

CITY OF JOHANNESBURG PROFILE ON THE HIV EPIDEMIC TRENDS TO ACCELERATE PROGRESS OF HIV RESPONSE



**City of Johannesburg profile on the HIV epidemic trends to accelerate progress of HIV response
[2018 – 2020]**

October 2020

FOREWORD

The City of Johannesburg HIV profile on the HIV epidemic trends to accelerate progress of HIV response show how our response to HIV, Tuberculosis and sexually transmitted infections has evolved. Working collaboratively across multiple sectors and departments we have managed to improve services offering across communities. We have also managed to implement various programmes targeted at key and vulnerable populations.

This profile documents progress that has been made and will inform development of the Multisectoral District Implementation Plans. This report provides insight into the path we have travelled as a city to overcome HIV pandemic. The involvement of all sectors – government, business, labour, civil society, development agencies, research institutions and communities will be critical going forward.

I would like to thank UNAIDS for the continued support they have provided to the City of Johannesburg. This exercise would not have been a success without their support.

It is my pleasure to present the City of Johannesburg HIV profile on the HIV epidemic trends

.....
Cllr Geoffrey Makhubo
Executive Mayor
City of Johannesburg

Date

PREFACE

It is my pleasure to inform you that through the technical assistance of UNAIDS, City of Johannesburg has embarked on a process of developing the city's second (2nd) profile of the HIV epidemic trends to accelerate progress in implementing the Fast-Track Cities approach. The Fast-Track Cities approach support cities to achieve their commitments to the Paris Declaration to which City of Johannesburg is a signatory.

The City of Johannesburg has made significant progress in making communities know about their HIV, TB and STI status, linking those that are infected to the much-needed care and treatment and in ensuring that they stay on treatment. We have actively engaged our communities through our community dialogues and door-to-door campaigns doing community mobilization and health education in our drive to increase awareness and uptake of health services. However, there is a need to consolidate our efforts in targeting key and vulnerable population to incorporate a human rights-based approach to development of programme. Our approach should be targeted at that we leave no one behind in the AIDS response.

I believe this profile will inform planning, advocacy work, training and capacity development, budgeting and setting of targets in the city. This report will also serve as a baseline for the multisectoral district implementation plans.

.....
Cllr Eunice Mgcina
MMC Health and Social Development
City of Johannesburg

Date

ACKNOWLEDGEMENTS

I would like to take this opportunity to express our appreciation on the significant contribution from all individuals, government departments, civil society sector representatives, development agencies, research institutions and communities who participated in the profiling exercise for the HIV epidemic in the City of Johannesburg.

I would like to thank the representatives from the City of Johannesburg for their contribution in providing reports, statistics and guidance; as well as development partners and community organizations their time and effort in making this profiling process a success. I would like to thank representatives from Department of Education, Department of Social Development and Department of Health for sharing of valuable information during the profiling exercise.

The Best Health Solutions team namely Dr. Ndumiso Tshuma, Dr. Nellie Dominica Myburgh, Thenjiwe Maphosa and their support staff played a critical role of collecting and analyzing the data to generate this report.

Lastly, I would like to acknowledge the financial and technical support provided by the UNAIDS in the development of this profile.

.....
Dr. B. Desai
Acting Executive Director: Health Services
City of Johannesburg

Date

ACRONYMS

AIDS	Acquired Immunodeficiency Syndrome	NCD	Non communicable diseases
ANC	Antenatal Care	NDoH	National Department of Health
ART	Antiretroviral Therapy	NDP	National Development Plan
CBO	Community-Based Organisations	NGO	Non-Governmental Organisation
CRS	Community Responses and Systems	NPO	Non-profit Organisation
CSO	Civil Society Organisations	NSP	National Strategic Plan
DAC	District AIDS Council	OVC	Orphans and Vulnerable Children
DHIS	District Health Information System	PCA	Provincial Council on AIDS
DSD	Department of Social Development	PCR	Polymerase Chain Reaction
EID	Early Infant Diagnosis	PLHIV	People living with HIV
GBV	Gender-based violence	PMTCT	Prevention of Mother-To-Child Transmission
HBC	Home-Based Care	PrEP	Pre-Exposure Prophylaxis
HCT	HIV Counselling and Testing	PSET	Post-School Education and Training System
HIV	Human Immunodeficiency Virus	PWID	People Who Inject Drugs
HMIS	Health Management Information System	PWUD	People Who Use Drugs
HSRC	Human Sciences Research Council	RTCQI	Rapid test continuous quality improvement
IPV	Intimate Partner Violence	SADHS	South Africa Demographic and Health Survey
ISHP	Integrated School Health Programmes	SAHRC	South African Human Rights Commission
KP	Key populations	SANAC	South African National AIDS Council
KPI	Key Performance Indicator	SASSA	South African Social Security Agency
KVP	Key and vulnerable populations	SBCC	Social Behaviour Change Communication
LAC	Local AIDS Council	SDR	Stigma and discrimination reduction
LGBTI	Lesbian, Gay, Bisexual, Transgender and Intersex+	SR	Sub-recipient
M&E	Monitoring and Evaluation	SRH	Sexual Reproductive Health
MARP	Most at Risk Population	Stats SA	Statistics South Africa
MDIP	Multi-Sectoral District Implementation Plan	STI	Sexually transmitted infection
MDR-TB	Multi-drug-resistant TB	TB	Tuberculosis
MMC	Medical Male Circumcision	UNAIDS	Joint United Nations Programme on HIV/AIDS
MSM	Men who have sex with men	USAID	The United States Agency for International Development
MTCT	Mother-to-Child Transmission	VAW	Violence against women
		WHO	World Health Organisation

EXECUTIVE SUMMARY

A detailed profiling exercise was conducted to determine the HIV epidemic trends in the City of Johannesburg. This was a review process focused on understanding the city's current situation on HIV epidemic trends. The expected outcomes were to further improve progress on the implementation of action plans that were aligned to HIV epidemic response. The review process was restricted to the most recent literature information on HIV and AIDS trends for the City of Johannesburg during the period 2018 to 2020. In addition to other data sources used in the profiling exercise, the following organizations and reports were used as primary sources for the baseline data and further changes on HIV epidemic trends over the years; ANOVA Health, Aurum Institute, Wits RHI, Thembisa Model, strict Health Barometer and annual reports for the city of Johannesburg.

The main purpose of the HIV epidemic trends profiling exercise was to accelerate progress of HIV response in the City of Johannesburg. This was enhanced through the analysis of gathered information using various platforms. The profiling exercise involved gathering information that was targeted at informing the MDIP baseline, advocacy work, budgeting, target setting, training and advocacy work.

The intended specific outcomes were to determine current progress, identify gaps and challenges and to provide alternative best-practices and solutions. The suggested solutions were expected to benefit government departments, municipalities, SANAC sectors, development partners and community-based organizations. Furthermore, the Gauteng AIDS Council secretariats at provincial, district and local levels were also expected to benefit from HIV profiling outcomes.

A mixed method approach was used for the data collection and analysis. Data were collected using Virtual Focus Group Discussions (V-FGD) and Virtual Key Informant Interviews (V-KII), closed ended questionnaires and document review. Most significant change stories were extracted using qualitative data collection instruments.

Key Findings

HIV burden

- The City of Johannesburg has seen a 5.8% increase in the total number of people living with HIV, from 715 391 in 2017 to 756 751 in 2020¹.
- The overall HIV prevalence during the period under review has marginally declined from 13.3% in 2017 to 13% in 2020¹.
- In 2020, HIV prevalence was highest among females across all age groups with 28.3% for 25-49 years, 15% for 50 years and above and 9% for 15-24 years old¹.
- In 2020, the HIV prevalence among FSW was 43.7%; this is 11.9% decline from the baseline of 49.6% in 2017. Among MSM, the HIV prevalence has decreased from 24.2% in 2017 to 22.5% in 2020¹.

HIV 90-90-90 cascade

- In the City of Johannesburg 86% of the people living with HIV (PLHIV) know their HIV status (1st 90), and among the PLHIV who know their status, 77.6% are linked to care (2nd 90) and of those currently on treatment, 84.3% who are virally suppressed at 12 months. (3rd 90)².

¹ Thembisa Model version 4.2 for five metros, 2019, Date extracted: 13 September 2020

² DHIS, 2020; 90-90-90 Treatment and retention acceleration Quarterly report Jan-March 2020

City of Johannesburg Profile on the HIV Epidemic Trends

HIV Counselling and Testing

- The number of HIV tests done from April 2019 to March 2020 is 1 846 503, which resulted in 114 397 people being diagnosed as being HIV positive².

ART Adherence

- A total of 409 240 PLHIV remained on ART and this is a 21% shortfall from the set target of 516 516².
- The set targets were also not achieved across all regions, and the progress ranged from 75.9% (Region B and G) to 84.7% (Region E)².

ART adult viral load done at 6 months rate

- During the period April 2019 to March 2020, the ART adult viral load done at six months rate ranged from 66% (Region B) to 86% (Region A) and was below the set target of 90% across all the Health sub-districts².

Prevention of Mother-to-Child Transmission

- Mother to Child Transmission has decreased from 4.35% in 2017 to 2.83% in 2020¹.

¹ Thembisa Model version 4.2 for five metros, 2019, Date extracted; 13 September 2020

² DHIS, 2020, Date extracted; 29 November 2020

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INTRODUCTION

Background

Recent literature shows that “strategic investments in proven interventions will help Johannesburg achieve the treatment targets and be on track to end AIDS by 2030” (Stuart et al., 2018). Such interventions include implementation of prevention programmes; HIV testing programmes; Medical Male Circumcision (MMC) and condom distribution; these have been proven to result in the reduction of new infections. Furthermore, ensuring scale and quality of the HIV treatment programme is vital for the city's economic prosperity and for South Africa as a whole.

Outcome 1 the Growth and Development Strategy for 2040 is an “Improved quality of life and development-driven resilience for all” with targeted focus on poverty reduction, food security, development initiatives that enable self-sustainability, improved health and life expectancy, and real social inclusivity. By 2040, the City aims to achieve substantially enhanced quality of life for all, with this outcome supported by the establishment of development-driven resilience.

To this end the City has committed to substantially reduce HIV prevalence and non-communicable diseases and thus is committed to the National Strategic Plan (NSP) for HIV, TB and Sexually Transmitted Infections (STIs) 2017 - 2022 (through ensuring “a society characterized by healthy living for all”).

The City of Johannesburg is among the fast track cities on the Paris Declaration that were pledged to achieve the 2020 and 2030 HIV targets (Stuart et al., 2018). These targets state that by 2020, 90% of all people living with HIV (PLHIV) will know their HIV status, 90% of all people with diagnosed HIV infection will receive antiretroviral therapy (ART), and 90% of all people receiving ART will be virally suppressed (90-90-90 targets), with these percentages increasing to 95% by 2030 (95-95-95 targets) (Stuart et al., 2018, Wilkinson et al., 2019).

The City is committed to the National Department of Health objectives of the National TB Control Programme i.e. to screen 90% of all vulnerable people and place 90% of people with TB diagnosed on treatment; to achieve 90% treatment success rate for drug-susceptible TB, and 75% for drug resistant TB.

Current research on sex workers confirms that the HIV prevalence was estimated at 57.7% in South Africa by 2019 (AVERT, 2020). The prevalence was observed to vary by province, and it was 71.8% in the City of Johannesburg and 53.5% in Durban in 2019 (AVERT, 2020). Factors that have been found to contribute to increase HIV risk for sex workers in South Africa include high levels of violence, lack of education, injecting drugs, substance abuse, binge drinking alcohol, multiple sexual partners and poverty (Coetzee et al., 2017). The form of violence mainly affecting women sex workers include rape and sexual assault (AVERT, 2020).

Research also showed that the HIV prevalence for men having sex with men was 18.1% in South Africa in 2019, and it also varied by province (SANAC, 2017b). This was estimated at 26.8% in Johannesburg, 22.3% in Cape Town and 48, 2% in Durban (SANAC, 2017b). It has also been noted from literature that gays, lesbians, bisexual, transgender and intersex (LGBTI) were experiencing challenges of social stigma. As a result, men having sex with

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men may find it difficult to disclose their sexuality to healthcare workers and get the healthcare they need (Duby et al., 2018).

In addition, the HIV prevalence in children in South Africa has been on the decline from 260 000 in 2018 to 14 000 in 2018. Recent studies confirm that the decline was as a result of prevention of mother-to-child transmission (PMTCT) programmes (Duby et al., 2018).

In a bid to educate people in South Africa about HIV and AIDS, awareness campaigns have been conducted through several organizations which include LoveLife, Soul City Institute and MTV Shuga (AVERT, 2020). The aim of these awareness campaigns was also to raise awareness about the stigma people living with HIV face, as well as to raise awareness about HIV testing and risk. Therefore, this report aims to profile the HIV epidemic trends in the City of Johannesburg, particularly on the key and vulnerable populations.

City of Johannesburg Profile on the HIV Epidemic Trends

Purpose of the profiling exercise

The main purpose of the City of Johannesburg profile on the HIV epidemic trends was to accelerate progress of HIV response by outlining key lessons, identifying best practice, gaps/challenges and make recommendations as outlined in the diagram below. These key expected outcomes will contribute towards the implementation of the actions plans that were aligned to HIV epidemic response. The profiling exercise involved gathering information which aim to inform the Multisectoral District Implementation Plan (MDIP) baseline, budgeting, target setting, training and advocacy work.

Figure 1: Purpose of the HIV epidemic trends profiling



The information gathered during the profiling exercise focused on determining the progress made in response to the HIV epidemic in the City of Johannesburg for the period 2018 to 2020.

Specific Objectives

The specific objectives of the profiling exercise were to:

- Develop an HIV profile outline of key populations, adolescent girls and young women in the City of Johannesburg in consultation with all organizations and government departments implementing key populations programmes.
- Assess progress and key achievements in response to HIV epidemic in the City of Johannesburg during the period 2018 to 2020.
- Identify gaps and challenges influencing non-achievement of key results.
- Identify best practise and lessons learnt [what works and should be improved; what does not work and should be dropped; and what is missing (emerging issues) that should be added].
- Develop a District Profile on the epidemic and response (including programme data) based on analysis of data collected, gaps and challenges.
- Develop one-page brief profiles for high burden regions as an annex to the City District Profile or factsheet.
- Convening and facilitating a meeting with City of Johannesburg stakeholders to present profiles and obtain buy-in.

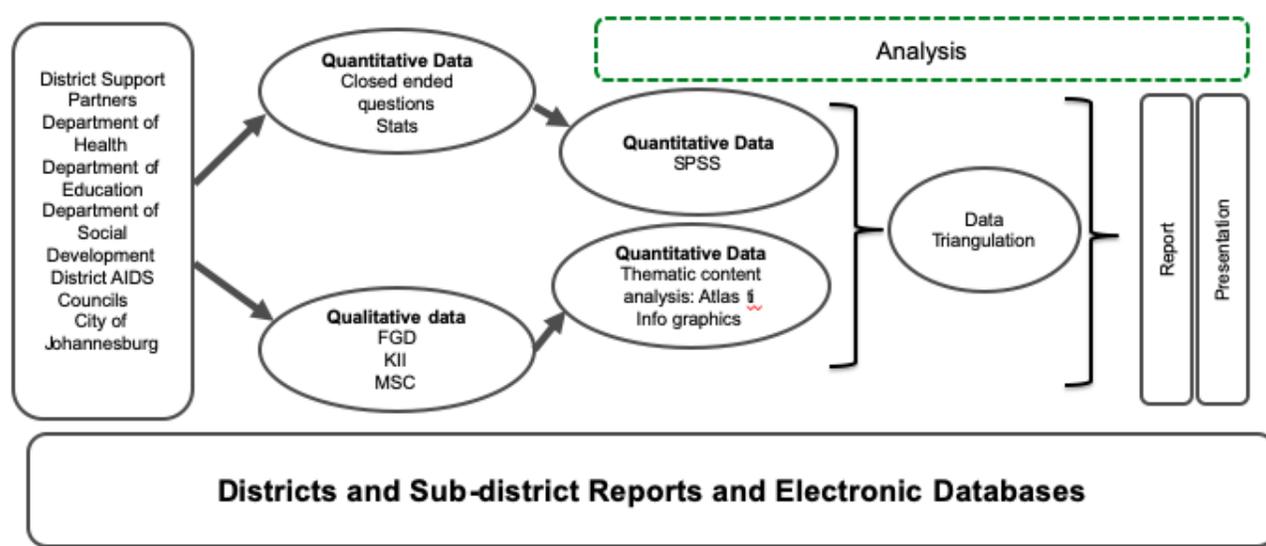
City of Johannesburg Profile on the HIV Epidemic Trends

PROFILING EVALUATION METHODOLOGY

Evaluation Design

The evaluation exercise was based on a mixed method approach that involved qualitative and quantitative data collection as illustrated on the diagram below.

Figure 2: Evaluation methodology



Data Collection

In-depth interviews (IDIs), key-informant interviews (KIIs) and focus group discussions were used for qualitative and quantitative data collection. Sampling of the respondents was **purposive** coupled with **snowballing** within selected organizations. **Stratification** was done to ensure geographic representation across regions. This was continued up to the end of the data collection period as well as to reach saturation.

The data flow was in-line with the study methodology; from collection, analysis and presentation to clients. Data collected was triangulated by the team via, but not limited to, focus group discussions/meetings, key informant interviews (KIIs) and desktop review of secondary quantitative and qualitative programmatic data, survey data and other relevant epidemiological data. The evaluation also involved the use of a web-based online data collection tools that allowed for virtual real time data collection in the context of COVID. All respondents in the selected sectors were contacted by Field Team Leaders to set up *Virtual Interviews via Zoom, Teams, WhatsApp or Cell phone*. Calls were recorded not only for quality control purposes but also for data validation and transcribing. In incidences where respondents have data problems, data support was provided for respondents who would like to be interviewed via Zoom, Teams Skype or WhatsApp.

This evaluation exercise was conducted during the COVID-19 pandemic; therefore, no face-to-face interviews were carried out; all the in-depth interviews were undertaken virtually. Participants based in the same office at the time

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of the interview were requested to maintain social distancing and also to wear masks. The health and wellbeing of respondents was of great importance in this study.

Thembisa estimates used are from a model developed for the five biggest metropolitan districts in South Africa, namely City of Cape Town, City of Ekurhuleni, City of eThekweni, City of Johannesburg, and City of Tshwane. The model is not yet published; a final version was shared by UNAIDS.

Data Analysis

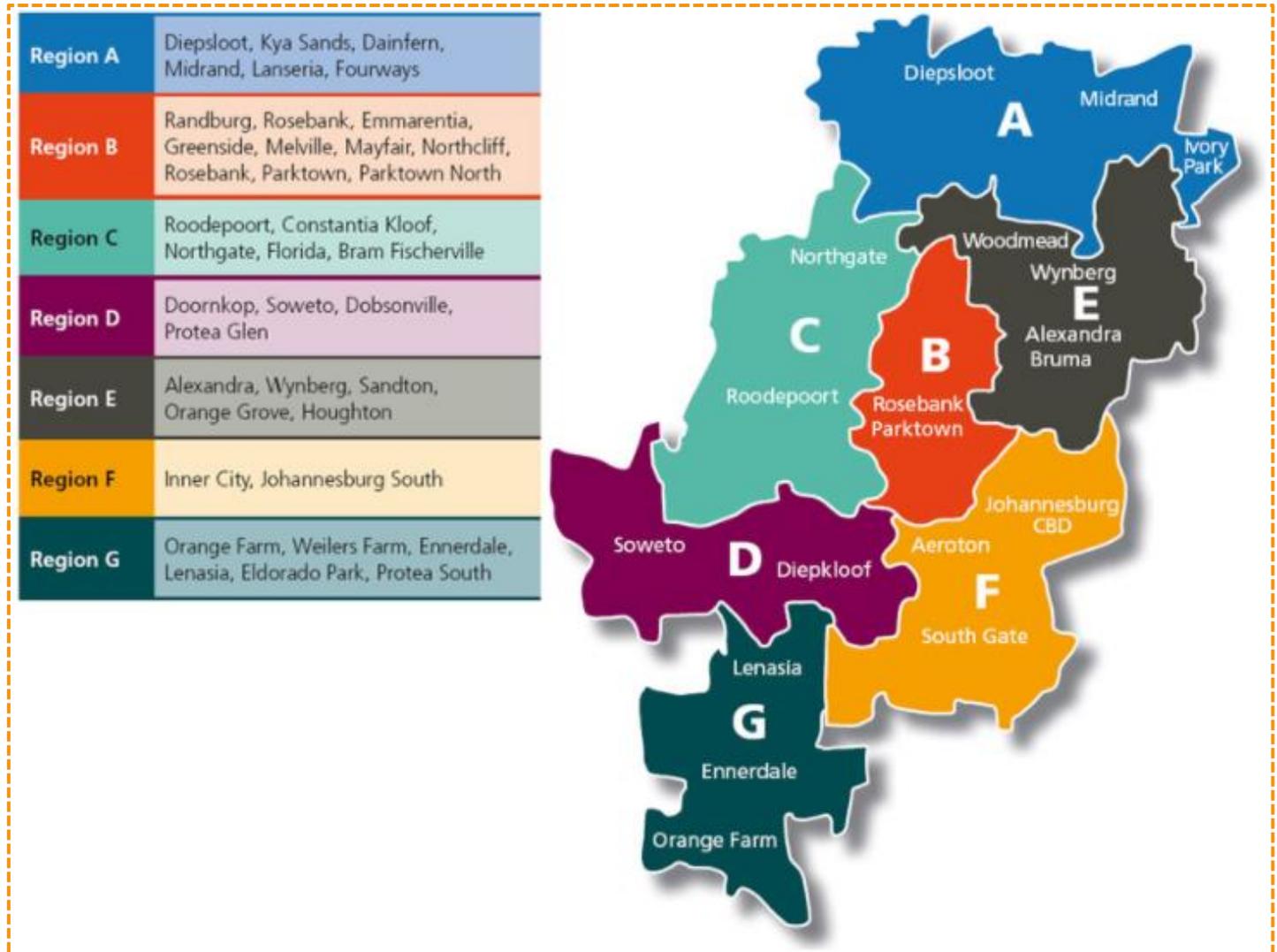
The data collected was reviewed and coded for unifying ideas. Content analysis was used to analyze the data that entailed the reading and reviewing of interviews. This was done to ensure that meaningful units were identified and condensed into categories and themes based on prior formulated themes. Emerging themes and subthemes from the interviews were noted and included in this report. Data from online databases were exported to Microsoft Excel Spreadsheet generate graphical presentations for trend analysis.

City of Johannesburg Profile on the HIV Epidemic Trends

City of Johannesburg Map

The City of Johannesburg is divided into 7 Regions (Region A to G).

Figure 3: City of Johannesburg Map



(Department of Health, 2019a); Date extracted: 4 November 2020

City of Johannesburg Profile on the HIV Epidemic Trends

City of Johannesburg Health facilities

Below is a list of health facilities providing health services per region

Region A

Bophelong (Region A) Clinic, Diepsloot South clinic, Ebony Park / Kaalfontein Clinic, Eyathu Ya Rona clinic, Halfway House clinic, Hikhensile clinic, Mayibuye clinic, Midrand West Clinic, Mpumelelo clinic, Nizamiya Clinic, OR Tambo Clinic, Rabie Ridge clinic, Thuthukani clinic, Witkoppen Clinic.

Region B

Berario clinic, Bosmont clinic, Claremont clinic, Parkhurst clinic, Randburg clinic, Riverlea Major clinic, Rosebank Satellite clinic, Sophiatown clinic, Westbury clinic, Windsor clinic.

Hospitals

Helen Joseph hospital; Rahima Moosa hospital, Tara HS Moross hospital

Region C

Bophelong (Region C) Clinic, Braamfischer clinic, Cosmo City clinic, Davidsonville clinic, Discoverers CHC, Helderkruijn clinic, Princess clinic, Rex Street clinic, Siphumlile clinic, Sol Plaatjies clinic, Tshepisong clinic, Weltevreden Park clinic, Zandspruit clinic.

Closed health facilities

Florida clinic

Region D

Chiawelo CHC, Diepkloof LA clinic, Diepkloof Provincial clinic, Elias Motsoaledi clinic, Green Village clinic, Itireleng CHC, Jabavu clinic, Klipspruit West clinic, Lillian Ngoyi CHC, Mandela Sisulu clinic, Meadolands Zone 2 clinic, Michael Maponya clinic, Mofolo CHC, Mofolo South clinic, Moroka clinic, Naledi clinic, Nokuphila clinic, Noordgesig clinic, Orlando Provincial clinic, Protea Glen clinic, Senaoane clinic, Shanty clinic, Sinqobile clinic, Slovoville clinic, Tladi L.A clinic, Tladi Provincial clinic, Zola CHC, Zola Gateway clinic, Zondi clinic,

Hospitals

Bheki Mlangeni hospital, Chris Hani Baragwanath hospital.

Region E

4th Avenue clinic, Alexandra 8th Avenue clinic, Alexandra CHC, Alexandra East Bank clinic, Petervale clinic, Riverpark clinic, Sandown clinic, Thoko Mngoma clinic, Wendywood clinic.

Hospitals

Edenvale hospital, Sizwe Tropical Diseases hospital

Closed health facilities

Orchards clinic

Region F

17 Esselen Str clinic, Bellavista clinic, Bezvalley clinic, Crosby clinic, Crown Gardens clinic, Glenanda clinic, Hilbrow CHC, Jeppe Street clinic, Kibler Park clinic, Malvern clinic, Mayfair clinic, Rosettenville clinic, South Hills clinic, Yeoville clinic.

Hospitals

Charlotte Maxeke Johannesburg hospital, South Rand hospital,

Closed health facilities

Joubert Park clinic, 80 Albert Street clinic, Jeppe clinic

Region G

Barney Molokoane clinic, Eikenhof Provincial clinic, Eldorado Park X2 clinic, Eldorado Park X9 clinic, Ennerdale X8 clinic, Ennerdale X9 clinic, Freedom Park clinic, Imbalenhle clinic, Kliptown clinic, Lawley 2 clinic, Lawley clinic, Lenasia clinic, Lenasia Health Centre X2 clinic, Lenasia South CHC, Lenasia South Civic clinic, Lenasia X10 clinic, Mid Ennerdale clinic, Mountainview clinic, Orange Farm X7 clinic, Protea South clinic, Sinethemba clinic, Stretford CHC, Thembelihle clinic, Thulamtwana clinic, Vlaktefontein clinic, Weilers Farm clinic, Wildebeesfontein clinic.

Closed health facilities

Finetown clinic

City of Johannesburg Profile on the HIV Epidemic Trends PROFILING EVALUATION FINDINGS

City of Johannesburg Population

The total estimated population for the City of Johannesburg was 5.34 million by June 2020 (DHIS, 2020). Of the total population, 2.68 million were females and 2.67 million males. Region D has the highest population that constituted 25% (1 335 297) of the total population for the city of Johannesburg; and Region B has the lowest population of 7% (395 069) (DHIS, 2020). Regions A and C have the same population size of 13% of the total population while Region E closely follows at 12% of the total population for the City of Johannesburg (Table 1). The majority of the population was composed of both males and females within the age group of 25-34 years; and they both constituted 18.2% (974 203) of the total population. The population for the less than 5 years, constituted 8.6% (462 239); and 1.7% (92 573) was for the older with 75 years and above for both females and males (Table 1). The City of Johannesburg will require mitigation strategies that are associated with the aging population, and these also constitute part of the key and vulnerable population. The adolescent girls and young women (AGYW; 15-24 years) constituted 7.5% (402 151) of the total population (Table 1). The AGYW are at more risk of HIV, TB and STIs and the increase in population for this population will require additional strengthening of programs that are targeted at educating and encouraging the AGYW on good practices and behavior change.

Table 1: City of Johannesburg Population, Jul 2019 to Jun 2020

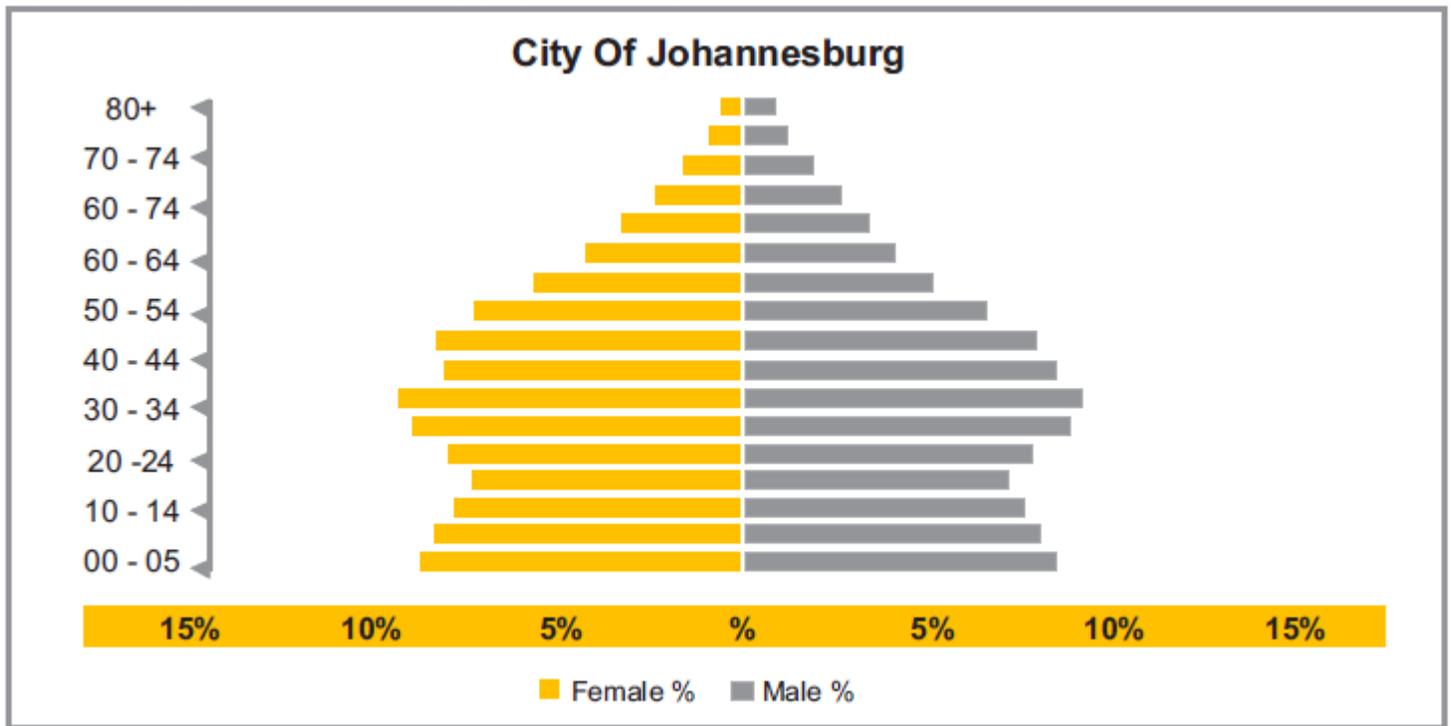
Age group	Region							Total City of Johannesburg
	A	B	C	D	E	F	G	
Female Population								
under 5 years	30 768	16 891	30 777	57 088	27 595	31 235	34 145	228 496
05-09 years	29 251	16 058	29 260	54 275	26 235	29 697	32 462	217 240
10-14 years	27 414	15 050	27 423	50 867	24 588	27 831	30 424	203 597
15-19 years	25 959	14 251	25 967	48 166	23 282	26 354	28 808	192 786
20-24 years	28 191	15 476	28 200	52 308	25 284	28 620	31 285	209 365
25-29 years	32 303	17 733	32 313	59 937	28 972	32 794	35 848	239 901
30-34 years	33 341	18 304	33 352	61 864	29 903	33 849	37 001	247 614
35-39 years	30 494	16 740	30 503	56 581	27 349	30 958	33 841	226 468
40-44 years	28 886	15 857	28 894	53 596	25 907	29 325	32 056	214 521
45-49 years	23 948	13 146	23 956	44 434	21 479	24 312	26 576	177 851
50-54 years	18 612	10 217	18 618	34 533	16 693	18 895	20 655	138 222
55-59 years	14 774	8 111	14 779	27 414	13 251	14 999	16 396	109 724
60-64 years	12 397	6 806	12 401	23 002	11 119	12 586	13 758	92 069
65-69 years	9 560	5 248	9 563	17 738	8 574	9 706	10 609	70 998
70-74 years	6 794	3 730	6 797	12 607	6 094	6 898	7 540	50 459
75-79 years	4 327	2 376	4 328	8 028	3 881	4 392	4 801	32 132
80 years and older	3 378	1 854	3 379	6 267	3 029	3 429	3 748	25 083
Total population	360 397	197 847	360 509	668 703	323 235	365 880	399 955	2 676 526
Male Population								
under 5 years	31 474	17 279	31 484	58 399	28 228	31 953	34 929	233 743
05-09 years	29 868	16 397	29 877	55 418	26 788	30 321	33 147	221 816
10-14 years	27 887	15 309	27 896	51 743	25 011	28 311	30 948	207 104
15-19 years	26 277	14 425	26 286	48 757	23 568	26 677	29 161	195 151
20-24 years	28 427	15 605	28 435	52 743	25 495	28 859	31 546	211 108
25-29 years	32 230	17 693	32 240	59 801	28 907	32 720	35 768	239 360
30-34 years	33 303	18 282	33 314	61 793	29 869	33 810	36 958	247 328
35-39 years	29 016	15 929	29 025	53 837	26 024	29 457	32 201	215 488
40-44 years	29 627	16 265	29 636	54 972	26 572	30 077	32 879	220 026

City of Johannesburg Profile on the HIV Epidemic Trends

45-49 years	26 148	14 354	26 156	48 516	23 452	26 545	29 017	194 187
50-54 years	20 092	11 030	20 098	37 279	18 020	20 397	22 297	149 213
55-59 years	15 018	8 245	15 023	27 866	13 470	15 246	16 667	111 535
60-64 years	11 400	6 258	11 403	21 152	10 225	11 573	12 651	84 663
65-69 years	8 172	4 486	8 175	15 163	7 329	8 297	9 069	60 691
70-74 years	5 563	3 054	5 565	10 321	4 989	5 648	6 173	41 313
75-79 years	2 959	1 624	2 959	5 489	2 653	3 003	3 283	21 970
80 years and older	1 803	990	1 804	3 345	1 617	1 830	2 001	13 388
Total population	359 262	197 222	359 373	666 594	322 214	364 724	398 693	2 668 082
Total Population (Males + Females)								
Total population (% of total CoJ pop)	s	395 069 (7%)	719 882 (13%)	1 335 297 (25%)	645 449 (12%)	730 603 (14%)	798 647 (15%)	5 344 607

Source: (DHIS, 2020); Date extracted: 25 September 2020

Figure 4: City of Johannesburg population pyramid, Jul 2019 to Jun 2020



Source: (DHIS, 2020); Date extracted: 25 September 2020

City of Johannesburg Profile on the HIV Epidemic Trends

Socio-economic profile

Social and structural factors increase vulnerability to HIV and TB, and they undermine prevention and treatment strategies. These factors include poverty, unemployment, inadequate access to quality education and gender inequality (GAC, 2017). These factors impact on health seeking behaviour and adherence to prescribed regimens. It has been noted that people with lower socio-economic status experience the greatest barriers to accessing health care (GAC, 2017).

Unemployment

In 2018/2019, unemployment in the city has increased by 1% (City of Johannesburg, 2019). Unemployment level was at 29.8% [using narrow definition] and 31.7% [using broader definition of unemployment] by May 2019 (City of Johannesburg, 2019). The City recognises that a large youth (18-35) population also has great potential. As such the City is committed to fostering skills and entrepreneurship opportunities among the youth.

The City of Johannesburg contributes 14.91% of the Gross Domestic Product (GDP) of South Africa. Formal employment accounts for 83.54% of total employment figures in the city. Informal sector account for 16.46% of total employment (City of Johannesburg, 2019). Over the past decade, employment through the informal sector has seen an average grown rate of 5.6% (City of Johannesburg, 2019).

Poverty and Inequality

The City of Johannesburg had a Human Development Index (HDI) of 0.724 in 2018, which is better than that of South Africa generally, which sits at 0.654. (City of Johannesburg, 2019). HDI is the combination of three basic dimensions of human development: A long and healthy life, knowledge and a decent standard of living. Over the past decade the city has seen a slow but steady improvement in HDI. Similarly, the Gini coefficient of the city, a measure of income inequality, moved from 0.64 in 2008 to 0.62 in 2018 (City of Johannesburg, 2019).

Despite these developments, Johannesburg continues to struggle with high levels of inequality, poverty, social exclusion and underdevelopment. In 2018, about 45% of the city's population lived in poverty (City of Johannesburg, 2019). These issues are exacerbated further because many people live in informal conditions with poor access to basic services with long and costly commutes as a result of the city's apartheid spatial planning.

Given the rate of the population growth and high structural unemployment, stronger economic growth is required to deal with the challenge of poverty. The city needs to grow economically, in order to create jobs and take care of its social obligations for those who may not be in economically viable situations. The likely effect of high sustained in-migration patterns and population growth is that the growth in demand for jobs and services far outpaces the number of jobs and infrastructure available thereby putting pressure on the service.

Migration

Johannesburg continues to attract migrants seeking economic opportunity, access to services, political asylum and refuge. The pace and scale of migration between and within provinces, rural areas, towns and cities is complex, with significant movement between secondary towns and primary cities, between homes in rural areas and places of work in the city, and between the urban core and its peripheries (City of Johannesburg, 2016). Migration brings cultural, political and social plurality, creating opportunities and challenges as migrants articulate diverse ways of being in the city, with more people attempting to access an already-stretched resource pool. As Johannesburg becomes even more multi-cultural, building social cohesion and creating spaces that allow for multiple expressions of this rich diversity is an ongoing priority for urban governance role players (City of Johannesburg, 2016). The

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manner in which the city addresses the reality of migration of those both from within South Africa and beyond its borders will influence the daily experience of all the city's residents, regardless of origin.

Water and Sanitation

Water and sanitation services in the city are provided by the municipal entity, Johannesburg Water (City of Johannesburg, 2018). It supplies approximately 833 004 domestic, commercial and industrial customers and serves an estimated consumer base of about 5.1 million people (City of Johannesburg, 2018). As a service-delivery oriented entity, Johannesburg Water has identified key programmes to ensure the delivery of reliable and quality services to all residents, including marginalised areas (City of Johannesburg, 2019). About 6 528 households were provided with basic sanitation against a target of 4 834 households in informal settlements in 2018/2019 (City of Johannesburg, 2019). In addition, a total of 8 287 households were provided with access to basic water and 131.63 km of water pipes were replaced during the same financial year (City of Johannesburg, 2019).

Housing services

In 2018/2019, the City of Johannesburg's housing backlog was estimated at over 300 000 (City of Johannesburg, 2019). This implies the need to address challenges of informal settlements, overcrowding in hostels, the non-regulated backyard rental sector, inner city overcrowding and homeless people in general. In the 2018/2019 financial year, housing focused on: upgrading informal settlements, construction of mixed housing opportunities, construction of serviced sites, issuing of title deeds to beneficiaries, upgrading and surfacing roads in existing RDP projects and the installation of solar geysers (City of Johannesburg, 2019).

To address the City's ever-increasing housing backlog, **Diphetogo** was introduced for the period 2018/2019 to 2020/2021, to ensure delivery of 100 000 housing opportunities and 20 000 units in the inner city (City of Johannesburg, 2019). The Department of Housing and the Johannesburg Social Housing Company (JOSHCO) was assigned with the responsibility to work in partnership with the private sector (City of Johannesburg, 2019).

A total of 3 418 housing units were constructed in 2016/2017, and in 2017/2018, 2 103 units were completed (City of Johannesburg, 2019). Human Settlement Development Grant spend for 2016/2017 was 98.6%, and in 2017/18 it was at 65.745%. In 2018/2019 it reduced to 58.02%. The capital spending target was achieved at 92.74% in 2016/2017, and 86.80% in 2017/2018, and then increased to 98% in 2018/2019 (City of Johannesburg, 2019).

Sexual offences reported to the police

Sexual offences are sexual activities that a person has not consented to, and these include rape and sexual assault (SAPS, 2019). Female sex workers were the most affected in the City of Johannesburg, with 50.9% reporting physical assault and 21.9% reporting sexual assault or rape (SAHMS Report, 2014; Coetzee et al., 2017).

During the period under review, the total number of sexual offences among seven (7) police stations with highest number of cases, increased from 1 365 in 2016/17 to 1 425 in 2018/19 (Table 2). Sexual offences in the City of Johannesburg across the top seven (7) stations ranged from 177 (Diepsloot) to 226 (Orange farm) in 2018/2019. The percentage increase in the number of sexual offences from 2017/2018 to 2018/2019 was highest in Moroka (16.9%), followed by Orange Farm (15.9%). Dobsonville police station had the lowest increase in the number of sexual offences of 1% from 2017/8 to 2018/19. The criminalization of sex workers compounds the issue of violence as it discourages sex workers from reporting rape and assault and it also perpetuates discrimination and abuse in all forms, including violence (AVERT, 2020). There is need to increase awareness campaigns about sexual abuse through various platforms that include community radio stations, screens and print media. Victims should be encouraged to report all forms of sexual abuse to the police and to receive psychosocial support.

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Table 2: Stations in the top 10 for Sexual offences in City of Johannesburg: 2017-2019

Station	2016/17	2017/18	2018/19	% Change (2018 to 2019)
Orange farm	184	195	226	15.9%
Temba	211	204	213	4.4%
Ivory Park	207	195	212	8.7%
Dobsonville	227	206	208	1.0%
Moroka	201	177	207	16.9%
Hillbrow	155	168	182	8.3%
Diepsloot	180	166	177	6.6%
Total	1365	1311	1425	8.7%

Source: (SAPS, 2019), Date extracted; 19 November 2020

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Disease Burden

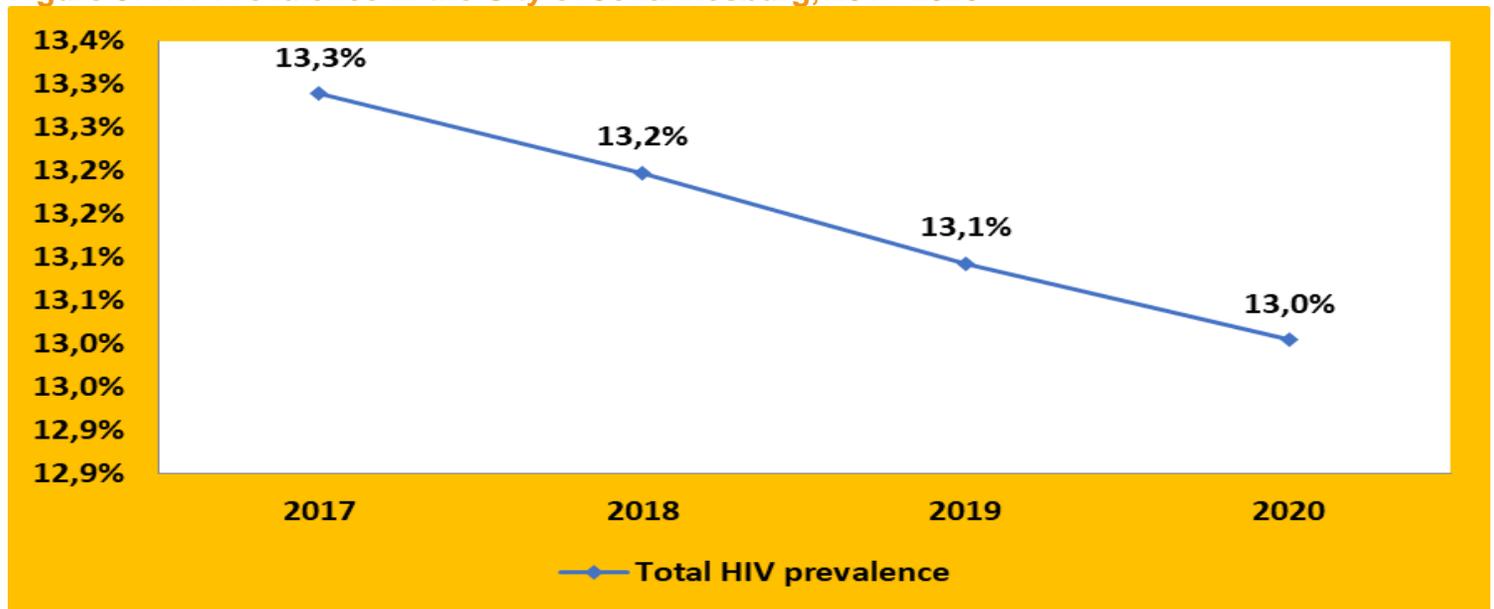
Tuberculosis and HIV/AIDS increase each other's effects thus accelerating the weakening of the immune system. As the viral load increases, tuberculosis increases the progression of HIV infection into AIDS, and in turn HIV infection reduces the CD4 count and impacts the course of tuberculosis, leading to death (Pan American Health Organization, 2018). Research indicates that HIV-negative people have a 5% likelihood of having TB infection advance to disease in the first 2 years; however, HIV-positive people have 3%-13% likelihood per year of having TB infection progress to disease. Consequently, HIV response efforts need to be coordinated with TB initiatives in order to rapidly diagnose HIV, TB case-finding, assess immune status, and correctly treat both infections (Gray & Cohn, 2013).

HIV Burden

HIV Prevalence

The overall estimated HIV prevalence during the period under review has marginally declined from 13.3% in 2017 to 13% in 2020 (Figure 5). The decline can be attributed to HIV intervention programs which include prevention therapy of mother to child transmission (PMTCT), expansion of HIV testing services, same day initiation on antiretroviral and programs that include improved linkage to care, strategies to improve adherence to treatment have also contributed to the steady decline in HIV prevalence.

Figure 5: HIV Prevalence in the City of Johannesburg, 2017-2020

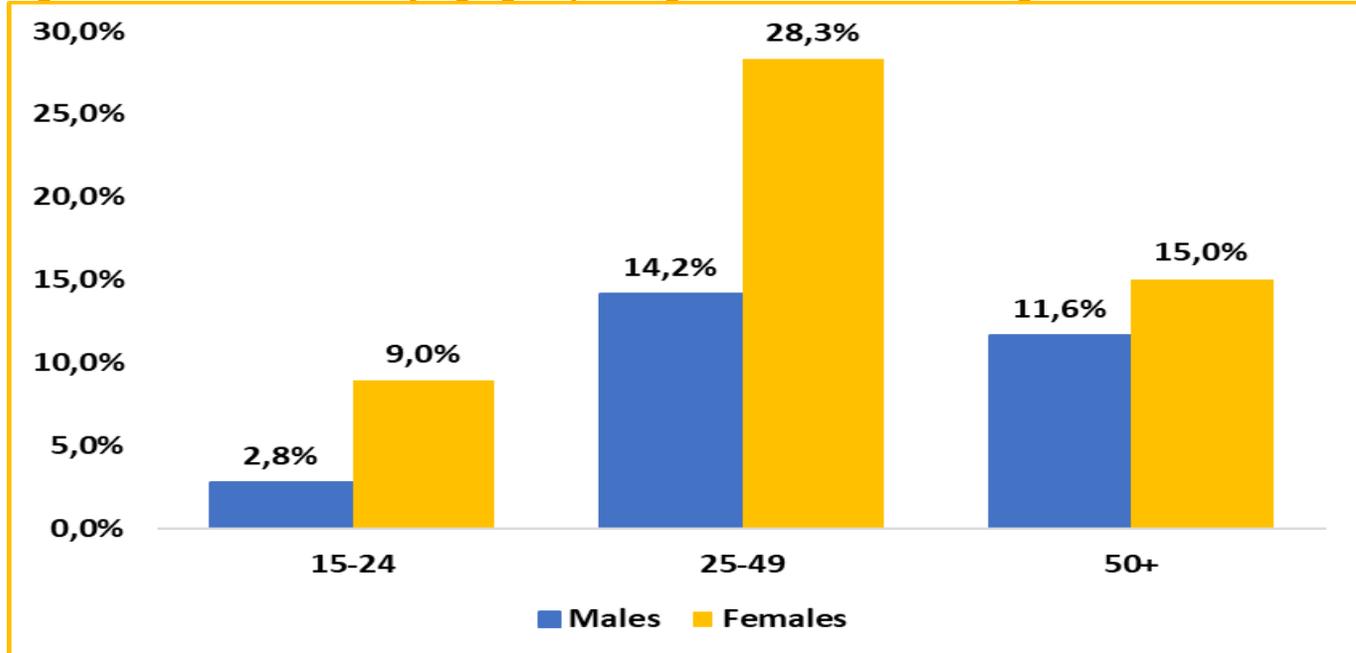


Source: (Thembisa Model version 4.2 for five metros, 2019); Date extracted: 13 September 2020

As figure 6 below illustrates, the estimated HIV prevalence was highest among females compared to males across all age groups (Figure 6). Prevalence was also highest for the 25 to 49-year age group (28.3%). The high prevalence in females can be partly attributed to the implementation of the ART programme, as more women than men are receiving ART (Simbayi et al., 2018). Implementation of ART has resulted in faster declines in HIV and AIDS-related mortality among women than men (Simbayi et al., 2018).

City of Johannesburg Profile on the HIV Epidemic Trends

Figure 6: HIV Prevalence by age group and gender in Johannesburg as at 2020

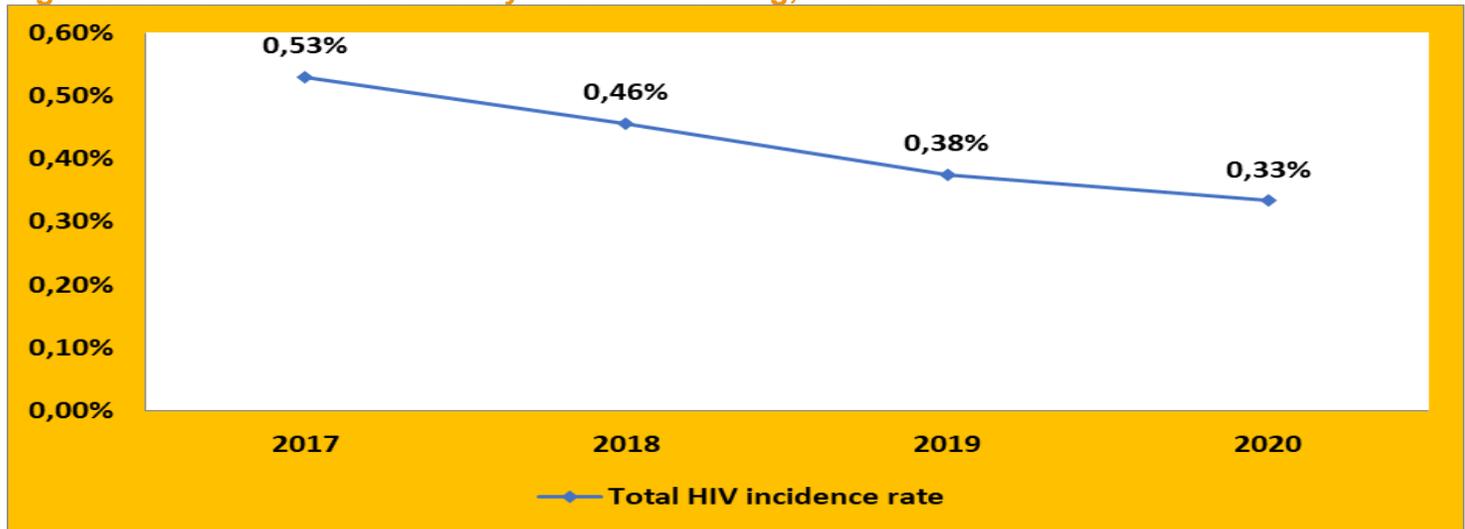


Source: (Themبisa Model version 4.2 for five metros, 2019); Date extracted: 13 September 2020)

HIV incidence

Figure 7 shows a decrease in the overall estimated HIV incidence from 0.53% in 2017 to 0.33% in 2020. This downward trend in HIV incidence could be attributed to HIV prevention programmes that include the universal test and treat, same day ART initiation and retention in care strategies. In addition, this was also reinforced by expansion of HIV programmes that focusses on key and vulnerable populations such as Adolescent girls and young women, men including the voluntary medical male circumcision services, male and female condom distribution, and pre- and post-exposure prophylaxis.

Figure 7: HIV incidence in the City of Johannesburg, 2017-2020

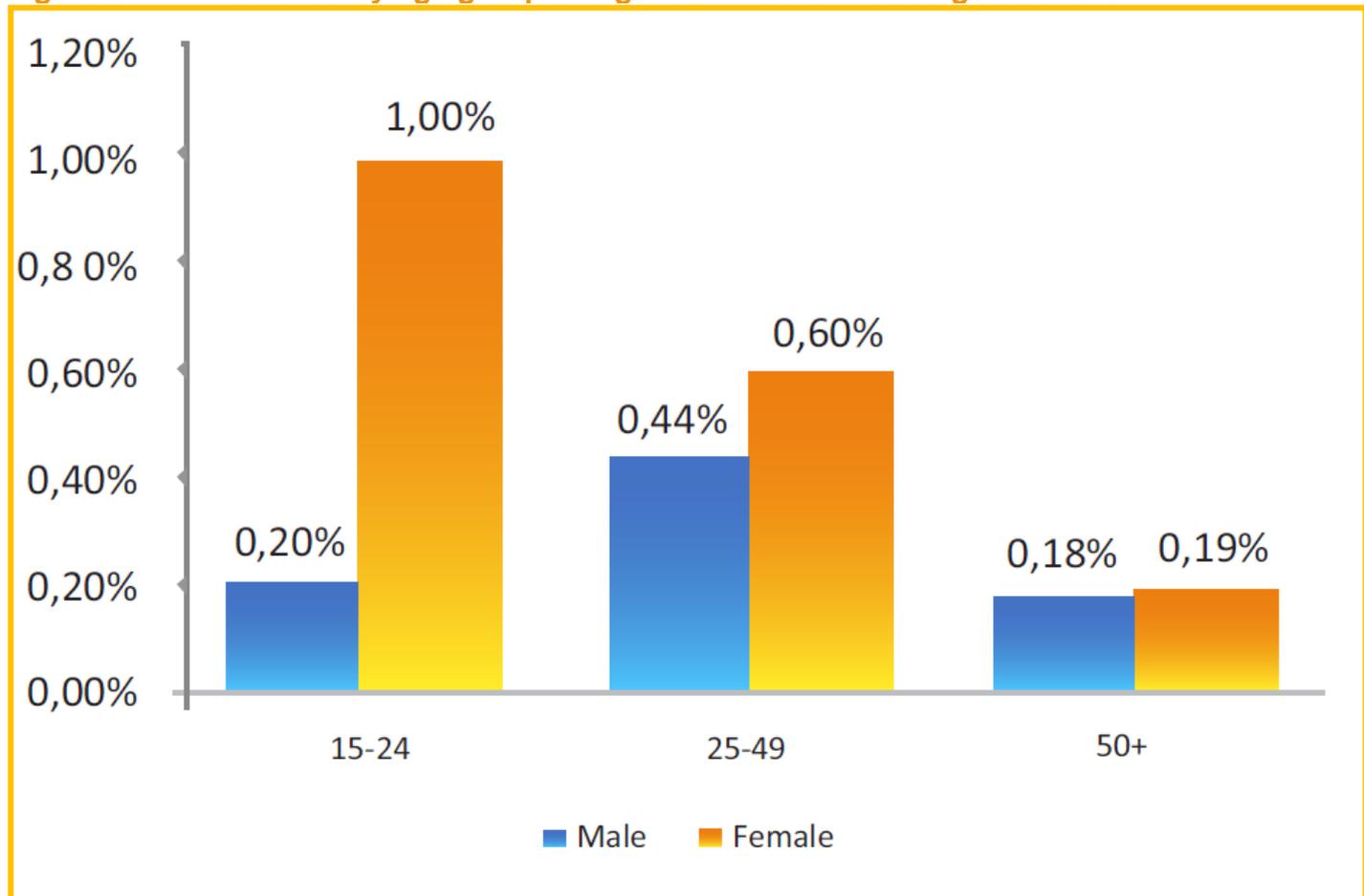


Source: (Themبisa Model version 4.2 for five metros, 2019); Date extracted: 13 September 2020)

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Figure 8 also shows that in 2020, the estimated HIV incidence was highest among females compared to men across all age groups. The socioeconomic circumstances increase the risk of HIV infection among females (Simbayi et al., 2018). In 2020, the HIV incidence was highest among young women (15-24 years) (Figure 8). Previous studies have shown that early sexual debut and multiple sexual partners were among risk factors for the transmission of HIV in young women (Simbayi et al., 2018). There is need to educate the youth through awareness campaigns in the City of Johannesburg about the risks associated with multiple sexual partners and early sexual debut. Intervention programs targeting AGYW need to be reinforced and such programs include Keeping Girls in Schools, DREAMS and comprehensive sexuality education.

Figure 8: HIV incidence by age group and gender in Johannesburg as at 2020



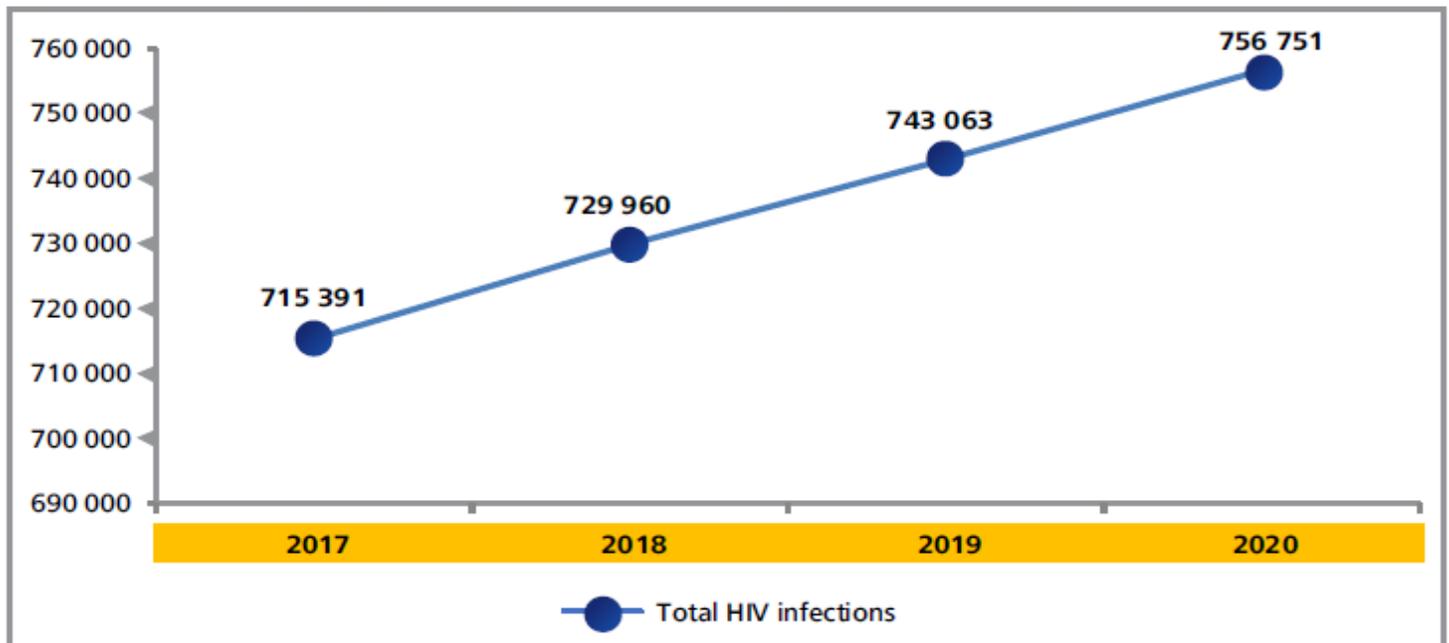
Source: (Thembisa Model version 4.2 for five metros, 2019); Date extracted: 13 September 2020

Number of people living with HIV

The City of Johannesburg has seen a 5.8% increase in the total number of people living with HIV, from 715 391 in 2017 to 756 751 in 2020 (Figure 9).

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Figure 9: Number of people living with HIV in the City of Johannesburg, 2017-2020

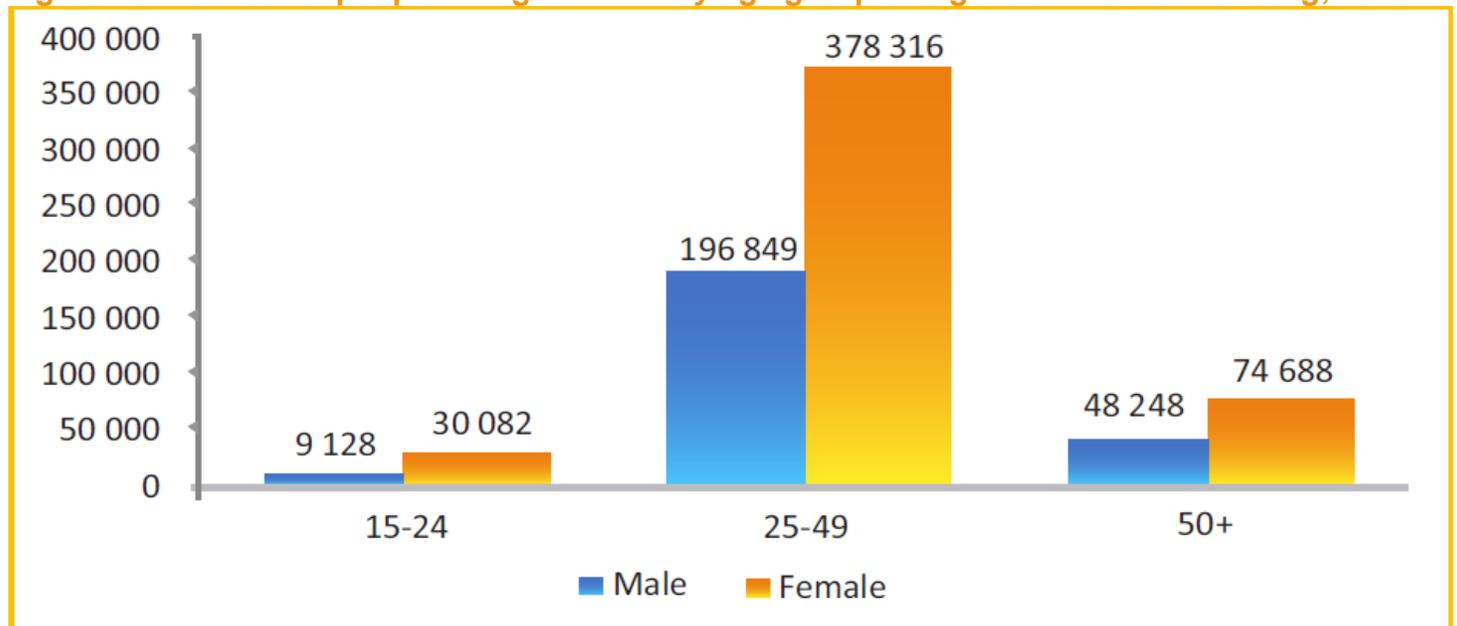


Source: (Thembeisa Model version 4.2 for five metros, 2019); Date extracted: 01 October 2020

Total number of people living with HIV by age group

In 2020, the estimated number of people living with HIV was highest among females across all age groups (Figure 10). Number of people living with HIV was also highest among people aged 25 to 49 years and lowest among the young age groups (15 -24 years). There is need to intensify prevention strategies targeting women since they are also more vulnerable to high risk of HIV infection.

Figure 10: Number of people living with HIV by age group and gender in Johannesburg; 2020



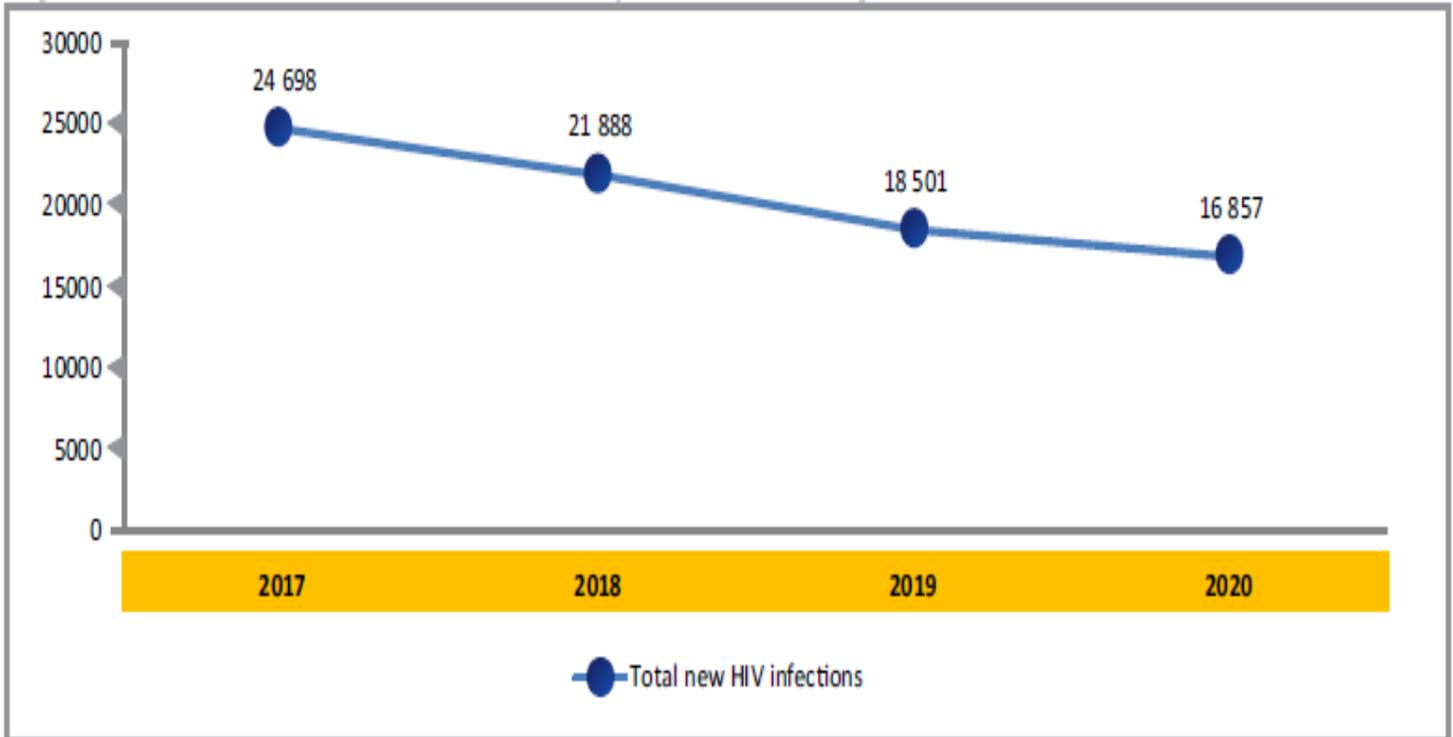
Source: (Thembeisa Model version 4.2 for five metros, 2019); Date extracted: 13 September 2020

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Number of new HIV infections

The estimated number of new HIV infections has declined by 31.7% from 24 698 in 2017 to 16 857 in 2020 (Figure 11). This translates to 7.9% decrease annually on average. The decrease in new HIV infections could be attributed to the implementation of HIV prevention programmes in the district which include prevention of mother to child transmission, HCT, voluntary medical male circumcision (VMMC), condom distribution, provision of PrEP to key populations; comprehensive sexuality education, same day ART initiation and increased access to ART.

Figure 11: Total new HIV infections in the City of Johannesburg, 2017-2020



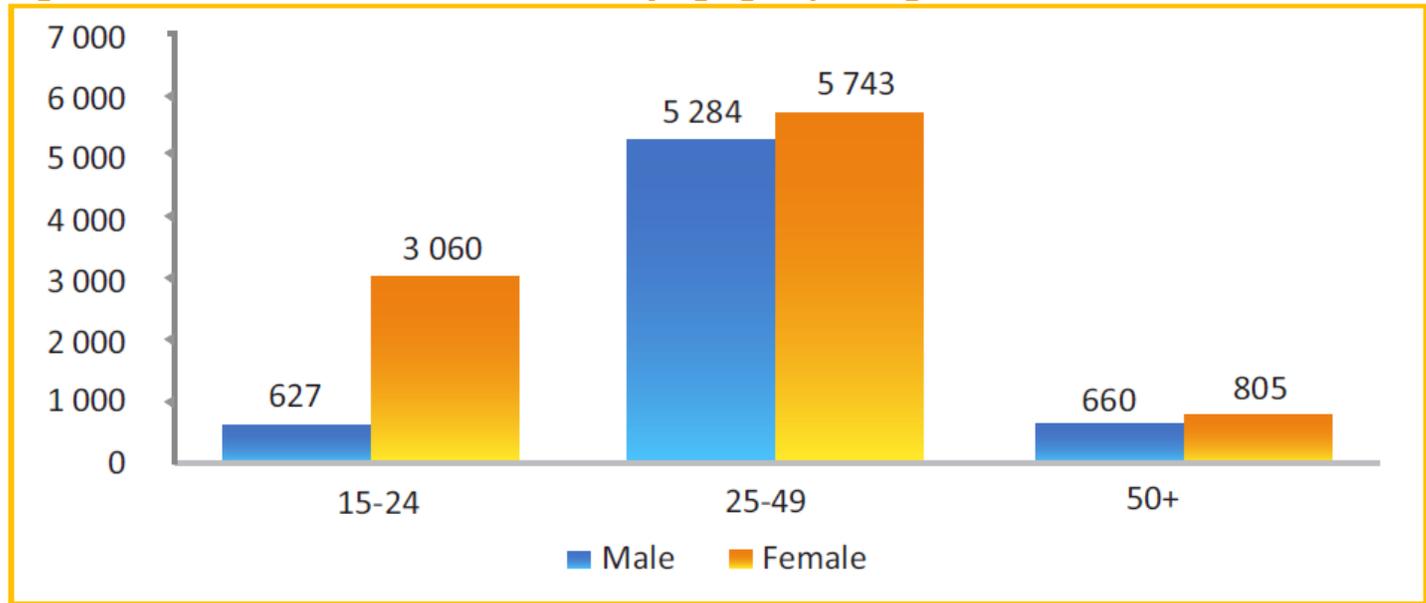
Source: (Thembisa Model version 4.2 for five metros, 2019); Date extracted: 13 September 2020

New HIV infections by age group and gender

In 2020, new HIV infections in the City of Johannesburg were highest among individuals aged 25-49 years (Figure 12). New HIV infections were also highest among females across all age groups. However, new HIV infections were approximately five (5) times higher among females (3060) compared males (627) for the age group, 15 to 24 years. HIV programs targeting females particularly, the AGYW need to be intensified in the City of Johannesburg.

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Figure 12: Number of new HIV infections by age group and gender as at 2020



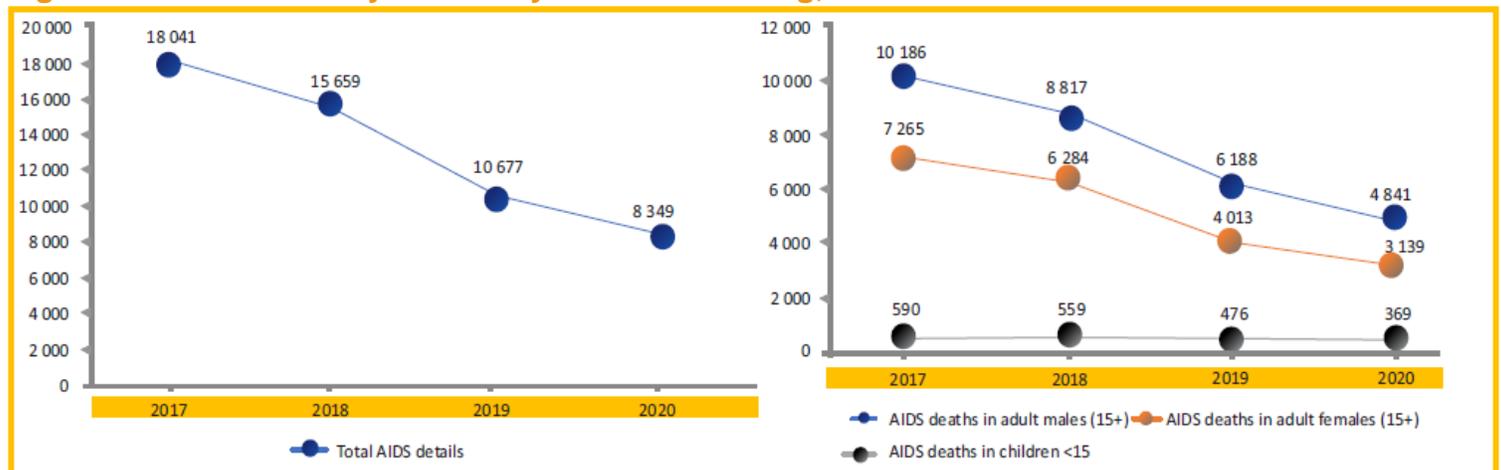
Source: (Thembisa Model version 4.2 for five metros, 2019); Date extracted: 13 September 2020

AIDS related deaths in the City of Johannesburg

The total AIDS related deaths have declined by 53.7% from 18 041 in 2017 to 8 349 in 2020 (Figure 13). During the period under review, the AIDS related deaths were also higher among males aged 15 years and above compared to females (Figure 13).

AIDS related deaths among children decreased from 658 in 2017 to 369 in 2020, and this was a decline of 37.5% (Figure 13). There is need to encourage adherence to medication for patients on ART through adherence clubs, HIV testing and counselling services and family support would be required. This would ensure a continued decrease in AIDS related deaths.

Figure 13: AIDS Mortality in the City of Johannesburg, 2017-2020



Source: (Thembisa Model version 4.2 for five metros, 2019); Date extracted: 13 September 2020

City of Johannesburg Profile on the HIV Epidemic Trends

TB Burden

TB Screening and TB start on treatment

Percentage of clients five years and older screened for TB symptoms in the City of Johannesburg during the period July 2019 and June 2020 was 96% (Figure 15). The TB symptoms screening rate was above 90% across all the Regions with the exception of Regions D (89%) and G (75%) (Figure 15). The two underperforming Regions will need a lot of support to improve on TB symptoms screening and data capturing from the district as they also happen to be amongst the high TB burdened Regions in the city.

Index of suspicion was very low across the City of Johannesburg with only 1.4% (80 595 of 5 863 483) of the clients that were screened for TB symptoms were found to be symptomatic (Table 3). The target set by National Department of Health is to find between 2% and 10% TB presumptive cases out of all the clients five years and older screened for TB symptoms. All the Regions managed to investigate over 90% of their clients for TB except Region C who only investigated 56% of their clients presumed to have TB (Figure 15). The low investigation rate in this Region was mainly due to data quality issues at the time of this report.

The TB positivity rate amongst clients five years and older in the city was very high (10%) during this period with 7 065 clients of the 71 877 investigated for TB having been confirmed to have the disease. The NDoH has set the TB positivity rate at a range between 2 and 10%. The positivity rate was high across the city ranging from 7% (Region C and G) to the highest being 16% (Region B) (Figure 15). This high positivity rate amongst the TB presumptive cases TB implies the need to intensify active case finding across the city as there seem to be a number of people contracting the TB disease in our communities.

The facilities in the city has done very well on their 2nd 90 of the 90 90 90 UNAIDS target by ensuring that all clients confirmed with DS-Tb are initiated on treatment. This is as they managed to initiate 99% (6 999 of 7 065) of their clients on treatment during the period July 2019 and June 2020 (Figure 15). The city will continue to monitor and maintain this performance across all the Regions as this will help in curbing the spread of the TB disease in our communities.

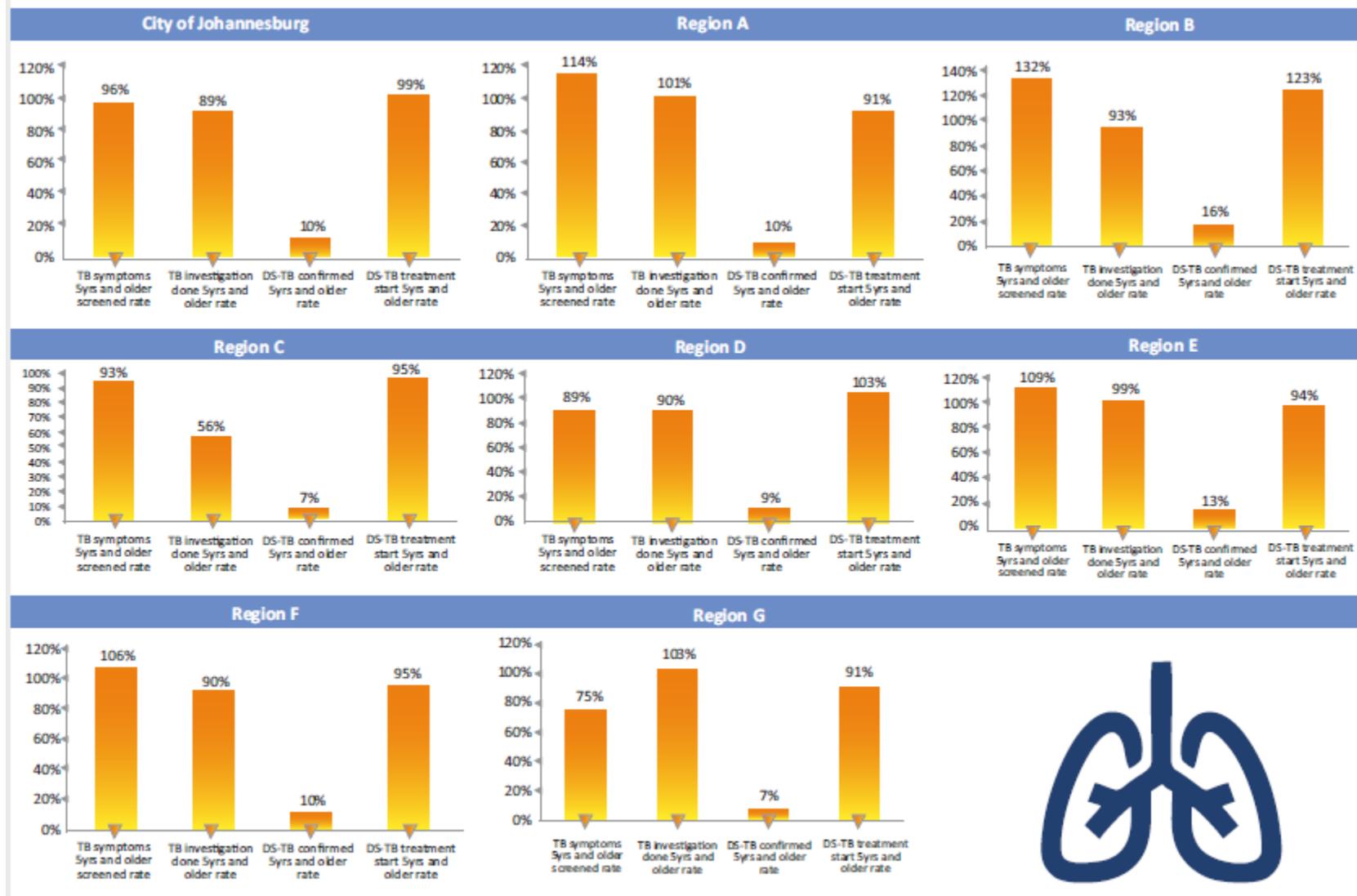
Table 3: Drug Sensitive TB treatment Cascade; July 2019 to June 2020

TB Management as from July 2019 to June 2020		
PHC headcount 5 years and older	6 142 158	
Screen for TB symptoms 5 years and older	5 863 483	
TB Symptom 5 years and older screened in facility rate	96%	1st 90
TB symptomatic 5 years and older	80 595	1.4%
TB investigation done 5 years and older	71 877	89.2%
DS-TB confirmed 5 years and older	7 065	9.8%
DS-TB treatment start 5 years and older	6 999	
DS-TB treatment start 5 years and older rate	99%	2nd 90
TB treatment success rate (7 816 of 9 466) [April 2018 - March 2019]	83%	3rd 90

Source: (DHIS, 2020); Date extracted: 30 October 2020

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Figure 14: TB Screening and TB start on treatment; July 2019 to June 2020



Source: (DHIS, 2020); Date extracted: 25 September 2020

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TB treatment success rate

The City of Johannesburg has struggled on the 3rd 90 of the 90 90 90 UNAIDS set target as only 83.4% (6 466 of 7 856) of the clients initiated on DS-TB treatment during April 2018 and March 2019 were successfully treated (Table 2, Figure 16). It was only Region B with its 90.3% treatment success rate performance that managed to achieve the 90% target during this period April 2018 to March 2019 (Table 4, Figure 16). The NDoH had set the target for the financial year 2018/2019 at 89% and above (Department of Health, 2019b). The poor performance on this indicator could be attributed to high death and lost to follow-up as well as challenges that was brought by the transition from ETRNet reporting system (Department of Health, 2019b) to TIER.Net. The City needs to work on strengthening data quality management systems and patient tracking systems particularly in Regions C, D, E, F and G.

TB clients lost to follow-up rate

In 2018/2019, the overall TB clients lost to follow-up rate was 9.1%, and this was above the planned targets of below 5.5% (Table 4, Figure 15) (Massyn et al., 2020). The lowest TB loss to follow during the same period was in Region A with 4.8% and the highest lost to follow-up rate was reported in Regions D (10.9%) and Region G (11%) (Table 4, Figure 15). The two Regions with the highest lost to follow-up rate are also the high TB burdened Regions in the city. Findings from the 2018/2019 annual report indicate that, the high lost to follow-up rates above the set target of 5.5% were attributed to difficulties in tracing patients as a result of incorrect patient contact details (Department of Health, 2019b). There is need for the City of Johannesburg to educate the communities in all regions about the importance of providing correct demographic information to healthcare service providers.

TB death rate

The overall TB death rate in the City of Johannesburg was 6.1% in 2018/2019, and this was above the planned target of below 5% (Table 4, Figure 15). Across regions, the TB death rate ranged from 3.7% (Region B) to 7.8% (Region D). Late presentation of advanced TB and high HIV co-infection rate (67%) were the major reasons for an increase in TB death rate (Department of Health, 2019a). Communities in all regions particularly Regions D (7.8%) and Region F (7.1%) need more awareness on early presentation of TB symptoms at the nearest health facilities.

Table 4: Drug Sensitive TB treatment outcomes, April 2018 to March 2019

Organisation unit/Data	All DS-TB client in treatment outcome cohort	All DS-TB client treatment success rate	All DS-TB client successfully completed treatment	All DS-TB client lost to follow-up rate	All DS-TB client lost to follow-up	All DS-TB client death rate	All DS-TB client death	All DS-TB client treatment failure rate	All DS-TB clients treatment failure	All DS-TB acquired RR/MDR during treatment rate	All DS-TB acquired RR/MDR during treatment
City of Johannesburg	12 528	83.4	10445	9.1	1140	6.1	762	0.44	55	0.13	16
Region A	1 573	89.4	1405	4.8	76	5.3	84	0.45	7	0.19	3
Region B	435	90.3	393	5.5	24	3.7	16	0.46	2	0.23	1
Region C	984	87.5	851	8.2	81	4.3	42	0	0	0.3	3
Region D	3 929	80.5	3162	10.9	427	7.8	306	0.66	26	0.03	1
Region E	1 283	87	1116	6.7	86	5.8	74	0.55	7	0.31	4
Region F	2 147	80.7	1732	9.6	207	4	85	0.23	5	0.09	2
Region G	2 177	81.5	1776	11	239	7.1	155	0.37	8	0.09	2

Source: (DHIS, 2020); Date extracted: 30 October 2020

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Figure 15: Drug Sensitive TB treatment success rate, follow-up rate, death rate, April 2018 to March 2019



Source: (DHIS, 2020); Date extracted: 30 October 2020

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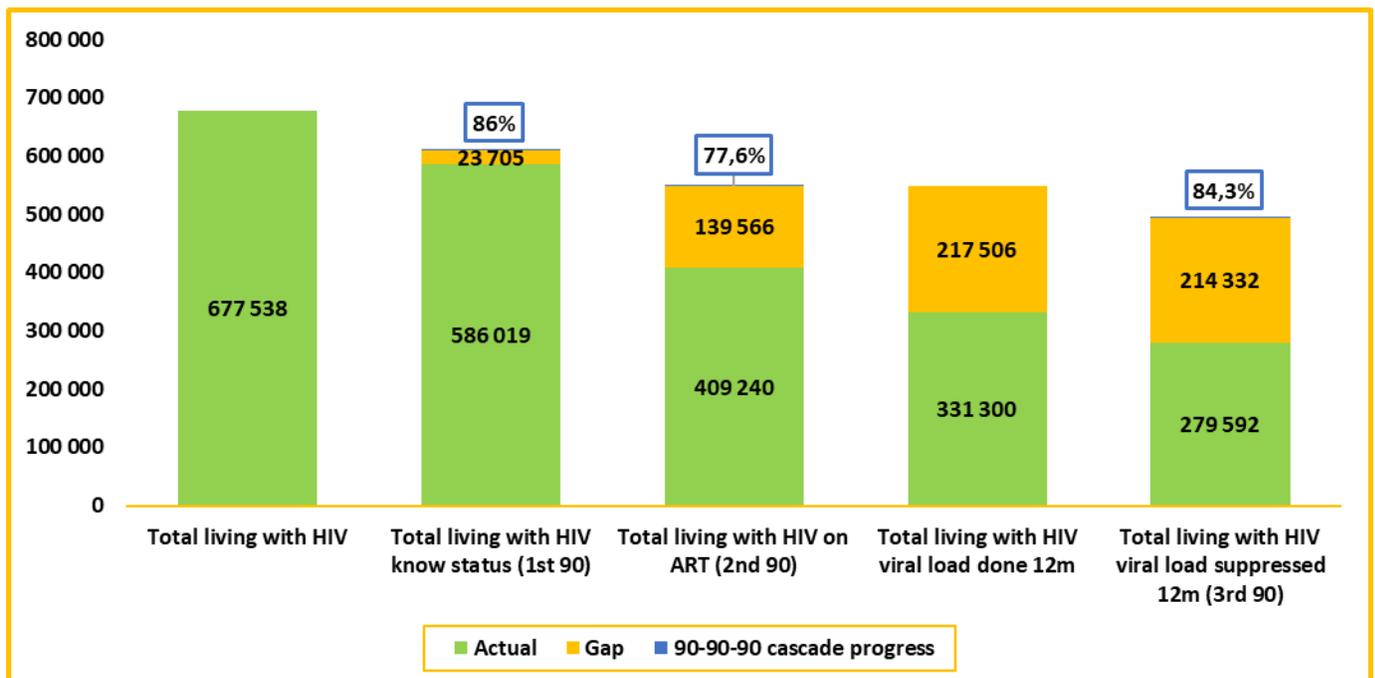
People living with HIV

South Africa has the largest ART program in the world and 62% of the people living with HIV were on treatment by end of 2018 (UNAIDS, 2019). HIV tests performance has increased above 90%. The City of Johannesburg has thus far achieved 86-77.6-84.3 performance against the 90-90-90 HIV targets by March 2020 (DHIS, 2020). With 86% of the people living with HIV (PLHIV) know their HIV status (1st 90), and among the PLHIV who know their status, 77.6% are linked to care (2nd 90) and of those currently on treatment, 84.3% who are virally suppressed at 12 months of treatment (Figure 16).

In accordance to the 90-90-90 Treatment and Retention Acceleration.

Quarterly Report of January to March 2020, to achieve the 90-90-90 targets, the City must reach the number of people living with HIV (PLHIV) know their HIV status by 23 765, the number of people on ART by 139 566, and the number of people who are virally suppressed by 214 334 by December 2020 (Figure 16). The City of Johannesburg needs to strengthen its HIV prevention and care strategies which includes universal test and treat, and differentiated models of care to ensure effective implementation of the 90-90-90 targets. The City has adopted the 90-90-90 Treat Retention and Acceleration strategies and are implementing operation Phuthuma which provides ten (10) key actions which focusses on an intensified response towards the realization of the 90-90-90 targets and HIV epidemic control (National Department of Health, 2020).

Figure 16: City of Johannesburg HIV 90-90-90 cascade; January to March 2020



Source: (DHIS, 2020); Date extracted: 30 November 2020

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General Population HIV Interventions

HIV Counselling and Testing

Total number of people tested for HIV in the City of Johannesburg

A total of 1 846 503 HIV tests were carried out in the City of Johannesburg during 2019/2020, exceeding the set target of 1 161 322 for the period by 59%. Significant progress was also across all the Regions and the progress ranged from 113% (Region F) to 209.4% (Region C) (Table 5).

Table 5: HIV test done in the City of Johannesburg, April 2019 to March 2020

Region	2018/19 Baseline	YTD 2019/20			
		Target	Actual	Gap	Progress
Region A	161 111	164 239	317 521	-153 282	193.3%
Region B	70 003	66 109	109 163	-43 054	165.1%
Region C	112 475	94 414	197 739	-103 325	209.4%
Region D	281 591	329 038	467 579	-138 541	142.1%
Region E	103 366	100 616	178 975	-78 359	177.9%
Region F	148 672	239 104	270 464	-31 360	113.1%
Region G	163 068	167 802	305 062	-137 260	181.8%
City of Johannesburg Total	1 040 2861	1 161 322	1 846 503	-685 181	159%

Source: (DHIS, 2020); Date extracted: 29 November 2020

HIV test yield in the City of Johannesburg

The number of HIV tests done from 2018/19 to 2019/20 is 1 846 503, which resulted in 114 397 people being diagnosed as being HIV positive. The HIV test yield in the City of Johannesburg is 6.2%, and it is highest in Region F (7.8%) and lowest in Region B (4.9%) (Table 6).

In Regions with low HIV yield such as region B, D and E, there is a need for innovative interventions to identify people living with HIV and initiate them on antiretroviral therapy (Joseph Davey et al., 2019). One such approach to identify PLHIV is HIV Index testing (Jubilee et al., 2019), which implies increasing the number of HIV testing services to sexual, needle sharing partners and family members of known PLHIV who are at increased risk of HIV infection such as and children. This helps to increase the identification of HIV positive cases among children and adults, and it also leads to an increased linkage into care and treatment services (Jubilee et al., 2019). Therefore, there is need to encourage all patients attending ART clinics in the district to bring their sexual-; needle sharing partners family members for HIV testing.

City of Johannesburg Profile on the HIV Epidemic Trends

Table 6: HIV positive test results in the City of Johannesburg, April 2019 to March 2020

Region	HIV tests done	HIV positive test results	HIV positivity
Region A	317 521	18 718	5.9%
Region B	109 163	5 358	4.9%
Region C	197 739	13 994	7.1%
Region D	467 579	27 067	5.8%
Region E	178 975	9 290	5.2%
Region F	270 464	21 197	7.8%
Region G	305 062	18 773	6.2%
City of Johannesburg Total	1 846 503	114 397	6.2%

Source: (DHIS, 2020); Date extracted: 29 November 2020

ART Adherence

In 2019/2020, a total of 409 240 PLHIV remained on ART and this is a 21% shortfall from the set target of 516 516 (Table 7). The set targets were also not achieved across all regions, and the progress ranged from 75.9% (Region B) to 84.7% (Region E). The low progress on patients remaining on ART is an indication on poor adherence. There is need to improve on linkage to care and follow-up for patients on ART across all regions in the City of Johannesburg.

Table 7: Total PLHIV remain on ART in the City of Johannesburg, April 2019 to March 2020

Region	2018/19 Baseline	YTD 2019/20			
		Target	Actual	Gap	Progress
Region A	51 922	72 898	58 829	14 069	80.7%
Region B	20 901	29 347	22 271	7 076	75.9%
Region C	29 848	41 906	34 993	6 913	83.5%
Region D	104 022	146 046	115 098	30 948	78.8%
Region E	31 808	44 658	37 839	6 819	84.7%
Region F	71 833	107 182	83 650	23 532	78%
Region G	53 048	74 479	56 560	17 919	75.9%
City of Johannesburg Total	363 382	516 516	409 240	107 276	79.2%

Source: (DHIS, 2020); Date extracted: 29 November 2020

ART adult viral load done at 6 months rate

The World Health Organization (WHO) recommends that initial viral load testing in people living with HIV should be done after 6 months of initiating ART and every 12 months thereafter routinely (Direess et al., 2020). During the period April 2019 to March 2020, the ART adult viral load done at six months rate in the City of Johannesburg was 74.5%. It ranged across regions from 69%

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(Region G) to 86% (Region A) and was below the set target of 90% across all the Regions (Table 8).

Treatment failure is associated with poor adherence and hence it is recommended that counseling sessions should be enhanced for 3–6 months for people with high viral load count before diagnosing first-line treatment failure (Diress et al., 2020). Clear information should be communicated to PLHIV about the adverse consequences of poor adherence which include switching to second- or third-line ARV regimens that often have less tolerable side effects and are costlier (Moosa et al., 2019). Resistant HIV strains can be transmitted to others and poor adherence also results in more opportunistic infections. Therefore it is recommended that $\geq 95\%$ adherence be maintained to achieve optimal viral suppression and prevent HIV resistance (Moosa et al., 2019). This can only be achieved through viral load testing and counselling sessions to encourage adherence.

Table 8: ART adult viral load done at 6 months rate in the City of Johannesburg, April 2019 to March 2020

Region	2018/19 Baseline %	YTD 2019/20			
		Target %	Actual %	Gap %	Progress %
Region A	78.8	90	86	4	86%
Region B	67.4	90	66	24	66%
Region C	84.1	90	85	5	85%
Region D	74.1	90	75	15	75%
Region E	72.3	90	72	18	72%
Region F	72.7	90	76	14	76%
Region G	71.5	90	69	21	69%
City of Johannesburg	74.5	90	76	14	76%

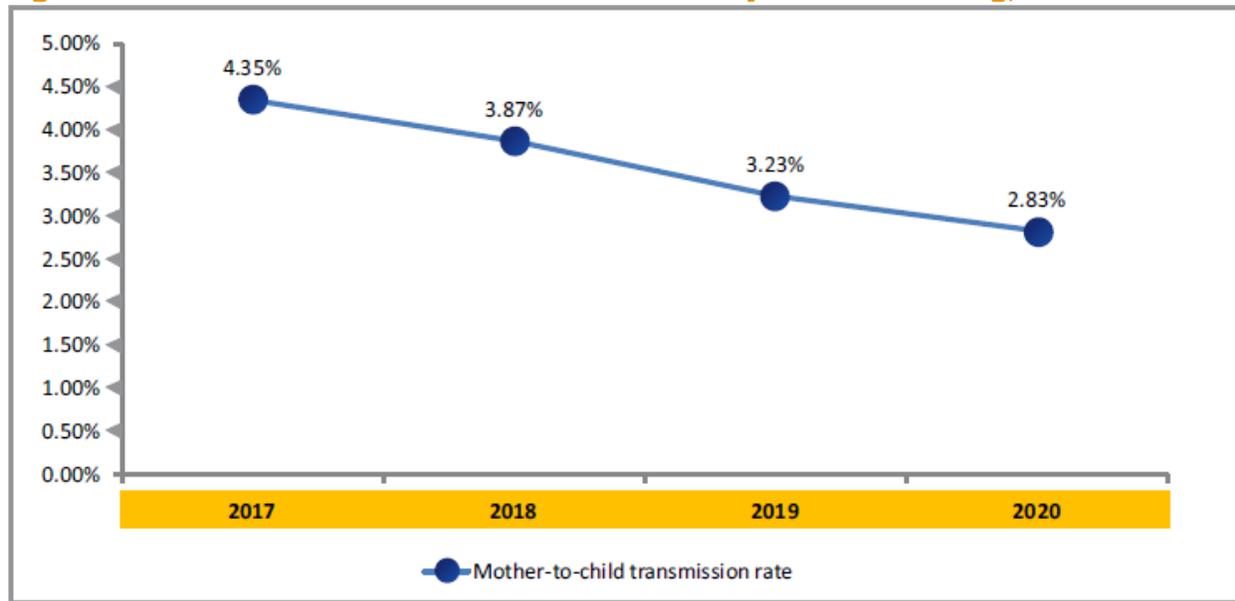
Source: (DHIS, 2020); Date extracted: 29 November 2020

Prevention of Mother-to-Child Transmission

Mother to Child Transmission (MTCT) has decreased from 4.35% in 2017 to 2.83% in 2020 (Figure 17). This outstanding decline could be attributed to prevention of mother to child transmission (PMTCT) programmes that have been implemented at district level during the period under review. These programmes include provision of HIV counselling services in antenatal clinics as part of standard care, universal test and treat, training and mentoring support provided to primary health care (PHC) nurses. In addition, PMTCT programmes were also further strengthened by the introduction of the Last Mile Plan-Elimination of Mother to Child transmission in 2016 and this has resulted in the retention of mothers in the continuum of care (UNICEF, 2020).

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Figure 17: Mother to child transmission rate in the City of Johannesburg, 2017-2020



Source: (Thembisa Model version 4.2 for five metros, 2019), Date extracted: 13 September 2020

Antenatal HIV profile in the City of Johannesburg

Antenatal care provides an opportunity for pregnant women to receive evidenced-based interventions leading to a positive pregnancy experience (Department of Health, 2018). Therefore, there is need for women to book for antenatal care for the first time during the first trimester of their pregnancy and preferably before 20 weeks' gestation (Massyn et al., 2020). This facilitates the timely identification of women who require special attention, referral to a higher level of care, or more antenatal visits.

Antenatal 1st visits before 20 weeks rate

The antenatal 1st visit before 20 weeks rate measures the number of pregnant women who have a booking visit (first visit) before they are 20 weeks (about half way) into their pregnancy as a proportion of all antenatal 1st visits (Massyn et al., 2020).

During the period July 2019 to June 2020, the antenatal 1st visit total was 104 293 and the total number of women already on ART at 1st visit was 14 072 (Table 9). The antenatal known HIV positive but NOT on ART at 1st visit was 910 and antenatal start on ART was 9 939 in the City of Johannesburg (Table 9). Overall, the antenatal client start on ART rate was 95.9%.

Antenatal overview Region level

The antenatal client start on ART rate ranged from 91.5% (Region F) to 108.4% (Region B) (Table 9). Two Regions [B and E] managed to surpass the 100% district target by 2019/2020. To further improve the antenatal client start on ART rate across all districts, there is need to for early presentation of pregnant women wishing to be enrolled in the PMTCT programme (Department of Health, 2019a).

Table 9: Antenatal HIV profile in the City of Johannesburg, July 2019 to June 2020

Indicator	Regions / Region							
	CoJ	A	B	C	D	E	F	G
Antenatal 1st visit total	104 293	21 206	5 730	11 001	24 268	9 510	17 409	15 169
Antenatal already on ART at 1st visit	14 072	2 885	335	1 404	4 013	1 091	2 436	1 908
Antenatal known HIV positive but NOT on ART at 1st visit	910	168	36	130	184	68	154	170
Antenatal HIV 1st test positive	8 858	1 955	365	980	2 096	785	1 377	1 300
Antenatal start on ART	9 939	2 083	476	1 132	2 344	909	1 477	1 518
Antenatal client eligible for ART initiation	10 366	2 225	439	1 210	2 409	902	1 614	1 567
Antenatal client start on ART rate	95.9%	93.6%	108.4%	93.6%	97.3%	100.8%	91.5%	96.9%

Source: (DHIS, 2020); Date extracted: 25 September 2020

HIV yield rates of infants around 18 months

The total number of HIV positive tests of infants around 18 months of life was 21 397 from July 2019 to June 2020, and the number of HIV test positive around 18 months was 140 (Table 10). This translates to the overall HIV test around 18 months positive rate of 0.7% in the City of Johannesburg. The 2019/2020 target for HIV test around 18 months was 1.38% or less, and this implies the City of Johannesburg has already achieved the 2019/2020 target. At Region level, six Regions in the City of Johannesburg have achieved HIV test around 18 months' positive rates that were below 1.38%. The overall low HIV positive rates of infants around 18 months of life positive rate in the six Regions could have been as a result of increased ART initiation for HIV positive mothers (Department of Health, 2019a). However, Region B was above the 2019/2020 target of 1.38% for HIV positive rate at 1.6% (Table 10); this could have been as a result of poor data collection, reporting and linkage to care of HIV infected infants.

Table 10: HIV Positive test of infants around 18 months, Johannesburg, July 2019 - June 2020

Region	HIV test around 18 months	HIV test positive around 18 months	HIV test around 18 months positive rate (%)
Region A	2 870	20	0.7
Region B	763	12	1.6
Region C	2 119	10	0.5
Region D	5 946	47	0.8
Region E	3 014	9	0.3
Region F	2 813	10	0.4
Region G	3 872	32	0.8
City of Johannesburg	21 397	140	0.7

Source: (DHIS, 2020); Date extracted: 25 September 2020

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Infant PCR test positive around 10 weeks rate

The City of Johannesburg has exceeded the target of less than 1.3% by 2020 for infant PCR positive around 10 weeks rate (Department of Health, 2020) for the July 2019 to June 2020 period. The total number of infant PCR tests at birth during this period was 16 604, the number of infant PCR positive tests at birth were 83, and this translates to infant PCR positive test around 10 weeks rate of 0.5% (Table 11).

Furthermore, all the Regions in the City of Johannesburg have infant PCR test positive around 10 weeks rate of less than 1% (Table 11). This decline in PCR test positive was attributed to the effective training of healthcare workers on early infant diagnosis and PCR testing, accurate recording, and expanding treatment initiation through all PHC nurses (Department of Health, 2019a). This reduction is also attributable to an increase in ART initiation during antenatal care.

Table 11: Infant PCR tests at birth in the City of Johannesburg, July 2019 to June 2020

Region	Infant PCR test at birth	Infant PCR test positive at birth	Infant 1st PCR test positive at birth rate (%)
Region A	295	1	0.3
Region B	3 117	24	0.8
Region C	240	0	0.0
Region D	6 710	26	0.4
Region E	1 796	3	0.2
Region F	3 934	26	0.7
Region G	512	3	0.6
City of Johannesburg	16 604	83	0.5

Source: (DHIS, 2020); Date extracted: 25 September 2020)

Voluntary Medical Male Circumcision (VMMC)

The total number of voluntary medical male circumcisions for males 15 years or older was 6 957 during the period July 2019 to June 2020, and the circumcision rate was 62% in the City of Johannesburg. The medical circumcision rate was highest in Region F at 78.6% and lowest in Region at 49.9% (Table 12). There is need to increase demand creation strategies and to ensure availability of dedicated personnel to sustain the program beyond PEPFAR/USAID support. The number of VMMC were affected by the outbreak of Covid-19 and the moratorium placed on conducting VMMC. The National Department of Health (NDoH) recommends a phased return of VMMC services, once there is evidence that the programme has the ability to mitigate the risks and comply with the government regulations.

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Table 12: Voluntary medical male circumcisions in the City of Johannesburg, July 2019 to June 2020

Region	Number of Medical male circumcision 15 years and older	Medical male circumcision 15 years and older rate (%)
Region A	791	49.9
Region B	1 119	74.6
Region C	907	53.9
Region D	1 474	55.3
Region E	513	75.7
Region F	1 637	78.6
Region G	516	50.0
Total City of Johannesburg	6957	62.0

Source: (DHIS, 2020); Date extracted: 25 September 2020

Voluntary medical male circumcision challenges and solutions

Gaps and challenges	Possible Solutions
VMMC is not sufficiently promoted and marketed in and out of the facilities	Engage with Region Managers/HAST Coordinators/Facility Managers to ensure and emphasize the importance of integrating VMMC into general PHC Services
Some VMMC Clinics are isolated in facilities.	Engage funded NGO and WBPHCOT units to market the services within the community
	Use radio and print media to sensitize communities about access to VMMC services with place and times stipulations.
	Increase training and skills development for DoH staff on performing circumcisions at DoH sites

Condoms distribution

The overall male condom distribution in the district from July 2019 to June 2020 was 32 296 195, a 16% coverage. Region F had the highest male condom distribution coverage (32.6%) while Region D was the lowest in coverage (7%) for male condom distribution (Table 13). The low condom distribution across all Regions was attributed to suppliers unable to meet the demand, lack of dedicated staff for condom management, late payment of condom suppliers. There is need to increase primary and secondary condom distribution sites in all the Regions to increase the coverage to above 50%. Coloured, scented male condoms are more popular than the unscented original brand of condoms.

Female condoms distributed in the district was 1 111 895 from July 2019 to June 2020, a coverage of 55%. Region C had the highest coverage for female condom distribution (96%), and Region E had the lowest coverage (12%). Female condom distribution was low in most Regions due to few suppliers for female condoms, and these were failing to meet the demand (Department

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of Health, 2019a). In addition, the low uptake of female condoms was attributed to lack of knowledge of how to use it, their unavailability and sexual partner refusal to use it.

Table 13: Condom distribution in the City of Johannesburg, July 2019 to June 2020

Region	Male condoms distributed	Male condom distribution coverage (%)	Female condoms distributed	Female condom distribution coverage (%)
Region A	3 374 404	12.4	89 055	0.32
Region B	2 943 000	19.8	80 500	0.54
Region C	5 096 991	18.8	263 870	0.96
Region D	3 526 120	7.0	299 400	0.59
Region E	3 439 280	14.1	28 900	0.12
Region F	8 969 400	32.6	181 650	0.65
Region G	4 947 000	16.4	168 520	0.55
Total City of Johannesburg	32 296 195	16.0	1 111 895	0.55

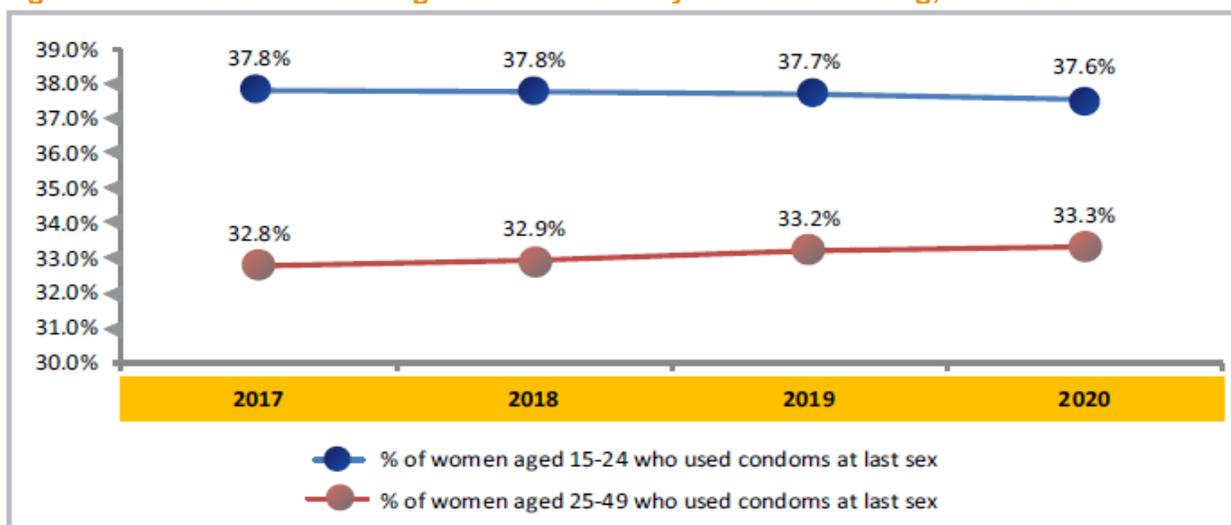
Source: (DHIS, 2020); Date extracted: 25 September 2020

Condom use among at last sexual encounter

During the period 2017 to 2020, condom use at last sex encounter among women aged 15-24 years has remained constant at 37.8% from 2017 to 2018, with a slight decline of 5.3% from 37.8% in 2018 to 37.6% in 2020. A marginal increase of 1.5% among women aged 25-29 years has been recorded regarding condom use at last encounter with a shift from 32.8% in 2017 to 33.3% in 2020 (Figure 18).

Consistent and correct usage of male and female latex condoms reduces the risk of acquiring sexually transmitted diseases (Simbayi et al., 2018). The HSRC survey has shown that condom use at last sexual encounter was consistently highest among people aged 15–24 years than in the older age groups (Simbayi et al., 2018).

Figure 18: Condom use among women in the City of Johannesburg, 2017-2020



Source: (Thembeisa Model version 4.2 for five metros, 2019), Date extracted: 13 September 2020)

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Post-Exposure Prophylaxis (PEP)

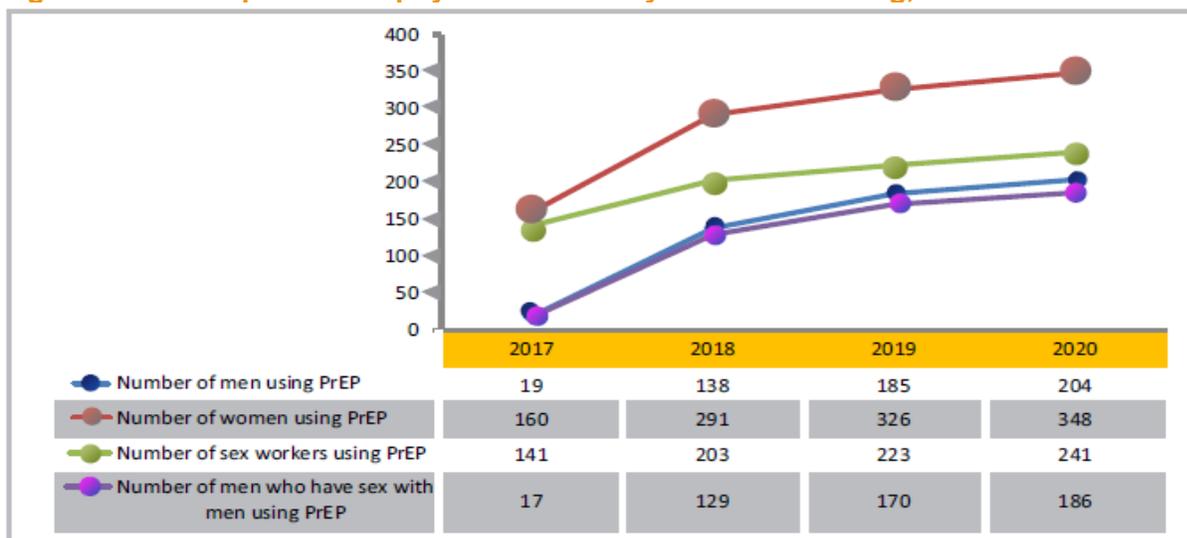
One of the links between violence against women and HIV/AIDS include the transmission of HIV following rape and existing data shows that young women are at great risk in South Africa (Kim et al., 2003). Post exposure prophylaxis (PEP) to prevent HIV after rape was introduced into the South African public health services in 2002 (Abrahams & Jewkes, 2010). PEP after a sexual assault was legislated in 2007, via the Sexual Offences and Related Matters Amendment Act No 23 and this law ensures services are provided free by the state, in designated facilities (Abrahams & Jewkes, 2010). However, various institutional and practical challenges obstruct access and adherence to PEP treatment within the crucial time limit. Challenges include lack of awareness about PEP among both survivors and the inability of individual provider institutions to meet patients' needs, and mainly in rural areas (Nare, 2013). Data on PEP in the City of Johannesburg is currently highly limited.

Number of individuals receiving oral Post-Exposure Prophylaxis (PrEP)

During the period 2017 to 2020, there has been a 47.8% increase in PrEP uptake among men from 138 in 2018 to 204, compared to 19.6% among women moving from 291 in 2018 to 348 in 2020 (Figure 19). PrEP use among sex workers has increased by 18.7% and by 42% for men having sex with men for the period 2018 to 2020 (Figure 19). However, there is need to further increase PrEP uptake particularly for the key and vulnerable populations. The use of ARV drugs to prevent HIV infection is a biomedical prevention measure that is appropriate for certain circumstances and groups at risk such as key affected populations. South Africa was the first country in sub-Saharan Africa to fully approve pre-exposure prophylaxis (PrEP) (Bekker et al., 2016) (Venter et al., 2015).

During the period June 2016 to August 2020 there were 12 869 PrEP initiations in Johannesburg. PrEP initiations are done by the Sex Worker, MSM, Transgender programmes and at selected Primary Health Care Fixed and outreach services.

Figure 19: Pre-Exposure Prophylaxis in the City of Johannesburg, 2017-2020



Source: (Thembisa Model version 4.2 for five metros, 2019); Date extracted: 13 September 2020

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Differentiated Models of care

The differentiated models of care implemented in Johannesburg includes Adherence Clubs, facility and external pick-up-points. Clients can collect their medication from external pick-up points located at corporate pharmacies, post offices, collect and go lockers, purpose-built containers and pharmacy dispensing units (PDUs). As at October 2020, 209 157 clients were receiving medication from the NDoH Central Chronic Medicine Dispensing and Distribution Programme (CCMDD).

Best Practice; Pharmacy Dispensing Unit (PDU): Right to Care

The Gauteng Department of Health, in partnership with Right to Care and Right ePharmacy, has launched a Pharmacy Dispensing Unit (PDU) in Alexandra township, Johannesburg (Right to Care, 2018). The PDU was the first medical dispensing self-service machine in Africa. It was developed to ensure accurate dispensing, quick collection of medication and reducing congestion in public healthcare facilities (Right to Care, 2018) (ITWeb, 2018). In addition, it was introduced to align to NDoH Central Chronic Medicine Dispensing and Distribution Programme (CCMDD) to respond to South Africa's changing epidemiological profile that has led to an over-extension of public sector healthcare facilities including primary health care (PHC) clinics (ITWeb, 2018). This has placed enormous strain on available resources and has contributed towards medicine shortages and declining quality of care.

Alexandra Plaza was chosen as the first PDU pilot site (Right ePharmacy, 2020). It is one of the poorest areas in Johannesburg, with over 30 000 patients reliant on chronic medication. There are eight primary healthcare clinics in the vicinity which can all refer patients to collect their medicine from the PDU, which stays open for extended hours, including weekends and public holidays (U|Chief Report, 2018). It is conveniently located near a major shopping mall and next to popular banks and a grocery store. The extended hours entertained by the PDU sites allow patients to collect their medicine at a time and place which best suit them with minimum expenditure (Right ePharmacy, 2020). As at September 2020 there are 4 PDU units established in Johannesburg. These include the units at Alex Plaza (Reg E), Bambinani- (Region A); Bara- and N dofaya Malls (Region D).

City of Johannesburg Key and Vulnerable Populations specific interventions and progress

Key Populations are disproportionately affected by HIV. Key populations who are at higher risk of HIV include people who use and inject drugs (PWUD/PWID), men who have sex with men (MSM), transgender people, sex workers and inmates. According to NSP, Goal 3 promotes targeted and customized intervention packages for specific key and vulnerable populations (KVPs) who are at high risk of transmitting and being infected with HIV, TB, and STI. Among other KVP, Table 14 below outlines some of the key populations for HIV and STIs such as sex workers, transgender and men who have sex with men. It also lists key populations for TB such as diabetes and people living with HIV. Examples of vulnerable populations for HIV and STI included AGYW, orphans and vulnerable children.

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Table 14: Key and vulnerable populations for HIV, TB and STIs

Key populations for HIV and STIs	Key populations for TB	Vulnerable populations for HIV and STIs
Sex workers	People living with HIV	Adolescent girls and young woman
Transgender people	Household contacts of TB index patients	Children including orphans & vulnerable children
Men who have sex with men	Health care workers	People living in informal settlements
People who use drugs	Pregnant woman	Mine workers
Inmates	Children < 5 years	Mobile populations, Migrants and undocumented foreigners
	Diabetics	People living with disabilities
	People Living in informal settlements	Other LGBTI populations
	Miners and peri-mining communications	

Source: (SANAC, 2017a)

The NSP 2017–2022 also prioritize reaching key and vulnerable populations with targeted interventions; and customized intervention packages for specific key and vulnerable populations (KVPs) who are at high risk of transmitting and being infected with HIV, TB, and STI.

Orphanhood

The term ‘orphan’ refers to children younger than 18 years who have lost either their mother (maternal orphan), father (paternal orphan) or both biological parents (double orphan). Orphans are considered a vulnerable group because of the loss of parental guidance and protection, and they are more likely to be abused and exploited, both physically and sexually, than their non-orphaned counterparts (Simbayi et al., 2018). The loss of a parent or caregiver can translate into other losses, such as the loss of access to social grants, education and healthcare and all of these events would increase a child’s vulnerability to HIV infection (Mthembu et al., 2016). HIV prevalence among orphans has been consistently higher among orphans than non-orphans since 2012 (Simbayi et al., 2018). It was noted that highest HIV prevalence was among children who had lost both parents followed by maternal orphans.

In 2017, the percentage of paternal orphans in the City of Johannesburg was 4.6%, maternal orphans 2% and double orphans 1.9% (Table 16).

Table 15: Orphanhood status among children aged 18 years and younger, 2017

District	Maternal		Paternal		Double orphan		Not orphan	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
City of Johannesburg	2.0	1.0 – 3.7	4.6	2.6 – 8.1	1.9	0.8 – 4.6	91.5	86.5 – 94.7

Source: (Simbayi et al., 2018)

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Adolescent girls and young women

There has been an increase in the number of programmes targeted at trying to reduce the HIV infection rates among Adolescence Girls and Young Women (AGYW). Programs such as *Woza masibonisane* community responses program are focusing on sexual health to improve the psychological wellbeing as well as the prevention of HIV through sessions held in Stepping Stone and One man can interventions. A vast amount of information has been disseminated so as to ensure that youths are well informed and empowered.

There has been intensified effort by different projects with the intention to bring about reduction of infections on young girls (15-24 years), as well as building HIV testing and treatment programs that attract and retain the male sexual partners AGYW. PrEP demonstration projects were carefully targeted to young women at the highest risk in the highest prevalence areas.

DREAMS Program

The DREAMS (Determined, Resilient, Empowered, AIDS-free, Mentored and Safe) partnership is an ambitious public-private partnership to reduce rates of HIV among adolescent girls and young women (AGYW) in the highest HIV burden countries (United States Agency for International Development, 2020). Keeping AGYW HIV- and AIDS-free is critical for their well-being and health, the health of their families and communities (PEPFAR, 2015). The DREAMS Program focus is about the decrease in sexual risk, reduced numbers of pregnancy (15-24 years) with HIV positive status, increase empowerment. Dreams Program made it possible for an increase in educational attainment and increased favourable attitudes towards gender equity. The DREAMS initiative consists of evidence-based interventions, aimed at addressing the structural and behavioural drivers that increase AGYW risk of acquiring HIV, including poverty, gender inequality, gender-based violence (GBV), absence of parental and community support, and lack of education and vocational training. The DREAMS initiative is executed in the City of Johannesburg through existing U.S. government funded programme implementers that include community, faith-based and non-governmental organizations along with South African Government structures operating at the provincial, district, sub-district, metro, ward and village level.

Other programmes that are implemented in the City of Johannesburg include the OVC Family Strengthening Program which focusses on children 0-17 years old, it includes HIV Prevention education (Vhutshilo 1&2, Let's Talk); Linkages to SRH, HIV, VMMC and GBV services; Screening for TB, STI and immunization status; Early Infant Diagnosis & Child Protection; Promotion of, Gender Norms Change and GBV prevention and Contribution to HIV clinical cascade including support in tracing of OVCs (4Children, 2019).

Successes of the OVC Family strengthening programme includes: Bi-directional Referrals between CoJ support partners; OVC recruited into the programme know their HIV status and it is estimated that 99% are on ART. Other activities include adherence Counselling, disclosure training, and enhancing treatment literacy.

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The expected outcome of the OVC programme is to support the achievement of health outcomes, build health and nutrition knowledge and skills in caregivers, facilitate access to key health services (especially HIV testing and care and treatment services), to enable vulnerable children (especially girls) to stay HIV-free and includes interventions that reduce economic vulnerabilities and increase resilience in adolescents and families affected by and vulnerable to HIV. To prevent and mitigate violence, abuse, exploitation, and neglect of children and adolescents, including sexual and gender-based violence. To support children and adolescents affected by and vulnerable to HIV to overcome barriers to accessing education, and provide vocational training for some adolescents (4Children, 2019).

In Johannesburg the OVC / DREAMS programmes are implemented by support partners FHI 360; HIVSA; CCI and Johannesburg Child Welfare.

Table 16: Intervention programmes targeting adolescent girls and young women in the City of Johannesburg, 2017-2020

District	HIV	TB	STI	Interventions
City of Johannesburg (HIV burden and TB)	X	X	X	<ul style="list-style-type: none"> • Risk reduction programmes. • PrEP & PEP • She Conquers, YOLO, Zazi, Nalibali • HIV Testing Services • TB Intensified case finding • Prevention of substance abuse programmes. • Adherence clubs • DREAMS

Source: (SANAC, 2017a)

Sexual Reproductive health

The number delivery 15-19 years in facility was 3 049 between July 2019 to June 2020, and delivery 15-19 years in facility rate was 6.2% and this was above the set target of less than 4.4% by 2020 (Table 17). The delivery 15-19 years in facility rate was highest in Region G (23.1%), and lowest in Region A with no reports of delivery 15-19 years in facility. However, with the exception of Region A, the delivery 15-19 years in facility rates across all the other regions in the City of Johannesburg were above the set target of 4.4% by 2020. The high delivery 15-19 years in facility rates is an indication of high levels of teenage pregnancy and an indication of unprotected sex among teenagers. There is need to strengthen comprehensive sexuality education programmes in schools.

Table 17: Delivery 10-14 and 15-19 years in facility in the City of Johannesburg, July 2019 to June 2020

Region	Delivery 15-19 years in facility	Delivery in 10-19 years in facility rate
Region A	0	0.0
Region B	211	9.2
Region C	122	8.7
Region D	1 645	6.0
Region E	123	5.1
Region F	697	4.6

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Region G	251	23.1
City of Johannesburg	3 049	6.2

Source: (DHIS, 2020); Date extracted: 25 September 2020

Table 18: Adolescent girls and young women challenges and solutions

Gaps and challenges	Proposed Solutions
The most at-risk AGYW often lack strong social networks.	Interventions that build social capital have been shown to increase agency and empowerment among AGYW.
There is limited access to PrEP by AGYW	<ul style="list-style-type: none"> • Deliver PrEP at TVETs and other institutions of higher learning. PrEP Should be part of comprehensive prevention package of care. • Establish or revitalize school-based or school-linked adolescent-friendly sexual and reproductive health (ASRH) services (if capacity exists) to increase access and uptake.
Lack of knowledge on PrEP among the AGYW	<ul style="list-style-type: none"> • Increasing mobilisation and community education on PrEP.

Female sex workers

During the period 2017 to 2020, the City of Johannesburg has also prioritized intervention services to female sex workers. The table below indicate the interventions that were provided.

Table 19: Summary of interventions provided for female sex workers

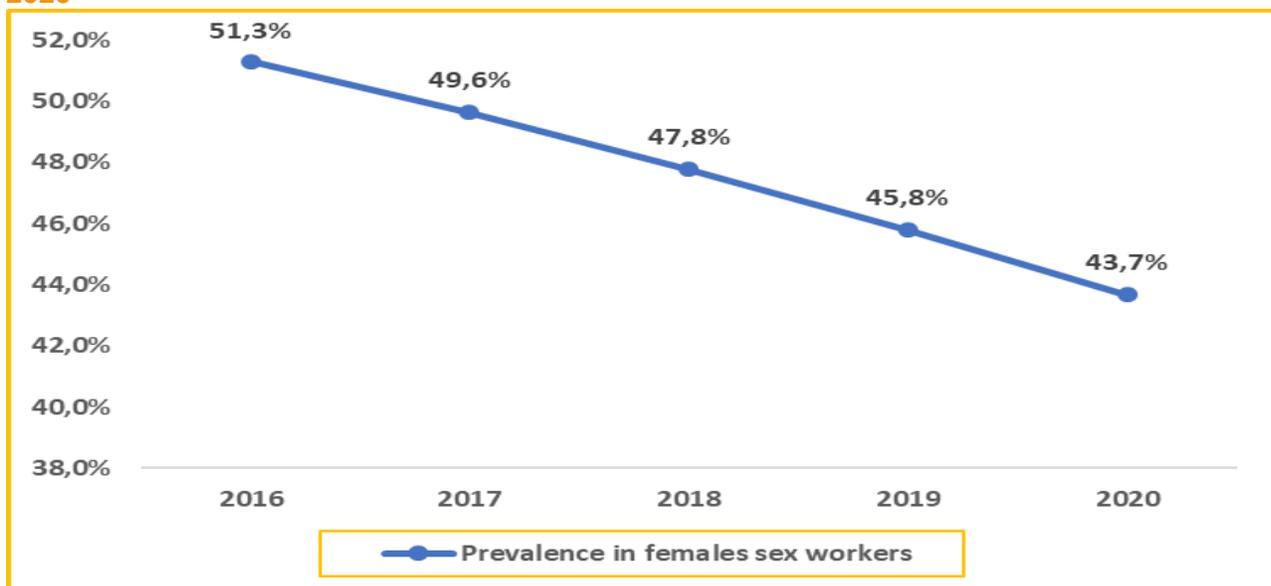
	Intervention
STRUCTURAL	Promotion of social cohesion, social capital, social inclusion and leadership
	Advocacy interventions for policy, program and/ or service change
	Economic strengthening and supplementary income generation
BIOMEDICAL	Use of male and female condoms and lubricant
	Diagnosis and treatment of STIs with anal, genital and oral manifestations
	Pre-exposure prophylaxis (PrEP)
	Post-exposure prophylaxis (PEP)
	Client-and provider-initiated HIV testing and counselling
	HIV care and treatment
BEHAVIORAL	Individual- level behaviour change through peer education and community-based counselling
	Collective-level behaviour change
	Institutional level behaviour change through health providers
	Media communication for behaviour change

HIV prevalence among female sex workers and men who have sex with men

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Female sex workers (FSW) remain a highly vulnerable population, with up to 3 in 10 FSW reporting to have experienced violence as a result of being known or thought to be a sex worker (SAHMS, 2018). Figure 20 below shows the HIV prevalence trends for female sex workers (FSW) from 2017 to 2020. In 2020, the HIV prevalence among FSW was 43.7%; this is 11.9% decline from the baseline of 49.6% in 2017. Peer educators from community-based organizations have been providing more health information to sex workers in the City of Johannesburg. Mapping of sex worker hot spots and provision of onsite sex worker-workplace health related services has been intensified which also increased the numbers of sex workers reached with behavior change messaging potentially decreasing the HIV infection rate among sex workers. Local health programmes must prioritize services that reflect the variety and complexity of sex worker needs and behaviours, and should be designed in consultation with sex workers (Slabbert et al., 2017). For epidemic control, tailored programs that identify, initiate, and retain FSW living with HIV on ART and provide prevention services to HIV-uninfected FSW should be considered for increasing access to and uptake of critical services (SAHMS, 2018).

Figure 20: HIV Prevalence among female sex workers in the City of Johannesburg, 2017-2020



Source: (Thembisa Model version 4.2 for five metros, 2019); Date extracted: 13 September 2020

In Johannesburg the Sex worker programme is being implemented by Wits Reproductive Health Institute. According to the October 2020 report to the Johannesburg District, there were 1 216 sex workers receiving ART treatment from services provided by WRHI. Successes reported by WRHI includes accessing social media platforms successful in identifying new beneficiaries; Social Worker appointed at the Sex Worker site to address psycho-social needs of female sex workers and provide supportive supervision to peer educators; increased case finding and Linkage to ART >90%. Challenges are retention of sex workers on PrEP and ART and COVID-19 Protocols in brothels lead to fewer sex worker in hotspots.

Best Practice Case study

The WRHI provides the following;

- Comprehensive clinic-based services from Esselen Street Clinic
- Brothel-based comprehensive services
- Mobile Clinic Services to street-based sex workers (Mnyamandawo: dark place)
- Hot spot mapping
- Brothel-, hotel- and truck stop owner engagement
- Sensitisation
- Flexibility to deal with the dynamics of sex workers (nudity, vulgar, violence, intoxication)
- The implementation of programs that promote positive parenting among SW by helping with the stimulation programs for the children.

Table 20: Sex workers, challenges and solutions

Challenges	Proposed solutions
Unanticipated level of reticence amongst sex workers to adopt the new option of 'treatment as prevention'.	Carrying out focus group discussions (FDGs) with sex workers to create a better understating of the barriers and enablers to PrEP uptake and adherence.
Accessing the target group.	Intensification of outreach and hotspot mapping. Through Social media – frequenting the social media platforms used by Sex workers. Review of peer education selection to ensure that interpersonal skills are embodied therein.
Length of time required to train to implement the PrEP guidelines with the necessary level of rigor and confidence.	Additional capacity development and mentoring to be provided to all categories of staff to ensure correct messaging regarding the benefits of PrEP.
Because sex work is illegal under South African law, sex workers have little legal protection. They are criminalized and stigmatized. The law and marginalization make sex workers more vulnerable to assault by clients, pimps and brothel keepers. They are often harassed by the police or fall victim to crime by having to	Decriminalize sex work, thereby removing all laws that criminalize sex work. Intensifying efforts to protect CSW against sexual and physical violence

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work within dangerous environments in order to escape public scrutiny.

Lesbian, gay, bisexual, transgender and intersex (LGBTI)

Lesbian, gay, bisexual, transgender and intersex (LGBTI+) communities, face high levels of social stigma and homophobic violence as a result of traditional and conservative attitudes (SANAC, 2017b). The young vulnerable LGBTI face estrangement from family and friendship networks, harassment at school and invisibility, which can lead in some cases to underachievement at school, dropping out of school, mental ill-health and homelessness. Furthermore, the LGBTI community face disadvantages on key social goods such as employment, health care, education and housing, and this marginalises them in society and makes them one of the vulnerable groups who are at risk of becoming socially excluded.

Research indicate that the uptake and effectiveness of health services amongst LGBTI is limited by internalised stigma, reluctance to seek care and unwillingness to disclose risk behaviours to healthcare workers (Duby et al., 2018). The stigmatisation and discrimination experienced by the LGBTI community can result in depression and harmful behaviour such as excessive alcohol and drug use. This makes it difficult for them to disclose their sexuality to healthcare facilities and get the healthcare they need (Duby et al., 2018). In 2017, the Human Sciences Research Council's Marang Men's Study found HIV prevalence among men who have sex with men of 26.8% in Johannesburg (SANAC, 2017b). However, data is currently limited on challenges experienced by LGBTI in the City of Johannesburg. There is need to improve on routine data collection for the LGBTI population to make informed decisions on HIV prevention programmes.

Men having sex with men

The NPO, Engage Men's Health has been working with the MSM community in Johannesburg for almost two (2) years and provides prejudice free services that are tailored for the health needs of MSM who use drugs, are homeless and who cannot easily access DOH services due to their hidden sexual practices and the discrimination that they face. Engage Men's Health provides psycho - sexual support and direct clinical services including treatment for Primary Health Care (PHC) for minor ailments, Wellness screening which includes COVID, HTS, TB, STIS, Diabetes and Hypertension with clinical services including STI and ART treatment for HIV positive clients and PrEP for men who participate in high risk sexual practices.

The MSM programme is implemented in all the Regions in Johannesburg. There is a Drop-in centre in region B.

In accordance to the Engage Men October 2020 report to Johannesburg, there were 552 persons remaining on ART within the Engage Men's programme.

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Table 21: Summary of interventions provided for men having sex with men

	Intervention
STRUCTURAL	Promotion of social cohesion, social capital, social inclusion and leadership
	Advocacy interventions for policy, program and/ or service change
	Fighting social and institutional homophobia
BIOMEDICAL	Use of male and female condoms and lubricant
	Diagnosis and treatment of STIs
	Post-exposure prophylaxis (PEP)
	Pre-exposure prophylaxis (PrEP)
	Client-and provider-initiated HIV testing and counselling
	HIV care and treatment
BEHAVIORAL	Individual- level behaviour change through peer education and community-based counselling
	Collective-level behaviour change
	Institutional level behaviour change through health providers
	Media communication for behaviour change

Transgender People

The implementation modality for transgender (TG) programme has been a combination prevention approach. Programming for TG has mainly been through developmental partners funded under Global Fund, USAID or PEPFAR. Anova through Global fund and the USAID program has managed to reach a number of transgenders in the City of Johannesburg district. This was mainly achieved through the outreach prevention programmes that were centered around testing for transgender.

Botsheloba Trans was the first HIV bio-behavioral survey (BBS) targeting exclusively TGW in South Africa (Scheibe et al., 2018). The survey was conducted by HSRC, with involvement of Access Chapter 2, SHE and SWEAT, to establish HIV prevalence among transgender women (TGW). HIV prevalence amongst TGW was at 63.4% in Johannesburg. Further condom use at last anal sex with a man was estimated at 76.7% in Johannesburg. Such findings serve to explain why City of Johannesburg, is a priority for TG programming. However, data for the transgender population in the City of Johannesburg is currently limited.

In 2020, support partner, Wits Reproductive Health Institute established a Transgender clinic in Braamfontein, Johannesburg.

Table 22 provides a list of other intervention programmes that were provided to Transgender in the City of Johannesburg.

Table 22: Summary of interventions provided to Transgender in the City of Johannesburg

	Intervention
STRUCTURAL	Promotion of social cohesion, social capital, social inclusion and leadership
	Advocacy interventions for policy, program and/ or service change
	Fighting social and institutional homophobia
BIOMEDICAL	Use of male and female condoms and lubricant
	Diagnosis and treatment of STIs and partner-notification
	Post-exposure prophylaxis (PEP)
	Pre-exposure prophylaxis (PrEP)
	Client-and provider-initiated HIV testing and counselling
	HIV care and treatment
BEHAVIORAL	Gender-affirming Health Care for trans people which includes Hormone therapy
	Psychosocial support Individuals
	Peer-led support groups, Peer education and community-based counselling
	Collective-level behaviour change
	Mental Health Counseling
	Intimate and gender-based violence support

Men and boys

Men’s Sector represents organizations and other bodies that work with men and boys, or run programmes focusing on men and boys, in the area of Health, Human Rights and Gender. It was involved in the Integration of Men in Partnership Against HIV and AIDS to the NSP 2012-2016 and the Government AIDS Action Plan and forms part of the SANAC Civil Society Forum. It supports initiatives that address the role of men in combating the spread of HIV and AIDS, as well mitigating the impact of the disease in communities.

Best Practice Case Study: Men’s Forum – Alexandra Township

The Men’s Forum in Alexandra Township in Region E has been implementing behaviour change initiatives targeting Men and Boys with the goal to address the social and structural drivers of HIV, TB and STIs. Using a multi-stakeholder approach, they have partnered with testing partners like Anova Health to provide health services for the men such as HIV Testing and Counselling, information about HIV/AIDS and TB prevention and treatment. The Men’s Forum is part of the Men’s Sector in the City of Johannesburg. Through activism, advocacy, and community mobilisation, the Men’s Forum aims to prevent HIV/AIDS prevalence and gender-based violence.

A male focussed HTS pop-up site was established at Alex plaza in July 2016 by Anova Health Institute in partnership with Johannesburg District Health Services. This was in response to the low uptake of HTS by men in health facilities; in line with the National Strategic Plan (NSP) a male

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targeted approach was needed. As a result, linkage to ART initiation improved from 12% to 60% overall with a total of 92 men started on ART at the site by end of September 2017.

Anova Health Institute is implementing the Health4Men programme. Two new approaches according Anova October 2020 Report to the Johannesburg district are the Mina Campaign that intends increasing the number of men accessing and being retained on treatment services. Mina is a marketing campaign that speaks directly to men on general health and wellbeing, and on HIV care and treatment specifically. The overall MINA brand vision is to significantly prevent the preventable deaths of men that are driven by an inability and lack of desire to act.

Secondly, “Coach Mpilo” is a Retention strategy that seeks to bring back men that are Lost to Follow Ups back onto care, enhance adherence among Virally Unsuppressed men and encourage ART uptake among newly diagnosed men.

The model also addresses psychosocial determinants of health like Disclosure that underpin uptake of ART among HIV diagnosed men. The model which will be empowered by MINA make use of Coaches and will be rolled out in 20 selected MINA pilot sites in the Johannesburg district.

Health4Men services are offered at Itireleng, Zola and Chiawelo CHCs in Region D; Yeoville Clinic in Region F and Riverpark Clinic in Region E. Successes reported includes that the programme is expanding and the programme grew by 15% (n=917) new or first-time clients utilised men’s health services through mobilisation by CLOs in October 2020. There are 11 029 men remaining on ART within the Health4Men Programme.

Table 23: Men, challenges and solutions

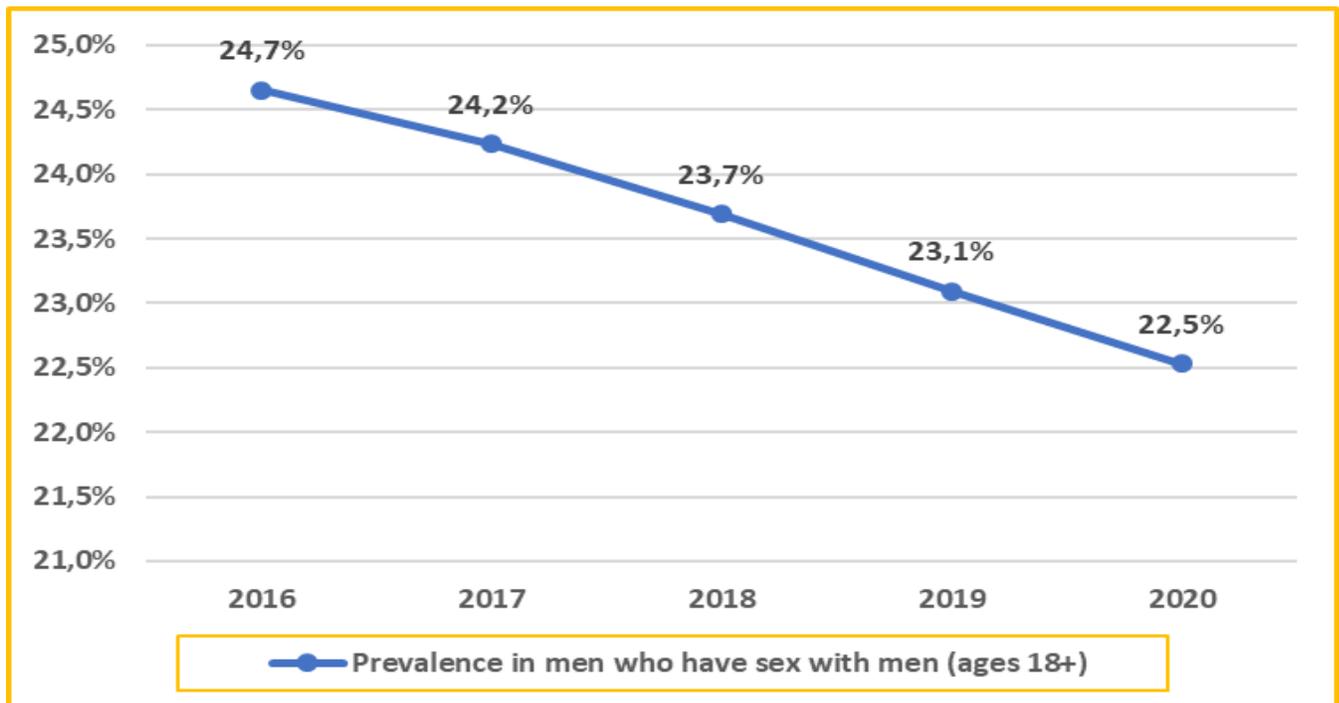
Gaps and challenges	Proposed Solutions
Low HIV yield and ART initiation	Provide support to Civil Society organisations such as the Men’s Forum to enhance peer outreach initiatives:

HIV prevalence among men who have sex with men

Figure 22 below shows the HIV prevalence trends for men who have sex with men (MSM) from 2017 to 2020. HIV prevalence among MSM has decreased from 24.2% in 2017 to 22.5% in 2020. The intervention programmes as listed in Table 24 above have been effective in reducing HIV prevalence among MSM. However, there is need to further intensify these intervention programmes.

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Figure 21: HIV Prevalence among men who have sex with men in the City of Johannesburg, 2016-2020



Source: (Thembeisa Model version 4.2 for five metros, 2019); Date extracted: 13 September 2020

Table 24: Men having sex with men challenges and solutions

Gaps and challenges	Proposed solutions
Poor linkage systems in community HTS programs	Implement the use of unique identifier to make it easy to track linkage from community testing to facilities or across Regions and District.
There is a likelihood that the HIV 90-90-90 targets will not be achieved as expected.	There is a need to Intensify diagnosis and subsequent treatment initiation of hard-to-reach and high-risk MSM whilst maintaining access and services to MSM through their centres of excellence and network of MSM-competent facilities.
Clients that test HIV positive at Community Testing events are not ready for ART Initiation	A strong sustained outreach peer follow-up engagement over time could result in successful linkage and referral to care
“Phantom” contact details	Implement a strong data support system to improve linkage to care for individuals will help with identification and elimination of ‘phantom’ contact details.

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The age of PrEP uptake is fairly high with most PrEP users being aged 30 years or more	There is an urgent need to promote PrEP among young MSM. PrEP will be advertised through bulk text message and social media to all clients
There is a low uptake of HTS by MSM in general.	Increase the index testing strategy to test partners and use a social network approach to reach previously untested MSM and MSM who have not tested in the last quarter.

People with disability

According to SANAC, people living with disabilities are made vulnerable in the context of HIV due to risk factors such as limited access to health services, discrimination and exclusion as well as poverty. Research on sexual violence and exploitation reveals that women and girls with disabilities are at heightened risk and that children with intellectual disability are 3 to 8 times more likely to experience sexual violence than children without disabilities.

Protective workshops and residential facilities provided by DSD promote the inclusion, mainstreaming and safety for people living with disabilities in order to provide “respect for their inherent dignity and equal enjoyment of human rights” (Department of Social Development, 2019)

People who inject drugs (PWID)

The UNAIDS factsheet (2018) shows that people who inject drugs are more than 20 times at risk of HIV compared with the general population. The high HIV risk is as a result of needle and injection equipment sharing. People who inject drugs also have higher rates of hepatitis C (HCV) and tuberculosis than the general population, (UNODC, 2017). The City of Johannesburg has therefore adopted a comprehensive package of harm reduction packages through CDC and Global Fund programmes. These comprehensive harm reduction packages include the following:

- Needle and syringe programmes
- Opioid substitution therapy
- HIV testing services
- Antiretroviral therapy
- Prevention and treatment of sexually transmitted infections
- Condom programmes for people who inject drugs and their sexual partners
- Targeted information, education and communication
- Prevention, vaccination, diagnosis and treatment of viral hepatitis B and C
- Prevention, diagnosis and treatment of tuberculosis
- Community distribution of naloxone

Of the interventions listed in the comprehensive package above, community distribution of naloxone was not implemented. Naloxone was available at drop-in centre or health centre. Treatment of Hepatitis C was not supported due to cost of treatment. Community based substance abuse treatment sites were established in Tladi, Eldorado Park, Joubert Park and River park respectively. In addition, a 24-Hour substance abuse crisis Line was established at 28

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Harrison Street in the inner city. Furthermore, a total of 105 schools were reached to ensure they have substance abuse policies in place and programs undertaken accordingly.

Best Practice JAB Smart for PWID: ANOVA

JAB Smart provides comprehensive harm reduction services to people who inject drugs (PWIDs) and their partners. Due to the frequency of sharing needles and common risky sexual behaviour, PWIDs have been identified as key populations, meaning they are vulnerable to HIV, tuberculosis, viral hepatitis and other blood-borne infections. They also face stigma, prejudice and lack of access to required health services.

According to the report to Johannesburg in November 2020, the project is working in Johannesburg, all regions. PWID have not been reached in Region B. The minimum package of services, includes the following components: Peer education, Risk assessment per PWID, and PWIDs are offered access to needles, syringes and safer injecting commodities, and access to clinical or support services.

Currently the project is reaching PWIDs via their mobile health unit which travels to the areas where there is a high concentration of PWIDs. Staff provides harm reduction packs which includes bulk clean needles/syringes, alcohol swabs, filters, sterile water, cooking gear plus condoms and lubricant, and nuanced HIV-related information. They are offered testing for HIV and treatment for STIs. Those that test positive are then linked to a clinic so they can start on treatment. They are also provided with basic wound management services, referral to social, mental health, and other medical services.

At the PWID clinic in Yeoville Anova Health Institute offers Opioid substitution therapy (OST). OST is a type of harm reduction initiative that offers people who are dependent on opioids (such as heroin) an alternative, prescribed medicine – most typically methadone or buprenorphine – which is swallowed rather than injected.

According to the November 2020 report to the Johannesburg District, 1 786 PWID were reached across all regions and 135 PWID was on OST.

This programme is targeted at protecting the public and first responders by facilitating the safe disposal of used needles and syringes. It also serves as a means of providing testing, counseling, and sterile injection supplies that help prevent outbreaks of other diseases.

Inmates

Innovative approaches are needed to monitor and support patients during the transition from correctional facilities to community HIV care. The prison environment may make it difficult for

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prisoners living with HIV to adhere to antiretroviral treatment. Estimates from UNAIDS shows that people in prison are on average five times more likely to be living with HIV compared with adults who are not incarcerated. The World Health Organization (WHO) estimates that prisoners are 15 times more likely to be HIV-positive than those who are not in imprisoned (UIAIDS, 2019) (WHO, 2019).

The use of contaminated injecting equipment when using drugs is one of the primary routes of HIV transmission in prisons. HIV prevention programmes are rarely made available to prisoners, and many prisoners with HIV are unable to access lifesaving antiretroviral treatment (ART) (UIAIDS, 2019). Mandatory HIV testing is enforced by some prison authorities, which is often seen as a breach of human rights.

The City of Johannesburg has been implementing HIV prevention and treatment programmes for inmates through the Department of Correctional Services. This include provision of primary health care, nutrition, hygiene and pharmaceutical services. However, data in the City of Johannesburg for inmates on Anti-Retroviral Therapy (ART), ART client viral load suppressed rate (VLS) among inmates and inmates tested HIV positive who know their results is currently limited.

CONCLUSION

There was progress across all regions in the City of Johannesburg with providing an enabling environment for health seeking behaviour by implementing initiatives such as the treatment retention and acceleration plan (TRAP) and Operation Phuthuma by improving screening and referrals for both communicable and non-communicable diseases (HIV and STIs, TB, NCDs); strengthening the Test and Treat initiative and implementing linkages to care management, treatment and support and strengthening of HIV Prevention interventions (Condom use, Medical Male, PMTCT, PEP, PREP); TB, Hypertension & Diabetes.

There is need to continue implementation of additional HIV testing services such as HIV Self screening and Index testing and continue and monitor the provision of HIV counselling services in antenatal clinics as part of standard care to maintain the current outstanding performances to achieving elimination of Mother to Child Transmission. There should be a focus on strategies to improve linkage to care, retention and re-engagement into care to address and to address high numbers of lost to follow-up and the ageing HIV population.

However, the City of Johannesburg needs to strengthen its strategies to ensure effective implementation of the 90-90-90 targets and its commitments to the Paris Fast Track City declaration. The City needs to expand its response beyond the Health response to expand social mobilization and advocacy platforms by working with Civil Society Sectors, other government departments and community-based organizations and re-establish the Johannesburg AIDS Council as a platform to strengthen and monitor the overall response to the epidemic in accordance with the National Strategic Plan for HIV, TB and STI.

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In addition, it is recommended that demand creation strategies for VMMC programmes need to be further strengthened and there should be dedicated personnel for effective implementation of VMMC programmes. Condom distribution coverage was also very low, particularly for the male condoms. There is need to improve on the supply chain management of condoms and to increase secondary condom distribution sites across all the Regions to increase the coverage to above 50%.

Johannesburg has been doing well in the implementation of customized intervention packages for the key and vulnerable populations. There has been an increase in the number of programmes targeted at MSM, sex workers, Men and Adolescence Girls and Young Women (AGYW) and the School Based HIV and GBV Prevention Programme. Comprehensive harm reduction packages were also introduced for the PWID. These services are available to a limited extend in all the seven Regions of Johannesburg. There is need to intensify and expand efforts to key and vulnerable populations to increase programmes targeting people with disabilities and transgender populations.

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