be used to inform new and more innovative SBCC campaigns, especially addressing social cultural issues and risk behaviours
- Support a targeted implementation of a widespread HIV testing and timely linkage to care campaign or programme
  - for those with a known HIV+ status who were tested before the introduction of test and treat in 2016 should be encouraged to ‘return to care’



U.S. President's Emergency Plan for AIDS Relief (PEPFAR)  
through the U.S. CDC (Cooperative Agreement #GH001629)  
Department of Science and Technology, South African National AIDS Council, Global  
Fund, Right to Care, UNICEF, Centre for Communication Impact, Soul City, LoveLife

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*Thank you for your attention*



# HIV prevalence by race, South Africa, 2017

