



Celebrating 20 years
of research towards a healthier nation

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

20 YEARS OF STRATEGIC HIV AND PUBLIC HEALTH DATA

Key findings for Gauteng 29 August 2024



science & innovation
Department:
Science and Innovation
REPUBLIC OF SOUTH AFRICA



OVERVIEW OF PRESENTATION 2

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



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PEPFAR
U.S. President's Emergency Plan for AIDS Relief



HSRC
Human Sciences
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CDC
CENTERS FOR DISEASE
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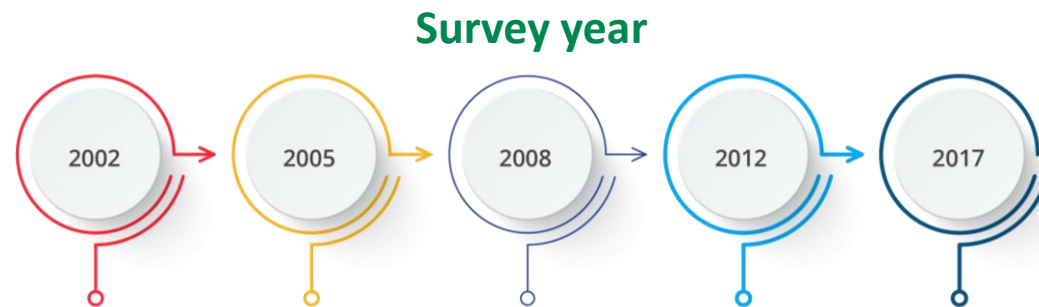
HISTORY OF THE SURVEY



- Expanded scope
- Larger sample size
- Increased biomarkers
- Take all approach



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



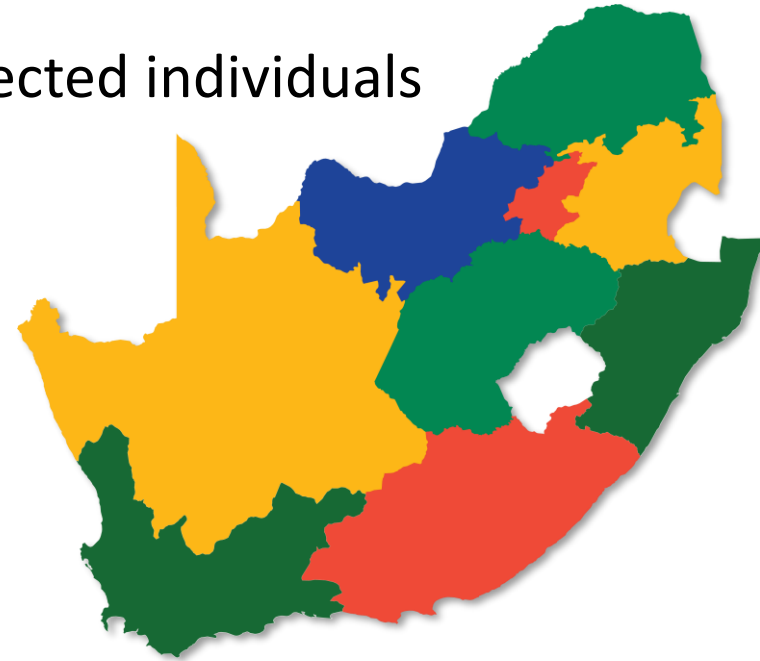
MAIN OBJECTIVES

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
- All districts were selected in GP



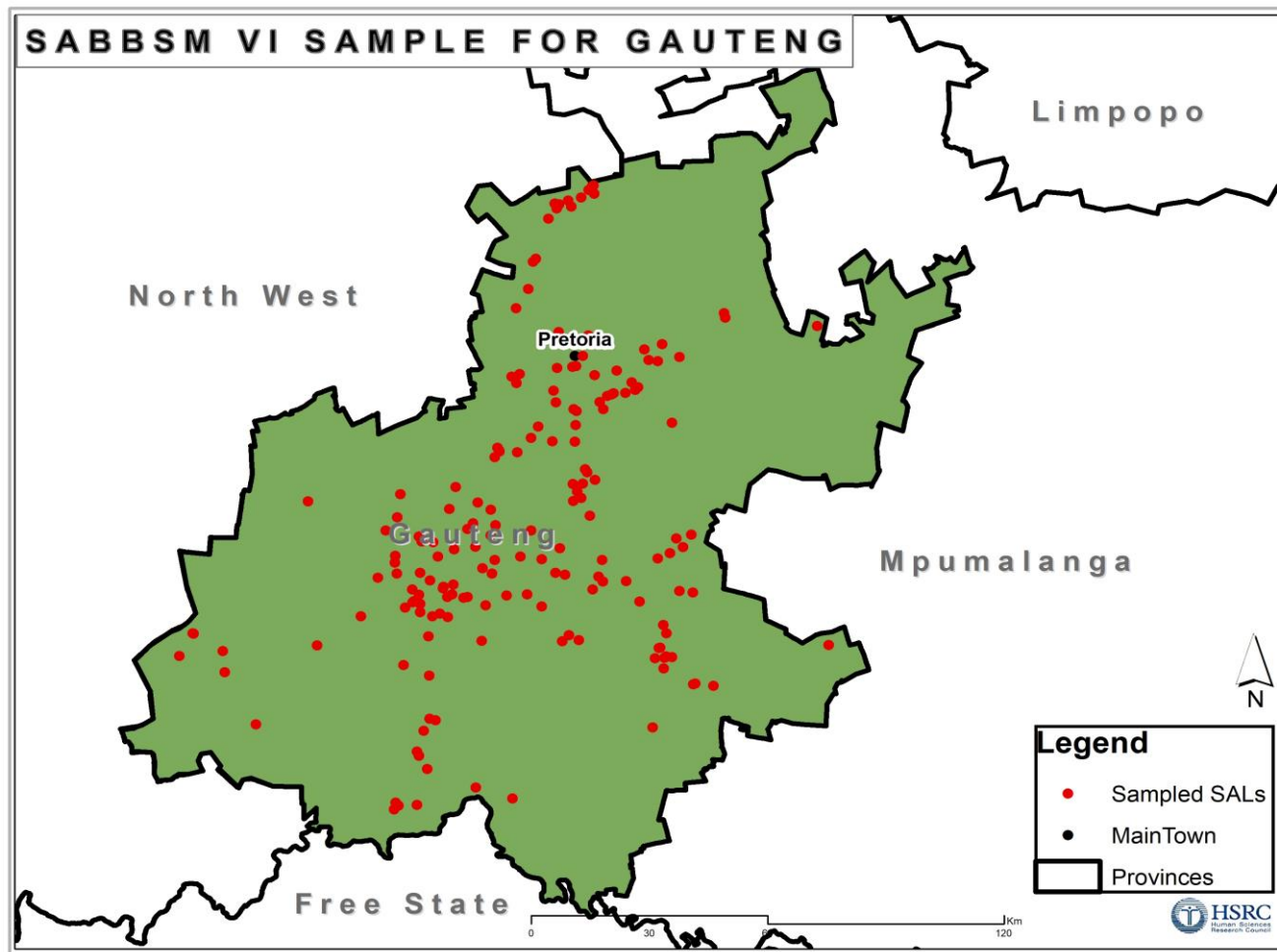
Study design and population

- A cross-sectional, population-based household survey, using multi-stage stratified cluster random sampling
- The study 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 **collected** from January 2022 to April 2023
- Expected sample size for Gauteng: 11 892

SABSSM VI SAMPLE FOR GAUTENG



QUESTIONNAIRES

Household Questionnaire



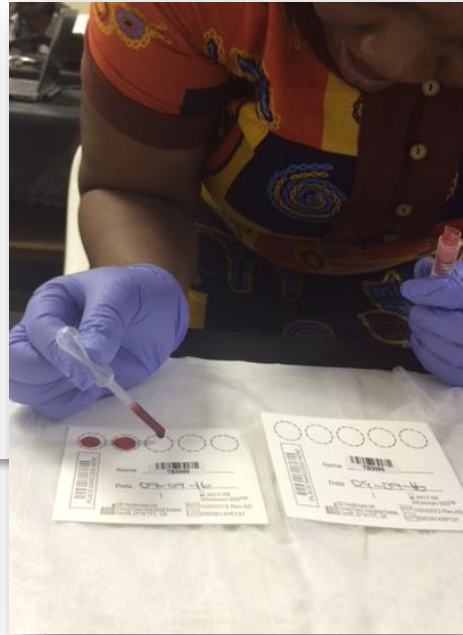
- This questionnaire was used to record a household listing of members and other household-level information

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

SPECIMEN TESTING



Dried Blood
Spot

HIV Ab testing

Two 4th Generation EIA plus
confirmatory testing
Nucleic Acid Amplification
test <24 months

HIV
Pos

*HIV Incidence
(age ≥ 2 years)
LAG assay/ RITA plus

ARVs
HPLC coupled with
Tandem Mass
Spectrometry

Viral Load
HIV-1 RNA on
Abbott m2000 HIV
Real-Time System

*HIV
Drug Resistance
(VL >1000cl/mL)
Next-generation
sequencing

* Not reported in this presentation



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RESULTS – Gauteng



RESPONSE RATES

- **3 190** VPs* were approached, where **3 027**, **94.9%** were valid
- Of the valid **3 027** households, **70.0%** completed a household interview
- Of the eligible **6 034** individuals, aged **0+** years**, **92.2%** were interviewed, and **60.0%** provided blood for HIV and additional testing
- Of the **1 881** eligible **males**, aged **15+ years**, **89.3%** were interviewed, and **60.2%** provided blood for HIV and additional testing
- Of the **2 479** eligible **females**, aged **15+ years**, **92.8%** were interviewed, and **65.6%** provided blood for HIV and additional testing

*VP- A visiting point is a physical address or a dwelling where a household or a group of households can be found. It can be a house, shack, vacant stand or a hostel

** Parents and guardians were interviewed on behalf of children <12 years

HIV PREVALENCE BY PROVINCE, SOUTH AFRICA, 2017 AND 2022



HIV Prevalence (%)

2017 National: 14.0



Mpumalanga	KwaZulu-Natal	Free State	Eastern Cape	North West	Gauteng	Northern Cape	Limpopo	Western Cape
19.4	18.0	17.0	15.9	14.8	12.1	8.2	10.1	8.6

2022 National: 12.7



Mpumalanga	KwaZulu-Natal	Free State	Eastern Cape	North West	Gauteng	Northern Cape	Limpopo	Western Cape
17.4	16.0	15.6	13.7	12.3	11.9	8.9	8.9	7.4

OVERALL HIV PREVALENCE, GAUTENG, 2017 AND 2022



The overall provincial estimate for HIV prevalence for all ages in **2022** was

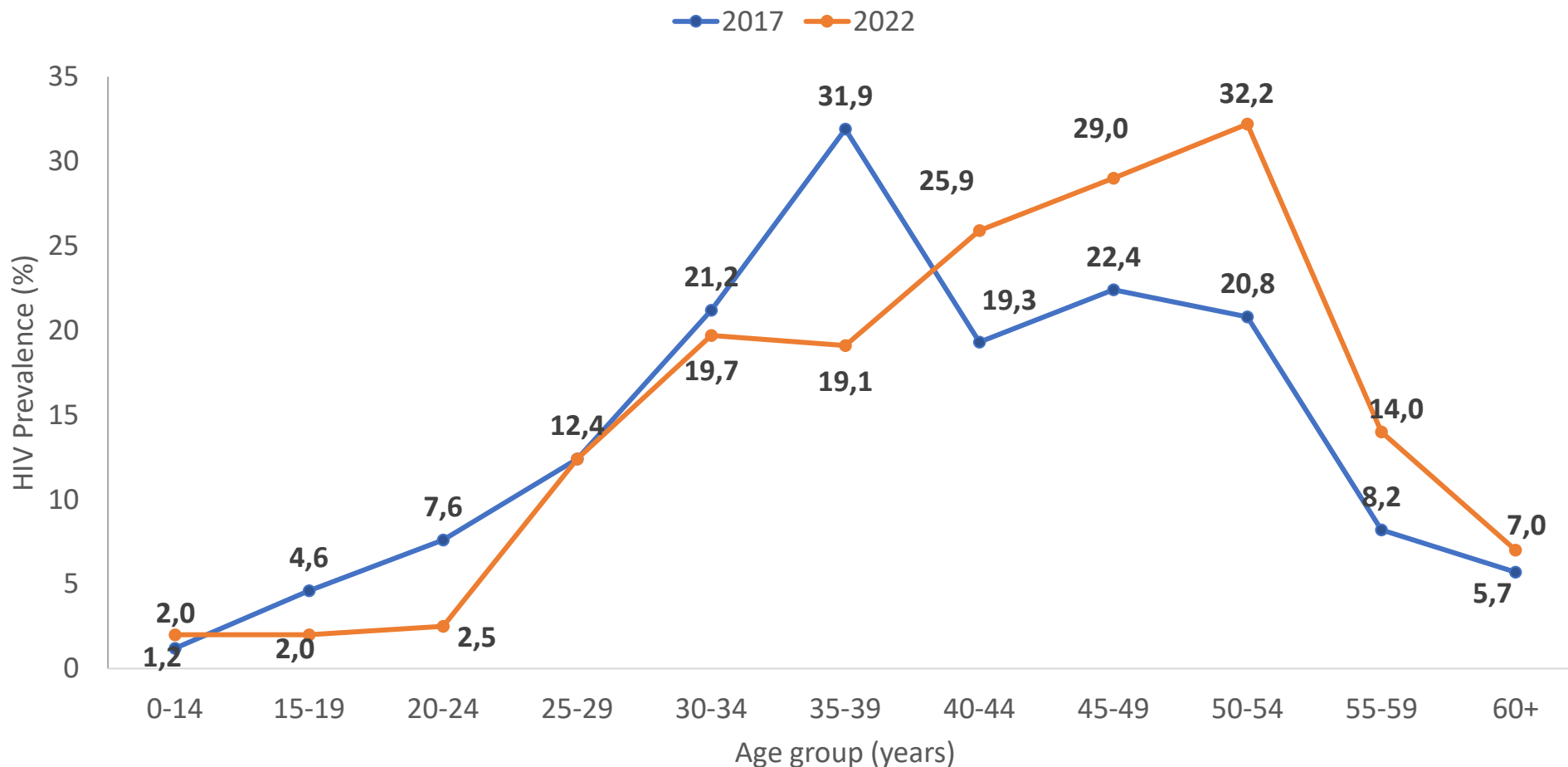
11.9%

translating to **1 720 000** people living with HIV.

The HIV prevalence was **12.1%** in **2017**

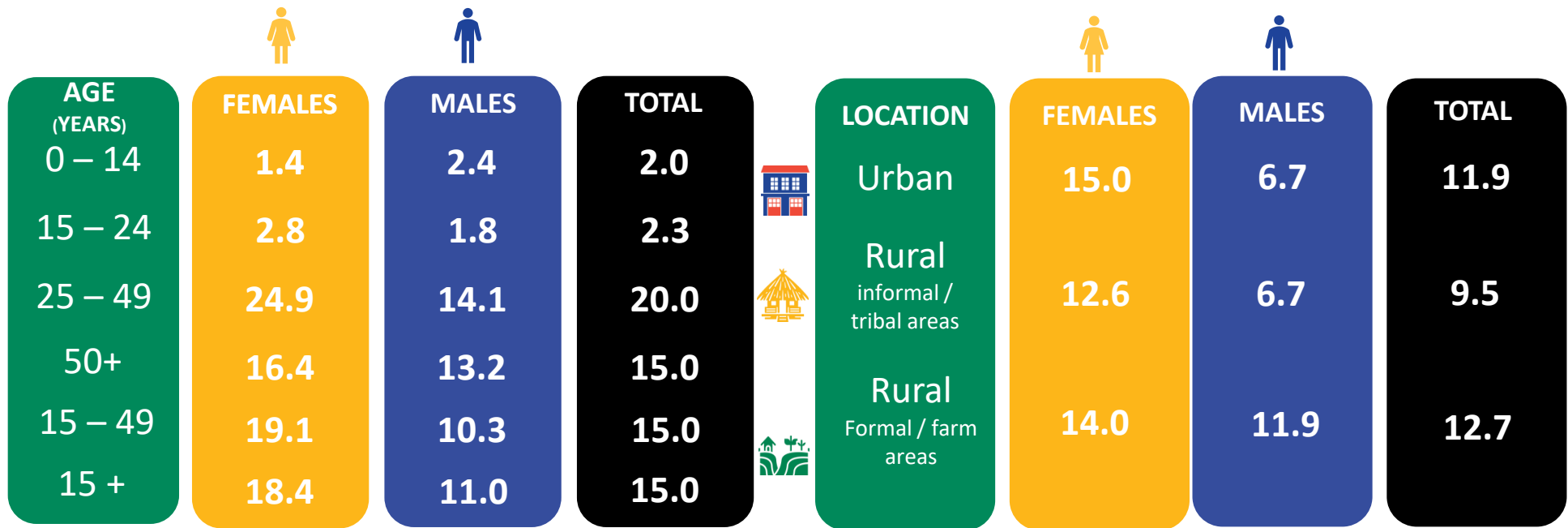
translating to **1 780 000** people living with HIV.

OVERALL HIV PREVALENCE BY AGE GROUP, GAUTENG, 2017 AND 2022

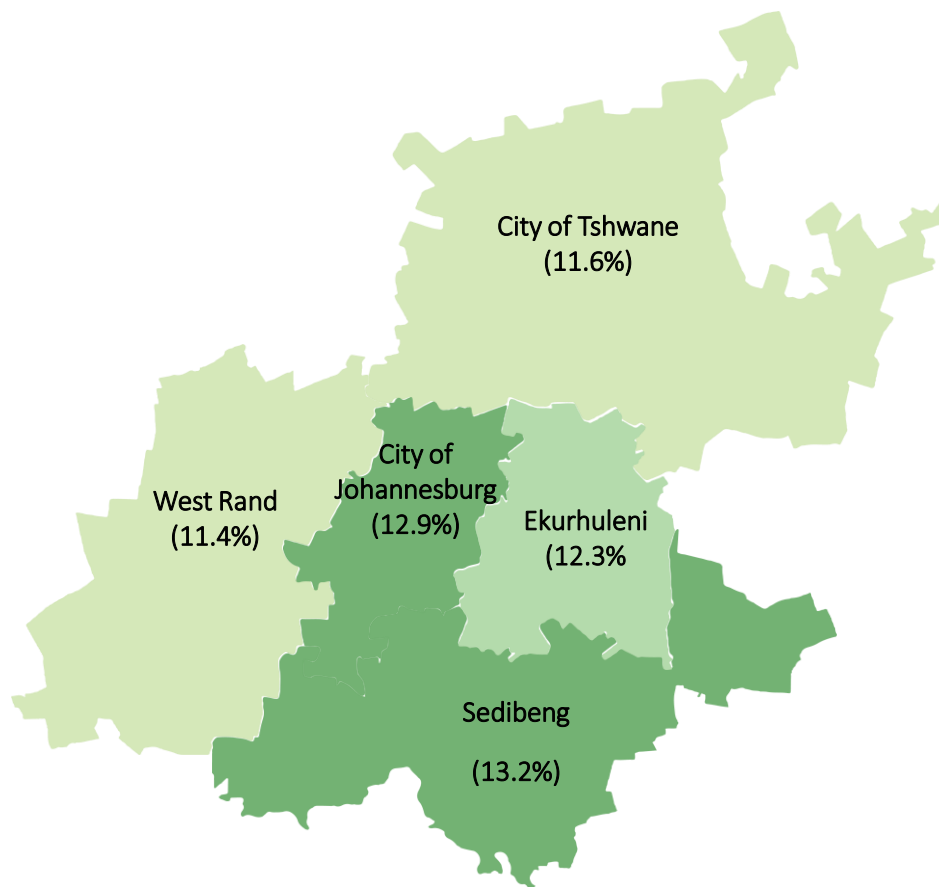


OVERALL HIV PREVALENCE, BY SEX FOR SELECTED DEMOGRAPHICS, GAUTENG, 2022

Total Females: 15.0% **Total Males: 8.6%** **Total Both Sexes: 11.9%**

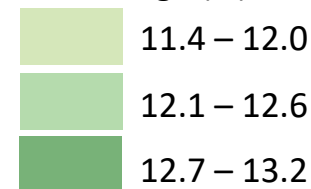


OVERALL HIV PREVALENCE, BY SELECTED DISTRICTS, GAUTENG, 2022



HIV prevalence by District (2022)

Percentage (%)



ANTIRETROVIRAL TREATMENT COVERAGE BY PROVINCE, SOUTH AFRICA, 2017 AND 2022

ART coverage (%)

2017 National: 63.7



KwaZulu-Natal	Northern Cape	Eastern Cape	Mpumalanga	Free State	Limpopo	North West	Western Cape	Gauteng
71.2	54.9	67.8	65.4	64.7	62.8	60.7	54.4	56.0

2022 National: 80.9

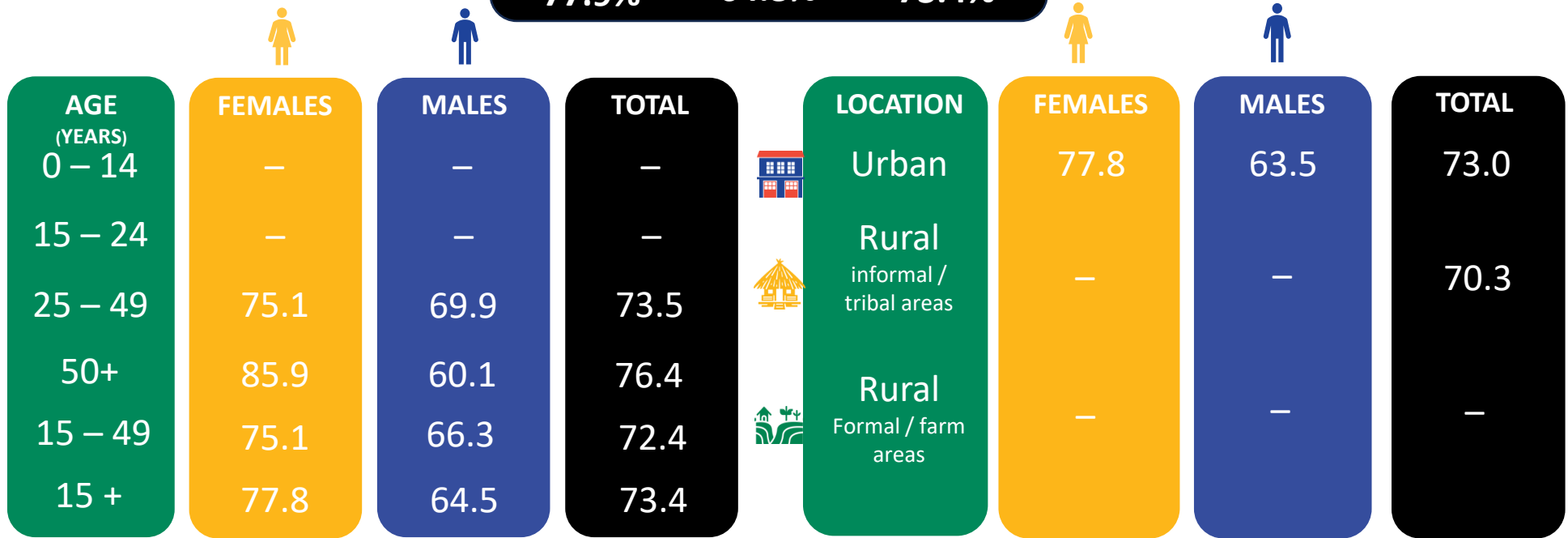


KwaZulu-Natal	Northern Cape	Eastern Cape	Mpumalanga	Free State	Limpopo	North West	Western Cape	Gauteng
87.3	86.2	83.5	81.8	81.3	80.8	78.9	76.8	73.4

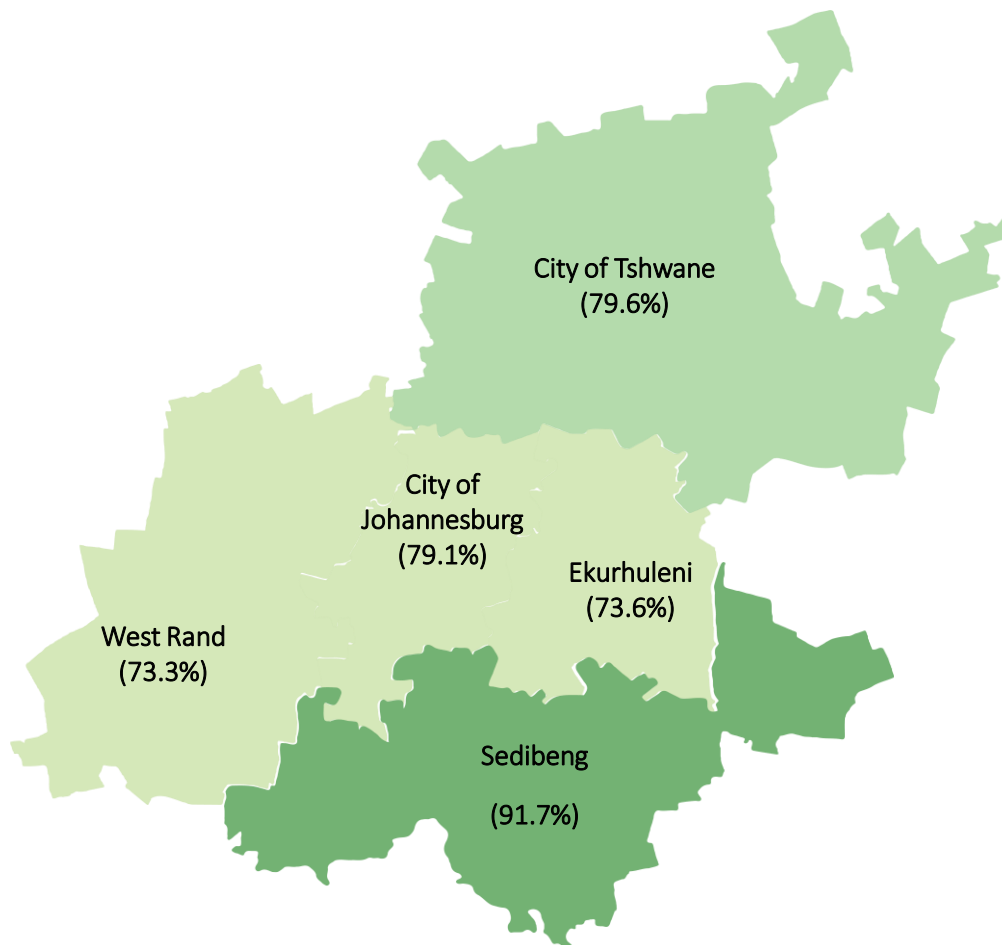
OVERALL ANTIRETROVIRAL TREATMENT, BY SEX FOR SELECTED DEMOGRAPHICS, GAUTENG, 2022

ART coverage (%)

Total Females: 77.9% **Total Males: 64.8%** **Total both Sexes: 73.4%**

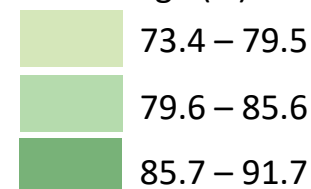


OVERALL ANTIRETROVIRAL TREATMENT, BY SELECTED DISTRICTS, GAUTENG, 2022



**Persons living with HIV on
 ART by District (2022)**

Percentage (%)



VIRAL LOAD SUPPRESSION BY PROVINCE, SOUTH AFRICA, 2017 AND 2022

Viral load suppression (%)

2017 National: 61.6



KwaZulu-Natal	Mpumalanga	Free State	Gauteng	Eastern Cape	Northern Cape	Western Cape	Limpopo	North West
67.8	60.0	66.2	55.3	66.3	52.2	54.6	58.7	60.8

2022 National: 81.4

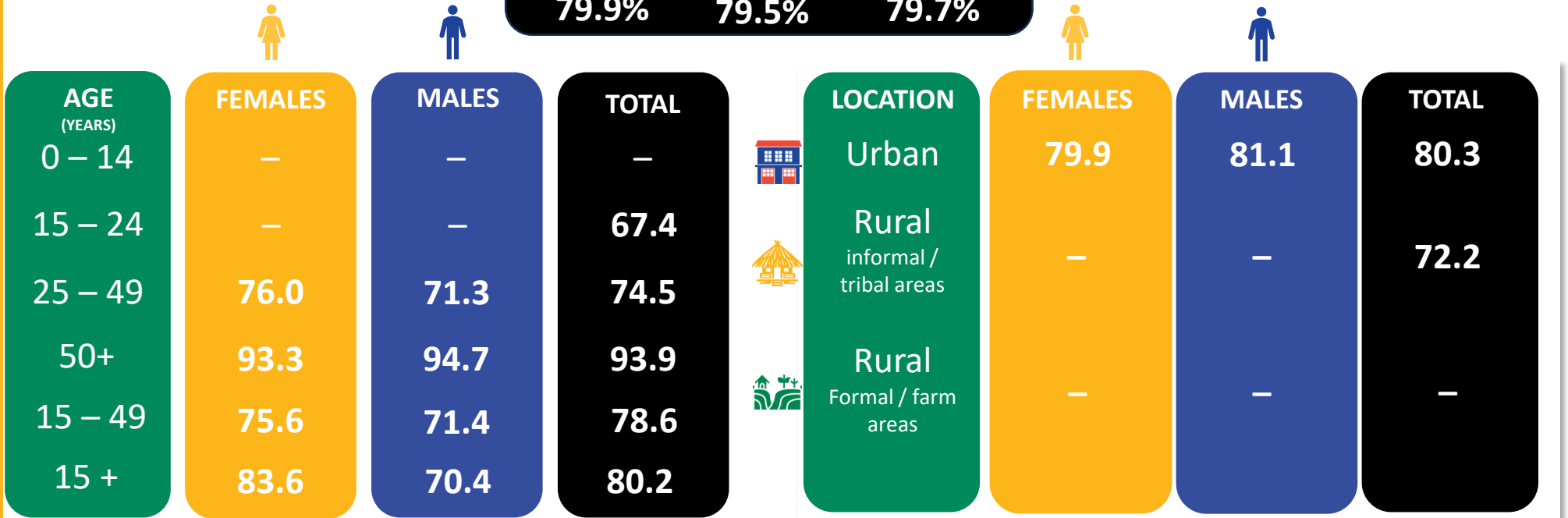


KwaZulu-Natal	Mpumalanga	Free State	Gauteng	Eastern Cape	Northern Cape	Western Cape	Limpopo	North West
86.8	82.5	81.1	79.7	79.3	78.6	78.4	77.0	77.0

OVERALL VIRAL LOAD SUPPRESSION*, BY SEX FOR SELECTED DEMOGRAPHICS, GAUTENG, 2022

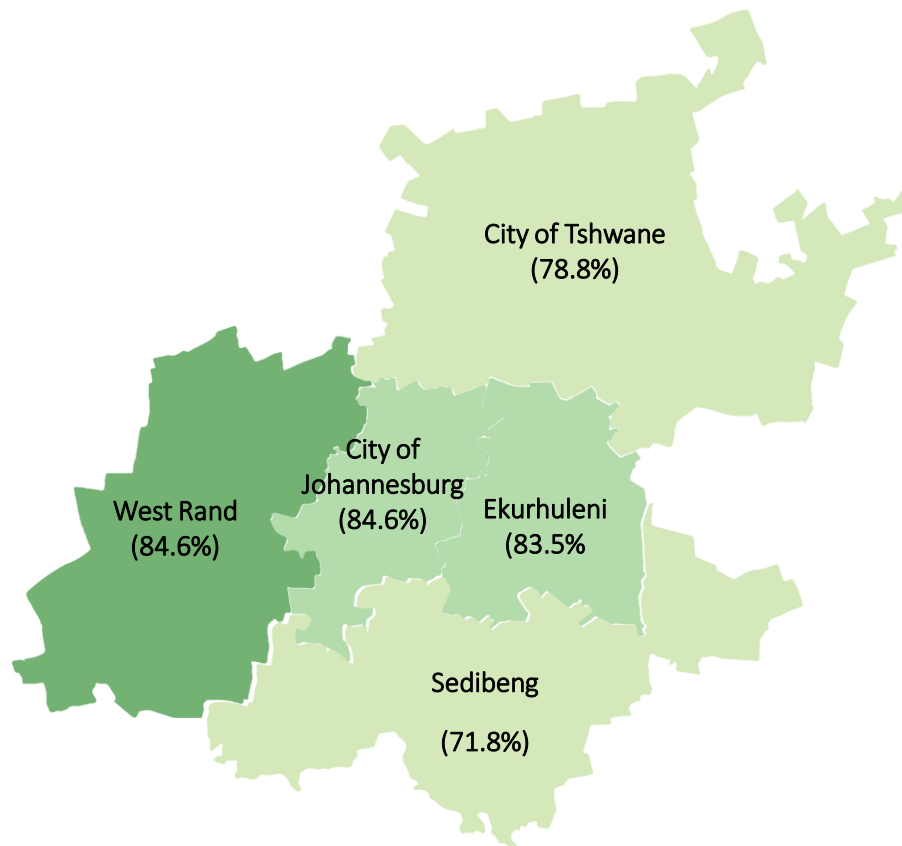
Viral load suppression (%)

Total
Females: 79.9%
Total
Males: 79.5%
Total both
Sexes: 79.7%



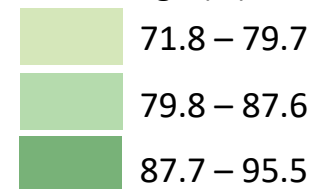
*Viral load <1,000 copies/ml

OVERALL VIRAL LOAD SUPPRESSION BY SELECTED DISTRICTS, GAUTENG, 2022



Viral Load Suppression by District (2022)

Percentage (%)



95-95-95 TARGETS: DEFINITIONS



First 95

Diagnosed/knows status
if tested positive in the
survey and



Had self-reported
being positive or



Tested positive for ART
in the study or



Self-reported using
ART



Second 95

On ART*



Tested positive for
ARVs in the study



Self-reported using
ART

*among those who know HIV status



Third 95

Virally
suppressed[‡]



Viral load <1000
copies/ml

[‡] among those on ART

95-95-95 TARGETS FOR PEOPLE AGED 15+ YEARS LIVING WITH HIV, BY SELECTED DEMOGRAPHICS, GAUTENG, 2022

Overall, GP

(Ages 15+ Years)

85.3%

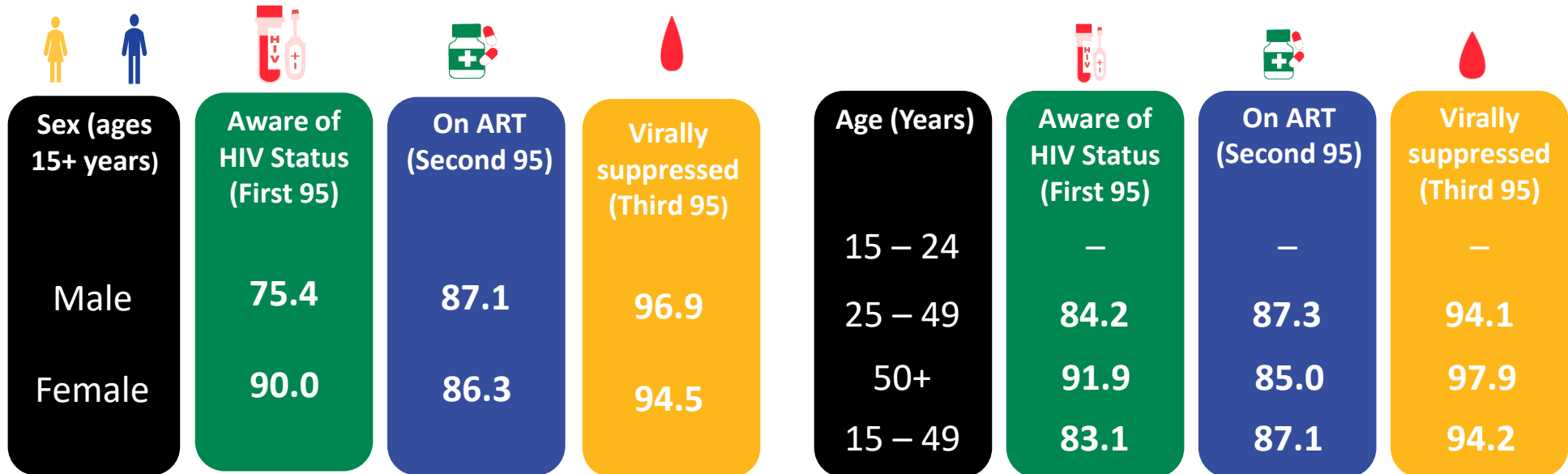
Aware of HIV Status (First 95)

86.5%

On ART (Second 95)

95.2%

Virally suppressed (Third 95)



95-95-95 TARGETS FOR PEOPLE AGED 15+ YEARS LIVING WITH HIV, BY DISTRICT, GAUTENG, 2022

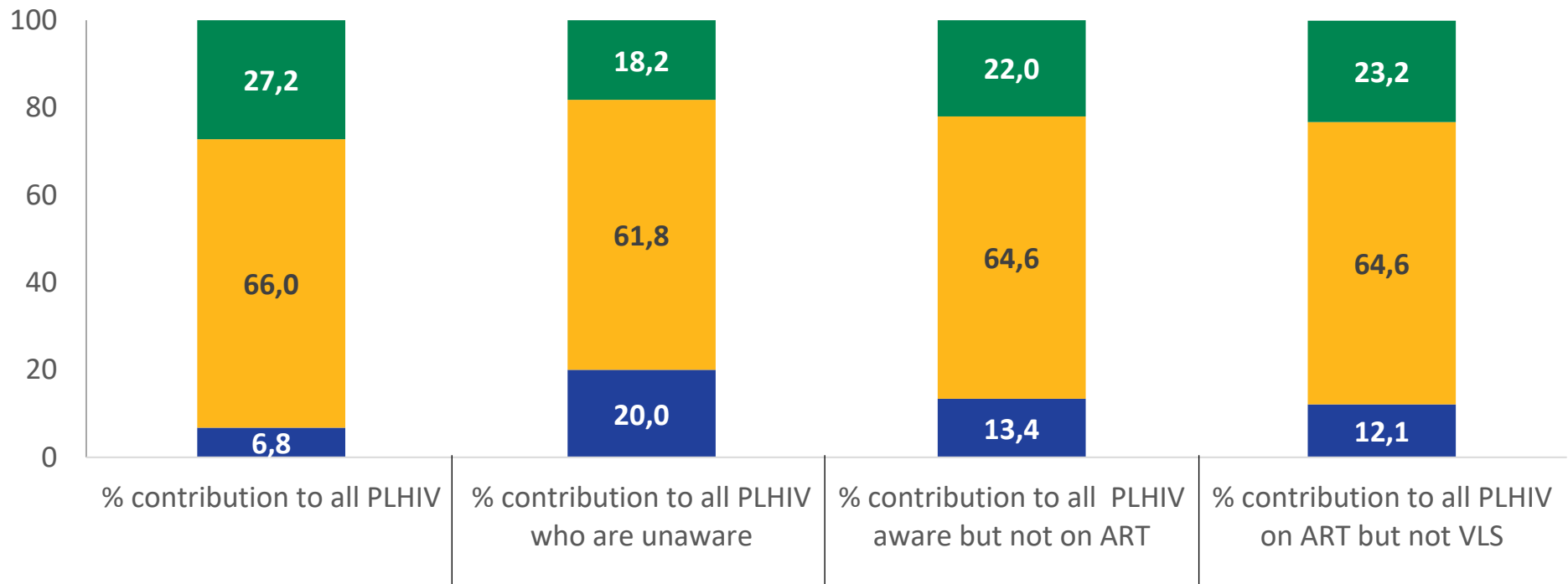
Overall, GP (Ages 15+ Years) **93.7%** **Aware of HIV Status (First 95)** **88.3%** **On ART (Second 95)** **90.3%** **Virally suppressed (Third 95)**

Districts	Awareness of HIV Status (first 95)	On ART (second 95)	Virally suppressed (third 95)
City of Johannesburg	86.6	94.9	96.4
City of Tshwane	86.2	88.9	92.5
Ekurhuleni	80.8	91.7	95.1
Sedibeng	97.0	94.4	89.7
West Rand	—	—	—

GAPS IN 95-95-95 TARGETS FOR PEOPLE AGED 15+ YEARS LIVING WITH HIV, BY AGE GROUPS, GAUTENG, 2022

Overall

■ 15 to 24 years ■ 25 to 49 years ■ 50 years and older

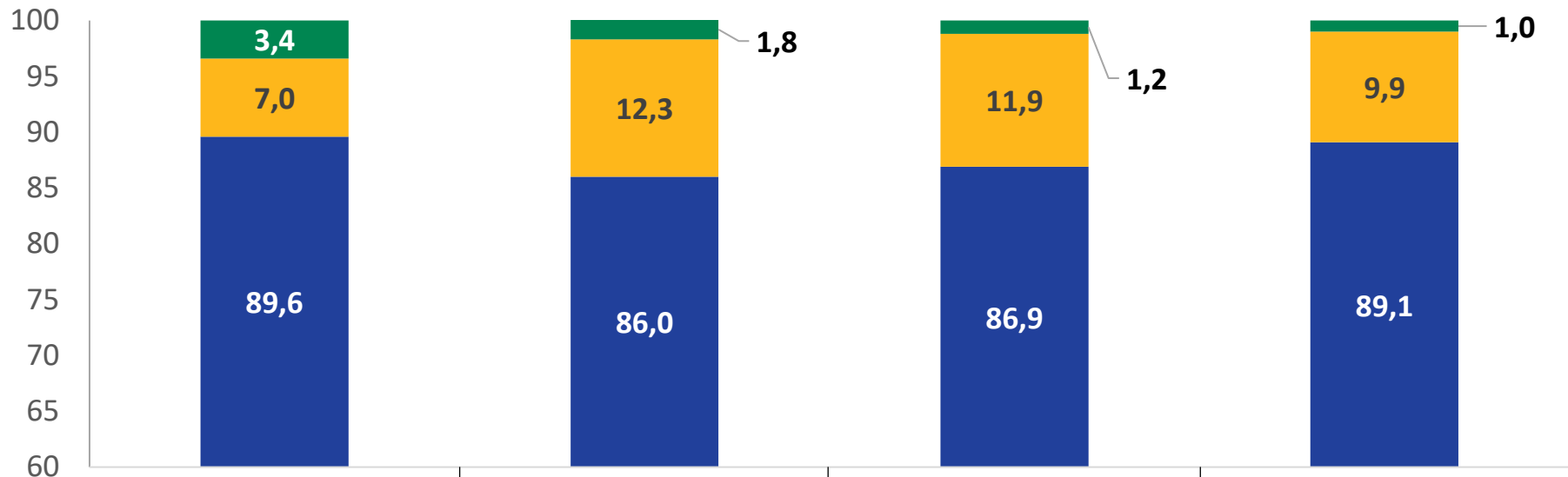


All PLHIV → **Undiagnosed** → **Not on ART** → **VL > 1,000 copies/ml**

GAPS IN 95-95-95 TARGETS FOR PEOPLE AGED 15+ YEARS LIVING WITH HIV, BY LOCALITY, GAUTENG, 2022

Overall

■ Urban areas ■ Rural informal/tribal areas ■ Rural formal/farm areas



% contribution to all PLHIV % contribution to all PLHIV who are unaware % contribution to all PLHIV aware but not on ART % contribution to all PLHIV on ART but not VLS

All PLHIV → **Undiagnosed** → **Not on ART** → **VL > 1,000 copies/ml**



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KEY DRIVERS OF THE HIV EPIDEMIC

SEXUAL DEBUT BEFORE THE AGE OF 15 YEARS AMONG YOUTH AGED 15–24 YEARS BY PROVINCE, SOUTH AFRICA, 2017 AND 2022

Early sexual debut (%)

2017 National: 13.0



Western Cape	Eastern Cape	Gauteng	Free State	North West	Limpopo	KwaZulu-Natal	Northern Cape	Mpumalanga
14.0	15.8	14.8	13.7	12.0	13.5	8.2	11.4	13.3

2022 National: 11.2

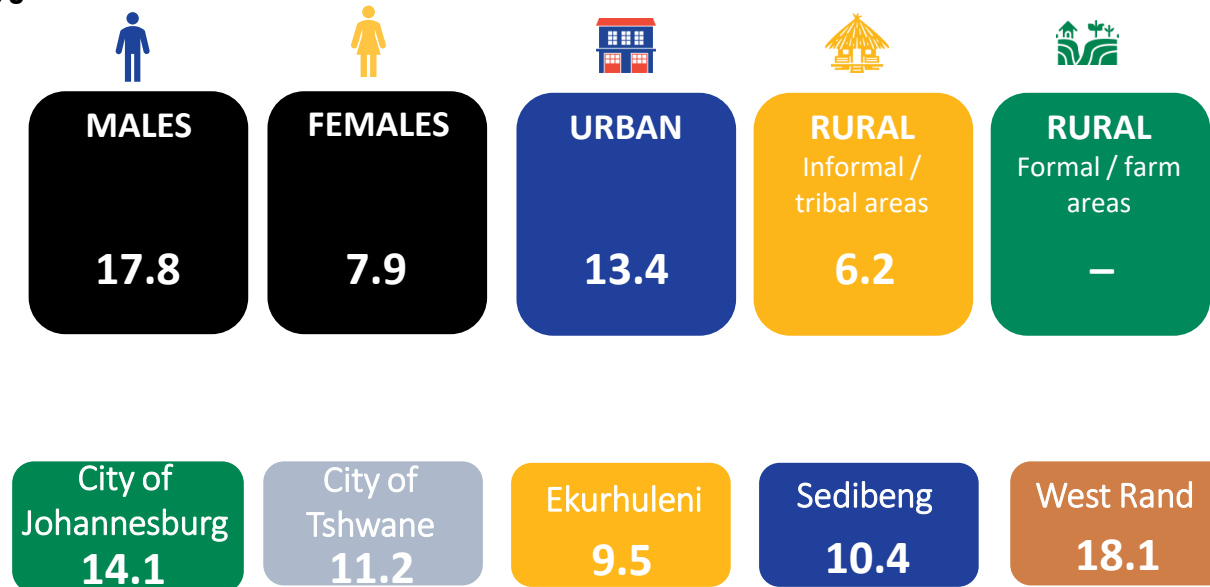


Western Cape	Eastern Cape	Gauteng	Free State	North West	Limpopo	KwaZulu-Natal	Northern Cape	Mpumalanga
16.3	15.3	13.2	9.2	8.8	8.7	8.6	8.0	5.4

SEXUAL DEBUT BEFORE THE AGE OF 15 YEARS AMONG YOUTH AGED 15–24 YEARS, BY SELECTED DEMOGRAPHICS, GAUTENG, 2022

Early sexual debut (%)

Overall, GP: 13.2%



MULTIPLE SEXUAL PARTNERS IN THE LAST 12 MONTHS AMONG PEOPLE AGED 15+ YEARS BY PROVINCE, SOUTH AFRICA, 2017 AND 2022

Multiple sexual partners (%)

2017 National: 10.8



Eastern Cape	Limpopo	KwaZulu-Natal	North West	Northern Cape	Free State	Gauteng	Western Cape	Mpumalanga
10.9	12.0	9.4	11.1	11.0	13.0	12.8	7.6	7.9

2022 National: 8.9

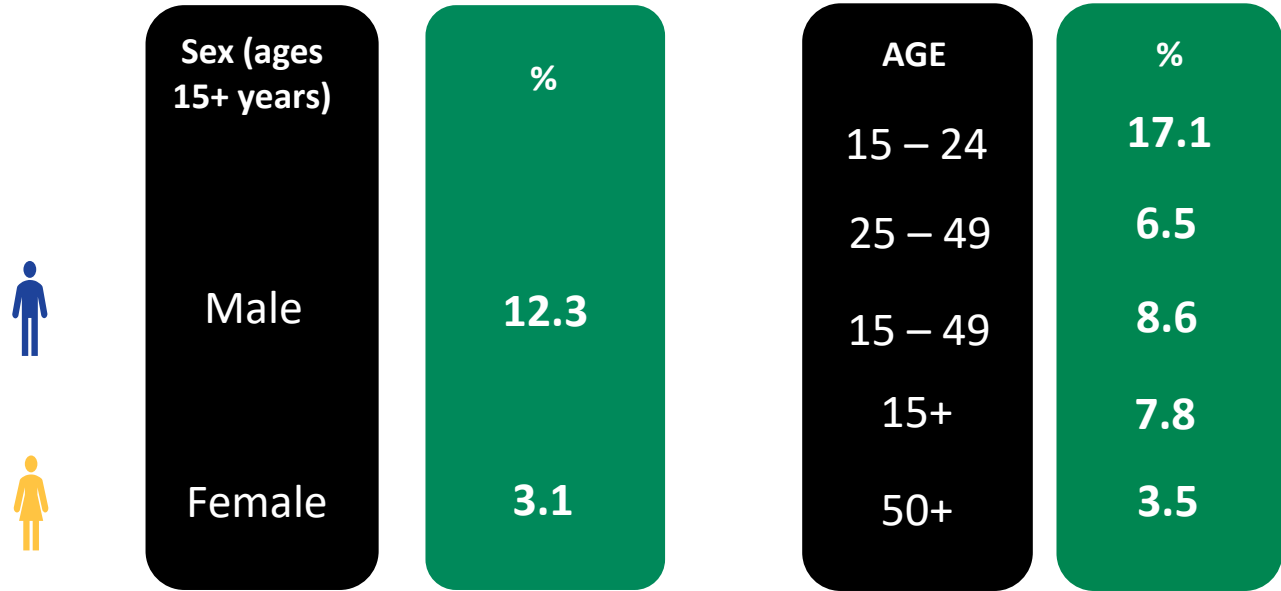


Eastern Cape	Limpopo	KwaZulu-Natal	North West	Northern Cape	Free State	Gauteng	Western Cape	Mpumalanga
11.9	11.4	11.0	9.5	8.4	7.8	7.8	6.7	5.1

MULTIPLE SEXUAL PARTNERS IN THE LAST 12 MONTHS AMONG PEOPLE AGED 15+ YEARS, BY SEX AND AGES, GAUTENG, 2022

Multiple sexual partners (%)

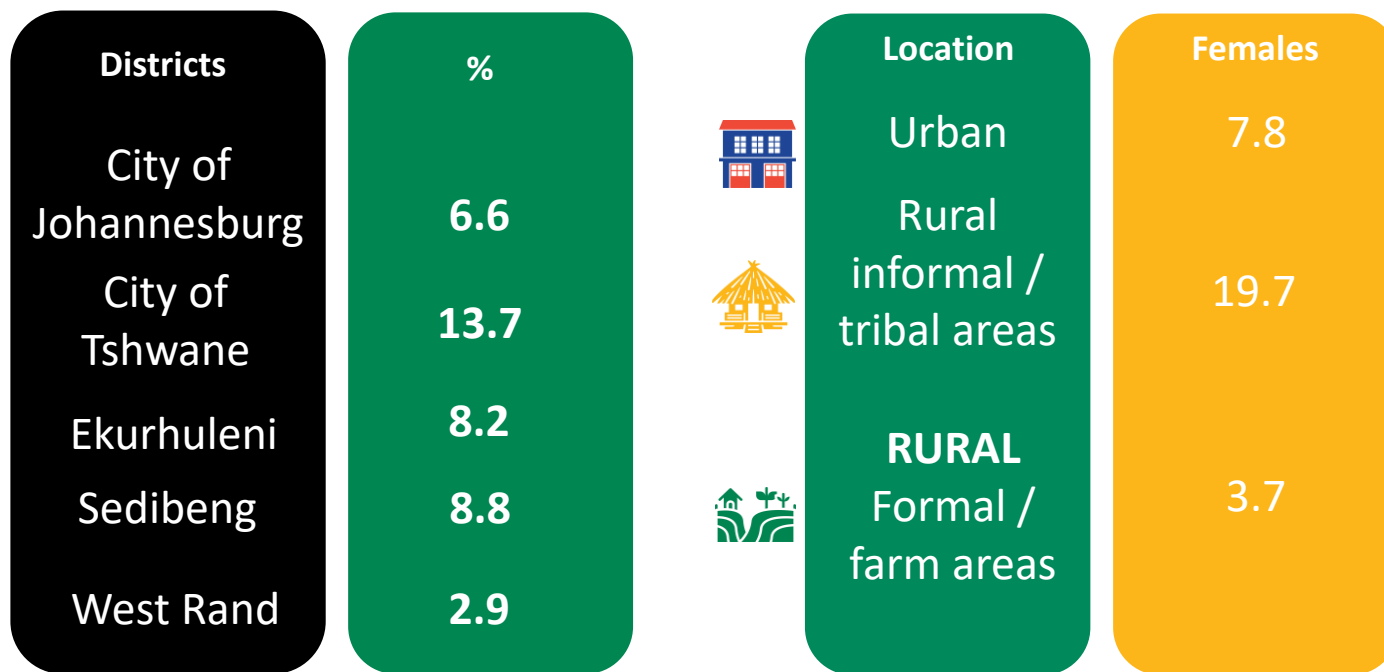
Overall, GP: 7.8%



MULTIPLE SEXUAL PARTNERS IN THE LAST 12 MONTHS AMONG PEOPLE AGED 15+ YEARS, BY SELECTED DEMOGRAPHICS, GAUTENG, 2022

Multiple sexual partners (%)

Overall, GP: 7.8%



CONDOM USE DURING MOST RECENT SEXUAL ENCOUNTER AMONG PEOPLE AGED 15+ YEARS BY PROVINCE, SOUTH AFRICA, 2017 AND 2022



Condom use at last sexual encounter (%)

2017 National: 39.0



Mpumalanga	Free State	Eastern Cape	Northern Cape	KwaZulu-Natal	North West	Gauteng	Limpopo	Western Cape
46.3	42.5	38.1	39.2	44.9	44.7	36.3	41.6	26.6

2022 National: 31.8



Mpumalanga	Free State	Eastern Cape	KwaZulu-Natal	North West	Northern Cape	Gauteng	Limpopo	Western Cape
46.1	34.8	34.7	32.8	32.2	30.4	30.3	29.8	22.1

CONSISTENCY OF CONDOM USE WITH THE MOST RECENT SEXUAL PARTNER AMONG PEOPLE AGED 15+ YEARS BY PROVINCE, SOUTH AFRICA, 2022

Condom use (%)



	Western Cape	Eastern Cape	Northern Cape	Free State	KwaZulu-Natal	North West	Gauteng	Mpumalanga	Limpopo	National
Every time:	13.4	21.7	17.7	22.7	17.7	21.4	20.0	24.6	20.1	19.5
Almost every time:	5.3	5.4	7.6	8.9	9.3	3.6	4.7	11.0	4.4	6.3
Sometimes:	16.5	24.7	22.4	19.3	27.8	24.4	21.6	32.0	22.5	23.5
Never:	64.9	48.2	52.3	49.2	45.2	50.7	53.8	32.4	53.0	50.7

CONSISTENCY OF CONDOM USE WITH THE MOST RECENT SEXUAL PARTNER AMONG PEOPLE AGED 15+ YEARS BY DISTRICT, GAUTENG, 2022

Condom use (%)

	City of Johannesburg	City of Tshwane	Ekurhuleni	Sedibeng	West Rand
Every time:	21.5	17.0	19.1	23.4	19.4
Almost every time:	6.2	5.0	4.6	5.7	5.9
Sometimes:	20.8	20.0	21.1	23.1	22.2
Never:	51.5	58.0	55.2	47.8	52.5

SELF-REPORTED CIRCUMCISION AMONG MALES AGED 15+ YEARS BY PROVINCE, SOUTH AFRICA, 2017 AND 2022

Male circumcision (%)

2017 National: 60.0



Limpopo	Eastern Cape	Mpumalanga	Gauteng	North West	Free State	KwaZulu-Natal	Western Cape	Northern Cape
81.3	80.5	63.7	64.4	50.9	57.2	38.3	52.0	39.2

2022 National: 63.7

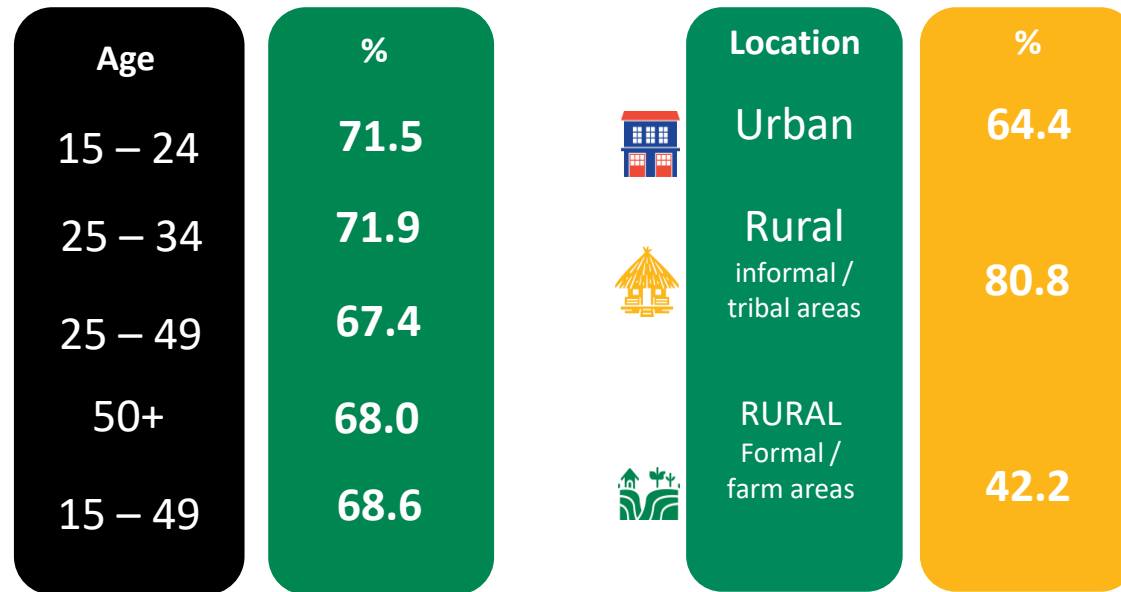


Limpopo	Eastern Cape	Mpumalanga	Gauteng	North West	Free State	KwaZulu-Natal	Western Cape	Northern Cape
87.7	77.2	71.8	64.0	60.8	59.2	54.6	50.9	35.6

SELF-REPORTED CIRCUMCISION AMONG MALES AGED 15+ YEARS BY SELECTED DEMOGRAPHICS, GAUTENG, 2022

Male circumcision (%)

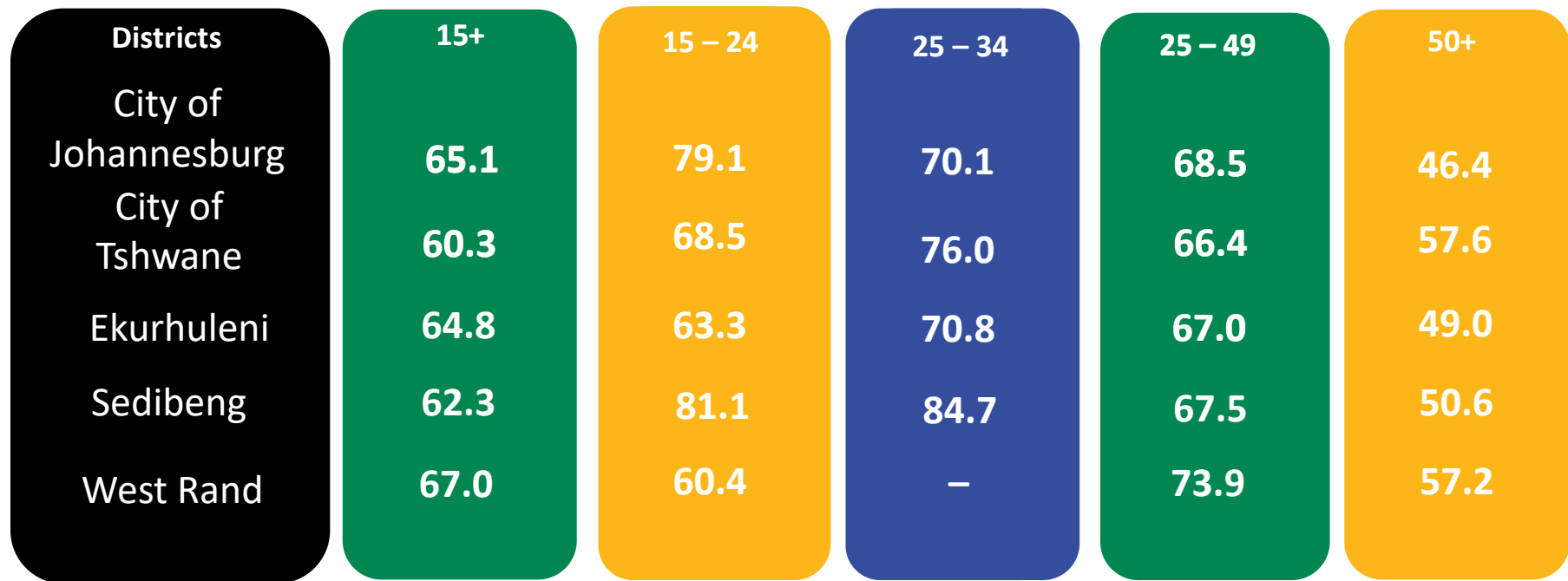
Overall, GP: 64.0%



SELF-REPORTED CIRCUMCISION AMONG MALES AGED 15+ YEARS BY AGE AND DISTRICTS, GAUTENG, 2022

Male circumcision (%)

Overall, GP: 64.0%



SELF-REPORTED CIRCUMCISION TYPE AMONG MALES AGED 15+ YEARS BY PROVINCE, SOUTH AFRICA, 2022



Medical circumcision (%)

2017 National: 60.0



KwaZulu-Natal	Free State	Northern Cape	Gauteng	Mpumalanga	North West	Western Cape	Limpopo	Eastern Cape
87.6	72.4	71.4	70.6	68.1	66.0	46.3	46.0	14.3

Traditional circumcision (%)

2017 National: 39.2

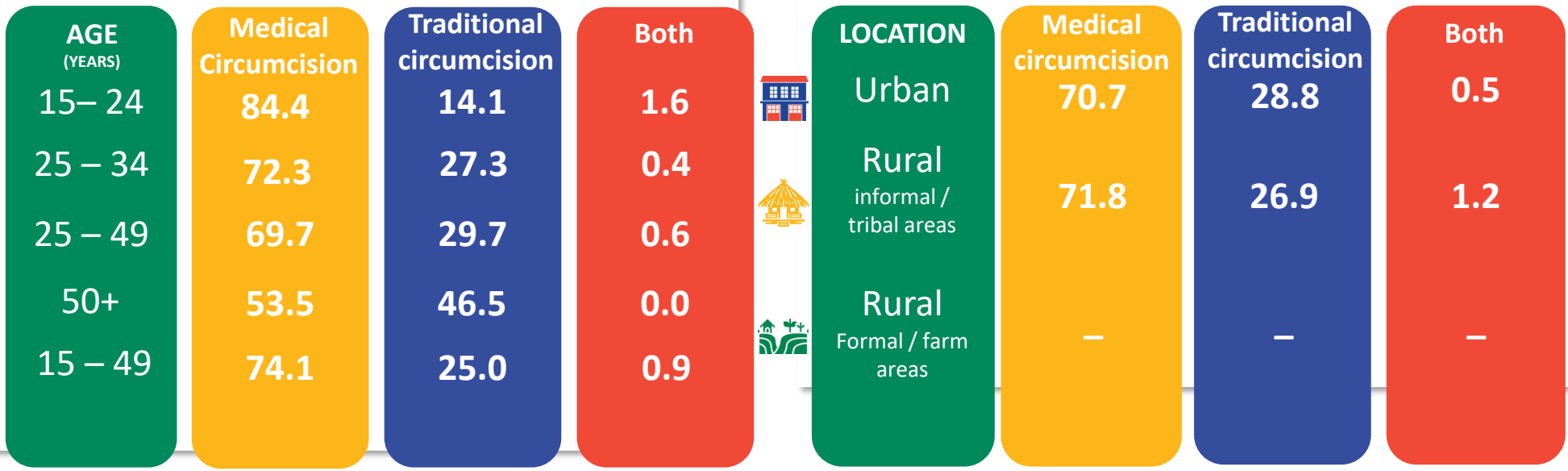


KwaZulu-Natal	Free State	Northern Cape	Gauteng	Mpumalanga	North West	Western Cape	Limpopo	Eastern Cape
11.8	26.4	28.6	28.7	31.4	33.5	53.5	52.0	85.0

Both Total: 0.8

SELF-REPORTED CIRCUMCISION TYPE AMONG MALES AGED 15+ YEARS, BY SELECTED DEMOGRAPHICS, GAUTENG, 2022

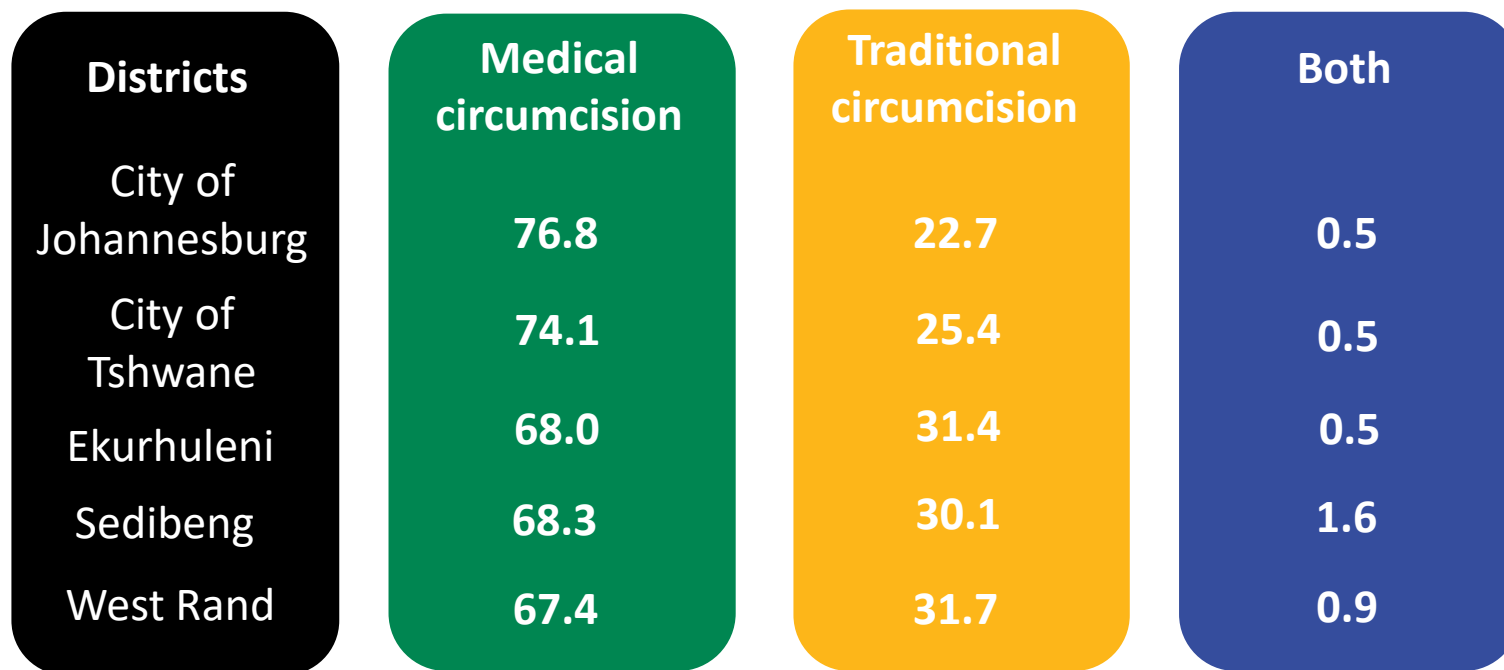
Medical circumcision 70.6% **Traditional circumcision 28.7%** **Both 0.7%**



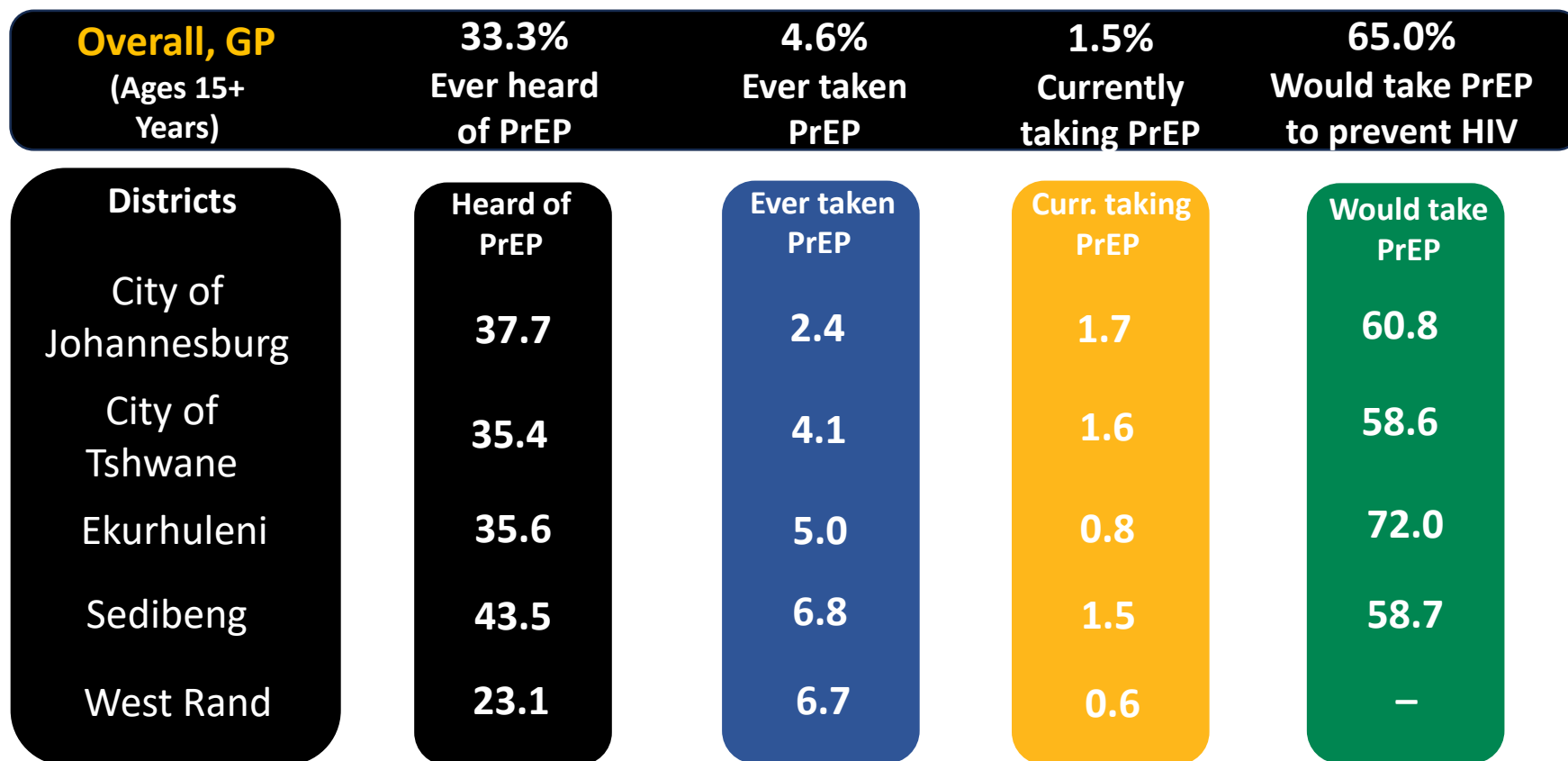
SELF-REPORTED CIRCUMCISION TYPE AMONG MALES AGED 15+ YEARS BY DISTRICTS, GAUTENG, 2022

Circumcision type (%)

Overall, GP: 64.0%

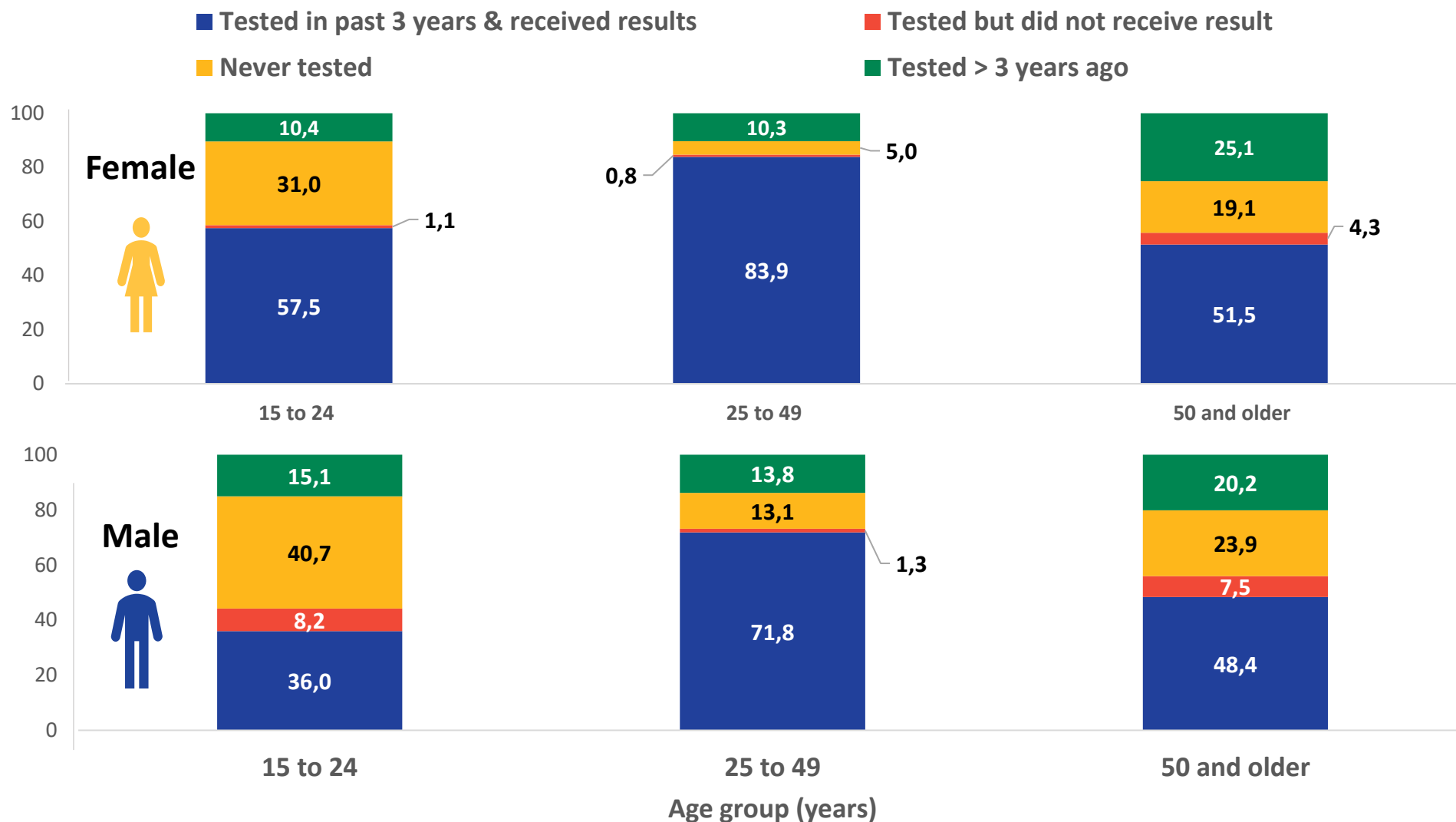


AWARENESS AND UPTAKE OF PRE-EXPOSURE PROPHYLAXIS (PREP) AMONG PEOPLE AGED 15+ YEARS*, GAUTENG, 2022



*People aged 15+ years who were HIV-negative or newly diagnosed HIV-positive in the survey

HIV TESTING AMONG PEOPLE AGED 15+ YEARS, BY AGE GROUPS, GAUTENG, 2022



CONCLUSIONS

- A shift in the HIV epidemic curve towards older age categories signals a stabilizing epidemic.
- Considerable improvement in ART coverage from 2017 (56%) to 2022 (73.4%).
- Disparities in the burden of HIV by gender remain, with a higher (~1.5-fold) prevalence among females aged 15–24 and 25–49 years as compared to males of the same age.
- ART coverage in 2022 was lower for men compared to women (64.4% vs 77.9%).
- Viral load suppression was lowest among adolescents and youth aged 15–24 years (67.4%).
- Gaps in the continuum of HIV care (knowledge of status, uptake of ART) persist for young people of both sexes aged 15–24 years.
- The prevalence of circumcision among males 15–49 falls below that national target; varies by district.
- PrEP awareness (33.3%) and uptake (4.6%) was universally low across districts; however, willingness to take PrEP was high (65.0%).

Actions for consideration

- Long-term planning to care for individuals in an aging HIV epidemic.
- Heighten 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
- Assess and address district-level gaps to improve access to HIV prevention, care and treatment services.
- Enhance prevention efforts that target groups disproportionately affected by the drivers of HIV infection such as women and young people.
- Focus efforts to increase coverage of male circumcision, and continue to engage with traditional houses, leadership and practitioners to ensure maximum health benefits among circumcised men
- Enhance accurate public awareness and demand for effective HIV prevention measures including, HIV testing and counseling, condom use and PrEP.

THANK YOU



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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)



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Department:
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REPUBLIC OF SOUTH AFRICA



FUNDING SOURCE



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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
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Mr Phaleng Maribe	Data Manager
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Name	Role
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Dr Pelagia Murangandi	Co-investigator
Ms Nuha Naqvi	Co-investigator

South African Medical Research Council (SAMRC)

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

National Institute for Communicable Diseases (NICD)

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

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Prof Lubbe	Co-Investigator
Ms Sandra Castel	Co-Investigator