LINKAGE TO CARE IN RIFAMPICIN RESISTANT TUBERCULOSIS PATIENTS IN GAUTENG PROVINCE, SOUTH AFRICA 2022 - 2023

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Outline

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- Discussion
- Conclusion and Recommendations

Introduction

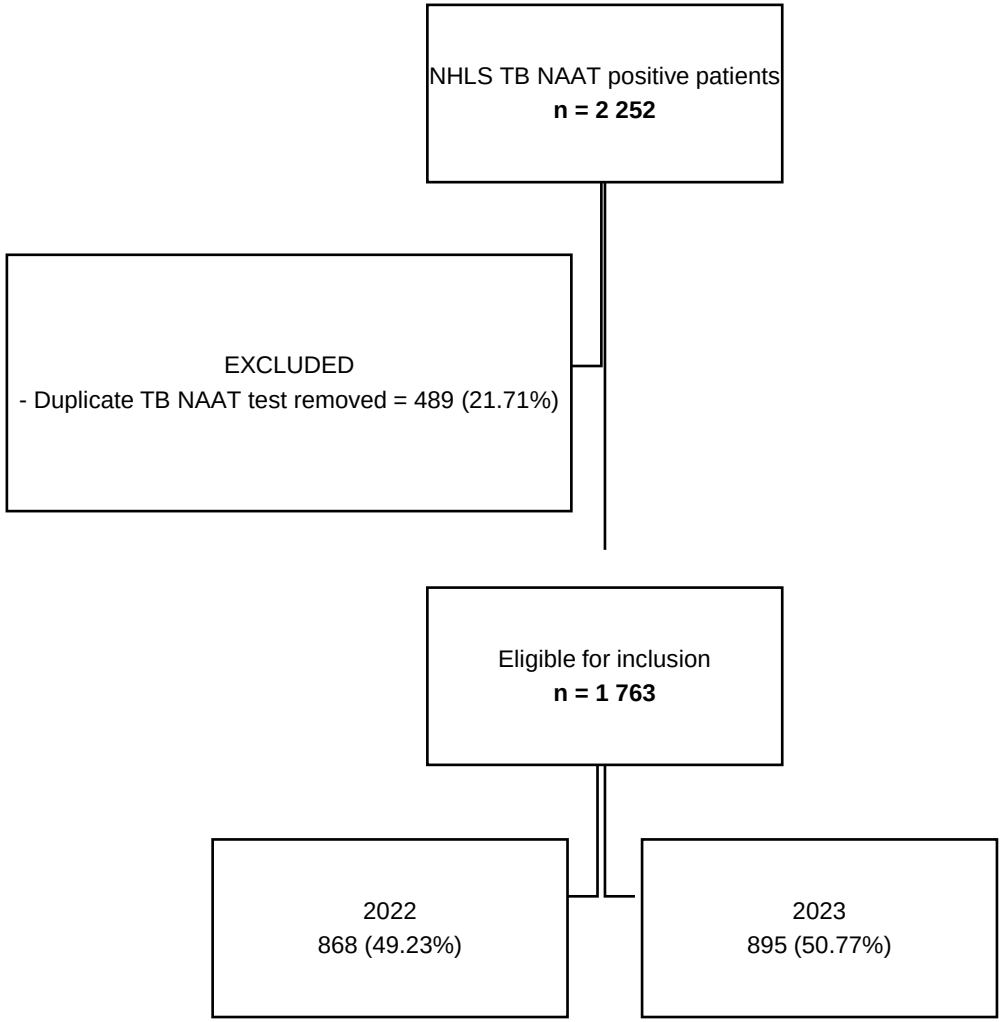
- Tuberculosis (TB) is one of the leading causes of death in South Africa. Linking Rifampicin Resistant (RR) TB patients to care, timely is key in reducing TB transmission and deaths. The global treatment initiation rate target is 90% and TB elimination is set for 2035. Therefore, to reach elimination, prompt initiation and high initiation rates are imperative.
- Pillar 2 of the recovery plan 3.0 (Find & Link) every patient diagnosed with DR-TB should be linked to care within one week
- The aim is to describe linkage to care of RR-TB patients in Gauteng province between 2022 and 2023.

Methods

- ***Study Design:***
  - Descriptive secondary data analysis
- ***Study population:***
  - All individuals with a positive TB nucleic-acid amplification test (NAAT) for Rifampicin Resistant Tuberculosis tested at a public institution in 2022 and 2023
- **Data collection:**
  - Data were obtained from weekly alerts sent by the Corporate Data Warehouse, South African National Health Laboratory Services and district feedback shared weekly.
- **Data Analysis:**
  - Data management and analysis were performed using STATA 17

Results

Breakdown of TB NAAT Positive Results



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Age distribution of RR-TB cases

	2022						2023					
	Johannesburg	Tshwane	Ekurhuleni	Sedibeng	West Rand	Gauteng Province	Johannesburg	Tshwane	Ekurhuleni	Sedibeng	West Rand	Gauteng Province
Age groups (years)												
	n(%)	n %	n %	n %	n %	n %	n %	n %	n %	n %	n %	n %
<5	1 0,33	33 2.04	1 0.38	0 0.00	0 0.00	5 0.58	3 0.78	1 0.78	0 0.00	1 1.32	0 0.00	5 0.56
5-14	0 0,0	11 0.68	3 1.15	0 0.00	0 0.00	4 0.46	3 0.78	1 0.78	0 0.00	0 0.00	1 1.30	5 0.56
15-24	32 10,60	6 4.08	16 6.15	9 9.68	6 9.09	69 7.95	26 6.74	8 6.20	15 6.61	3 3.95	3 3.90	55 6.15
25-34	67 22,19	29 19.73	65 25.00	22 23.66	15 22.73	198 22.81	80 20.73	32 24.81	61 26.87	29 38.16	20 25.97	222 24.80
35-44	83 27,48	33 22.45	87 33.46	21 22.58	23 34.85	247 28.46	105 27.20	35 27.13	71 31.28	26 34.21	27 35.06	264 29.50
45-54	48 15,89	18 12.24	36 13.85	14 15.05	13 19.70	129 14.86	57 14.77	15 11.63	45 19.82	8 10.53	10 12.99	135 15.08
55+	15 4,97	15 10.20	18 6.92	11 11.83	6 9.09	65 7.49	30 7.77	26 20.16	32 14.10	7 9.21	14 18.18	109 12.18
unknown	56 18,54	42 28.57	34 13.08	16 17.20	3 4.55	151 17.40	82 21.24	11 8.53	3 1.32	2 2.63	2 2.60	100 11.17

Gender distribution of RR-TB cases

	2022												2023											
	Johannesburg		Tshwane		Ekurhuleni		Sedibeng		West Rand		Gauteng Province		Johannesburg		Tshwane		Ekurhuleni		Sedibeng		West Rand		Gauteng Province	
Gender																								
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Female	107	35.43	37	25.17	88	33.85	35	37.63	23	34.85	290	33.41	122	31.61	53	41.09	85	37.44	31	40.79	23	29.87	314	35.08
Male	167	55.30	76	51.70	##	55.38	57	61.29	43	65.15	487	56.11	187	48.45	71	55.04	141	62.11	45	59.21	54	70.13	498	55.64
unknown	28	9.27	34	23.13	28	10.77	1	1.08	0	0.00	91	10.48	77	19.95	5	3.88	1	0.44	0	0.00	0	0.00	83	9.27

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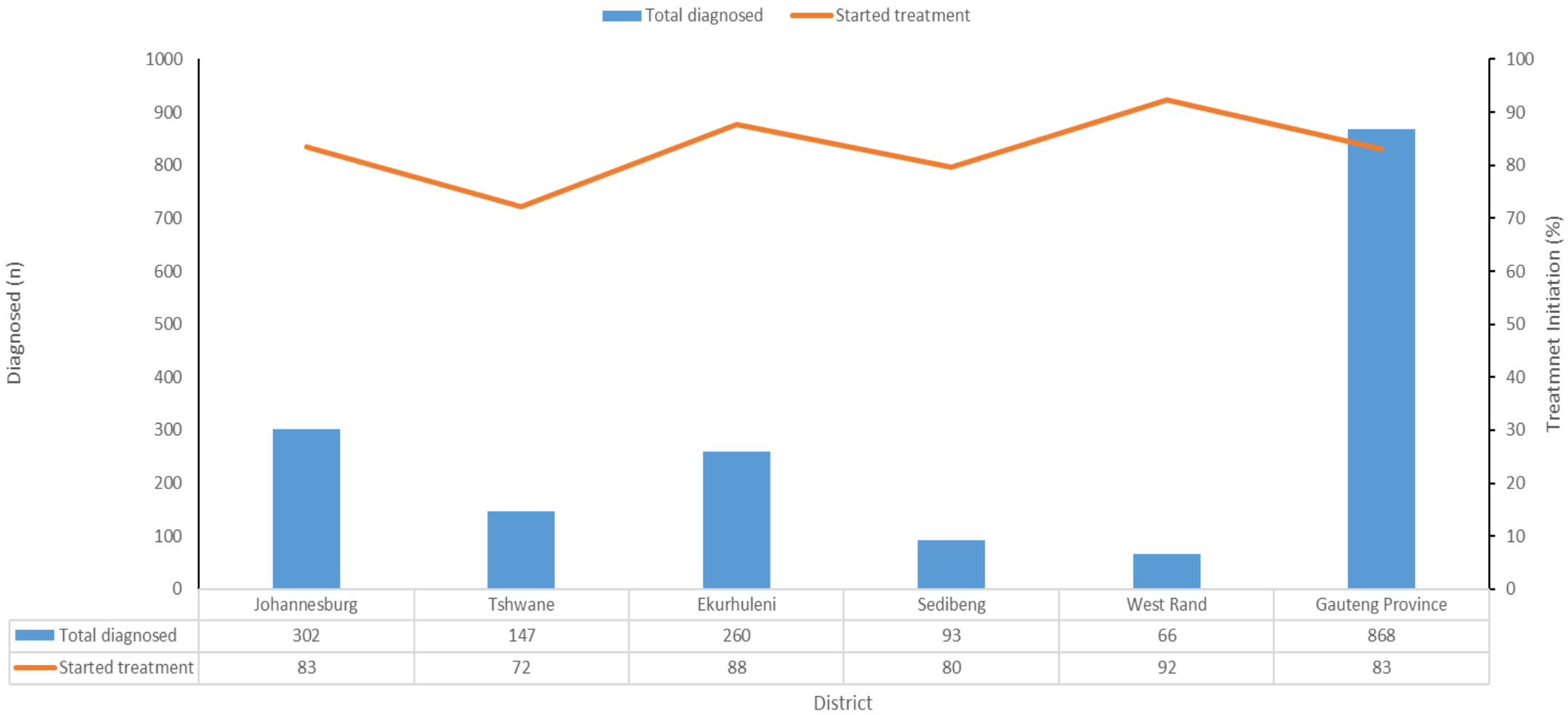
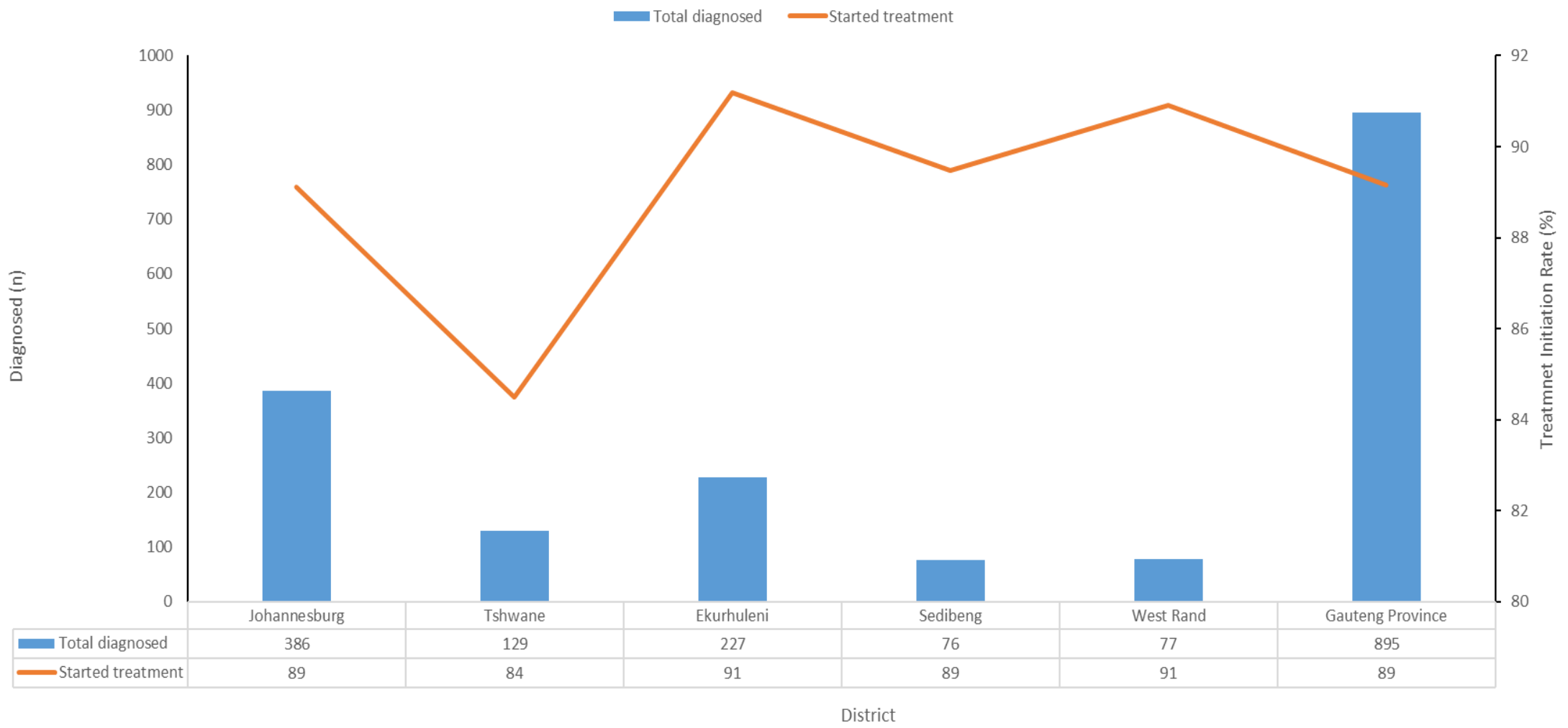
Diagnosis of RR-TB cases

	2022												2023											
	Johannesburg		Tshwane		Ekurhuleni		Sedibeng		West Rand		Gauteng Province		Johannesburg		Tshwane		Ekurhuleni		Sedibeng		West Rand		Gauteng Province	
Diagnosis																								
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Total diagnosed	302		147		##		93		66		868		386	100,00	129	100,00	227	100,00	76	100,00	77	100,00	895	100,00
Started treatment	252	83,44	106	72,11	##	87,69	74	79,57	61	92,42	721	83,06	344	89,12	109	84,50	207	91,19	68	89,47	70	90,91	798	89,16
Died before treatment	15	4,97	14	9,52	20	7,69	11	11,83	3	4,55	63	7,26	21	5,44	10	7,75	14	6,17	5	6,58	5	6,49	55	6,15
Refused treatment	1	0,33	5	3,40	3	1,15	1	1,08	0	0,00	10	1,15	2	0,52	1	0,78	0	0,00	1	1,32	0	0,00	4	0,45
Moved out	3	0,99	0	0,00	11	4,23	3	3,23	0	0,00	17	1,96	0	0,00	0	0,00	0	0,00	0	0,00	0	0,00		0,00
Cannot be traced	31	10,26	11	7,48	8	3,08	4	4,30	2	3,03	56	6,45	19	4,92	9	6,98	7	3,08	2	2,63	2	2,60	39	4,36

2022


Total diagnosed
Started treatment
Diagnosed (n)
Treatmnet Initiation (%)
1000
900
800
700
600
500
400
300
200
100
0
100
90
80
70
60
50
40
30
20
10
0
Johannesburg
Tshwane
Ekurhuleni
Sedibeng
West Rand
Gauteng Province
Total diagnosed 302 147 260 93 66 868
Started treatment 83 72 88 80 92 83
District

2023



	Johannesburg	Tshwane	Ekurhuleni	Sedibeng	West Rand	Gauteng Province
Total diagnosed	386	129	227	76	77	895
Started treatment	89	84	91	89	91	89

Time to treatment initiation (days) of RR-TB cases

	2022						2023					
	Johannesburg	Tshwane	Ekurhuleni	Sedibeng	West Rand	Gauteng Province	Johannesburg	Tshwane	Ekurhuleni	Sedibeng	West Rand	Gauteng Province
Time to treatment initiation (days)												
	n %	n %	n %	n %	n %	n %	n %	n %	n %	n %	n %	n %
0-7	150 59.52	56 52.83	78 68.42	38 51.35	35 57.38	435 60.33	223 64.83	72 66.06	123 59.42	30 44.12	34 48.57	482 60.40
8-14	57 22.62	28 26.42	46 20.18	18 24.32	20 32.79	169 23.44	52 15.12	19 17.43	57 27.54	19 27.94	21 30.00	168 21.05
15 - 30	36 14.29	15 14.15	17 7.46	12 16.22	3 4.92	83 11.51	48 13.95	16 14.68	20 9.66	14 20.59	14 20.00	112 14.04
31 - 60	8 3.17	6 5.66	6 2.63	4 5.41	3 4.92	27 3.74	16 4.65	2 1.83	5 2.42	5 7.35	1 1.43	29 3.63
> 61	1 0.40	1 0.94	3 1.32	2 2.70	0 0.00	7 0.97	5 1.45	0 0.00	2 0.97	0 0.00	0 0.00	7 0.88

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HIV Status per diagnosis of RR-TB Cases

	2022												2023											
	Johannesburg		Tshwane		Ekurhuleni		Sedibeng		West Rand		Gauteng Province		Johannesburg		Tshwane		Ekurhuleni		Sedibeng		West Rand		Gauteng Province	
HIV Status																								
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Positive	185	32,80	80	14,18	181	32,09	61	10,82	57	10,11	564	64,98%	262	42,74	80	62,02	163	26,59	52	8,48	56	9,14	613	68,49
Negative	68	38,42	37	20,90	46	25,99	17	9,60	9	5,08	177	20,39%	91	43,13	36	27,91	42	19,91	22	10,43	20	9,48	211	23,58
Missing	49	38,58	30	23,62	33	25,98	15	11,81	0	0,00	127	14,63%	33	46,48	13	10,08	22	30,99	2	2,82	1	1,41	71	7,93

Discussion

- The treatment initiation rate improved to 89.16% in 2023.
- Gauteng province reported a treatment initiation improvement from 83% to 89% over two years
- The greatest proportion of people who died prior to treatment initiation were from Sedibeng district, the second smallest district regarding population size in Gauteng province.
- The 25-34 year age group represented the largest proportion of initial LTFU.
- Strengths of this study include the use of one dataset where key indicators are imputed by district officials used to determine treatment initiation.
- There was a delay in treatment initiation on both years but worse in 2023 around the month of September due to BPaL/L-Roll out
- Limitations of this study include missing data greater than 15% for age and art initiation in 2022.
- We had a high number of unknown/missing HIV status in2022 compared to 2023

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Recommendations

- As a province we have already started with facility visits in all 5 Districts looking at linkage to care and to address delays in DR-TB treatment initiation.
- Discussion are ongoing in relation with proper use of SOPs and DR-TB guidelines to mitigate false positive DR-TB cases and also deduplication on the line lists.
- To improve our treatment initiation rate to above 90%.

Acknowledgements

- 1. Lehlohonolo Kumalo, Nomathamsanqa Ndhlovu, Kgomotso Dinake
- 2. National Institute for Communicable Diseases, a division of National Health Laboratory Services, Johannesburg, South Africa
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THANK YOU

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