



THE SIXTH SOUTH AFRICAN NATIONAL HIV PREVALENCE, INCIDENCE, AND BEHAVIOUR SURVEY (SABSSM VI)

A LEGACY OF PUBLIC HEALTH DATA THAT HAS IMPROVED LIVES OF SOUTH AFRICANS

International AIDS Conference, Munich

24 July, 18:00 – 19:30, Room 1 / Channel 2



Overview of presentation



- Background about the SABSSM survey series
- Main objectives of the survey
- Survey methods
- Response rates
- National and provincial HIV prevalence
- Antiretroviral treatment
- Viral load suppression
- Progress towards 95-95-95 targets
- Key drivers of HIV
- Concluding remarks

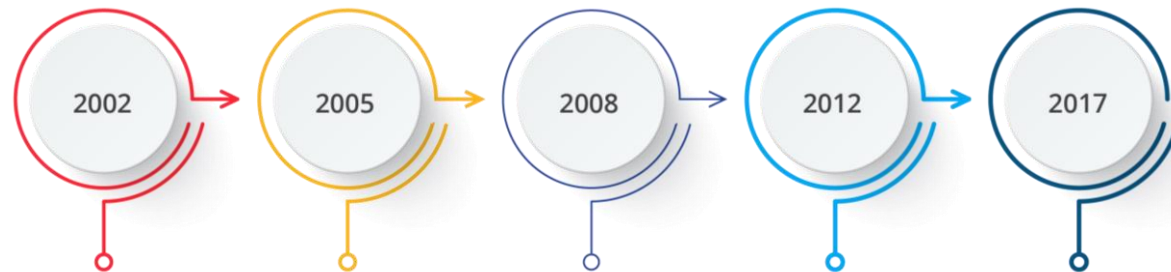
Way back in 2002



- Expanded scope
- Larger sample size
- Increased biomarkers
- Take all approach
- Electronic data collection

Major source of information for measuring the progress of the implementation of the South African National Strategic Plan (NSP) for HIV, STIs and TB

Survey year



Main objectives

To estimate at national, provincial and district levels (PEPFAR and NDoH priority):

- HIV prevalence (adults and children)
- Exposure to ART
- Viral load suppression in HIV-infected individuals



To estimate at national level:

- HIV incidence (annualized rate of new HIV infections)

Survey methods



Geographic scope

- National level: 9 provinces
- District level: 27 PEPFAR and 6 National Department of Health priority districts



Survey design and population

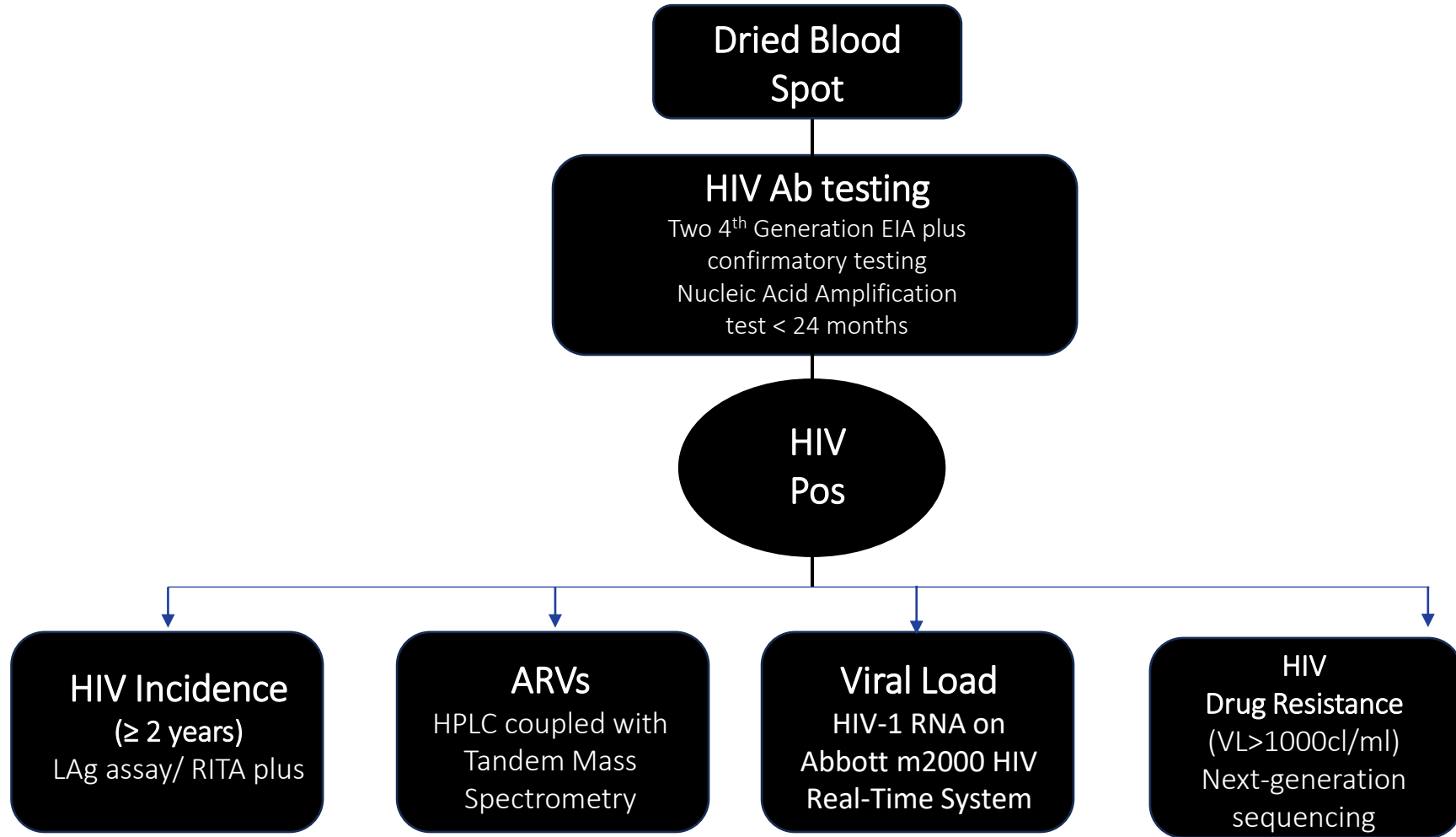
- A cross-sectional, population-based household survey using multi-stage stratified cluster random sampling
- The survey design and methods are validated in the five previous surveys



Survey population

- Persons of all ages living in South Africa at the time of the survey
- All members of the selected households were invited to participate
- Data collection occurred over 15 months, from January 2022 to April 2023

Specimen testing





RESULTS



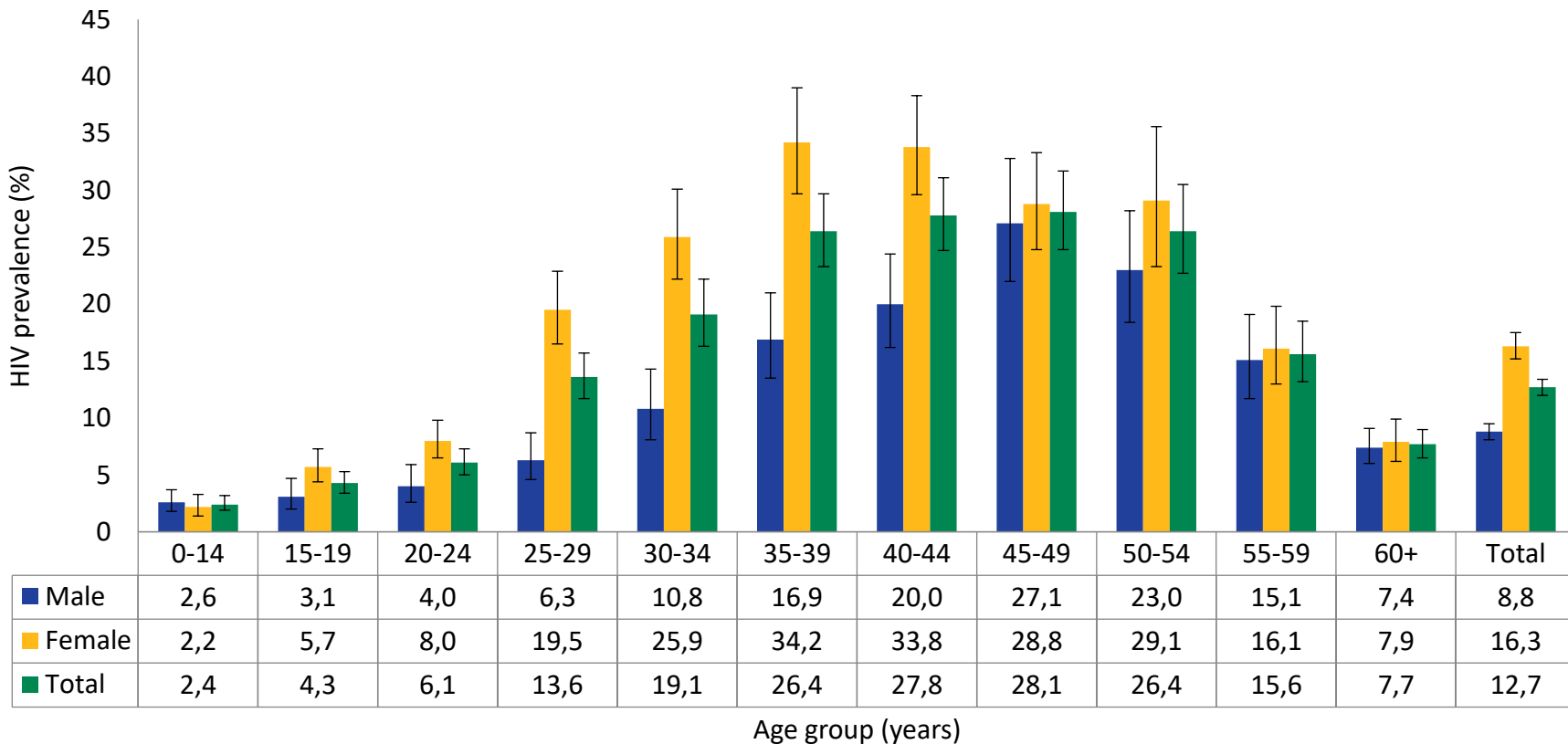
Response rates

- 29 447 VPs were approached, where 27 005 (91.7%) were valid
- Of the 27 005 valid households, 80.0% completed a household interview
- Of the eligible 76 134 individuals, aged 0+ years,
 - 94.1% were interviewed, 62.7% provided blood for HIV and additional testing
- Of the 30 718 eligible women, aged 15 years and older,
 - 94.9% were interviewed, and 69.0% provided blood for HIV and additional testing
- Of the 22 665 eligible men, aged 15 years and older,
 - 90.6% were interviewed, and 60.8% provided blood for HIV and additional testing

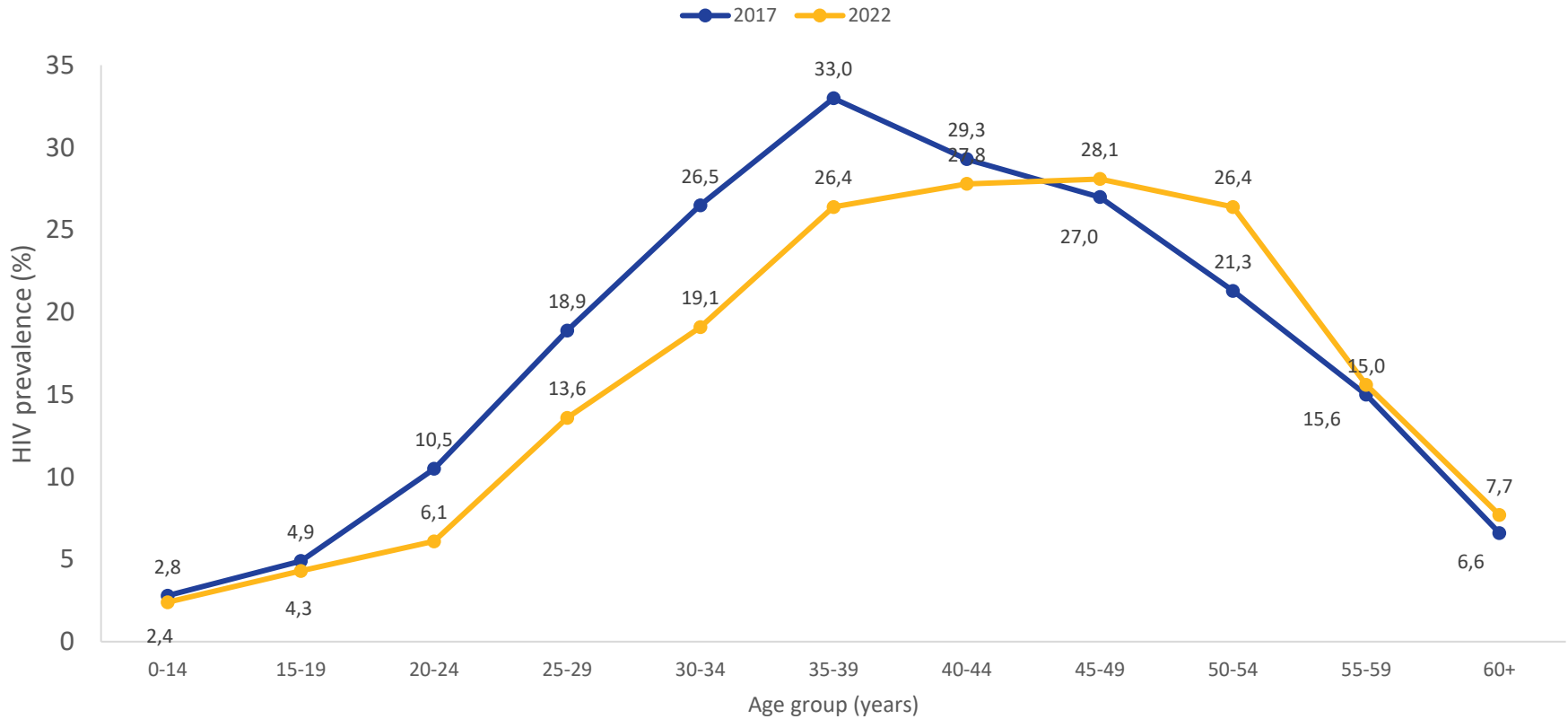
Overall HIV prevalence, South Africa, 2017 and 2022

- The national estimate for HIV prevalence for all ages in 2022 was 12.7% (95% CI: 12.0–13.4), translating to 7.8 million people (95% CI: 7.2–8.4)
- The HIV prevalence was 1.3 percentage points lower than the 2017 estimate, which was 14.0% (95%CI:13.2 – 14.8), translating to 7.9 people million (95% CI: 7.2–8.6)
- This represents 107 000 fewer people living with HIV in 2022

Overall HIV prevalence by sex and age, South Africa, 2022



Overall HIV prevalence by age, South Africa, 2017 and 2022



Overall HIV prevalence by age, South Africa, 2017 and 2022

Age group (years)	2017		2022	
	HIV-positive (%)	Number of PLHIV	HIV-positive (%)	Number of PLHIV
Total	14.0 [13.2–14.8]	7 900 000	12.7 [12.0–13.4]	7 800 000
0–14	2.8 [2.4–3.4]	470 000	2.4 [1.9–3.2]	390 000
15–24	7.8 [6.9–8.8]	750 000	5.2 [4.5–6.0]	530 000
25–49	26.3 [24.8–27.9]	5 600 000	22.1 [20.8–23.5]	5 300 000
50+	12.4 [10.8–14.2]	1 100 000	14.0 [12.5–15.6]	1 600 000
15–49	20.6 [19.4–21.8]	6 300 000	17.0 [16.1–18.0]	5 800 000
15+	18.7 [17.6–19.9]	7 400 000	16.3 [15.4–17.2]	7 400 000

Overall HIV prevalence (0+ years) by sex and locality, South Africa, 2017 and 2022

Variables	2017		2022	
	HIV-positive (%)	Number of PLHIV	HIV-positive (%)	Number of PLHIV
Sex				
Male	10.8 [10.0–11.7]	3 000 000	8.8 [8.1–9.5]	2 600 000
Female	17.1 [16.0–18.3]	4 900 000	16.4 [15.2–17.5]	5 200 000
Locality type				
Urban	13.0 [12.0–14.1]	4 600 000	12.3 [11.4–13.2]	4 800 000
Rural informal/tribal areas	15.3 [14.0–16.7]	2 700 000	13.0 [11.8–14.3]	2 400 000
Rural formal/farm areas	17.8 [5.4–20.5]	580 000	14.8 [12.7–17.2]	600 000

Antiretroviral treatment by age, South Africa, 2017 and 2022

Age group (years)	2017		2022	
	PLHIV on ART % [95% CI]	Estimated number of PLHIV on ART	PLHIV on ART % [95% CI]	Estimated number of PLHIV on ART
Total	63.7 [61.3–66.0]	4 500 000	80.9 [78.1–83.5]	5 700 000
0–14	54.5 [43.2–65.3]	170 000	79.0 [66.8–87.5]	280 000
15–24	41.4 [35.0–48.1]	280 000	63.2 [56.1–69.7]	270 000
25–49	64.5 [61.5–67.5]	3 300 000	82.1 [78.0–85.6]	3 900 000
50+	77.5 [73.4–81.2]	770 000	82.8 [77.0–87.4]	1 200 000
15–49	61.8 [59.2–64.3]	3 600 000	80.5 [76.7–83.8]	4 200 000

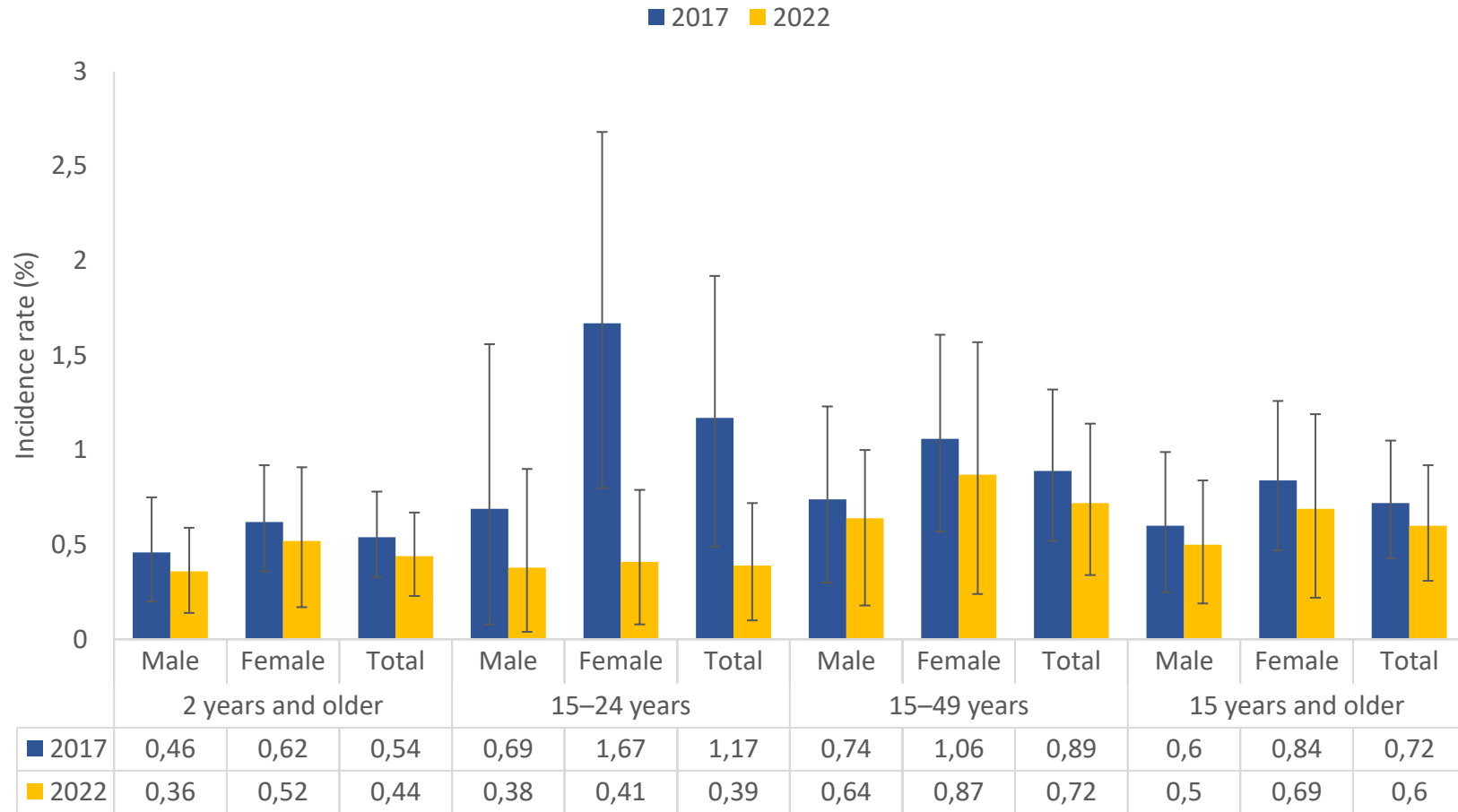
Antiretroviral treatment (0+ years) by sex and locality, South Africa, 2017 and 2022

Variable	2017		2022	
	PLHIV on ART % [95% CI]	Estimated number of PLHIV on ART	PLHIV on ART % [95% CI]	Estimated number of PLHIV on ART
Total	63.7 [61.3–66.0]	4 500 000	80.9 [78.1–83.5]	5 700 000
Sex				
Male	58.6 [54.5–62.6]	1 500 000	76.2 [71.5–80.3]	1 800 000
Female	66.5 [64.0–68.9]	3 000 000	83.2 [80.2–85.9]	4 000 000
Locality type				
Urban	60.5 [57.2–63.7]	2 600 000	77.4 [73.5–80.9]	3 400 000
Rural informal/tribal areas	69.2 [65.5–72.6]	1 700 000	85.9 [81.9–89.1]	1 900 000
Rural formal/farm areas	63.5 [54.7–71.4]	210 000	90.4 [86.9–93.1]	440 000

Dolutegravir-containing regimen coverage among people 15+ years with detectable ARVs, South Africa, 2022

Variables	n	%	95% CI
Total	4 993	73.0	70.4–75.5
Sex			
Male	1 237	77.5	72.7–81.6
Female	3 754	71.1	67.9–74.2
Age group (years)			
15–24	312	65.8	54.6–75.5
25–49	3 286	72.3	69.3–75.1
50+	1395	76.7	72.0–80.9
15–49	3 598	71.9	68.9–74.7

Estimated HIV incidence (%) by age and sex, South Africa, 2017 and 2022

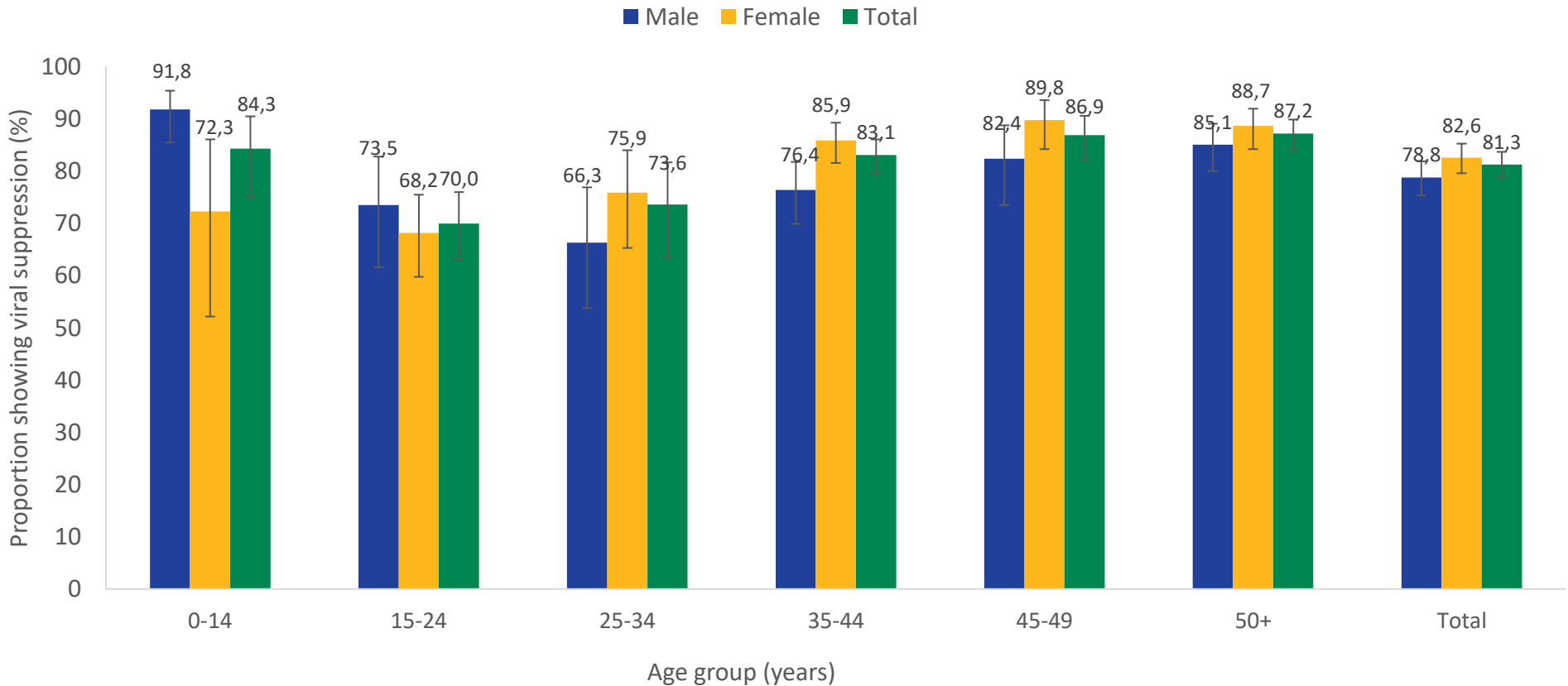




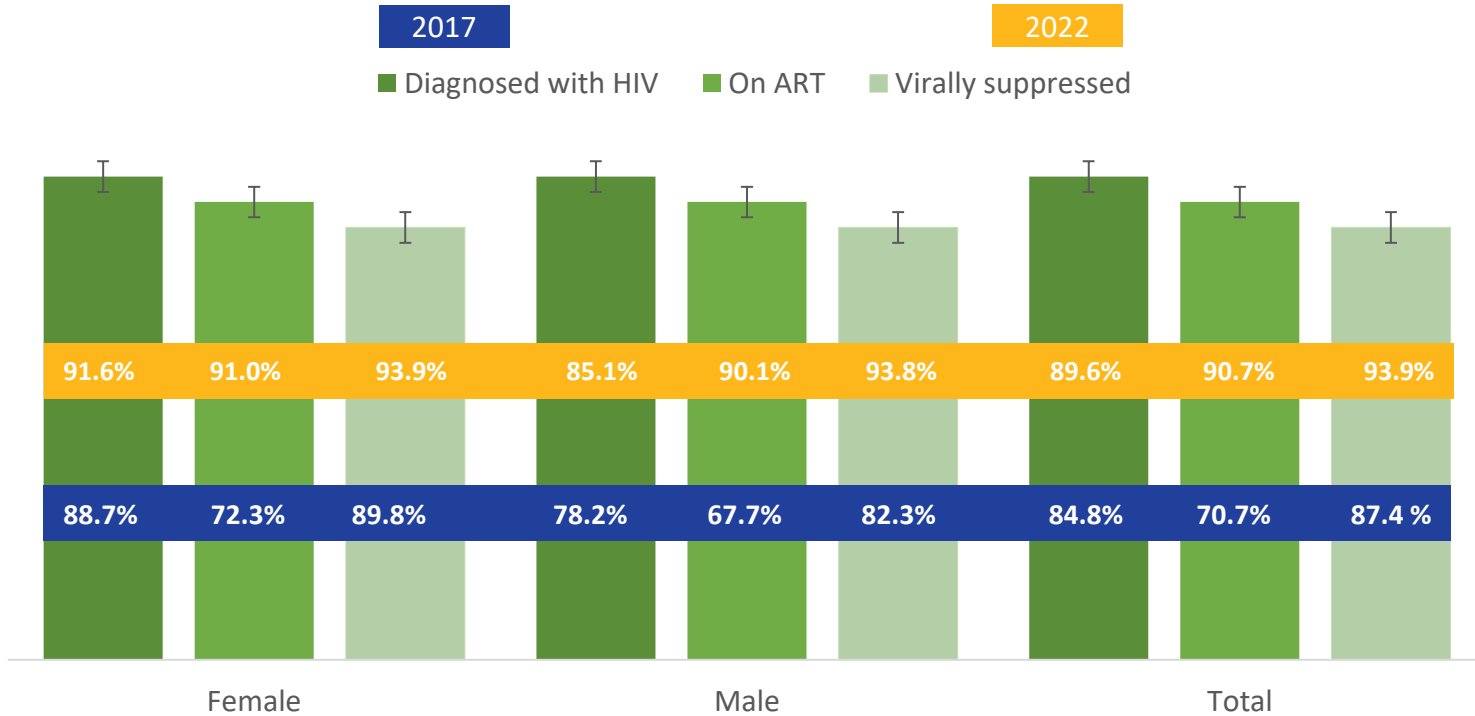
Estimated HIV incidence (%) by age and sex, South Africa, 2017 and 2022

Age groups (years)	Sex	2017		2022	
		Estimated number of new infections per year	95% CI	Estimated number of new infections	95% CI
2 and older	Total	249 800	150 600–362 400	232 400	121 500–353 900
	Male	109 000	47 600–177 000	96 000	37 600–158 000
	Female	140 800	81 600–208 400	136 000	44 500–238 000
15–24	Total	103 400	43 100–170 600	38 200	9 400–70 200
	Males	31 500	3 700–71 000	19 000	2 000–45 700
	Females	71 900	34 400–115 400	19 200	4 000–36 900
15–49	Total	217 900	126 300–322 200	205 400	97 000–324 000
	Males	97 000	39 000–161 100	80 300	25 400–140 700
	Females	120 800	64 800–183 700	125 000	35 000–224 600
15 and older	Total	232 000	137 800–339 000	227 400	116 600–352 000
	Males	98 300	150 600–362 400	91 800	34 300–154 500
	Females	133 500	47 600–177 000	135 800	43 700–235 200

Viral load suppression by sex and age, South Africa, 2022



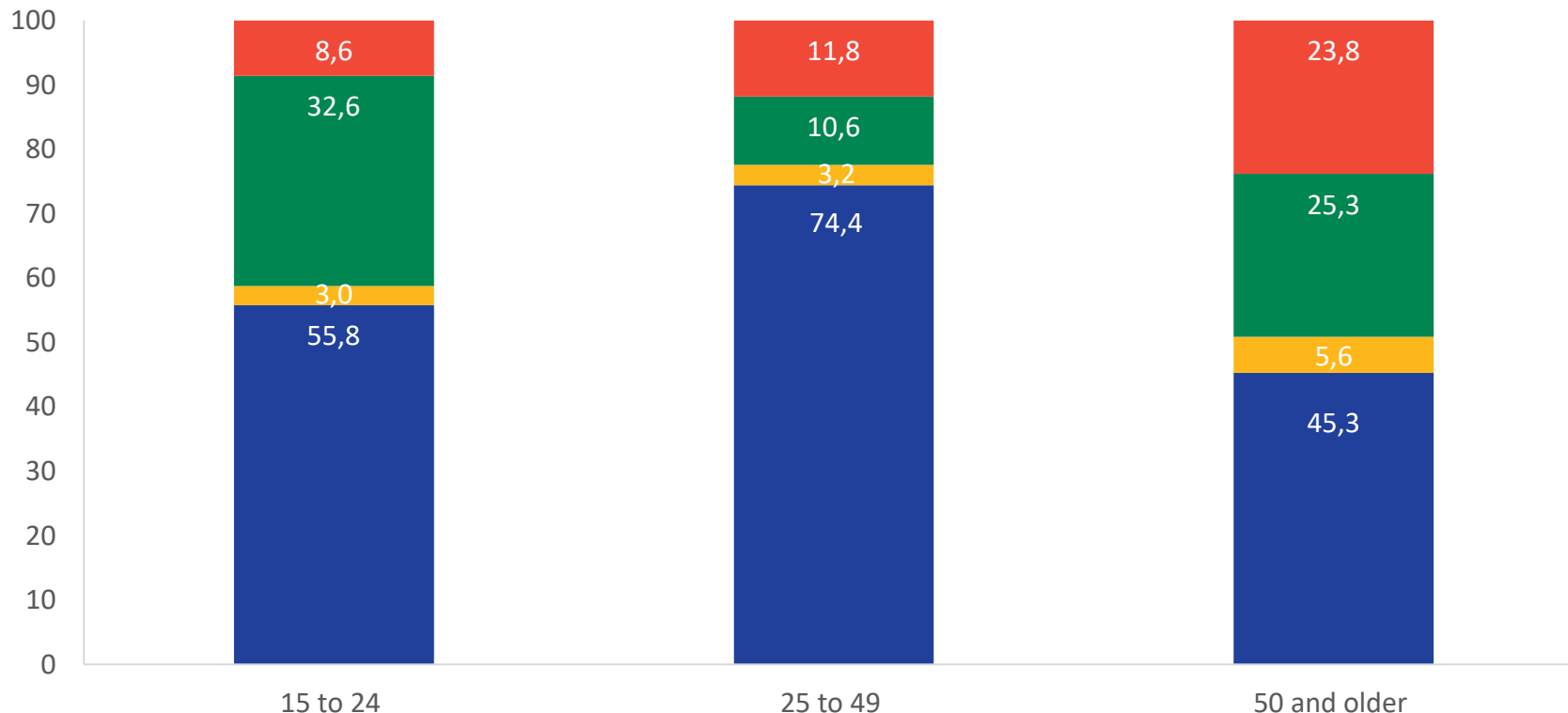
95-95-95 targets for people aged 15+ years living with HIV by sex, South Africa, 2017 and 2022





HIV testing history among individuals aged 15 years and older who tested HIV negative in the survey, by age group, South Africa, 2022

■ Tested in past 3 years & received results
 ■ Tested but did not receive result
 ■ Never tested
 ■ Tested > 3 years ago

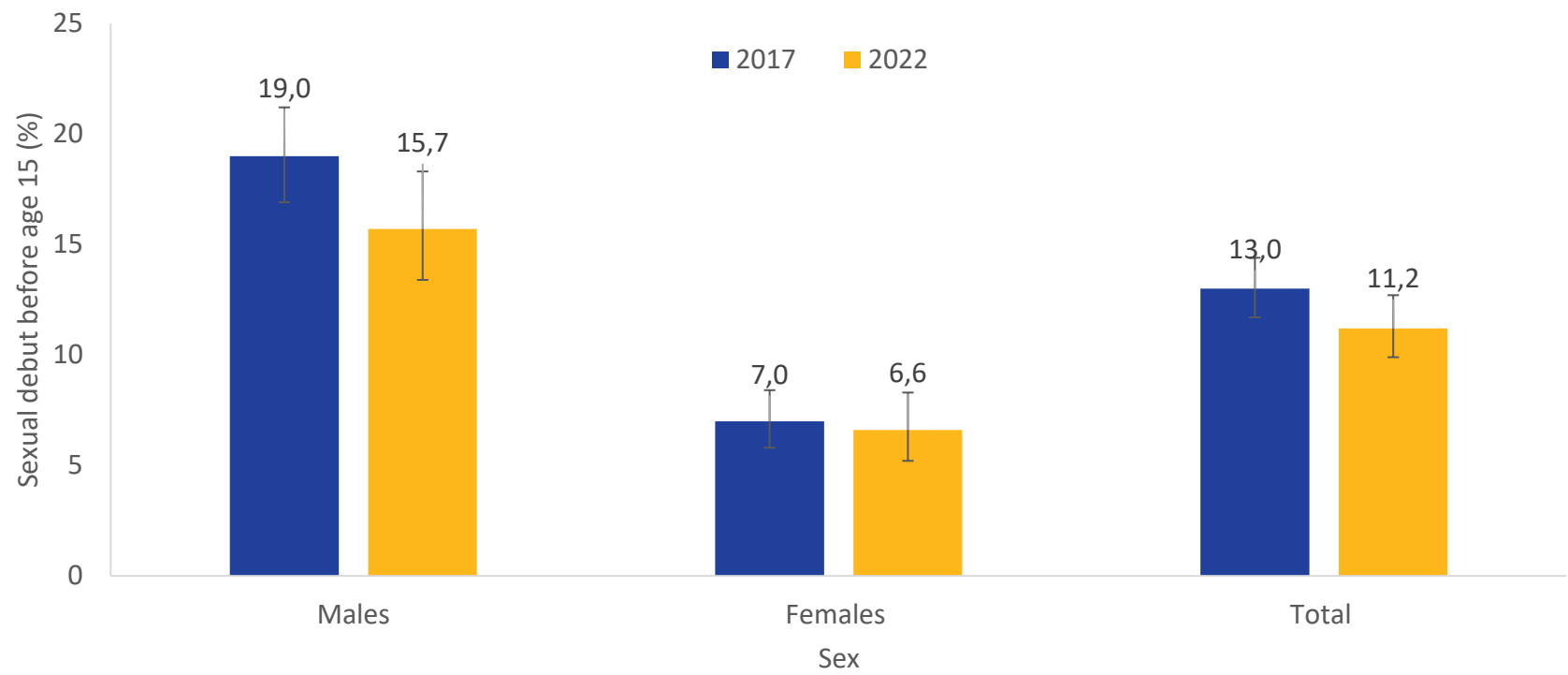




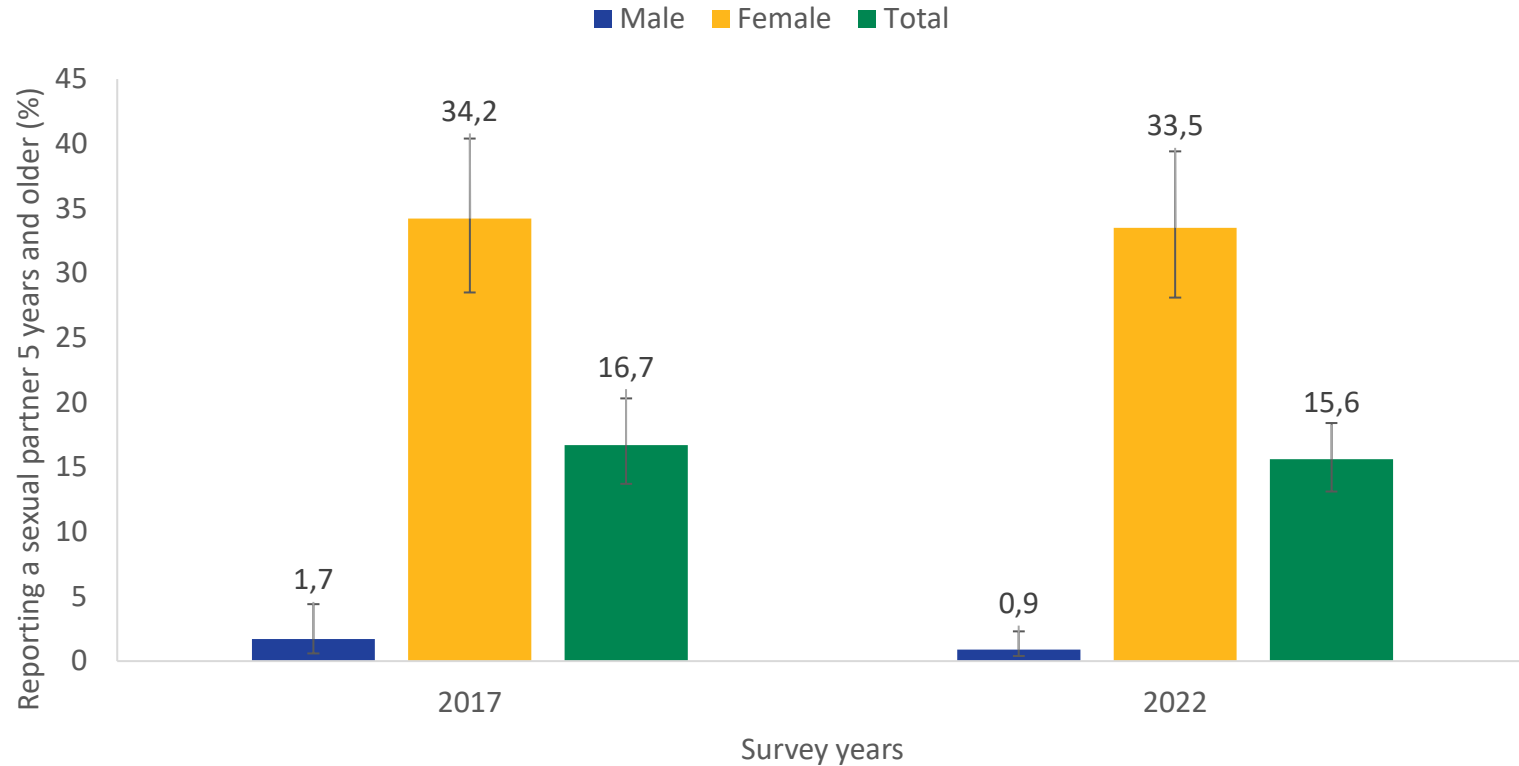
Key Drivers of HIV



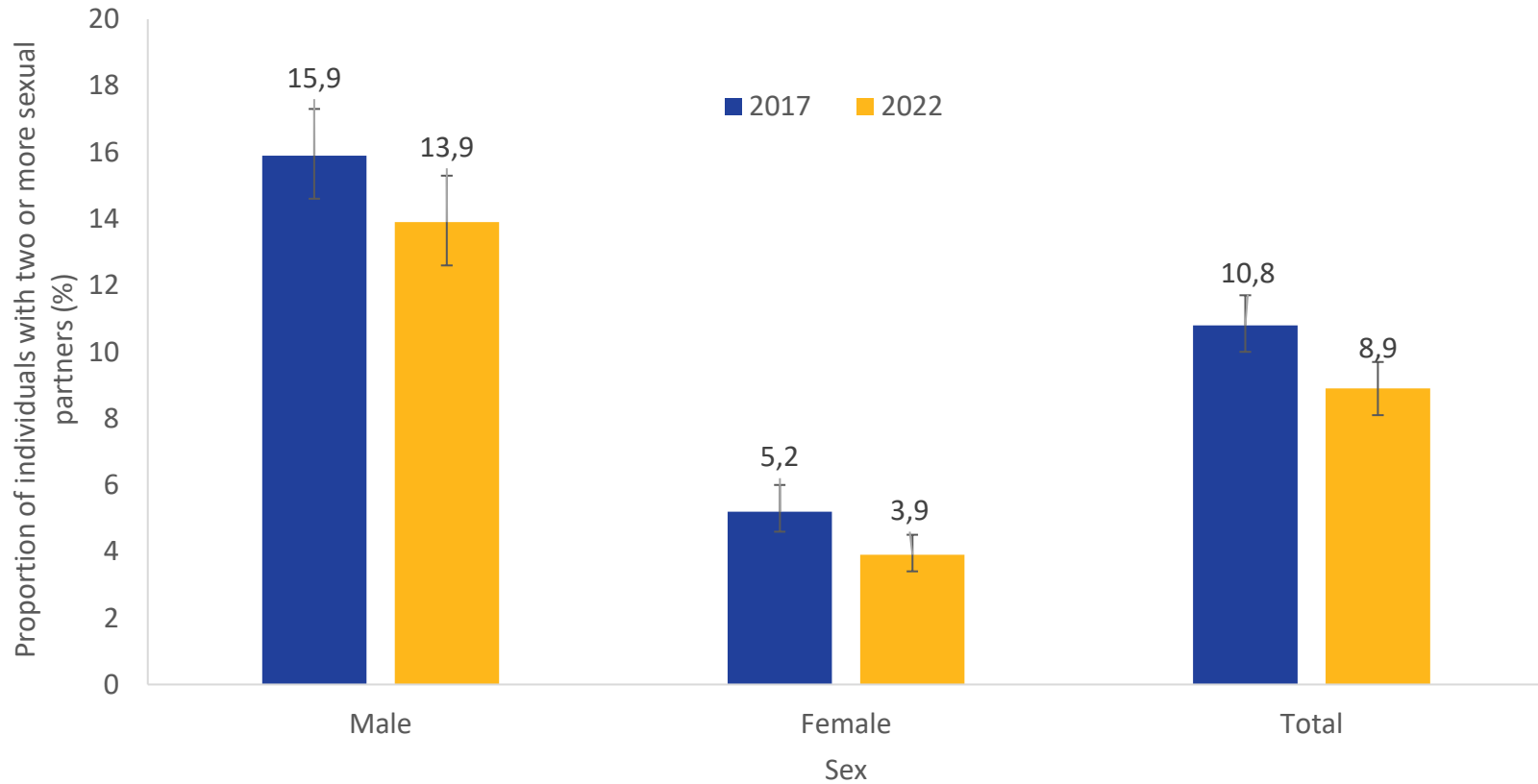
Sexual debut before the age of 15 years among youth aged 15–24 years by sex, South Africa, 2017 and 2022



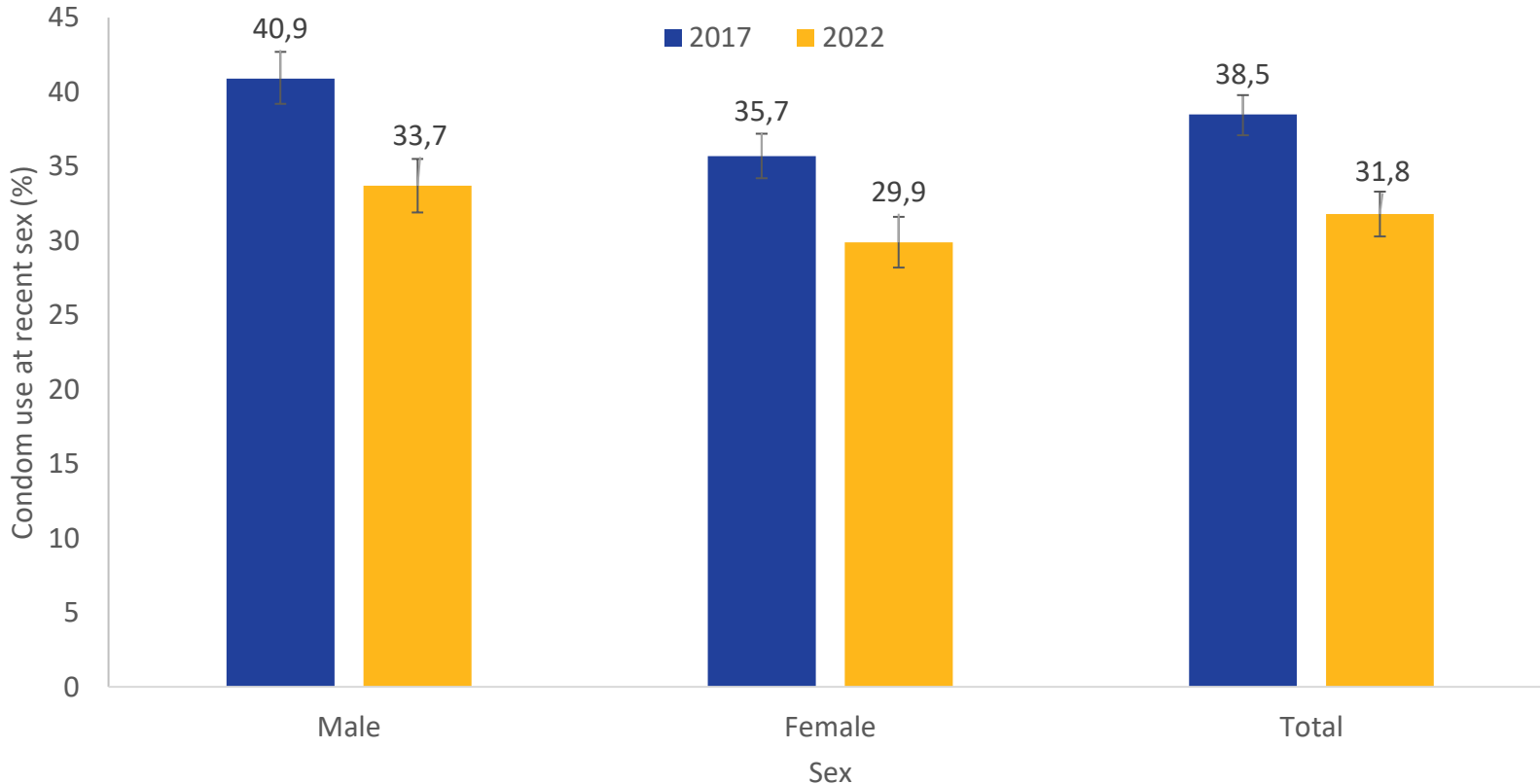
Age-disparate sexual relationships among adolescents aged 15–19 years by sex, South Africa, 2017 and 2022



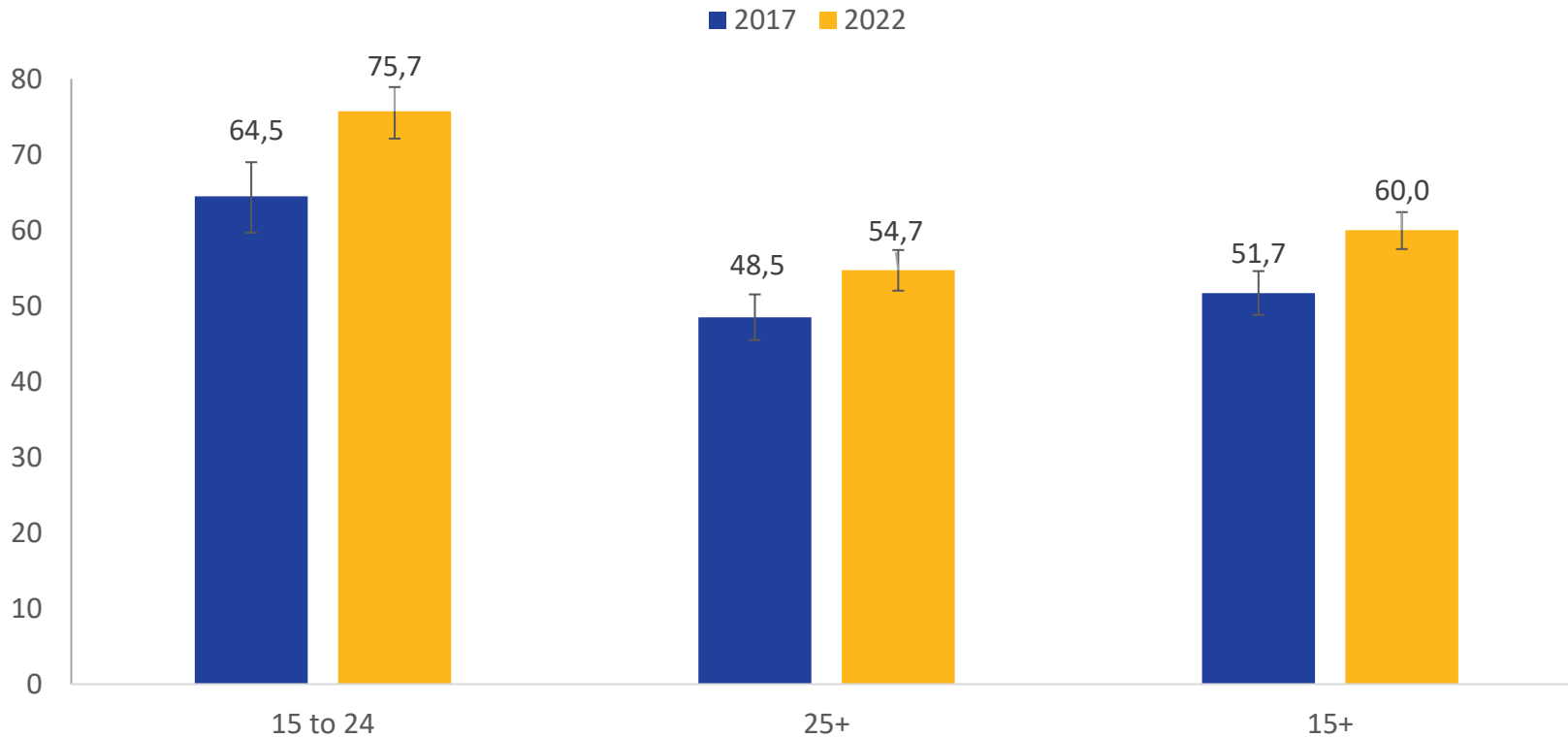
Adults aged 15+ years who had two or more sex partners in the last 12 months, South Africa, 2017 and 2022



Condom use during most recent sexual encounter among people aged 15+ years by sex, South Africa, 2017 and 2022



Medical circumcision reported by circumcised adult males by age, South Africa, 2017 and 2022



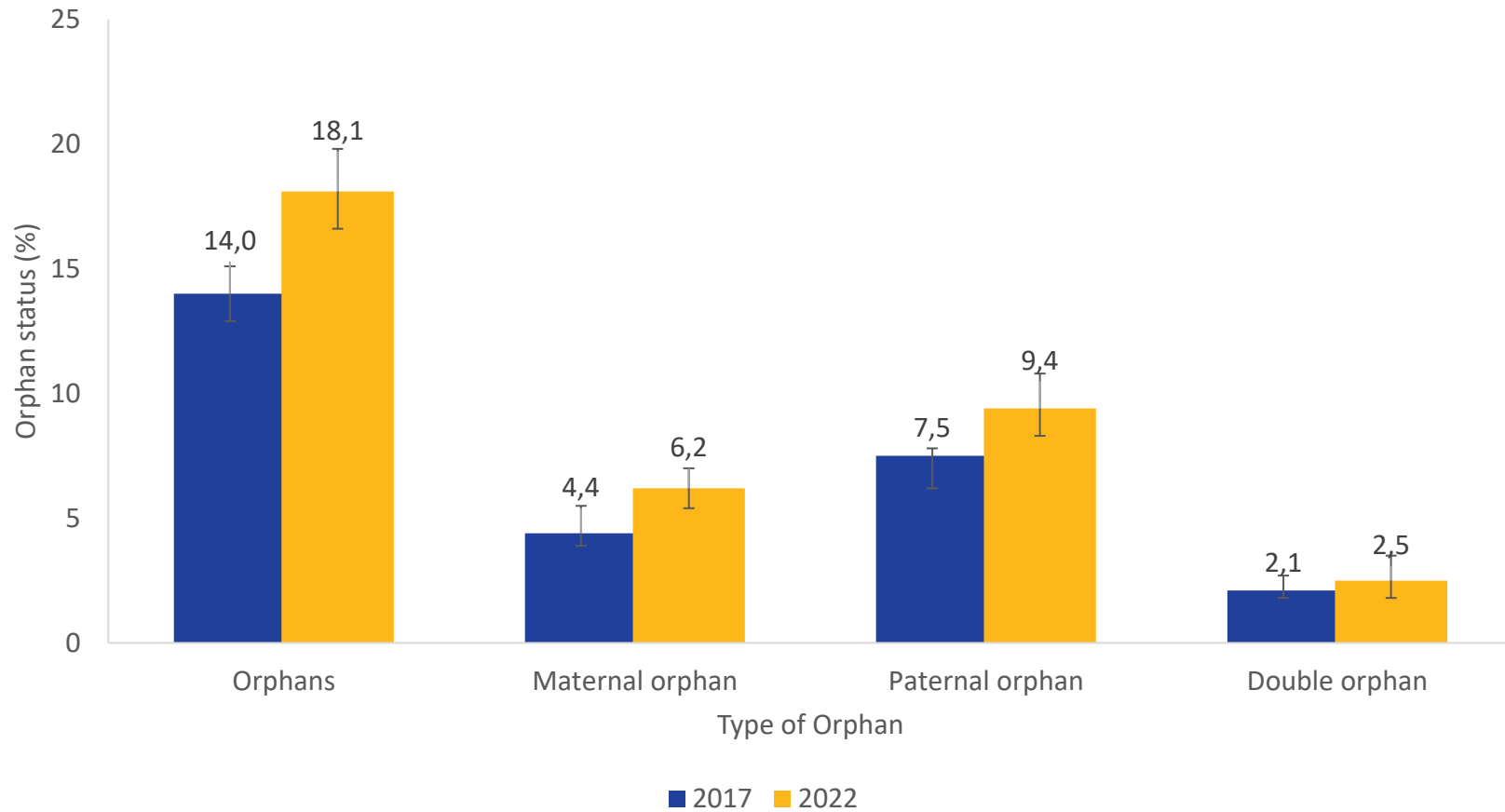
Awareness of pre-exposure prophylaxis (PrEP), among sexually active people aged 15 years and older, South Africa, 2022

- Overall, 34.2% (n=12 360) people had heard of PrEP, of whom 14.0% (n=4 691) had ever taken PrEP.
- 37.0% (n=718) of those who had ever taken PrEP were taking PrEP at the time of the survey.
- About two-thirds (64.2%) (n=3 885) of respondents who had heard of PrEP reported they would consider taking PrEP to prevent HIV infection.

HIV knowledge and stigma, among people aged 15 years and older, South Africa, 2022

- Overall, one quarter (25.7%, n=49 382) of individuals aged 15 years and older had correct knowledge and rejection of major misconceptions about HIV.
- Most people held positive attitudes toward PLHIV.
- The question “Is it a waste of money to train or give a promotion to someone with HIV/AIDS?” had the lowest proportion of positive responses at 66.3% (n=49 553).

Orphanhood status among minors aged 18 years and younger, South Africa, 2017 and 2022



Actions for consideration

- A long-term strategy to care for individuals in an aging HIV epidemic, including those with age-related comorbid conditions.
- Enhancing prevention efforts that target groups disproportionately affected by the key drivers of HIV infection, such as women and young people.
- Continuing intensive program focus on reducing new infections among adolescent girls and young women.

Actions for consideration

- Heightened focus on campaigns such as U=U and other strategies to promote uptake and sustained use of ART, especially among young people and adult men.
- Enhancing accurate public knowledge of HIV, and awareness of effective HIV prevention measures including condom use and PrEP.
- Continued focus on increasing VMMC uptake among males aged 15 years and older.

Conclusions

- Survey results suggest advancements in the fight against the HIV epidemic in South Africa.
- There is the stabilization of HIV prevalence, a reduction in HIV incidence, and an improvement in HIV treatment outcomes, such as increased rates of ART coverage and viral load suppression (VLS) in line with the 95-95-95 targets.
- Despite notable progress being achieved, continued efforts are required to reach the objective of ending HIV as a public health threat by 2030.

Conclusions

- The SABSSM series has emerged as one of the HSRC's leading scientific contributions to South Africa's HIV and AIDS response.
- It continues to provide essential data to:
 - monitor the HIV epidemic
 - monitor the impact of the HIV program in South Africa, and
 - to inform strategies for epidemic control in the National Strategic Plan for HIV, TB and STIs (NSP).

Consortium and partners

- U.S. Centers for Disease Control and Prevention (CDC)
- South African Medical Research Council (SAMRC)
- National Institute for Communicable Diseases (NICD)
- University of Cape Town (UCT)
- National Department of Health (NDoH)
- South African National AIDS Council (SANAC)
- United Nations Children's Fund (UNICEF)
- United States Agency for International Development (USAID)
- Joint United Nations Programme on HIV/AIDS (UNAIDS)

Funding source

President's Emergency Plan for AIDS Relief (PEPFAR) through the Centers for Disease Control and Prevention (CDC).

List of contributors

Human Sciences Research Council

Name	Role
Prof Khangelani Zuma	Overall Principal Investigator
Prof Leickness Simbayi	Principal Investigator
Dr Nompumelelo Zungu	Principal Investigator
Prof Sizulu Moyo	Principal Investigator
Dr Edmore Marinda	Co-Principal Investigator
Dr Sean Jooste	Co-Principal Investigator
Dr Shandir Ramlagan	Project Director
Dr Musawenkosi Mabaso	Project Director
Dr Lehlogonolo Makola	Overall Project Manager
Mr Johan Van Zyl	Project Manager: Quality Control
Dr Vuyelwa Mehlomakulu	Project Manager: HIV Testing Services
Dr Rindidzani Magobo	Project Manager: Laboratory Testing
Ms Yolande Shean	Communications Manager
Mr Phaleng Maribe	Data Manager
Ms Goitseone Maseko	Statistician
Ms Ronel Sewpaul	Statistician
Dr Inbarani Naidoo	Co-Investigator
Dr Jeremiah Chikovore	Co-Investigator
Mr Adlai Davids	Co-Investigator
Ms Mafanato Maluleke	Co-Investigator/Coordinator
Mr Lesiba Ofentse Molopa	Co-Investigator/Coordinator

U.S. Centers for Disease Control and Prevention (CDC)

Name	Role
Dr Rachael Joseph	Co-Investigator
Dr Pelagia Murangandi	Co-investigator
Ms Nuha Naqvi	Co-investigator

South African Medical Research Council (SAMRC)

Name	Role
Dr Tarylee Reddy	Statistician
Dr Nonhlanhla Yende-Zuma	Statistician
Ms Mikateko Mazinu	Statistician
Ms Yusentha Balakrishna	Statistician

National Institute for Communicable Diseases (NICD)

Name	Role
Prof. Adrian Puren	Co-Investigator
Ms. Beverly Singh	Co-Investigator
Ms Ewalde Cutler	Co-Investigator
Ms Zinhle Brukwe	Co-Investigator

University of Cape Town

Prof Lubbe Wiesner	Co-Investigator
Ms Sandra Castel	Co-Investigator

20 
Celebrating 20 years
of research towards a healthier nation

THANK YOU



Questionnaires

Household Questionnaire



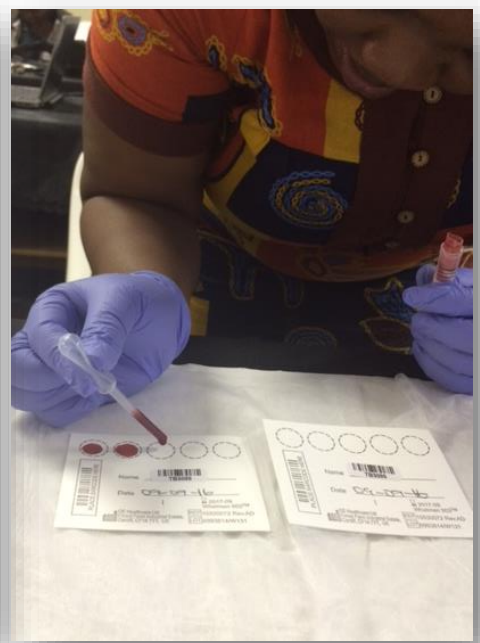
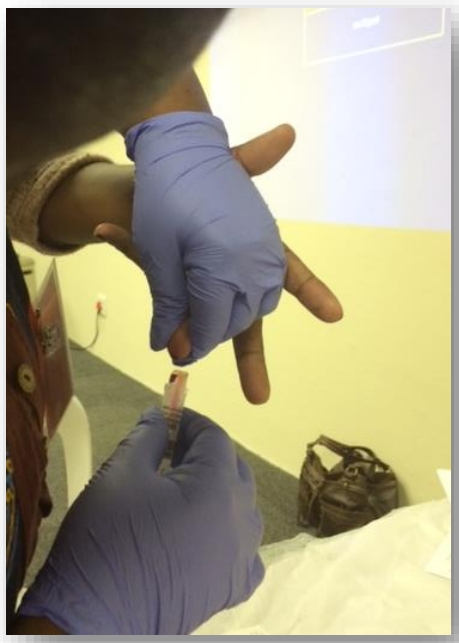
- Used to record a household listing of members and other household-level information

Individual questionnaires



- 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

Specimen collection



Dried blood spot (DBS) specimens collected by

- finger-prick
- heel-prick in infants < 24 months

Viral load suppression (15 + years) by sex and age, South Africa, 2017 and 2022

Variables	2017		2022	
	n	% [95% CI]	n	% [95% CI]
Total	5 617	62.2 [59.5–64.8]	7 050	81.2 78.5–83.6
Sex				
Male	1 468	54.1 [49.1–59.0]	1 931	77.6 73.9–80.9
Female	4 149	66.9 [64.3–69.5]	5 117	82.9 79.8–85.7
Age group (years)				
15–24	736	47.7 [40.9–54.6]	614	70.1 63.3–76.1
25–49	3 874	61.7 [58.3–64.9]	4 621	80.5 76.6–83.9
15–49	4 610	60.0 [57.2–62.8]	5 235	79.5 75.9–82.7
15+	5 617	62.2 [59.5–64.8]	7 038	81.2 78.5–83.6

95-95-95 targets definitions

**First
95**



Diagnosed/know status if tested positive in the survey and



Had self-reported being positive or



Tested positive for ART in the survey or



Self-reported using ART

**Second
95**



On ART



Tested positive for ARVs in the survey



Self-reported using ART

**Third
95**



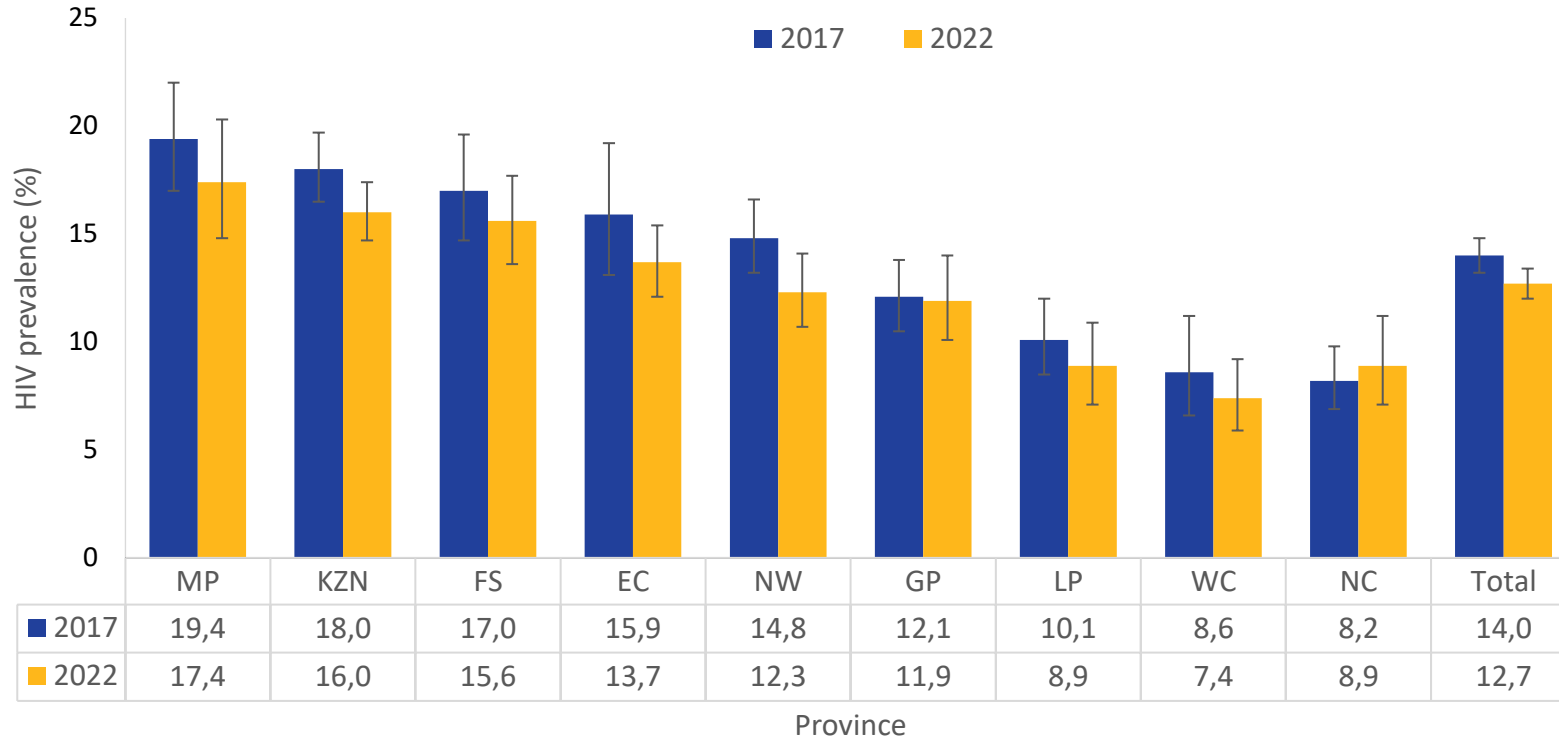
Virally suppressed

Viral load <1000 copies/ml

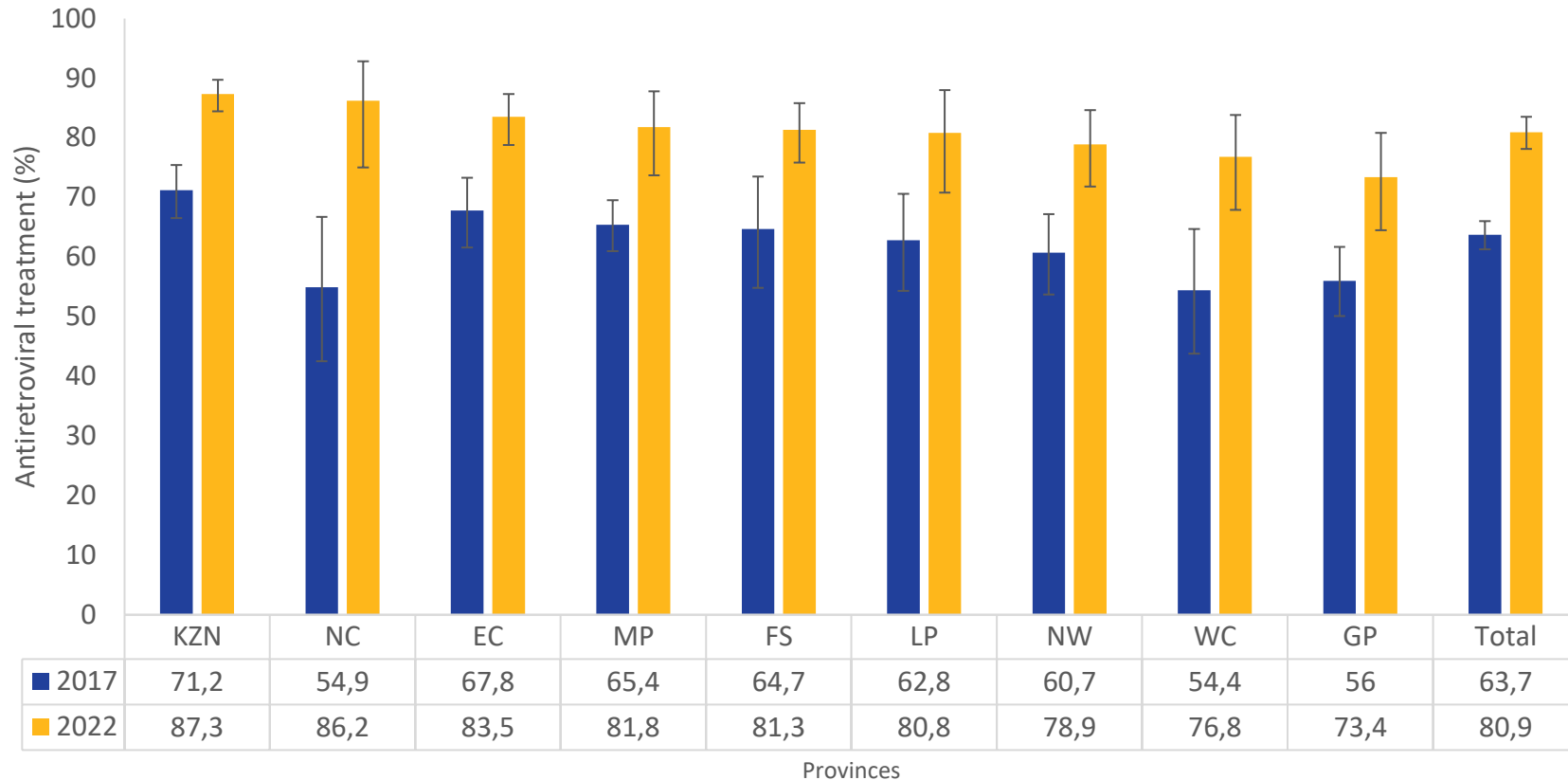
Perceived risk of HIV infection among youth and adults aged 15 years and older by sex, South Africa, 2022

Sex	Low perceived risk			High perceived risk		
	n	%	95% CI	n	%	95% CI
Total	35 634	85.6	84.4–86.7	6 013	14.4	13.3–15.6
Male	15 389	85.9	84.4–87.2	2 755	14.1	12.8–15.6
Female	20 245	85.3	84.0–86.5	3 258	14.7	13.5–16.0

Overall HIV prevalence (0+ years) by province, South Africa, 2017 and 2022



Antiretroviral treatment (0+ years) by province, South Africa, 2017 and 2022



Viral load suppression (0 + years) by province, South Africa, 2017 and 2022

