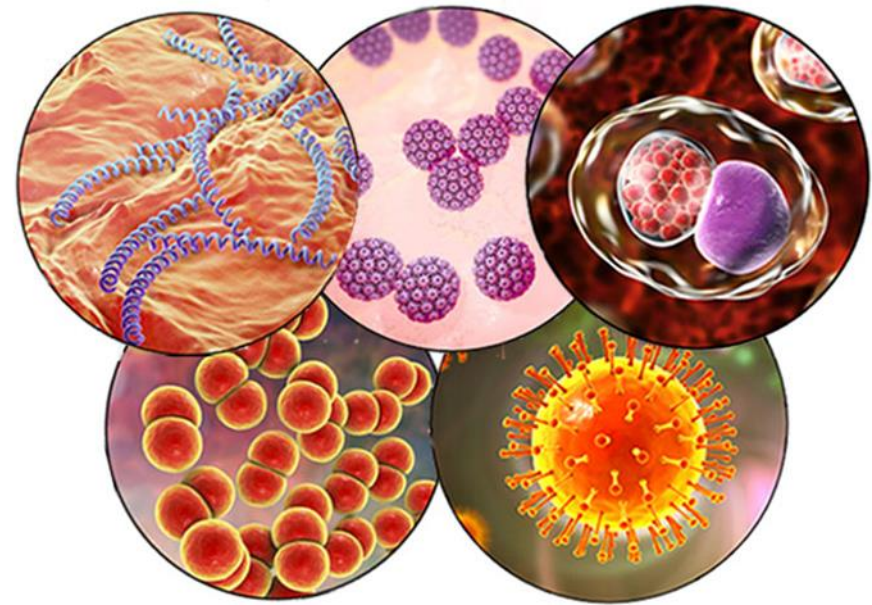




**NATIONAL INSTITUTE FOR
COMMUNICABLE DISEASES**

Division of the National Health Laboratory Service



SYPHILIS TRENDS: Sexually transmitted infections Sentinel Surveillance

**DUMISILE VENESSA MASEKO
LABORATORY MANAGER
CENTRE FOR HIV AND STIs**

Syphilis Management Training
25 September 2025



COMPONENTS OF THE STI NATIONAL SURVEILLANCE SYSTEM



Clinical Sentinel Surveillance

- Distribution of syndromes
- Sex and age distribution
- STI in pregnant women
- Referrals of treatment failures
- Drug/condom stock outs

Microbiological Sentinel Surveillance

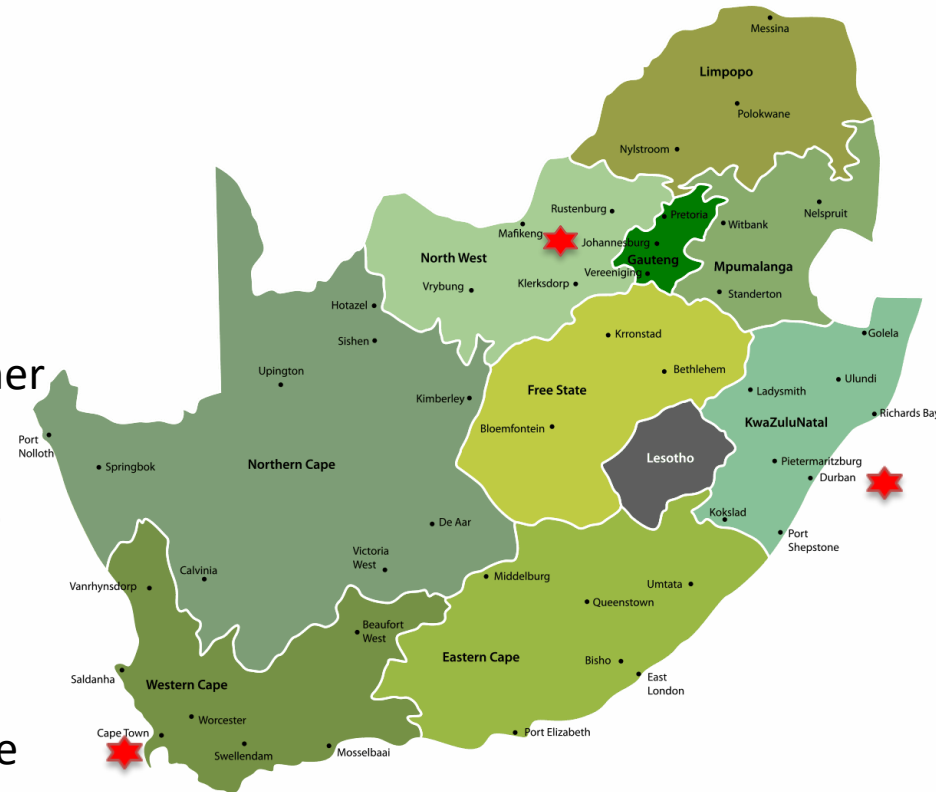
- Aetiology of syndromes
- **Serology for HSV-2, Syphilis, HIV, Hepatitis**

Antimicrobial Surveillance

- *Neisseria gonorrhoeae*
 - Ceftriaxone
 - Cefixime
 - Azithromycin
 - Gentamicin
- 

STI SENTINEL SURVEILLANCE IN SOUTH AFRICA

- Sentinel - Public Primary Healthcare (PHC) Facilities in South Africa
- Genital Ulcer Syndrome (GUS), Male Urethritis Syndrome (MUS) and Vaginal Discharge Syndrome (VDS)
- 2006-2018 annually Gauteng, biennial other key provinces
- 2014 all 9 provinces, 4 clinics per province (CDC funded)
- 2019 - Alexandra Healthcare Centre (Gauteng), Prince Cyril Zulu Communicable Diseases Centre (KwaZulu-Natal), Spencer Road Clinic (Western Cape)



<https://www.exploresouthafrica.net/map/>

LABORATORY BASED METHODOLOGY



Endocervical Swab

Multiplex PCR (NG, CT, TV, MG)

Vaginal Swab

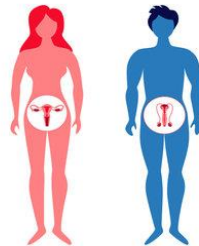
Vaginal Smear (Bacterial vaginosis and Candidiasis)

Endo-urethral Swab

Multiplex PCR (NG, CT, TV, MG)

Culture, Identification &
Antimicrobial susceptibility testing
NG

NG: *Neisseria gonorrhoeae*
CT: *Chlamydia trachomatis*
TV: *Trichomonas vaginalis*
MG: *Mycoplasma genitalium*



Blood

HIV Serology
HBsAg Serology
Specific Treponemal test (TPAb)
Reflex Non-Specific Assay (Rapid Plasma Reagin-RPR)

Ulcer Swab

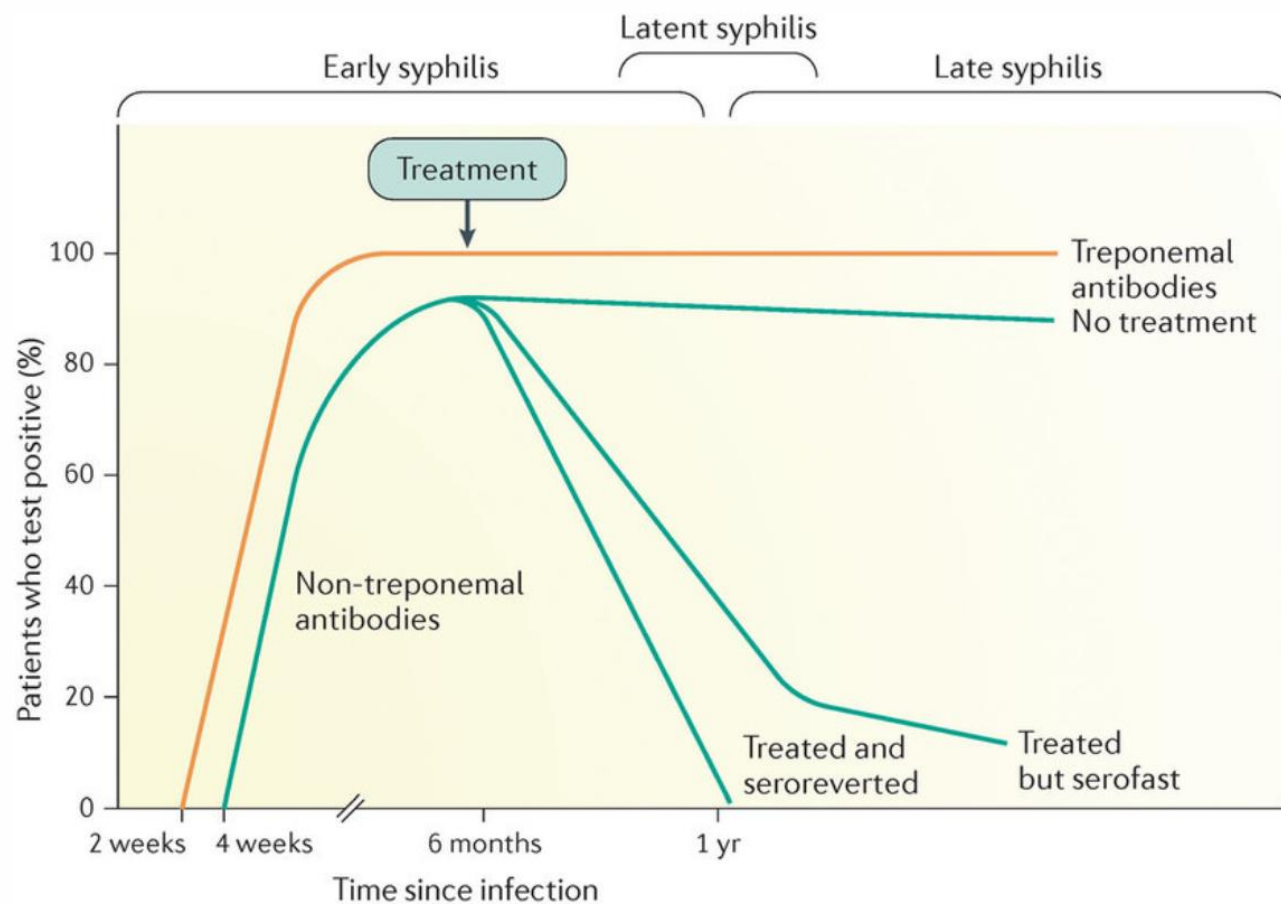
Multiplex PCR (HSV1/2, HD, TP, LGV)
Giemsa Smear (Donovanosis)

HSV: Herpes simplex virus
HD: *Haemophilus ducreyi*
TP: *Treponema pallidum*
LGV: Lymphogranuloma venereum

#Specialised Molecular testing: Typing, Resistance determinants, Sequencing



TREPONEMAL AND NON-TREPONEMAL ANTIBODIES





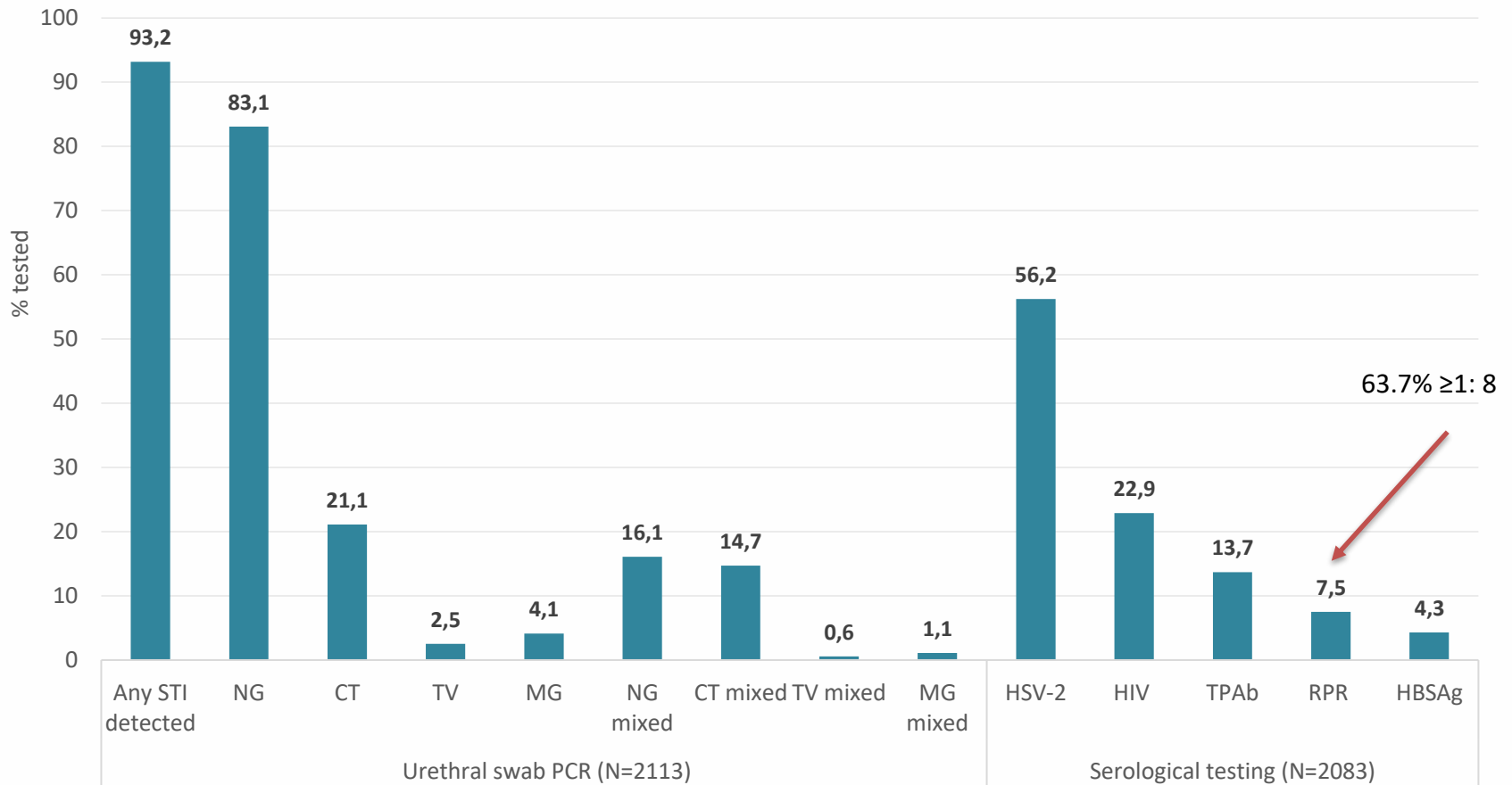
Public Health Bulletin
South Africa

Microbiological sentinel surveillance of sexually-transmitted infection syndromes in South Africa, 2021–2024

Tendesayi Kufa^{1,2*}, Lindy Gumede¹, Duduzile Nhlapo¹, Ilze Venter¹, Precious Mahlangu¹, Bianca Da Costa Dias¹, Matamela Mabugana¹, Shabashini Reddy¹, Thabitha Mathega¹, Portia Baloyi¹, Valencia Kekana¹, Alex Vezi¹, Nokuthula Nzuza¹, Zukiswa Mithani¹, Frans Radebe¹, Adrian Puren¹, Venessa Maseko¹, Etienne Müller¹

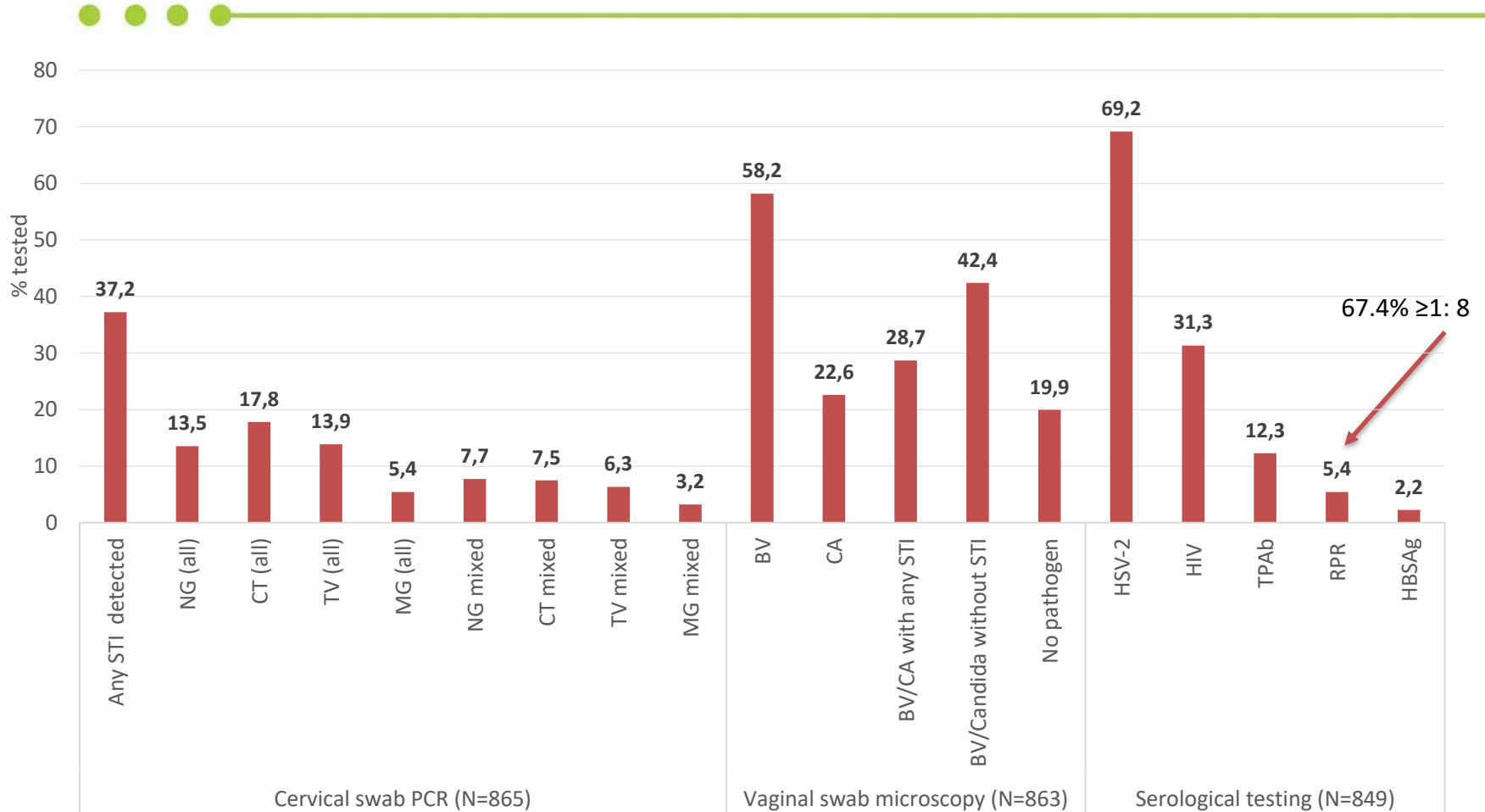


SEROLOGICAL PREVALENCE OF SYPHILIS – MALE ATTENDEES



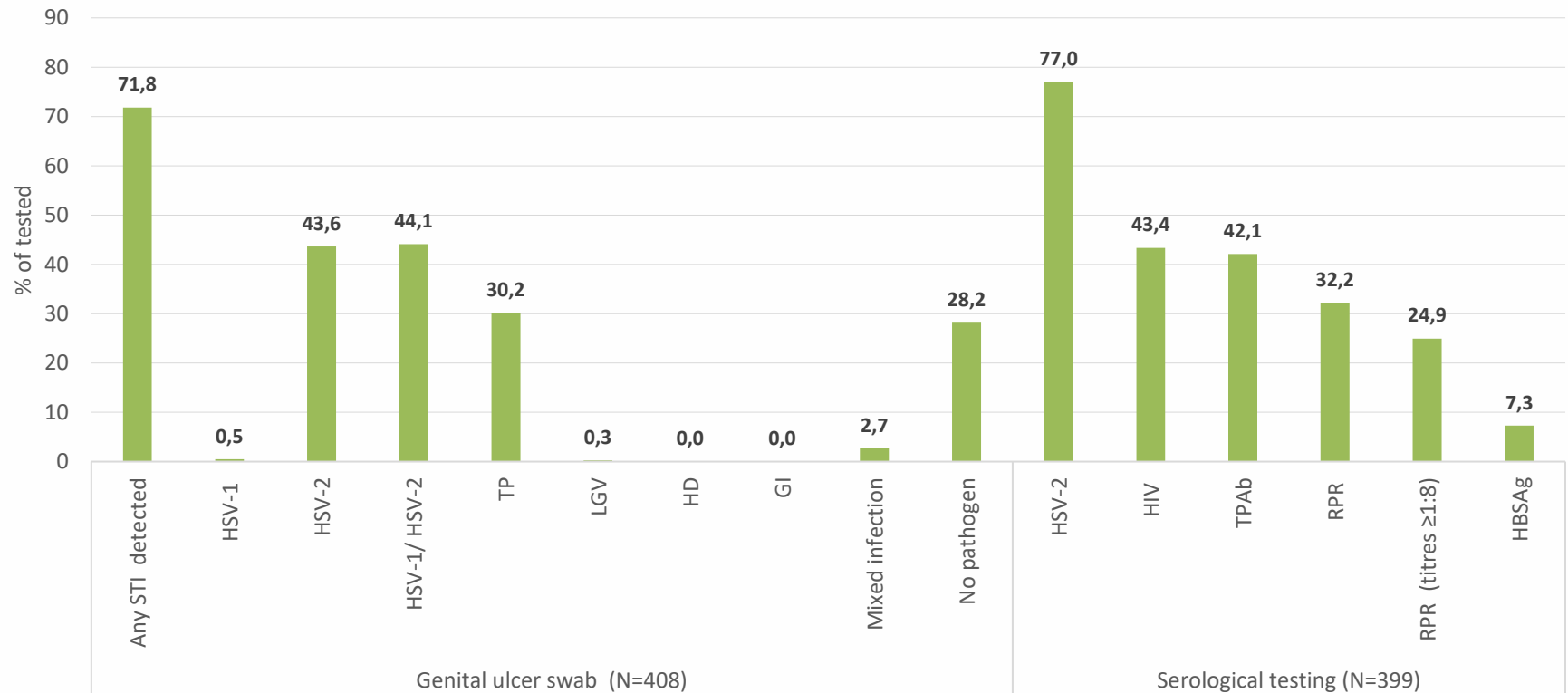
Prevalence of pathogens and aetiologies among male attendees with MUS, 2021- 2024, Gauteng, KwaZulu Natal and Western Cape, N=2113

SEROLOGICAL PREVALENCE OF SYPHILIS – FEMALE ATTENDEES



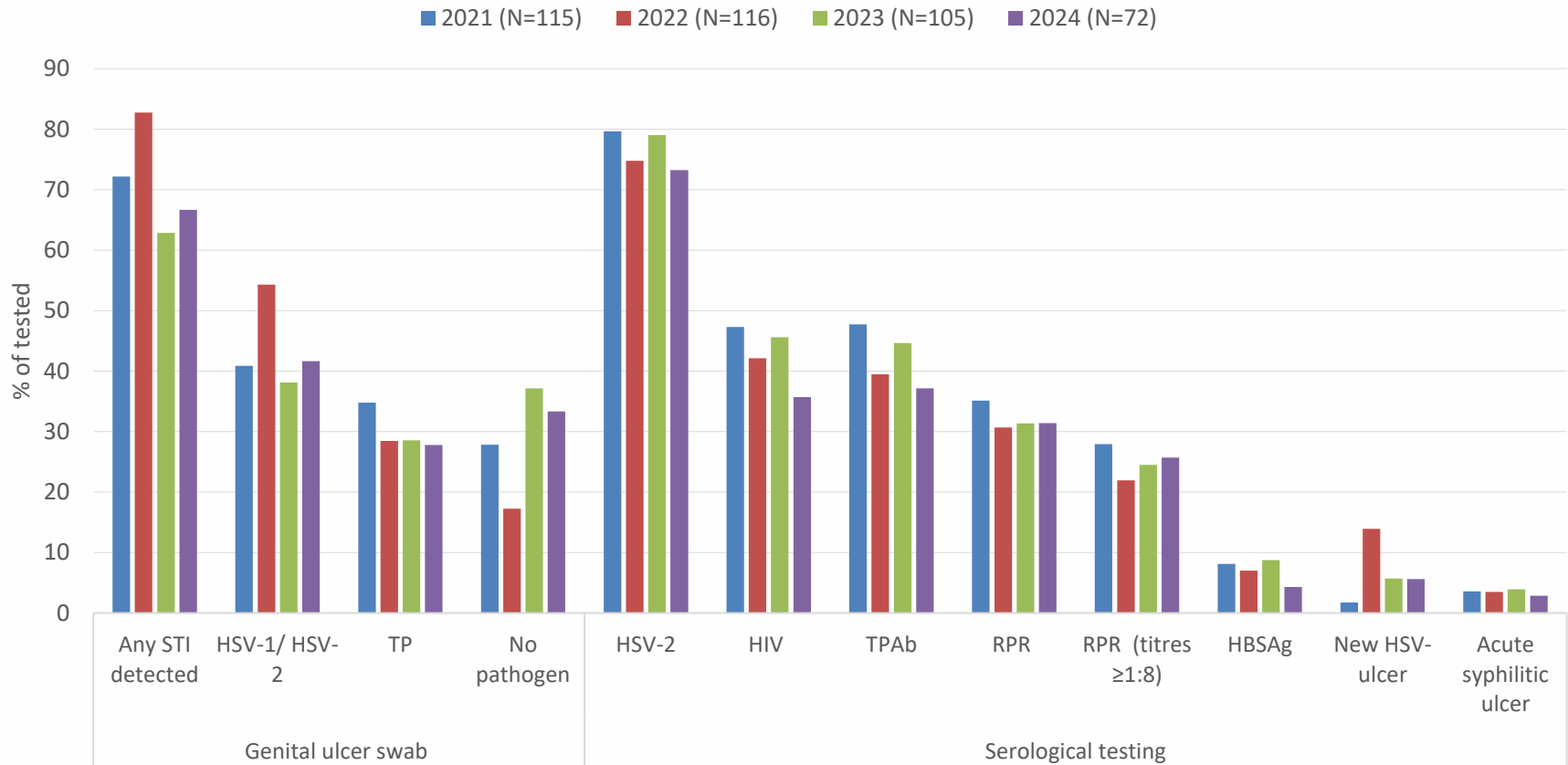
Prevalence of pathogens and aetiologies among attendees with VDS, 2021- 2024, Gauteng, KwaZulu Natal and Western Cape, N=865

PREVALENCE OF SYPHILIS- GENITAL ULCER SYNDROME



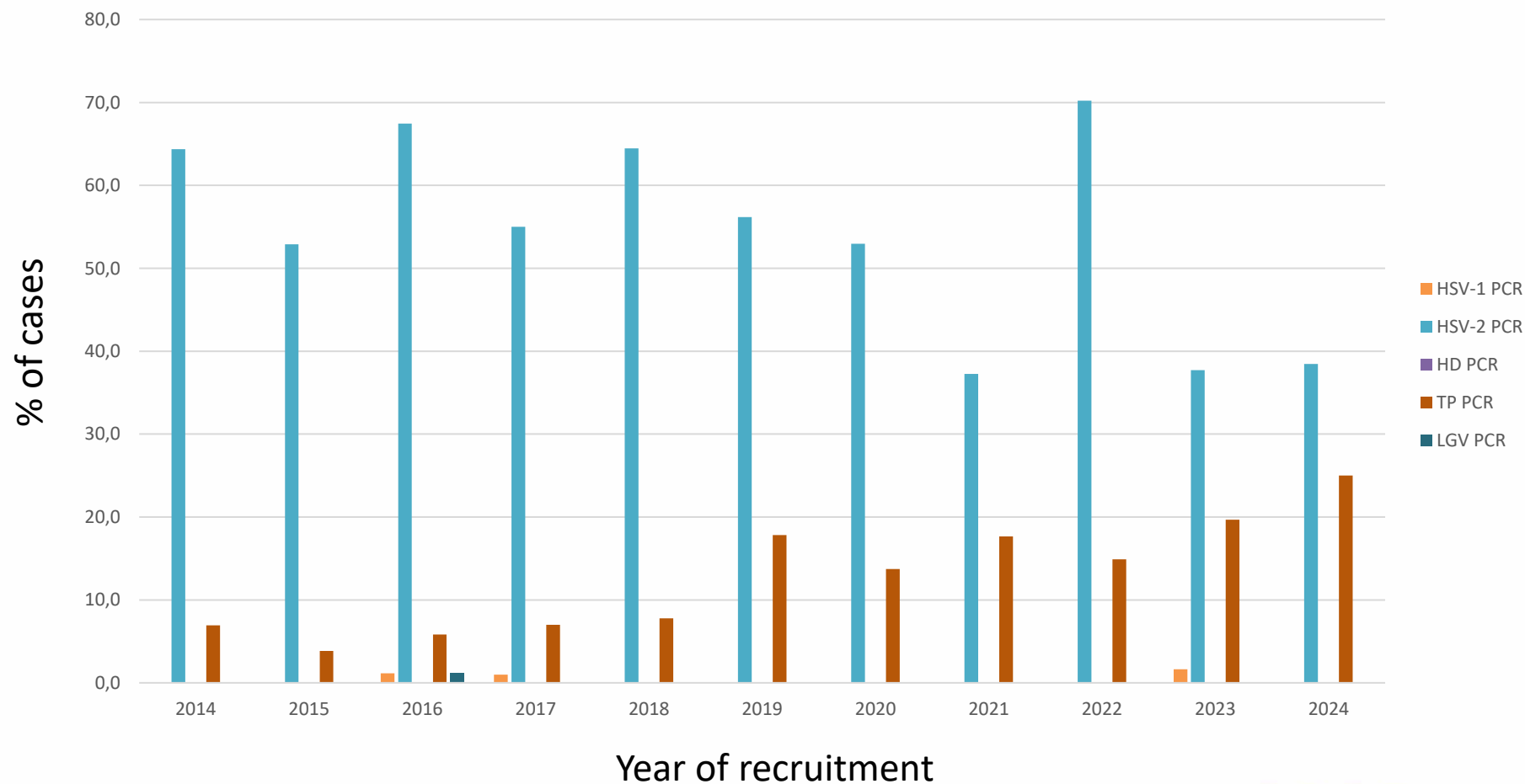
Prevalence of pathogens and aetiologies among attendees with GUS, 2021- 2024, Gauteng, KwaZulu Natal and Western Cape, N=865

PREVALENCE OF SYPHILIS



Prevalence of pathogens and aetiologies among attendees with GUS by year, 2021- 2024, Gauteng, KwaZulu Natal and Western Cape, N=408

AETIOLOGY OF GENITAL ULCER SYNDROME GAUTENG 2014-2024



EARLY WARNING SURVEILLANCE XDR NG EXTRA GENITAL SAMPLING



AIM

To establish an early warning surveillance system in at-risk priority populations (MSM) in order to monitor for evolving resistance to extended-spectrum cephalosporins in *Neisseria gonorrhoeae* and emerging STI pathogens



Men who have Sex with Men

≥18 years

Risk factors for STIs

Presenting with non-resolving urethritis

Pharyngeal swabs, Rectal swabs, Urethral swabs,
Ulcer swabs, Blood samples

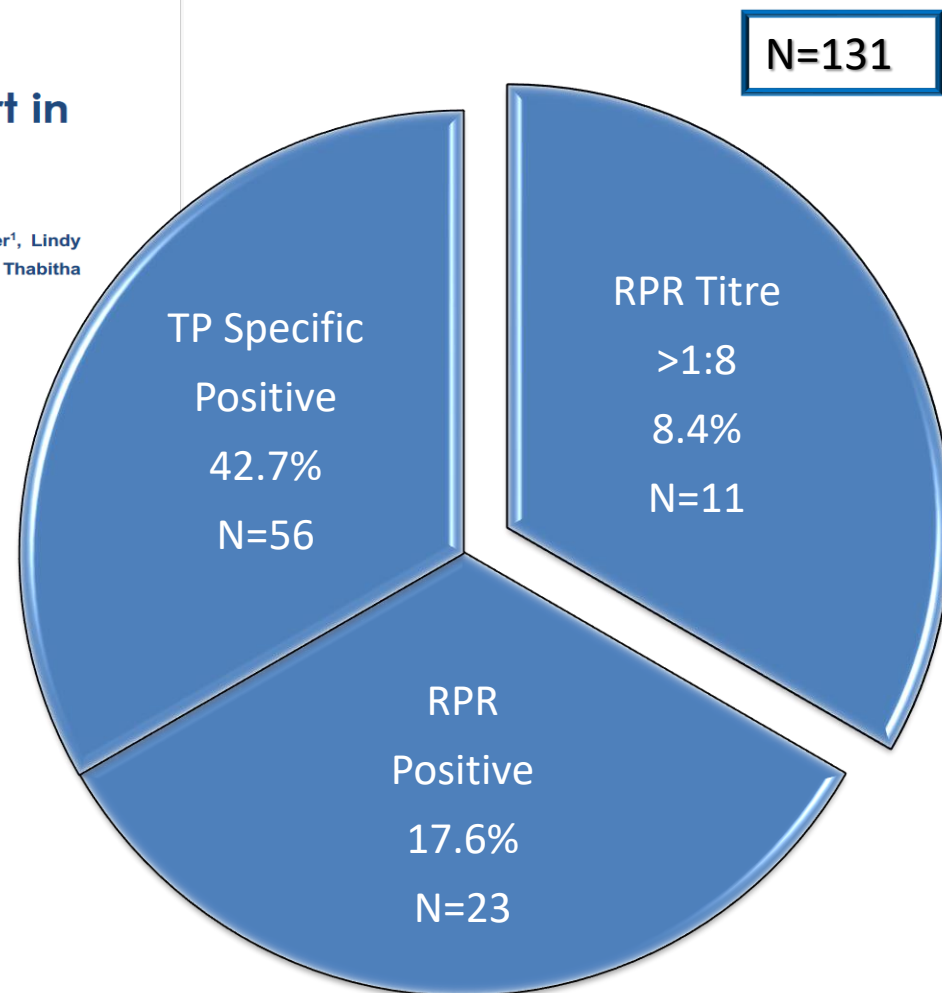


EARLY WARNING SURVEILLANCE XDR NG EXTRA GENITAL SAMPLING



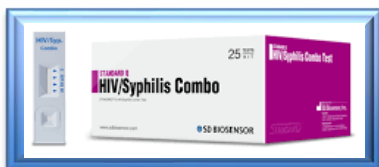
Sexually transmitted infections surveillance among a high-risk men who have sex with men (MSM) cohort in Johannesburg, South Africa, 2023

Bianca Da Costa Dias ¹, Mpumelelo Sibanda¹, Mahlape P Mahlangu¹, Johanna ME Venter¹, Lindy Gumed¹, Duduzile Valashiya¹, Maurice Greeves², Etienne E Müller¹, Dumisile Maseko¹, Thabitha Mathega¹, Portia Baloyi¹, Tendesayi Kufa^{1,3}, Frans Radebe¹





Training of healthcare workers on STIs and STI management



Introduce and provide dual HIV/syphilis and single syphilis rapid tests to screen all STI service attendees/ key populations for latent syphilis and to treat persons found to be positive.
Integrate into existing HIV services



Ensure the adequate supply chain and stock management of STI-related commodities - Penicillin



ACKNOWLEDGEMENTS

Patients and staff at the facilities

Centre for HIV and STIs Team



health

Department:
Health
REPUBLIC OF SOUTH AFRICA



**NATIONAL HEALTH
LABORATORY SERVICE**



**World Health
Organization**