

COVID-19 TESTING SUMMARY



NATIONAL INSTITUTE FOR
COMMUNICABLE DISEASES

Division of the National Health Laboratory Service

SOUTH AFRICA WEEK 28 2021

OVERVIEW OF REPORT

This report summarises national laboratory testing for SARS-CoV-2, the virus causing COVID-19, in South Africa. This report is based on data for specimens reported up to 17 July 2021 (Week 28 of 2021).

HIGHLIGHTS

- In the period 1 March 2020 through 17 July 2021, 14,175,399 (12,651,452 PCR and 1,523,947 antigen) tests for SARS-CoV-2 have been reported nationally.
- The number of tests reported in week 28 of 2021 (n=291,686) was lower than the number of tests reported in recent weeks.
- The testing rate in week 28 was 489 per 100,000 persons; highest in the Western Cape (795 per 100,000 persons) and lowest in KwaZulu-Natal (207 per 100,000 persons).
- In week 28 the percentage testing positive was 32.4%, which was similar to the previous week.
- The percentage testing positive in week 28 was highest in Limpopo (48.1%), Mpumalanga (39.0%), North West (37.2%), Gauteng (36.0%) and Western Cape (30.1%) provinces. The percentage testing positive was between 20% and 30% in the Northern Cape and Free State, and was <20% in the Eastern Cape and KwaZulu-Natal provinces.
- In week 28, compared to the previous week, the percentage testing positive increased in the Western Cape, Eastern Cape, Northern Cape, Free State, KwaZulu-Natal and Mpumalanga, and decreased in the North West, Gauteng and Limpopo.
- The number of tests reported is likely underestimated as antigen tests are increasingly being used outside of laboratory settings and reporting may be delayed or results may not be reported.

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Methods

Testing for SARS-CoV-2 began on 28 January 2020 at the NICD and after the first case was confirmed on 5th March 2020, testing was expanded to a larger network of private and NHLS laboratories. Laboratory testing was conducted for people meeting the case definition for persons under investigation (PUI). This definition was updated several times over the reporting period but at different times included (i) symptomatic individuals seeking testing, (ii) hospitalised individuals for whom testing was done, (iii) individuals in high-risk occupations, (iv) individuals in outbreak settings, and (v) individuals identified through community screening and testing (CST) programmes which were implemented in April 2020 and was discontinued from the week beginning 17th May. CST was implemented differently in different provinces, and ranged from mass screening approaches (including asymptomatic individuals) to screening of individuals in contact with a confirmed case to targeted testing of clusters of cases. Respiratory specimens were submitted to testing laboratories. Testing was performed using reverse transcriptase real-time PCR, which detects SARS-CoV-2 viral genetic material. Laboratories used any one of several in-house and commercial PCR assays to test for the presence of SARS-CoV-2 RNA. Testing for SARS-CoV-2 using rapid antigen-based tests was implemented towards the end of October 2020. Results of reported rapid antigen-based tests are included in this report, however data are incomplete and efforts are ongoing to improve data completeness.

Test results were automatically fed into a data warehouse after result authorisation. We excluded specimens collected outside South Africa and duplicate entries of the same test for an individual. From week 48 of 2020 onwards, test data were reported from the Notifiable Medical Conditions Surveillance System (NMCCSS). Date of specimen receipt in the laboratory was used when date of specimen collection was missing. Proportion testing positive (PTP) was calculated as the number of positive tests/total number of tests and presented as percentage by multiplying with 100. We used 2020 mid-year population estimates from Statistics South Africa to calculate the testing rate, expressed as tests per 100,000 persons. Patient admission status for

public and private sector tests was determined based on the reported patient facility. Laboratory turnaround times were calculated as the mean number of days between specimen collection and reporting of the result. Categorical variables were compared using the chi-squared test, and continuous variables with the students t-test, with a P-value < 0.05 considered statistically significant.

Health district and sub-district (in the metros) level results were mapped based on geo-locatable public and private sector testing facilities. Estimates of overall prevalence were derived using regression techniques. Estimates were adjusted to produce district-specific positive test prevalences based on the national average age and sex profile of testing for that week. This adjustment allows more accurate comparison of the proportion testing positive across districts.

The report includes tests reported between 1 March 2020 (week 10 of 2020), the week when the first case of COVID-19 was confirmed, and 17 July 2021 (week 28 of 2021).

Testing volumes and proportion testing positive

From 1 March 2020 through 17 July 2021, 14,175,399 SARS-CoV-2 tests were reported; 12,651,452 PCR and 1,523,947 antigen tests. The highest number of tests reported during the first wave occurred in week 28 of 2020 (beginning 5 July, n=307,914). In the second wave, weekly testing volumes increased from week 48 of 2020 (beginning 22 November), with the highest weekly number of tests since the start of the pandemic reported in week 1 of 2021 (beginning 3 January, n=501,111). In the third wave, the weekly number of tests started increasing in week 19 of 2021 (beginning 9 May), and increased weekly to 474,367 tests in week 26 of 2021 (beginning 27 June). The number of tests reported in week 28 was 291,686, lower than the number observed in the previous few weeks. All tests for samples collected in the previous week may not yet be reflected. Reduced testing volumes were observed over weekends and public holidays (Figure 1).

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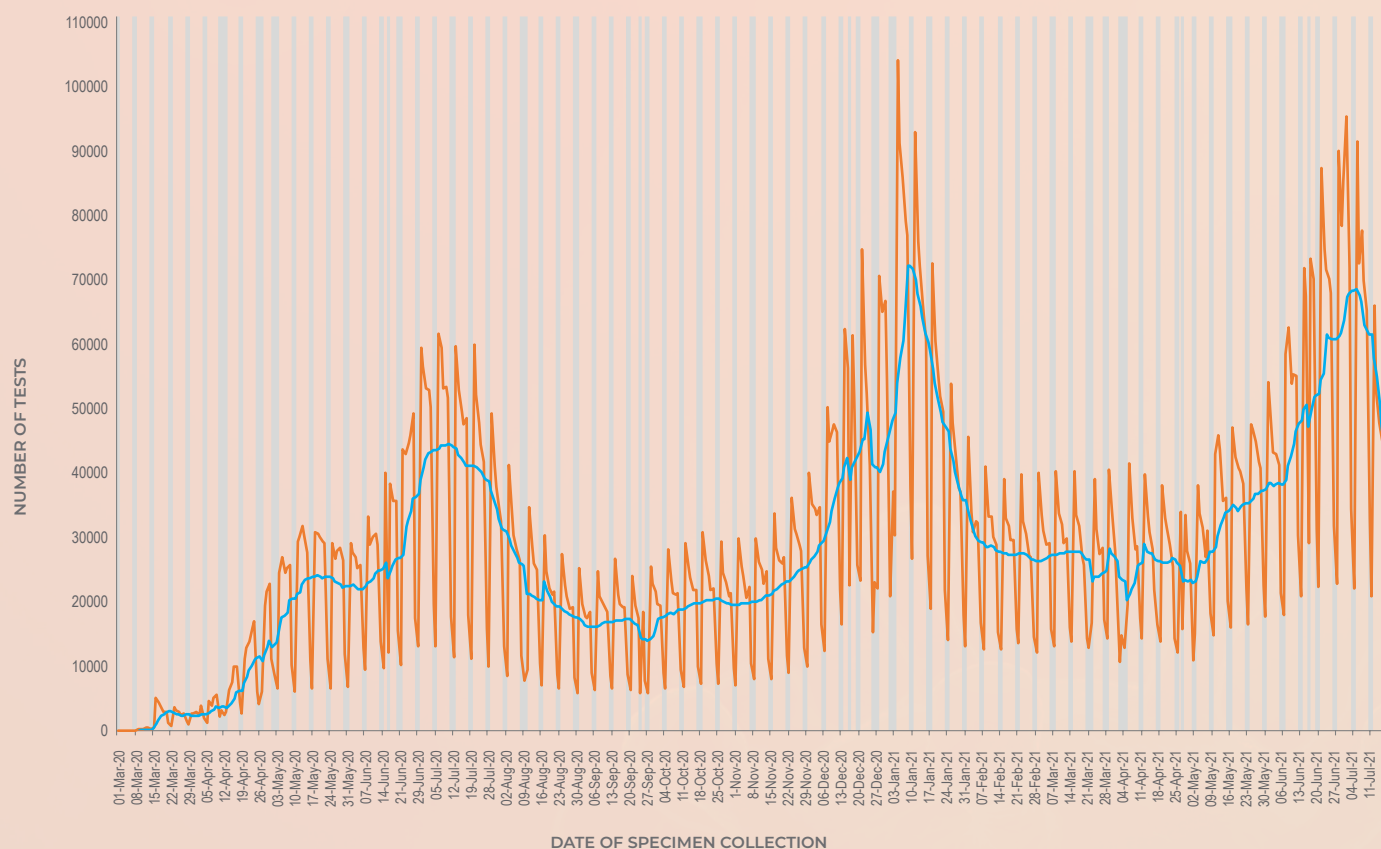


Figure 1. Number of SARS-CoV-2 tests reported by date of specimen collection, South Africa, 1 March 2020 – 17 July 2021. Blue line shows the 7-day moving average of the number of tests reported. Grey bars highlight weekend days and public holidays.

The overall percentage testing positive from week 10 of 2020 through week 28 of 2021 was 17.2% (Table 1). During the first wave of infections, the percentage testing positive peaked at 29.7% in week 29 of 2020, and subsequently decreased to 8.4% in week 44 of 2020. During the second wave of infections the percentage testing positive increased to a peak of 34.6% in week 53 of 2020, and subsequently decreased to 4.0% in week 14 of 2021. The percentage testing positive in week 28 of 2021 was 32.4%, unchanged from the previous week (32.3%, $P=0.375$), and higher than observed since week 53 of 2020 (beginning 27 December) (Figure 2).

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Table 1. Weekly number of SARS-CoV-2 tests and positive tests reported, South Africa, 1 March 2020 – 17 July 2021

Week number	Week beginning	No. of tests n (%)	No. of positive tests	Percentage testing positive (%)
10	01-Mar-20	456 (0.0)	13	2.9
11	08-Mar-20	2380 (0.0)	103	4.3
12	15-Mar-20	21567 (0.2)	897	4.2
13	22-Mar-20	17545 (0.1)	544	3.1
14	29-Mar-20	18251 (0.1)	521	2.9
15	05-Apr-20	26299 (0.2)	796	3.0
16	12-Apr-20	43754 (0.3)	1295	3.0
17	19-Apr-20	79179 (0.6)	2177	2.7
18	26-Apr-20	93816 (0.7)	3208	3.4
19	03-May-20	142712 (1.0)	6018	4.2
20	10-May-20	165377 (1.2)	8092	4.9
21	17-May-20	166544 (1.2)	11379	6.8
22	24-May-20	156139 (1.1)	12967	8.3
23	31-May-20	153571 (1.1)	15079	9.8
24	07-Jun-20	173905 (1.2)	22363	12.9
25	14-Jun-20	186090 (1.3)	32653	17.5
26	21-Jun-20	252100 (1.8)	55049	21.8
27	28-Jun-20	302751 (2.1)	75313	24.9
28	05-Jul-20	307914 (2.2)	86039	27.9
29	12-Jul-20	285602 (2.0)	84927	29.7
30	19-Jul-20	270898 (1.9)	78636	29.0
31	26-Jul-20	216396 (1.5)	58394	27.0
32	02-Aug-20	179573 (1.3)	40996	22.8
33	09-Aug-20	141104 (1.0)	26266	18.6
34	16-Aug-20	135014 (1.0)	21377	15.8
35	23-Aug-20	123333 (0.9)	16331	13.2
36	30-Aug-20	112762 (0.8)	12790	11.3
37	06-Sep-20	116997 (0.8)	11953	10.2
38	13-Sep-20	120716 (0.9)	12012	10.0
39	20-Sep-20	98819 (0.7)	10098	10.2
40	27-Sep-20	123062 (0.9)	11008	8.9
41	04-Oct-20	131045 (0.9)	11779	9.0
42	11-Oct-20	137976 (1.0)	12077	8.8
43	18-Oct-20	142171 (1.0)	12069	8.5
44	25-Oct-20	135853 (1.0)	11479	8.4
45	01-Nov-20	138841 (1.0)	12138	8.7
46	08-Nov-20	147009 (1.0)	14845	10.1
47	15-Nov-20	160649 (1.1)	18765	11.7
48	22-Nov-20	175695 (1.2)	22054	12.6
49	29-Nov-20	203149 (1.4)	30768	15.1
50	06-Dec-20	267926 (1.9)	53313	19.9
51	13-Dec-20	294466 (2.1)	68578	23.3
52	20-Dec-20	284567 (2.0)	81961	28.8
53	27-Dec-20	334393 (2.4)	115737	34.6
1	03-Jan-21	501111 (3.5)	151028	30.1
2	10-Jan-21	417910 (2.9)	104786	25.1

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3	17-Jan-21	327321 (2.3)	63244	19.3
4	24-Jan-21	249426 (1.8)	34629	13.9
5	31-Jan-21	203587 (1.4)	22357	11.0
6	07-Feb-21	193205 (1.4)	16461	8.5
7	14-Feb-21	190352 (1.3)	12166	6.4
8	21-Feb-21	184392 (1.3)	10368	5.6
9	28-Feb-21	189273 (1.3)	8672	4.6
10	07-Mar-21	193160 (1.4)	8318	4.3
11	14-Mar-21	185333 (1.3)	8136	4.4
12	21-Mar-21	172156 (1.2)	7339	4.3
13	28-Mar-21	163177 (1.2)	7058	4.3
14	04-Apr-21	180241 (1.3)	7276	4.0
15	11-Apr-21	183558 (1.3)	8833	4.8
16	18-Apr-21	184052 (1.3)	9450	5.1
17	25-Apr-21	159046 (1.1)	9163	5.8
18	02-May-21	193445 (1.4)	13410	6.9
19	09-May-21	237764 (1.7)	19833	8.3
20	16-May-21	245577 (1.7)	24097	9.8
21	23-May-21	258878 (1.8)	29571	11.4
22	30-May-21	265353 (1.9)	35817	13.5
23	06-Jun-21	331179 (2.3)	58634	17.7
24	13-Jun-21	361405 (2.5)	86268	23.9
25	20-Jun-21	422361 (3.0)	116100	27.5
26	27-Jun-21	474367 (3.3)	142978	30.1
27	04-Jul-21	427718 (3.0)	138103	32.3
28	11-Jul-21	291686 (2.1)	94471	32.4
Total		14,175,399 (100.0)	2,433,423	17.2

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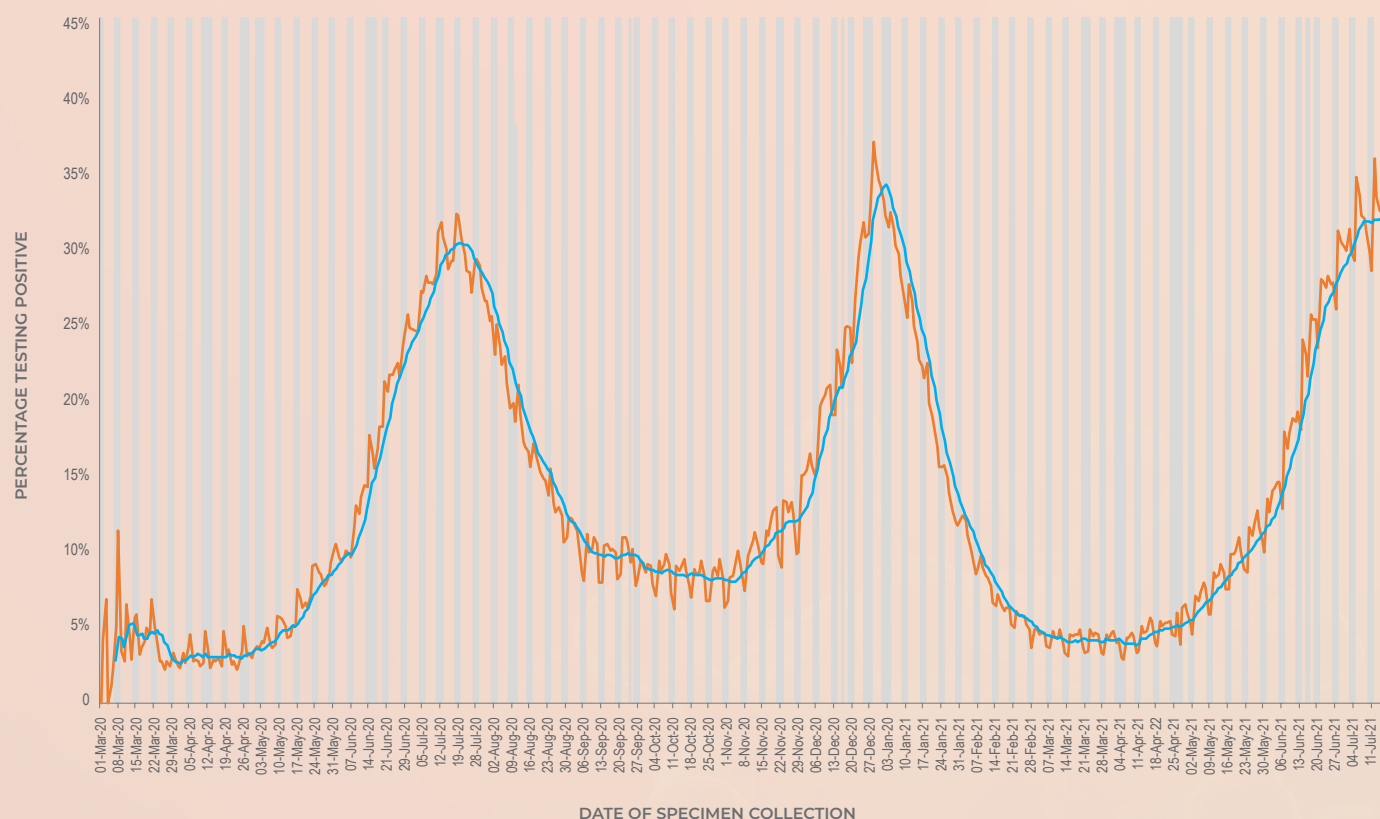


Figure 2. Percentage of tests positive for SARS-CoV-2 by date of specimen collection, South Africa, 1 March 2020 – 17 July 2021. Blue line shows the 7-day moving average of the percentage testing positive. Grey bars highlight weekend days and public holidays.

Testing in private and public sectors

From 1 March 2020 through 17 July 2021, 6,207,917 tests were reported in the public sector, with 17.1% testing positive. Over this same period, the private sector reported 7,967,482 tests, with 17.2% testing positive (Table 2). Overall, the public sector has reported 43.8% of tests and accounted for 43.7% of positive tests. In the first wave of infections the peak percentage testing positive was observed in week 30 of 2020 in the public sector (28.8%), and in week 29 of 2020 in the private sector (30.6%). In the second wave of infections the highest percentage testing positive was observed in week 53 of 2020 in both the public sector (34.9%) and private sector (34.4%). From week 27 to week 28 of 2021, the percentage testing positive increased by 1.3% in the public sector (30.9% in week 27 to 32.2% in week 28, $P < 0.001$) and decreased by

1.0% in the private sector (33.6% in week 27 to 32.6% in week 28, $P < 0.001$). In week 28 the percentage testing positive in the private sector (32.6%) was 0.4% higher than in the public sector (32.2%, $P = 0.016$).

The mean turnaround time for PCR tests reported in week 28 of 2021 was 1.2 days; 1.8 days in the public sector and 0.8 days in the private sector (Figure 3). Turnaround times for public sector PCR tests were >2 days in KwaZulu-Natal and Mpumalanga provinces in week 28 (Figure 4). Increases in turnaround times were observed in KwaZulu-Natal province in the past week, while decreases were observed in the Free State. Nineteen of the 28 (67.9%) NHLS laboratories performing PCR testing for SARS-CoV-2 had turnaround times ≤ 2 days in week 28 (Figure 5).

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Table 2. Weekly number of tests and positive tests reported, by healthcare sector, South Africa, 1 March 2020 – 17 July 2021

Week number	Week beginning	Public sector		Private sector		Public sector proportion of		Ratio of PTP ^a
		Tests	Cases n (%)	Tests	Positive tests n (%)	Tests (%)	Positive tests (%)	
10	01-Mar-20	294	10 (3.4)	162	3 (1.9)	64.5	76.9	1.837
11	08-Mar-20	401	27 (6.7)	1979	76 (3.8)	16.8	26.2	1.753
12	15-Mar-20	1442	81 (5.6)	20125	816 (4.1)	6.7	9.0	1.385
13	22-Mar-20	3478	149 (4.3)	14067	395 (2.8)	19.8	27.4	1.526
14	29-Mar-20	5868	194 (3.3)	12383	327 (2.6)	32.2	37.2	1.252
15	05-Apr-20	11735	417 (3.6)	14564	379 (2.6)	44.6	52.4	1.366
16	12-Apr-20	24167	672 (2.8)	19587	623 (3.2)	55.2	51.9	0.874
17	19-Apr-20	55110	1595 (2.9)	24069	582 (2.4)	69.6	73.3	1.197
18	26-Apr-20	67469	2453 (3.6)	26347	755 (2.9)	71.9	76.5	1.269
19	03-May-20	94338	4507 (4.8)	48374	1511 (3.1)	66.1	74.9	1.529
20	10-May-20	108001	5443 (5.0)	57376	2649 (4.6)	65.3	67.3	1.092
21	17-May-20	98648	7031 (7.1)	67896	4348 (6.4)	59.2	61.8	1.113
22	24-May-20	77597	6411 (8.3)	78542	6556 (8.3)	49.7	49.4	0.990
23	31-May-20	63945	6626 (10.4)	89626	8453 (9.4)	41.6	43.9	1.099
24	07-Jun-20	64655	8039 (12.4)	109250	14324 (13.1)	37.2	35.9	0.948
25	14-Jun-20	61149	11982 (19.6)	124941	20671 (16.5)	32.9	36.7	1.184
26	21-Jun-20	90455	20425 (22.6)	161645	34624 (21.4)	35.9	37.1	1.054
27	28-Jun-20	106374	27245 (25.6)	196377	48068 (24.5)	35.1	36.2	1.046
28	05-Jul-20	117727	32239 (27.4)	190187	53800 (28.3)	38.2	37.5	0.968
29	12-Jul-20	110664	31383 (28.4)	174938	53544 (30.6)	38.7	37.0	0.927
30	19-Jul-20	105217	30319 (28.8)	165681	48317 (29.2)	38.8	38.6	0.988
31	26-Jul-20	81248	22782 (28.0)	135148	35612 (26.4)	37.5	39.0	1.064
32	02-Aug-20	70566	16996 (24.1)	109007	24000 (22.0)	39.3	41.5	1.094
33	09-Aug-20	58661	11172 (19.0)	82443	15094 (18.3)	41.6	42.5	1.040
34	16-Aug-20	56138	9621 (17.1)	78876	11756 (14.9)	41.6	45.0	1.150
35	23-Aug-20	50319	7790 (15.5)	73014	8541 (11.7)	40.8	47.7	1.323
36	30-Aug-20	45422	6096 (13.4)	67340	6694 (9.9)	40.3	47.7	1.350
37	06-Sep-20	51055	6421 (12.6)	65942	5532 (8.4)	43.6	53.7	1.499
38	13-Sep-20	53707	6547 (12.2)	67009	5465 (8.2)	44.5	54.5	1.495
39	20-Sep-20	44841	5530 (12.3)	53978	4568 (8.5)	45.4	54.8	1.457
40	27-Sep-20	48629	5568 (11.4)	74433	5440 (7.3)	39.5	50.6	1.567
41	04-Oct-20	50435	5690 (11.3)	80610	6089 (7.6)	38.5	48.3	1.494
42	11-Oct-20	53452	5702 (10.7)	84524	6375 (7.5)	38.7	47.2	1.414
43	18-Oct-20	56123	6045 (10.8)	86048	6024 (7.0)	39.5	50.1	1.539
44	25-Oct-20	51287	5721 (11.2)	84566	5758 (6.8)	37.8	49.8	1.638
45	01-Nov-20	52999	6061 (11.4)	85842	6077 (7.1)	38.2	49.9	1.615
46	08-Nov-20	58914	8097 (13.7)	88095	6748 (7.7)	40.1	54.5	1.794
47	15-Nov-20	67582	10584 (15.7)	93067	8181 (8.8)	42.1	56.4	1.782
48	22-Nov-20	74574	12200 (16.4)	101121	9854 (9.7)	42.4	55.3	1.679
49	29-Nov-20	81269	15730 (19.4)	121880	15038 (12.3)	40.0	51.1	1.569
50	06-Dec-20	107910	24716 (22.9)	160016	28597 (17.9)	40.3	46.4	1.282
51	13-Dec-20	117212	29815 (25.4)	177254	38763 (21.9)	39.8	43.5	1.163
52	20-Dec-20	109913	34128 (31.1)	174654	47833 (27.4)	38.6	41.6	1.134
53	27-Dec-20	151631	52932 (34.9)	182762	62805 (34.4)	45.3	45.7	1.016
1	03-Jan-21	236991	71063 (30.0)	264120	79965 (30.3)	47.3	47.1	0.990
2	10-Jan-21	204007	52957 (26.0)	213903	51829 (24.2)	48.8	50.5	1.071
3	17-Jan-21	165636	34453 (20.8)	161685	28791 (17.8)	50.6	54.5	1.168
4	24-Jan-21	123225	18992 (15.4)	126201	15637 (12.4)	49.4	54.8	1.244
5	31-Jan-21	99759	12065 (12.1)	103828	10292 (9.9)	49.0	54.0	1.220
6	07-Feb-21	91295	8505 (9.3)	101910	7956 (7.8)	47.3	51.7	1.193
7	14-Feb-21	86193	6667 (7.7)	104159	5499 (5.3)	45.3	54.8	1.465
8	21-Feb-21	82465	5785 (7.0)	101927	4583 (4.5)	44.7	55.8	1.560
9	28-Feb-21	87828	4666 (5.3)	101445	4006 (3.9)	46.4	53.8	1.345
10	07-Mar-21	92696	4576 (4.9)	100464	3742 (3.7)	48.0	55.0	1.325
11	14-Mar-21	89794	4435 (4.9)	95539	3701 (3.9)	48.5	54.5	1.275
12	21-Mar-21	76557	3456 (4.5)	95599	3883 (4.1)	44.5	47.1	1.111
13	28-Mar-21	70747	3454 (4.9)	92430	3604 (3.9)	43.4	48.9	1.252
14	04-Apr-21	79046	3351 (4.2)	101195	3925 (3.9)	43.9	46.1	1.093

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15	11-Apr-21	84876	4356 (5.1)	98682	4477 (4.5)	46.2	49.3	1.131
16	18-Apr-21	79858	4701 (5.9)	104194	4749 (4.6)	43.4	49.7	1.292
17	25-Apr-21	69701	4112 (5.9)	89345	5051 (5.7)	43.8	44.9	1.044
18	02-May-21	80859	5442 (6.7)	112586	7968 (7.1)	41.8	40.6	0.951
19	09-May-21	90068	7292 (8.1)	147696	12541 (8.5)	37.9	36.8	0.953
20	16-May-21	98631	9076 (9.2)	146946	15021 (10.2)	40.2	37.7	0.900
21	23-May-21	119083	11703 (9.8)	139795	17868 (12.8)	46.0	39.6	0.769
22	30-May-21	108750	11743 (10.8)	156603	24074 (15.4)	41.0	32.8	0.702
23	06-Jun-21	144452	19578 (13.6)	186727	39056 (20.9)	43.6	33.4	0.648
24	13-Jun-21	149321	29013 (19.4)	212084	57255 (27.0)	41.3	33.6	0.720
25	20-Jun-21	172931	41703 (24.1)	249430	74397 (29.8)	40.9	35.9	0.809
26	27-Jun-21	224699	61856 (27.5)	249668	81122 (32.5)	47.4	43.3	0.847
27	04-Jul-21	202127	62368 (30.9)	225591	75735 (33.6)	47.3	45.2	0.919
28	11-Jul-21	133701	43000 (32.2)	157985	51471 (32.6)	45.8	45.5	0.987
Total		6,207,917	1,063,560 (17.1)	7,967,482	1,369,863 (17.2)	43.8	43.7	0.996

^aRatio of percentage testing positive (PTP) in the public sector to the private sector calculated as (no. of cases/total tests in public sector)/(no. of cases/total tests in private sector)

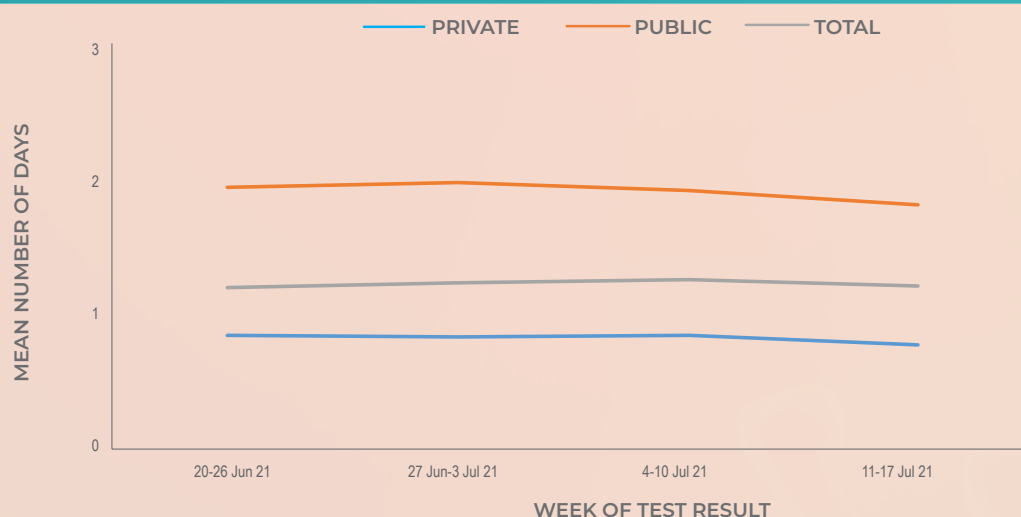


Figure 3. Mean number of days between date of specimen collection and date of test result for PCR tests, by week of test result, South Africa, 20 June – 17 July 2021

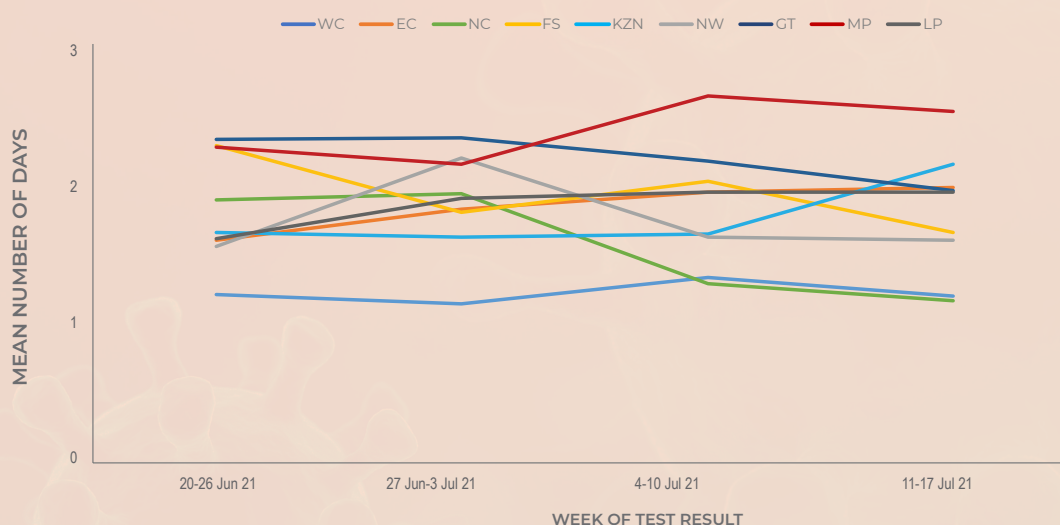


Figure 4. Mean number of days between date of specimen collection and date of test result for PCR tests, by week of test result and province, public sector, South Africa, 20 June – 17 July 2021. WC, Western Cape; EC, Eastern Cape; FS, Free State; KZN, KwaZulu-Natal; GT, Gauteng; NC, Northern Cape; NW, North West; MP, Mpumalanga; LP, Limpopo

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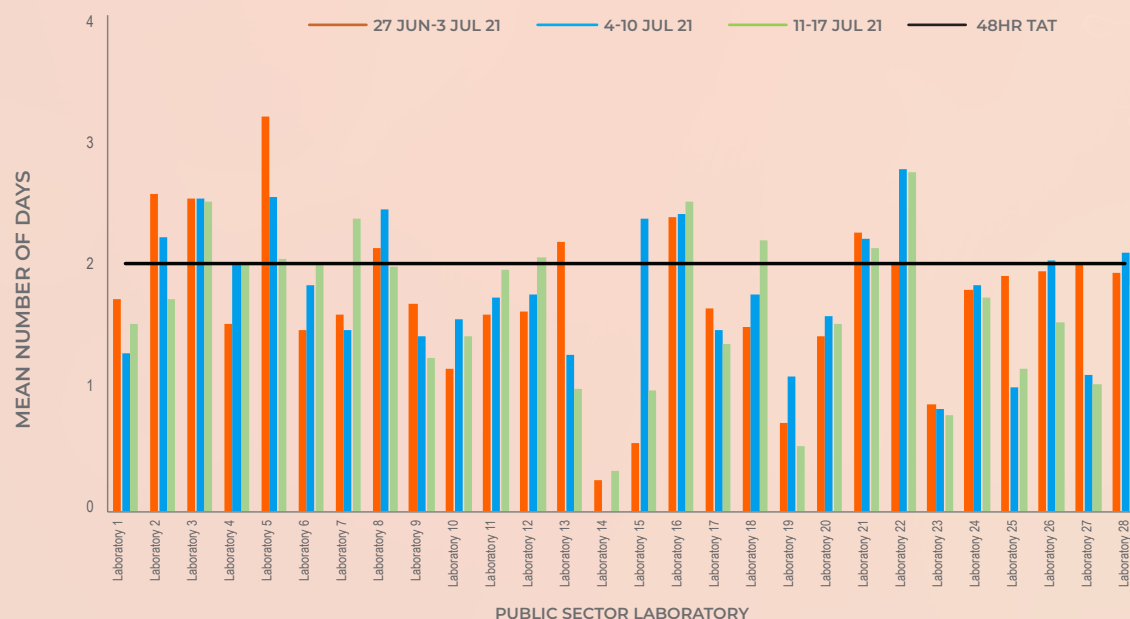


Figure 5. Mean number of days between date of specimen collection and date of test result for PCR tests, by public sector laboratory, 27 June – 17 July 2021. The horizontal black line indicates 48-hour turnaround time (TAT).

Testing by province

Gauteng reported the largest number of tests (38.3%), followed by Western Cape (19.1%) in week 28 of 2021 (Table 3). The overall testing rate decreased from 717 per 100,000 persons in week 27 to 489 per 100,000 in week 28. The testing rate ranged from 795 per 100,000 persons in Western Cape to 207 per 100,000 persons in KwaZulu-Natal (Figure 6). In week 28, testing rates decreased in most provinces, most notably in Gauteng, KwaZulu-Natal, North West and Free State provinces.

The percentage testing positive in week 28 was highest in Limpopo (48.1%), Mpumalanga (39.0%),

North West (37.2%), Gauteng (36.0%) and Western Cape (30.1%) provinces. The percentage testing positive was between 20% and 30% in the Northern Cape and Free State, and was <20% in the Eastern Cape and KwaZulu-Natal provinces (Figure 7 and Table 3). Compared to the previous week, the percentage testing positive in week 28 increased ($P \leq 0.002$) in the Western Cape, Eastern Cape, Northern Cape, Free State, KwaZulu-Natal and Mpumalanga, and decreased in the North West ($P = 0.003$), Gauteng ($P < 0.001$) and Limpopo ($P < 0.001$). The percentage testing positive was higher than the national average, not weighted for population size, in the North West, Gauteng, Mpumalanga and Limpopo provinces (Figure 7).

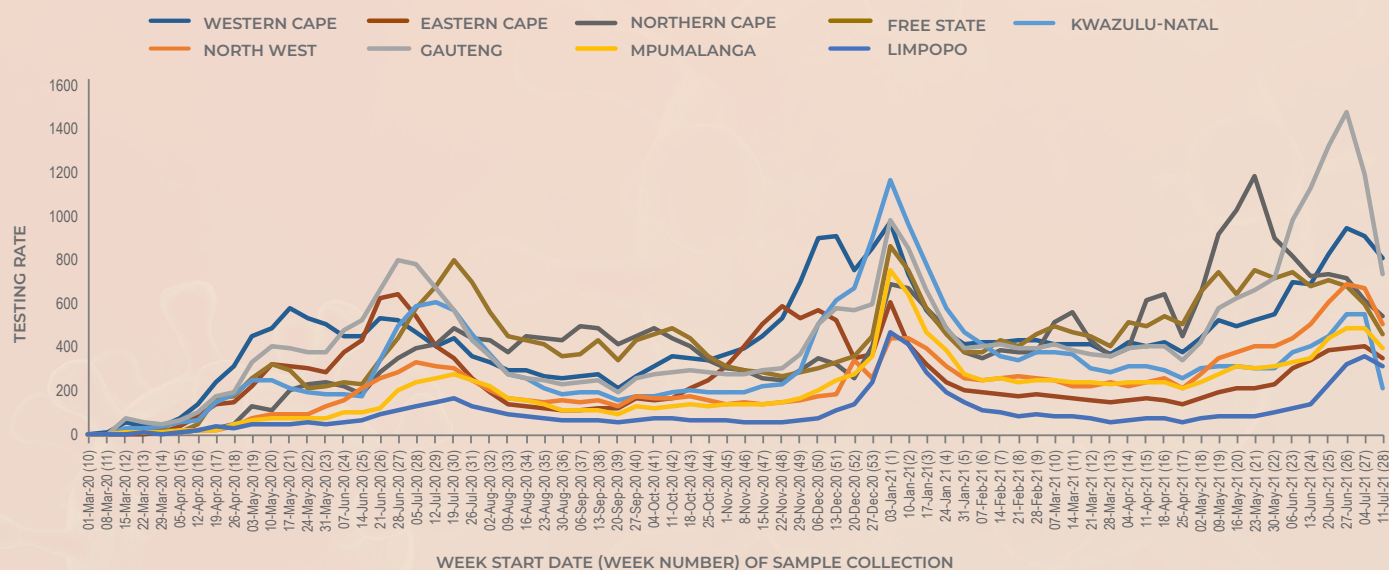


Figure 6. Testing rate per 100,000 persons by province and week of specimen collection, South Africa, 1 March 2020 – 17 July 2021

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Table 3. Weekly number of tests and positive tests reported, by province, South Africa, 27 June – 17 July 2021

Province	Population ^a	27 Jun-3 Jul 2021		4-10 Jul 2021		11-17 Jul 2021		Tests per 100,000 persons	Change in percentage positive ^b
		No. of tests	No. positive tests (%)	No. of tests	No. positive tests (%)	No. of tests	No. positive tests (%)		
Western Cape	7005741	65170	15374 (23.6)	62343	16899 (27.1)	55671	16743 (30.1)	795	3.0%
Eastern Cape	6734001	26074	4090 (15.7)	26863	4542 (16.9)	23483	4559 (19.4)	349	2.5%
Northern Cape	1292786	9054	1709 (18.9)	7837	1680 (21.4)	6938	1737 (25.0)	537	3.6%
Free State	2928903	19576	3753 (19.2)	17316	3816 (22.0)	13294	3258 (24.5)	454	2.5%
KwaZulu-Natal	11531628	62084	9173 (14.8)	62441	11411 (18.3)	23906	4649 (19.4)	207	1.2%
North West	4108816	27808	9564 (34.4)	26887	10363 (38.5)	20491	7622 (37.2)	499	-1.3%
Gauteng	15488137	223679	84147 (37.6)	180845	70248 (38.8)	111622	40132 (36.0)	721	-2.9%
Mpumalanga	4679786	22267	6886 (30.9)	22248	8339 (37.5)	18317	7141 (39.0)	391	1.5%
Limpopo	5852553	18647	8282 (44.4)	20930	10805 (51.6)	17956	8630 (48.1)	307	-3.6%
Unknown		8	0 (0.0)	8	0 (0.0)	8	0 (0.0)		
Total	59,622,350	474,367	142,978 (30.1)	427,718	138,103 (32.3)	291,686	94,471 (32.4)	489	0.1%

^a 2020 Mid-year population Statistics SA

^b Current week compared to previous week

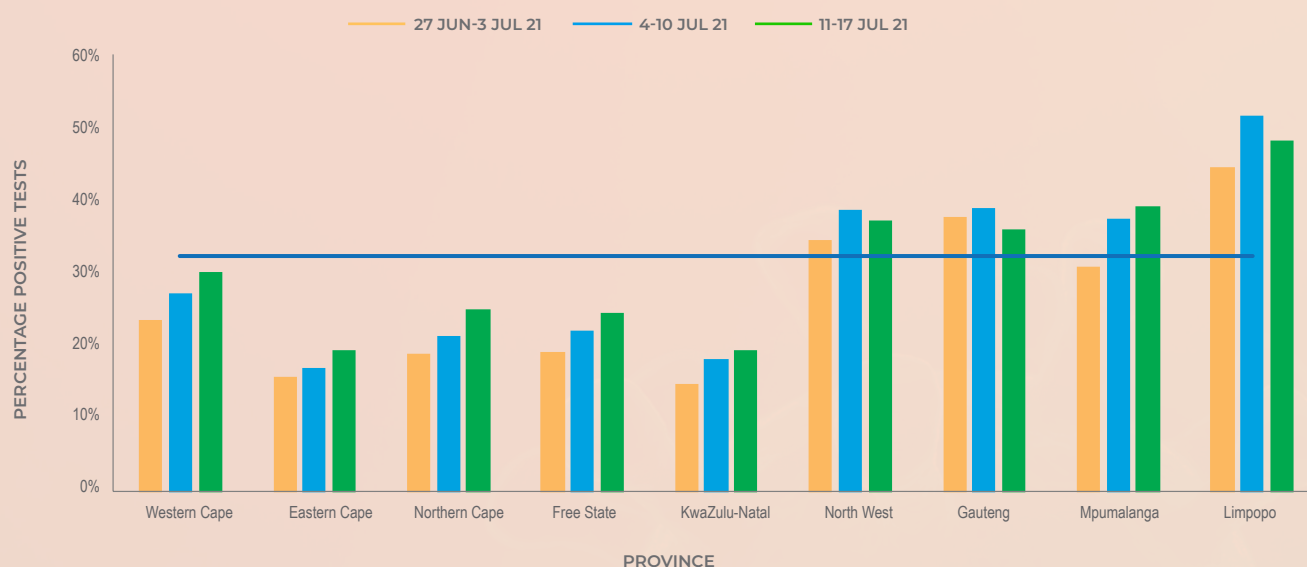


Figure 7. Weekly percentage testing positive, by province, South Africa, 27 June – 17 July 2021. The horizontal blue line shows the national mean for week 28, beginning 11 July 2021

Testing in the public sector

In the public sector, the percentage testing positive continued to increase in the past week (30.9% in week 27 to 32.2% in week 28, $P < 0.001$) (Table 4). The percentage testing positive in week 28 was highest in Limpopo (53.8%), Gauteng (39.4%) and Mpumalanga

(38.2%) provinces. The percentage testing positive in the public sector remains higher than the national average, not weighted for population size, in the Western Cape, North West, Gauteng, Mpumalanga and Limpopo provinces (Figure 8).

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Table 4. Weekly number of tests and positive tests reported in the public sector, by province, South Africa, 27 June – 17 July 2021

Province	27 Jun-3 Jul 2021		4-10 Jul 2021		11-17 Jul 2021	
	No. of tests	No. positive tests (%)	No. of tests	No. positive tests (%)	No. of tests	No. positive tests (%)
Western Cape	30167	7039 (23.3)	27648	7915 (28.6)	24364	7961 (32.7)
Eastern Cape	17136	2335 (13.6)	18387	2778 (15.1)	16045	2982 (18.6)
Northern Cape	6277	1134 (18.1)	5411	1132 (20.9)	4610	1162 (25.2)
Free State	10838	1635 (15.1)	9014	1758 (19.5)	7092	1697 (23.9)
KwaZulu-Natal	37848	4996 (13.2)	39220	6874 (17.5)	15253	2620 (17.2)
North West	13933	4227 (30.3)	13404	4500 (33.6)	10483	3656 (34.9)
Gauteng	92390	34758 (37.6)	71655	29318 (40.9)	41434	16337 (39.4)
Mpumalanga	9082	2518 (27.7)	9445	3437 (36.4)	7508	2867 (38.2)
Limpopo	7026	3214 (45.7)	7943	4656 (58.6)	6912	3718 (53.8)
Unknown	2	0 (0.0)	0	0 (0.0)	0	0 (0.0)
Total	224,699	61,856 (27.5)	202,127	62,368 (30.9)	133,701	43,000 (32.2)

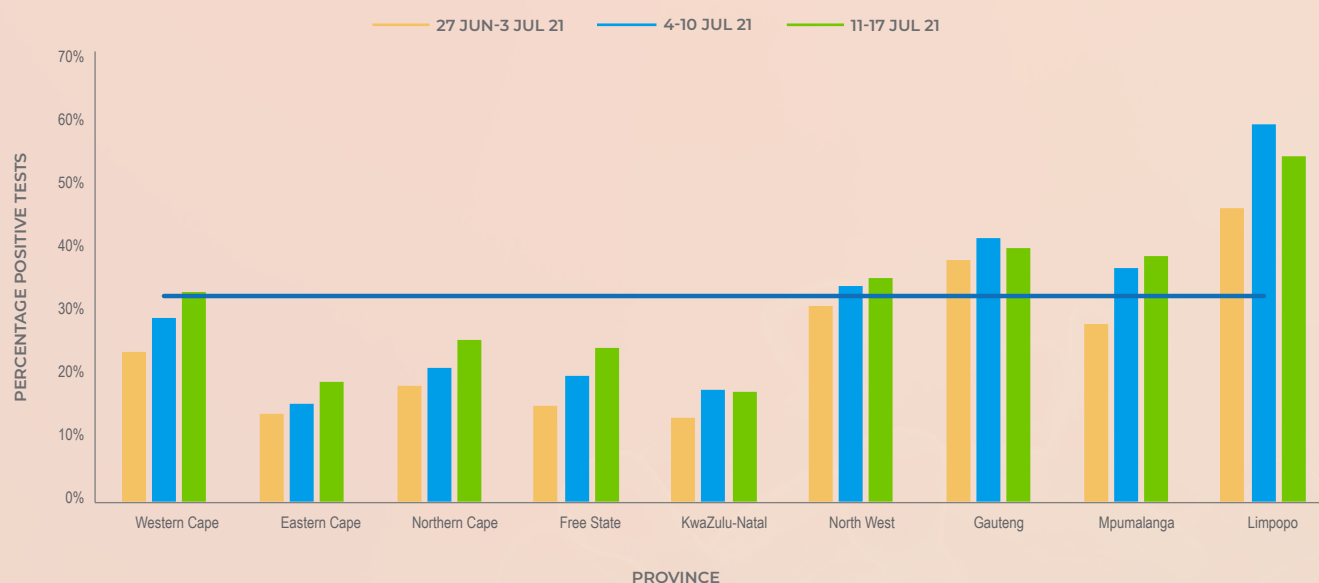


Figure 8. Weekly percentage testing positive in the public sector, by province, South Africa, 27 June – 17 July 2021. The horizontal blue line shows the national mean for week 28 of 2021, beginning 11 July 2021.

Facilities with high proportions testing positive

The data on testing at facility level for the public sector for week 28 includes only PCR test results due to the failure of some facilities to report on negative antigen test results which, if included, would result in an overestimate of the positive test proportion (PTP). All tests (PCR and antigen) conducted in the private

sector are included. Table 5.1 shows the 25 public sector clinics, hospitals and testing laboratories (where specimens were not tied to a particular facility), that had 25 or more specimens tested by PCR and at least five positive results in the week of 11-17 July 2021. Nine of the 25 public facilities showing the highest PTP are in Limpopo, with six in Gauteng, and two in each of Free State, KwaZulu-Natal, Mpumalanga, and North West.

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Table 5.1 Public sector healthcare facilities with a high proportion testing positive, 11-17 July 2021

Facility Name	Province	Tests	PTP (95% CI)
Facility 1	Free State	27	1.000 (1.000;1.000)
Facility 2	North West	43	0.837 (0.727;0.948)
Facility 3	Limpopo	31	0.806 (0.667;0.946)
Facility 4	Limpopo	50	0.800 (0.689;0.911)
Facility 5	North West	53	0.792 (0.683;0.902)
Facility 6	KwaZulu-Natal	33	0.788 (0.648;0.927)
Facility 7	Gauteng	25	0.760 (0.593;0.927)
Facility 8	Mpumalanga	59	0.746 (0.635;0.857)
Facility 9	KwaZulu-Natal	34	0.735 (0.587;0.884)
Facility 10	Limpopo	70	0.729 (0.624;0.833)
Facility 11	Limpopo	95	0.726 (0.637;0.816)
Facility 12	Gauteng	29	0.724 (0.561;0.887)
Facility 13	Mpumalanga	25	0.720 (0.544;0.896)
Facility 14	Limpopo	56	0.714 (0.596;0.833)
Facility 15	Limpopo	31	0.710 (0.550;0.869)
Facility 16	Limpopo	70	0.700 (0.593;0.807)
Facility 17	Western Cape	40	0.700 (0.558;0.842)
Facility 18	Limpopo	43	0.698 (0.560;0.835)
Facility 19	Limpopo	43	0.698 (0.560;0.835)
Facility 20	Gauteng	109	0.697 (0.611;0.784)
Facility 21	Free State	33	0.697 (0.540;0.854)
Facility 22	Gauteng	26	0.692 (0.515;0.870)
Facility 23	Gauteng	103	0.689 (0.600;0.779)
Facility 24	Gauteng	50	0.680 (0.551;0.809)
Facility 25	Northern Cape	28	0.679 (0.506;0.852)

95% CI: 95% confidence interval; PTP: positive test proportion

Table 5.2 shows the 25 private sector clinics, hospitals and testing laboratories (where specimens were not tied to a particular facility), that had 25 or more specimens tested and at least five positive results in the week of 11-17 July 2021, with the highest proportion testing positive nationally. The private-sector facilities with the 25 highest proportions testing positive are concentrated almost exclusively in Gauteng (19), with three in KwaZulu-Natal.

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Table 5.2 Private sector healthcare facilities with a high proportion testing positive, 11-17 July 2021

Facility Name	Province	Tests	PTP (95% CI)
Facility 1	Gauteng	64	0.688 (0.574;0.801)
Facility 2	Gauteng	67	0.687 (0.575;0.798)
Facility 3	Gauteng	115	0.652 (0.565;0.739)
Facility 4	Gauteng	157	0.624 (0.548;0.700)
Facility 5	Gauteng	52	0.615 (0.483;0.748)
Facility 6	Gauteng	49	0.612 (0.476;0.749)
Facility 7	Gauteng	56	0.607 (0.479;0.735)
Facility 8	Gauteng	28	0.607 (0.426;0.788)
Facility 9	Gauteng	142	0.606 (0.525;0.686)
Facility 10	Gauteng	40	0.600 (0.448;0.752)
Facility 11	Gauteng	57	0.596 (0.469;0.724)
Facility 12	KwaZulu-Natal	104	0.587 (0.492;0.681)
Facility 13	Mpumalanga	77	0.584 (0.474;0.694)
Facility 14	Gauteng	33	0.576 (0.407;0.744)
Facility 15	KwaZulu-Natal	47	0.574 (0.433;0.716)
Facility 16	Gauteng	89	0.573 (0.470;0.676)
Facility 17	Gauteng	37	0.568 (0.408;0.727)
Facility 18	Limpopo	477	0.566 (0.522;0.611)
Facility 19	KwaZulu-Natal	39	0.564 (0.408;0.720)
Facility 20	Gauteng	120	0.558 (0.469;0.647)
Facility 21	Gauteng	140	0.550 (0.468;0.632)
Facility 22	North West	33	0.545 (0.376;0.715)
Facility 23	Gauteng	46	0.543 (0.400;0.687)
Facility 24	Gauteng	240	0.542 (0.479;0.605)
Facility 25	Gauteng	56	0.536 (0.405;0.666)

95% CI: 95% confidence interval; PTP: positive test proportion

Health district-level results

The data from geolocatable public testing (almost every public sector facility in the country) and private testing (approximately 83% of private testing facilities) in the week from 11-17 July 2021 have been located within the spatial framework of the health districts and health sub-districts (in the metros). Districts with fewer than 20 tests reported during the week have been excluded from the analysis.

The results, for the 25 municipalities and metropolitan health sub-districts showing the greatest proportions testing positive (PTP) are shown in the table below. Fifteen of the 25 districts are in Limpopo, three in North West, and two in each of Gauteng and Mpumalanga.

For the fourth consecutive week, all 25 districts with the highest PTP showed a PTP in the current week in excess of 30%. For the third consecutive week, all districts exceeded 40%, and 18 exceeded 50% (last week, 23). PTP exceeded 30% in a further 94 districts (84 last week). Significant increases were observed in one of the 25 districts with the highest PTP (Greater Taung in North West).

There was a statistically significant reduction in PTP in two districts in Limpopo (Makhuduthamaga, and Greater Tubatse).

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Table 6. Health sub-districts with the highest proportion testing positive based on public and private sector data for the week of 11-17 July 2021

Health district or sub-district	Province	PTP (95% CI)	Previous week
Greater Taung	North West	0.830 (0.715-0.945)	0.476 (0.365-0.587)
Aganang	Limpopo	0.719 (0.573-0.865)	...
Bela-Bela	Limpopo	0.648 (0.569-0.727)	0.708 (0.633-0.783)
Molemole	Limpopo	0.613 (0.517-0.709)	0.592 (0.500-0.685)
Mutale	Limpopo	0.604 (0.472-0.737)	0.599 (0.454-0.745)
Greater Letaba	Limpopo	0.599 (0.500-0.698)	0.553 (0.416-0.690)
Makhado	Limpopo	0.596 (0.568-0.625)	0.606 (0.582-0.631)
Greater Giyani	Limpopo	0.560 (0.506-0.614)	0.509 (0.450-0.567)
Tswaing	North West	0.539 (0.421-0.656)	0.361 (0.259-0.463)
Moretele	North West	0.535 (0.479-0.592)	0.572 (0.512-0.632)
!Kheis	Northern Cape	0.535 (0.393-0.677)	...
Blouberg	Limpopo	0.534 (0.449-0.620)	0.607 (0.515-0.698)
Mogalakwena	Limpopo	0.522 (0.489-0.555)	0.568 (0.536-0.599)
Emadlangeni	KwaZulu-Natal	0.520 (0.390-0.650)	0.465 (0.378-0.551)
Makhuduthamaga	Limpopo	0.520 (0.455-0.585)	0.682 (0.629-0.734)
Elias Motsoaledi	Limpopo	0.519 (0.453-0.584)	0.602 (0.557-0.647)
Tshwane 7	Gauteng	0.506 (0.464-0.548)	0.449 (0.412-0.485)
Thulamela	Limpopo	0.504 (0.476-0.532)	0.535 (0.509-0.561)
Greater Tubatse	Limpopo	0.485 (0.454-0.515)	0.557 (0.526-0.587)
Swartland	Western Cape	0.477 (0.436-0.519)	0.427 (0.386-0.469)
Dr JS Moroka	Mpumalanga	0.476 (0.428-0.523)	0.531 (0.492-0.569)
Modimolle	Limpopo	0.473 (0.418-0.528)	0.519 (0.478-0.561)
Greater Tzaneen	Limpopo	0.472 (0.445-0.499)	0.426 (0.400-0.453)
Lesedi	Gauteng	0.467 (0.424-0.511)	0.446 (0.416-0.476)
Steve Tshwete	Mpumalanga	0.466 (0.446-0.487)	0.480 (0.461-0.498)

95% CI: 95% confidence interval; PTP: adjusted positive test proportion; Elements marked in **red** have current week proportions testing positive that are **higher** than, and CIs that do not overlap with, the previous week proportions and CIs. Elements marked in **blue** have current week proportions testing positive that are **lower** than, and CIs that do not overlap with, the previous week proportions and CIs.

The data for the current week for every district with a non-zero proportion testing positive or where the range of confidence interval is not more than 30% (15% either side of the point estimate), and where more than 20 tests were conducted in the present week, is presented graphically below.

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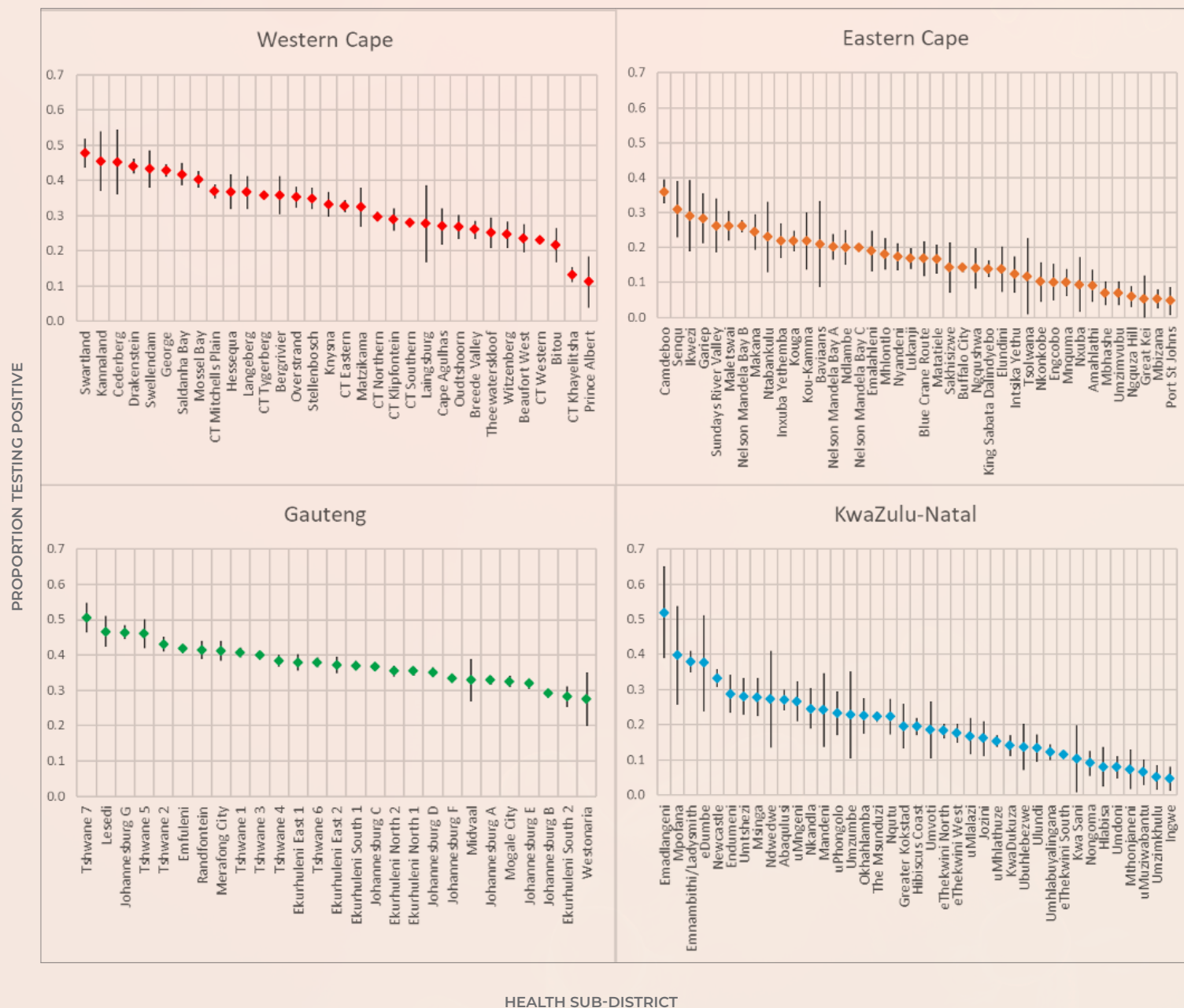


Figure 9.1 Proportions testing positive by health sub-district in the Western Cape, Eastern Cape, Gauteng and KwaZulu-Natal provinces based on public and private sector data for the week of 11-17 July 2021.

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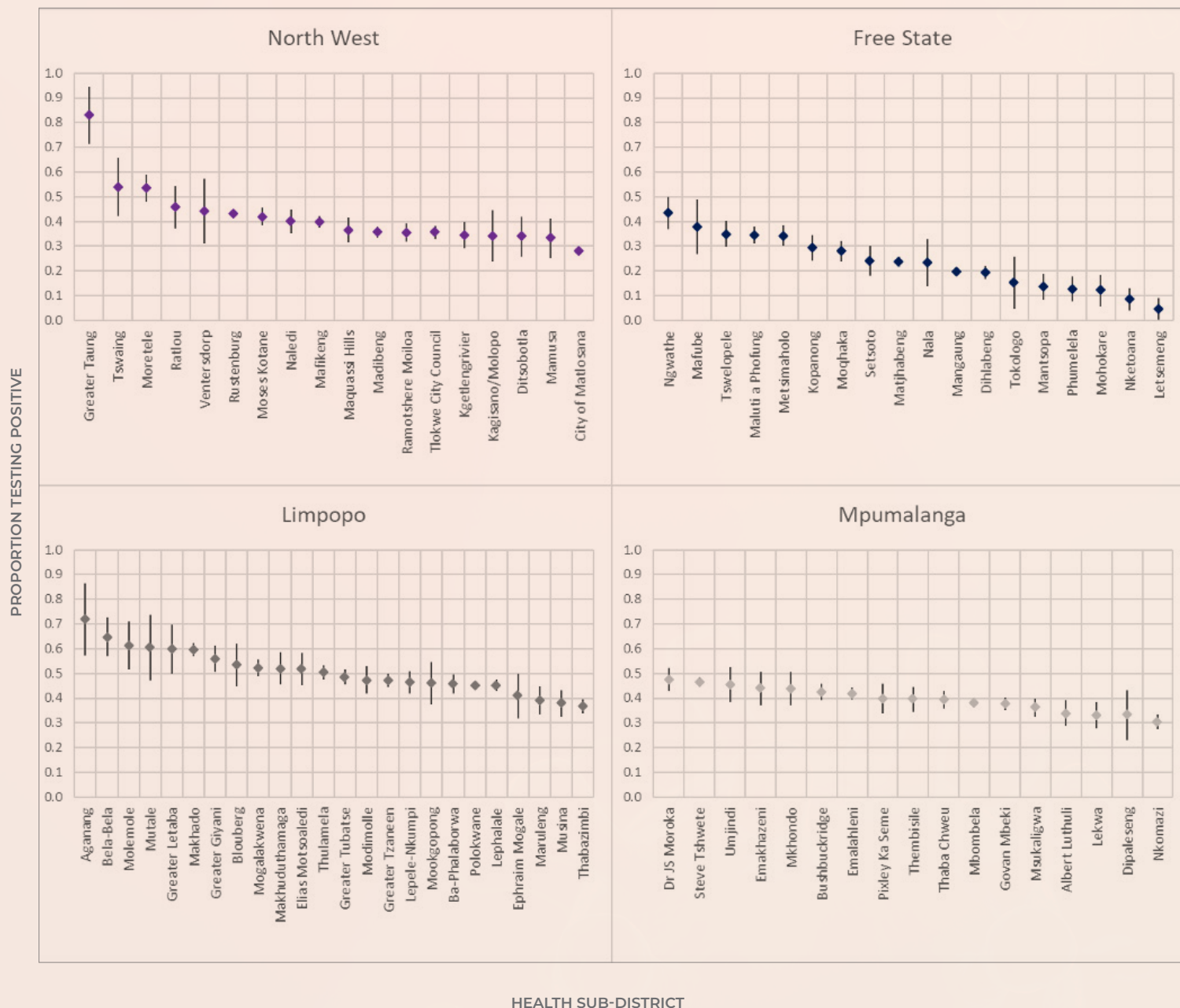


Figure 9.2 Proportions testing positive by health sub-district in the North West, Free State, Limpopo and Mpumalanga provinces based on public and private sector data for the week of 11-17 July 2021.

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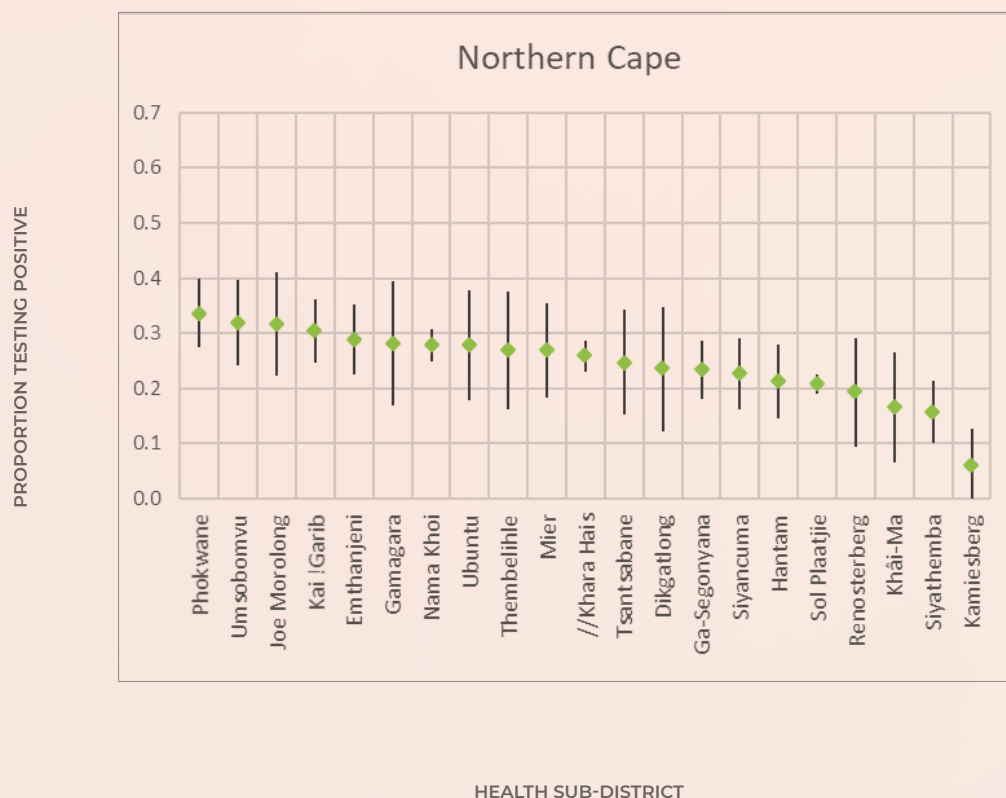


Figure 9.3 Proportions testing positive by health sub-districts in the Northern Cape Province based on public and private sector data for the week of 11-17 July 2021.

The spatial pattern of adjusted proportions testing positive, including both public and private sector data, by health district and sub-district are shown for South Africa (Figure 10), Western Cape (Figure 11), Eastern Cape (Figure 12), Northern Cape (Figure 13), Free State (Figure 14), KwaZulu-Natal (Figure 15), North West (Figure 16), Gauteng (Figure 17), Mpumalanga (Figure 18) and Limpopo (Figure 19).

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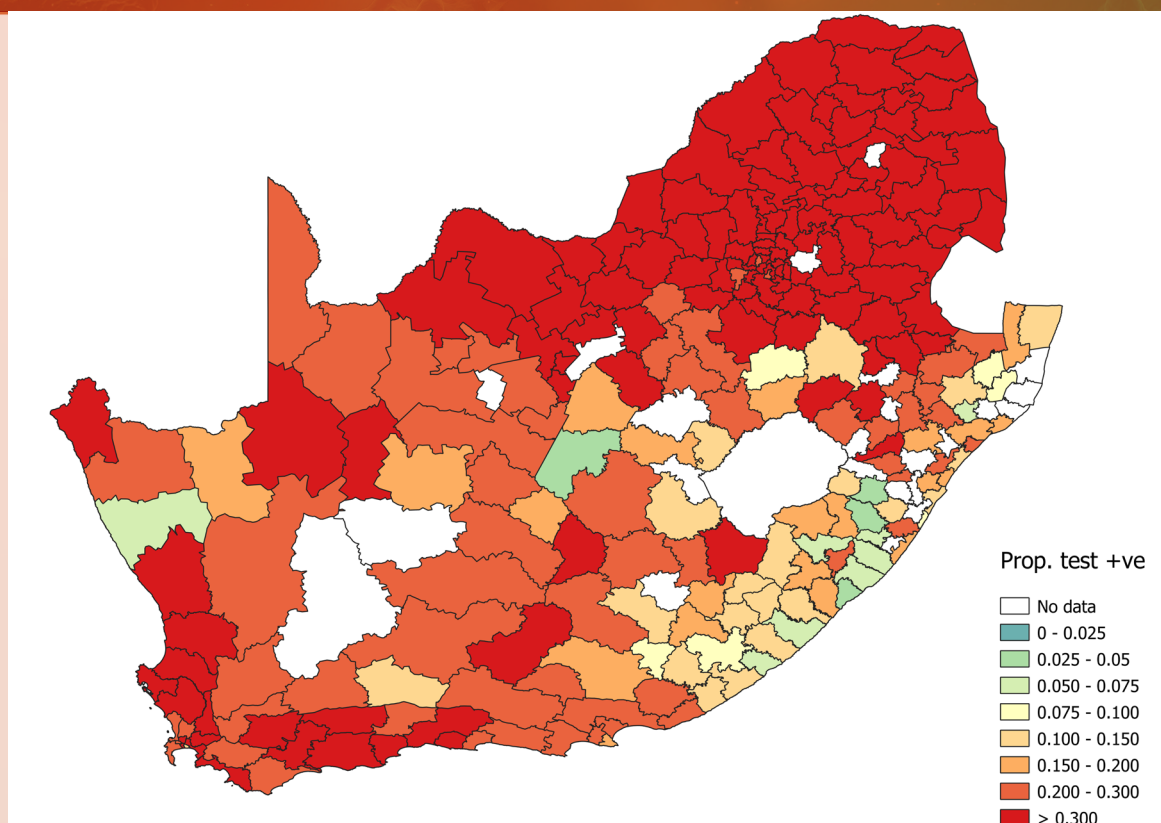


Figure 10. Proportion testing positive by health sub-district in South Africa for the week of 11-17 July 2021. Areas shaded white represent districts in which either (i) no tests were reported, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

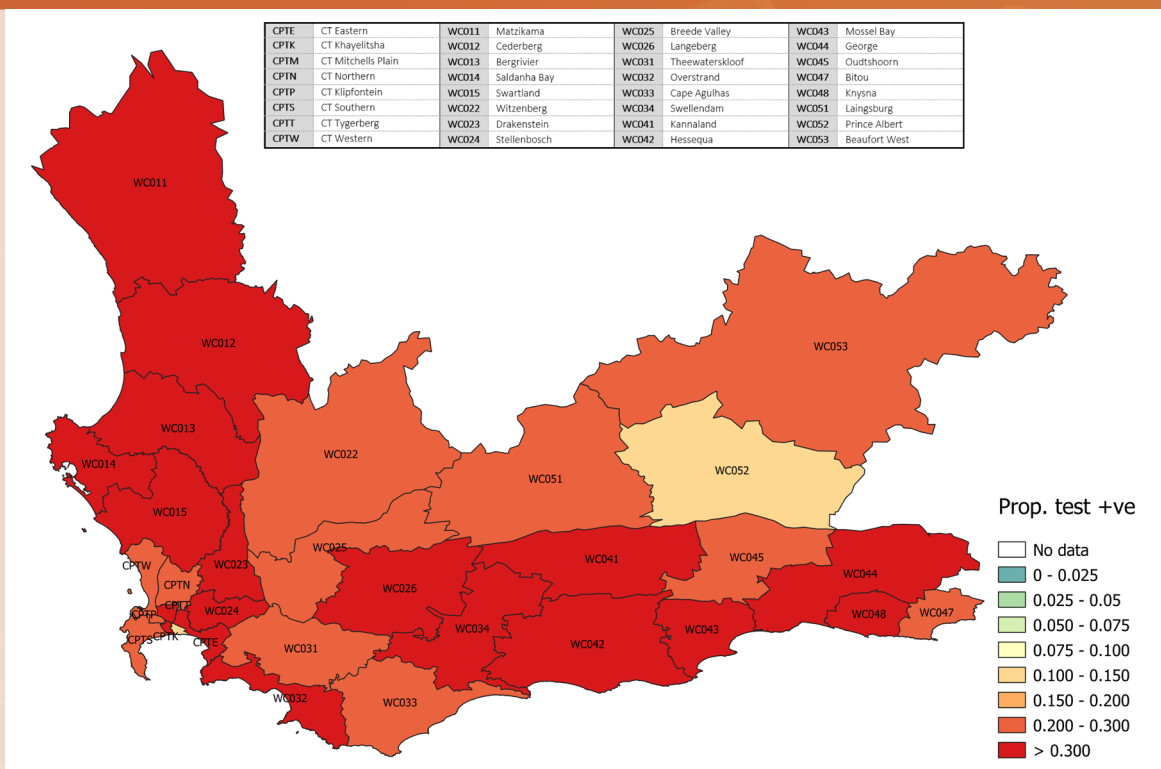


Figure 11. Proportion testing positive by health sub-district in the Western Cape Province for the week of 11-17 July 2021. Areas shaded white represent districts in which either (i) no tests were reported, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

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BUF	Buffalo City	EC122	Mngquma	EC135	Intsika Yethu	EC155	Nyandeni
EC101	Camdeboo	EC123	Great Kei	EC136	Emalahleni	EC156	Mhlonito
EC102	Blue Crane Route	EC124	Amahlathi	EC137	Engcobo	EC157	King Sabata Dalindyebo
EC103	Ikwezi	EC126	Ngqushwa	EC138	Sakhisizwe	EC441	Matatiele
EC104	Makana	EC127	Nkonkobe	EC141	Elundini	EC442	Umtzimvubu
EC105	Ndlambe	EC128	Nouba	EC142	Sengqu	EC443	Mloliyana
EC106	Sundays River Valley	EC131	Inouba Yethemba	EC143	Maletswai	EC444	Ntabankulu
EC107	Savlaans	EC132	Tsolwane	EC144	Gariep	NMAA	Nelson Mandela Bay A
EC108	Kouga	EC133	Inkwanca	EC153	Ngquzu Hill	NMAB	Nelson Mandela Bay B
EC109	Kou-Kamma	EC134	Lukanji	EC154	Port St Johns	NMAC	Nelson Mandela Bay C
EC121	Mbashe						

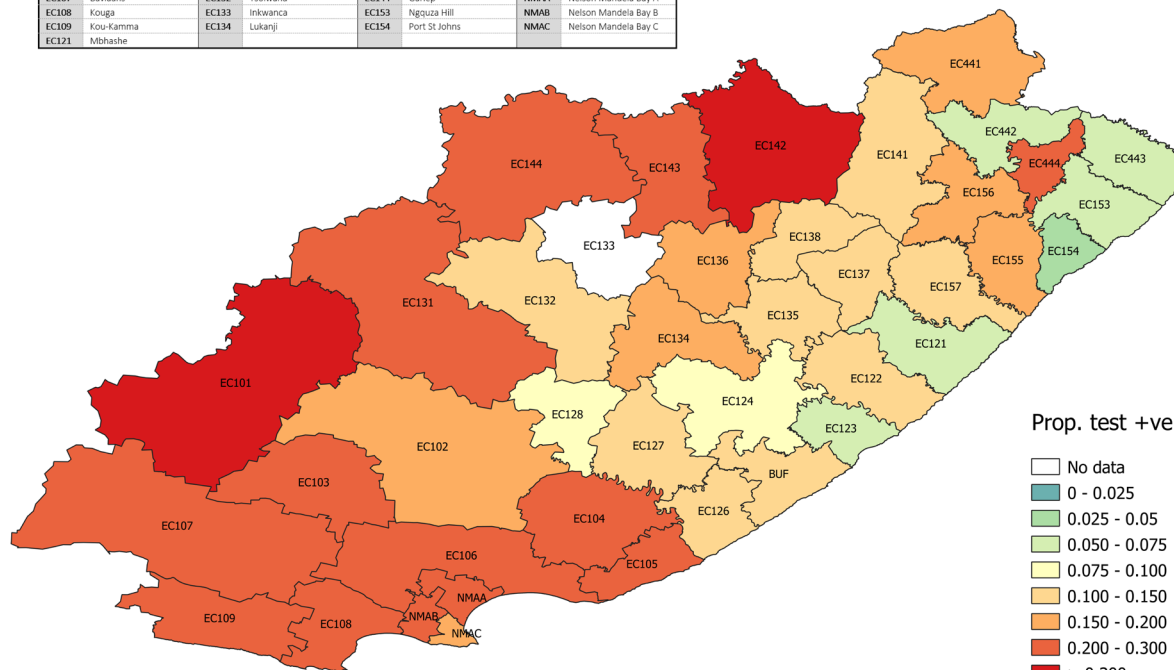


Figure 12. Proportion testing positive by health sub-district in the Eastern Cape Province for the week of 11-17 July 2021. Areas shaded white represent districts in which either (i) no tests were reported, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

NC061	Richtersveld	NC074	Karreborg	NC085	Tsantabane
NC062	Nama Khoi	NC075	Rensosterberg	NC086	Igatelokopele
NC064	Kamiesberg	NC076	Thembulile	NC091	Sol Plaspje
NC065	Handam	NC077	Siyathemba	NC092	Dikgatong
NC066	Karoo Hoogland	NC078	Siyancuma	NC093	Magareng
NC067	Khala-Ma	NC081	Mier	NC094	Phokwane
NC071	Uburro	NC082	Kai-Sarib	NC451	Jon Monstong
NC072	Umsobomvu	NC083	//Khara Hais	NC452	Ga-Segonyama
NC073	Emtharjeni	NC084	Utheis	NC453	Gamagara

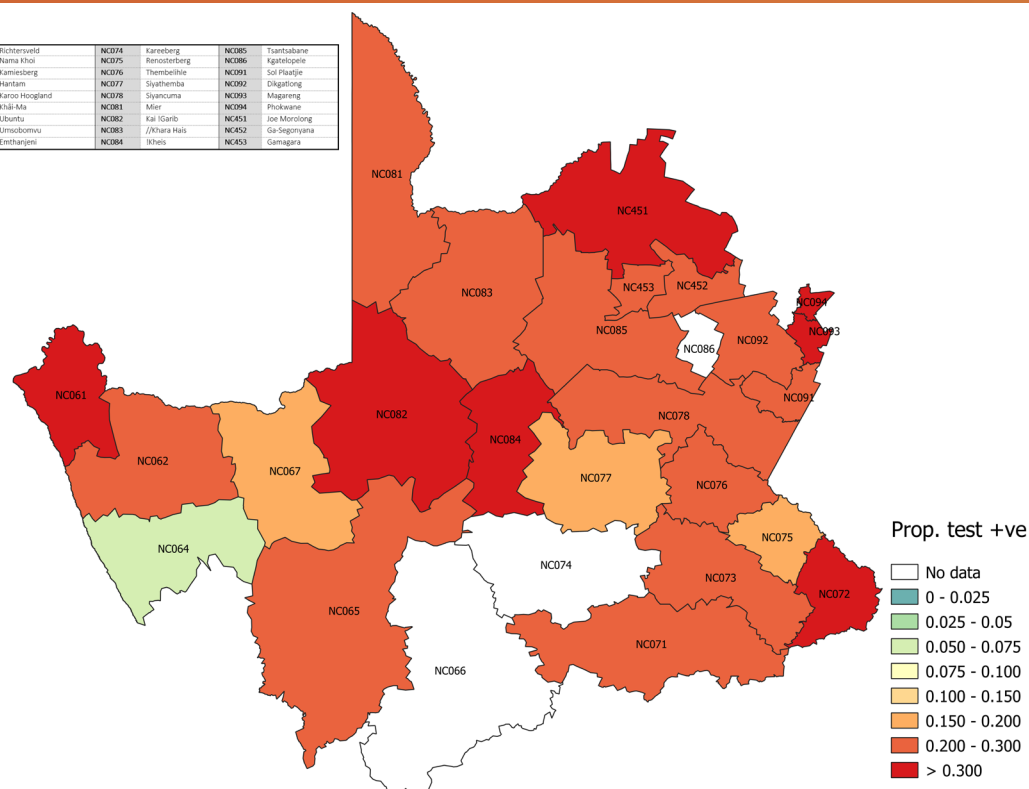


Figure 13. Proportion testing positive by health sub-district in Northern Cape Province for the week of 11-17 July 2021. Areas shaded white represent districts in which either (i) no tests were reported, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

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MAN	Mangaung	FS181	Masilonyana	FS191	Setsooto	FS196	Mantsopa
FS161	Letsemeng	FS182	Tokologo	FS192	Dihlabeng	FS201	Moghaka
FS162	Kopanong	FS183	Tswelopele	FS193	Nketoana	FS203	Ngwathe
FS163	Mohokare	FS184	Matjhabeng	FS194	Maluti a Phofung	FS204	Metsimaholo
FS164	Naledi	FS185	Nala	FS195	Phumelela	FS205	Mafube

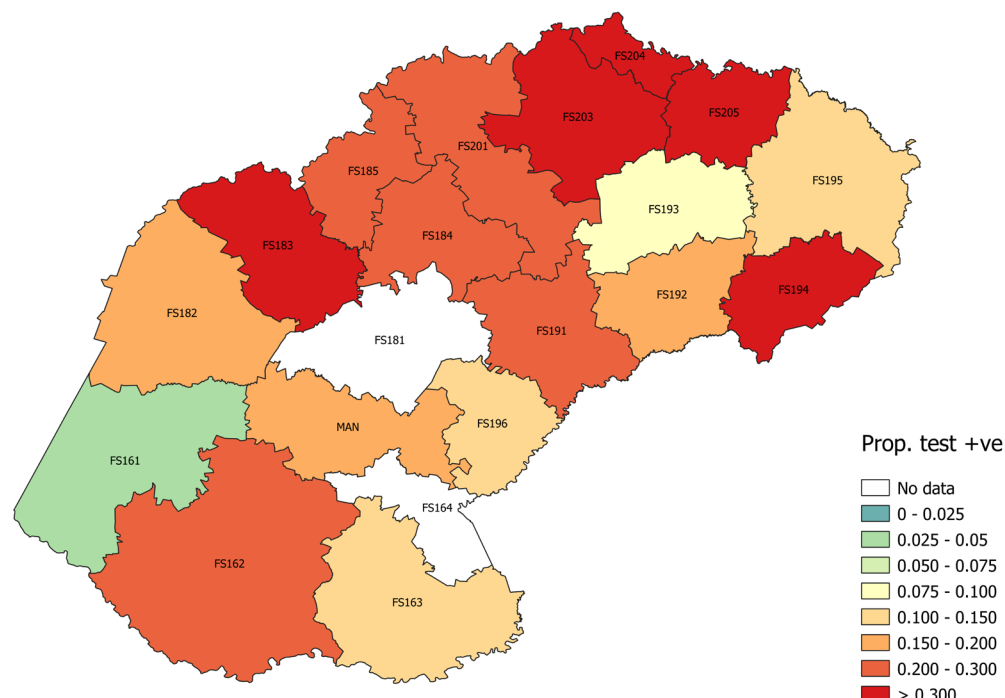


Figure 14. Proportion testing positive by health sub-district in Free State Province for the week of 11-17 July 2021. Areas shaded white represent districts in which either (i) no tests were reported, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

ETHN	eThekweni North	KZN233	Indaka	KZN273	The Big 5 False Bay
ETHS	eThekweni South	KZN234	Umtshezi	KZN274	Hlabisa
ETHS	eThekweni South	KZN235	Okhahlamba	KZN275	Mtubatuba
ETHW	eThekweni West	KZN236	Imbabazane	KZN281	Mfolosi
KZN211	Vulamehlo	KZN241	Endumeni	KZN282	uMhlathuze
KZN212	Umdoni	KZN242	Nqutu	KZN283	Ntambanana
KZN213	Umtumbe	KZN244	Mtinga	KZN284	uMlalazi
KZN214	uMuziwabantu	KZN245	Umvoti	KZN285	Mthonjaneni
KZN215	Ezingoleni	KZN252	Newcastle	KZN286	Nikandia
KZN216	Hlabiscus Coast	KZN253	Emadlangeni	KZN291	Mandeni
KZN221	uMshwathi	KZN254	Dannhauser	KZN292	KwaDukuza
KZN222	uMngeni	KZN261	eDumbe	KZN293	Ndwedwe
KZN223	Mpofana	KZN262	uPhongolo	KZN294	Maphumulo
KZN224	Impendle	KZN263	Abagqusi	KZN431	Ingwe
KZN225	The Mxunduzi	KZN265	Nongoma	KZN432	Kwa Sani
KZN226	Mkhambathini	KZN266	Ullundi	KZN433	Greater Kokstad
KZN227	Richmond	KZN271	Umlalabyalingana	KZN434	Ubuhlebezwe
KZN232	Emnambithi/Ladysmith	KZN272	Jozini	KZN435	Umlomkhulu

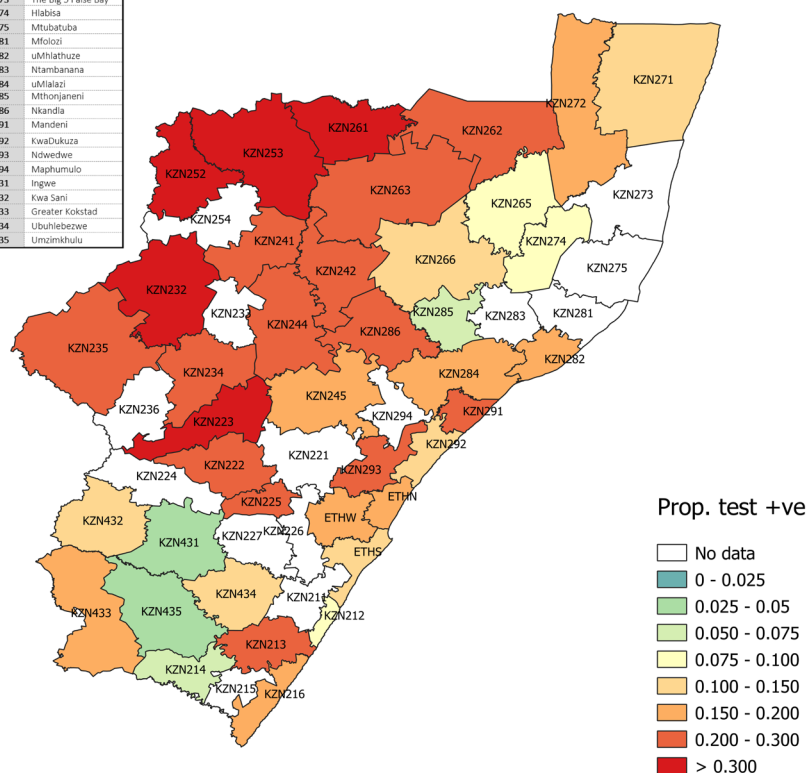


Figure 15. Proportion testing positive by health sub-district in KwaZulu-Natal Province for the week of 11-17 July 2021. Areas shaded white represent districts in which either (i) no tests were reported, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

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NW371	Moretele	NW383	Mafikeng	NW396	Lekwa-Teemane
NW372	Madibeng	NW384	Ditsobotla	NW397	Kagisano/Molopo
NW373	Rustenburg	NW385	Ramotshere Moiloa	NW401	Ventersdorp
NW374	Kgetlengrivier	NW392	Naledi	NW402	Tlokwe City Council
NW375	Moses Kotane	NW393	Mamusa	NW403	City of Matlosana
NW381	Ratlou	NW394	Greater Taung	NW404	Maquassi Hills
NW382	Tswaing				

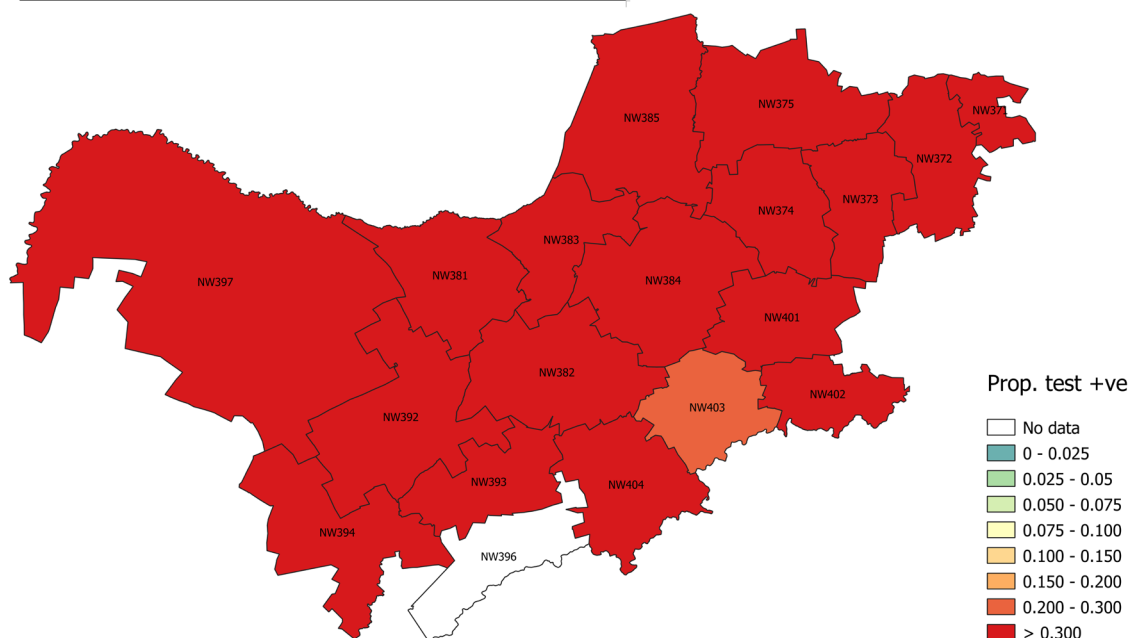


Figure 16. Proportion testing positive by health sub-district in North West Province for the week of 11-17 July 2021. Areas shaded white represent districts in which either (i) no tests were reported, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

EKUE1	Ekurhuleni East 1	GT421	Enfeleni	JHBA	Johannesburg A	TSH1	Tshwane 1
EKUE2	Ekurhuleni East 2	GT422	Midvaal	JHBB	Johannesburg B	TSH2	Tshwane 2
EKUN1	Ekurhuleni North 1	GT423	Lesedi	JHBC	Johannesburg C	TSH3	Tshwane 3
EKUN2	Ekurhuleni North 2	GT481	Mogale City	JHBD	Johannesburg D	TSH4	Tshwane 4
EKUS1	Ekurhuleni South 1	GT482	Randfontein	JHBE	Johannesburg E	TSH5	Tshwane 5
EKUS2	Ekurhuleni South 2	GT483	Westonaria	JHBF	Johannesburg F	TSH6	Tshwane 6
		GT484	Merafong City	JHBG	Johannesburg G	TSH7	Tshwane 7

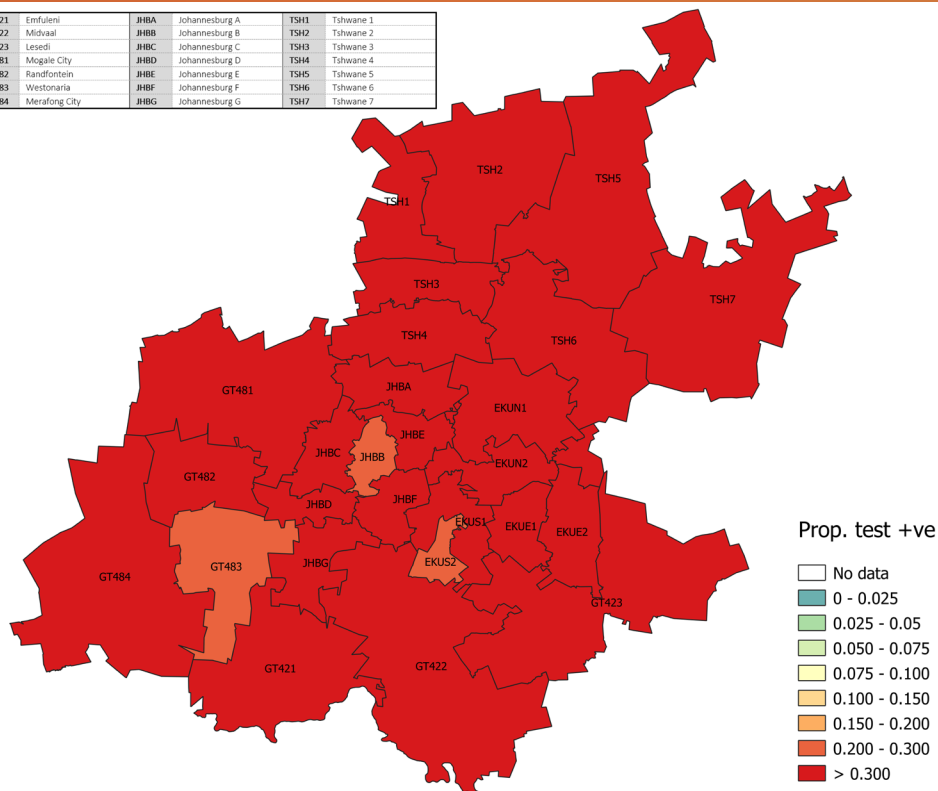


Figure 17. Proportion testing positive by health sub-district in Gauteng Province for the week of 11-17 July 2021. Areas shaded white represent districts in which either (i) no tests were reported, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

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MP301	Albert Luthuli	MP307	Govan Mbeki	MP316	Dr JS Moroka
MP302	Msukaligwa	MP311	Victor Khanye	MP321	Thaba Chweu
MP303	Mkhondo	MP312	Emalahleni	MP322	Mbombela
MP304	Pikey Ka Seme	MP313	Steve Tshwete	MP323	Umgindi
MP305	Lekwa	MP314	Emakhazeni	MP324	Nkomazi
MP306	Dipaleseng	MP315	Thembišile	MP325	Bushbuckridge

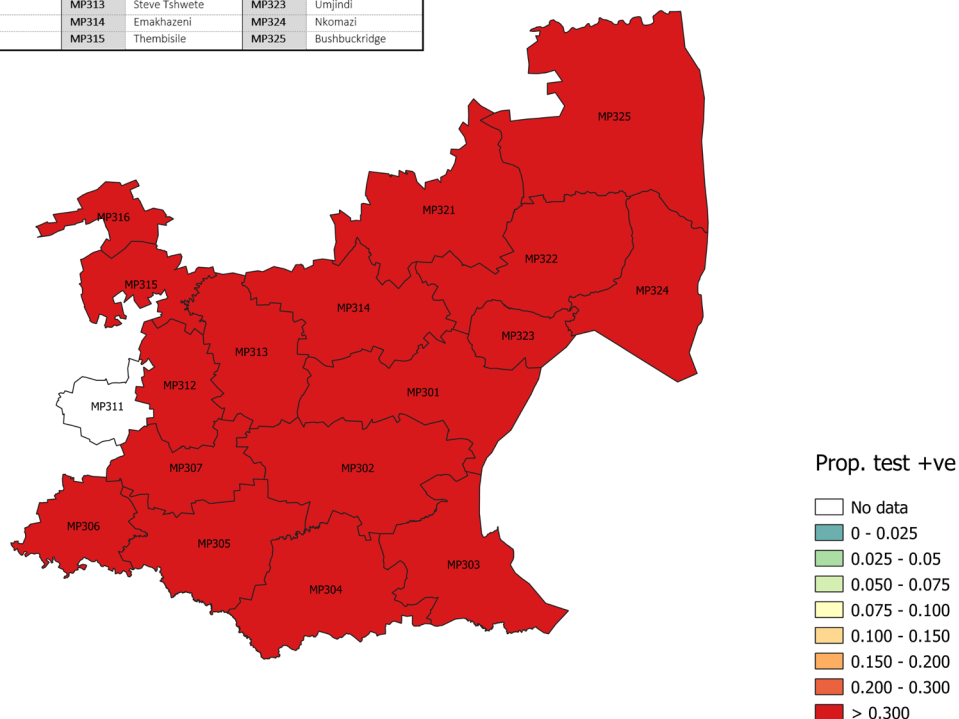


Figure 18. Proportion testing positive by health sub-district in Mpumalanga Province for the week of 11-17 July 2021. Areas shaded white represent districts in which either (i) no tests were reported, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

LIM331	Greater Giyani	LIM351	Blouberg	LIM365	Modimolle
LIM332	Greater Letaba	LIM352	Aganang	LIM366	Bela-Bela
LIM333	Greater Tzaneen	LIM353	Molemole	LIM367	Mogalakwena
LIM334	Ba-Phalaborwa	LIM354	Polokwane	LIM471	Ephraim Mogale
LIM335	Maruleng	LIM355	Lepele-Nkumpi	LIM472	Elias Motsoaledi
LIM341	Musina	LIM361	Thabazimbi	LIM473	Makhuduthamaga
LIM342	Mutale	LIM362	Lephalale	LIM474	Fetakomo
LIM343	Thulamela	LIM364	Mookgopong	LIM475	Greater Tubatse
LIM344	Makhado				

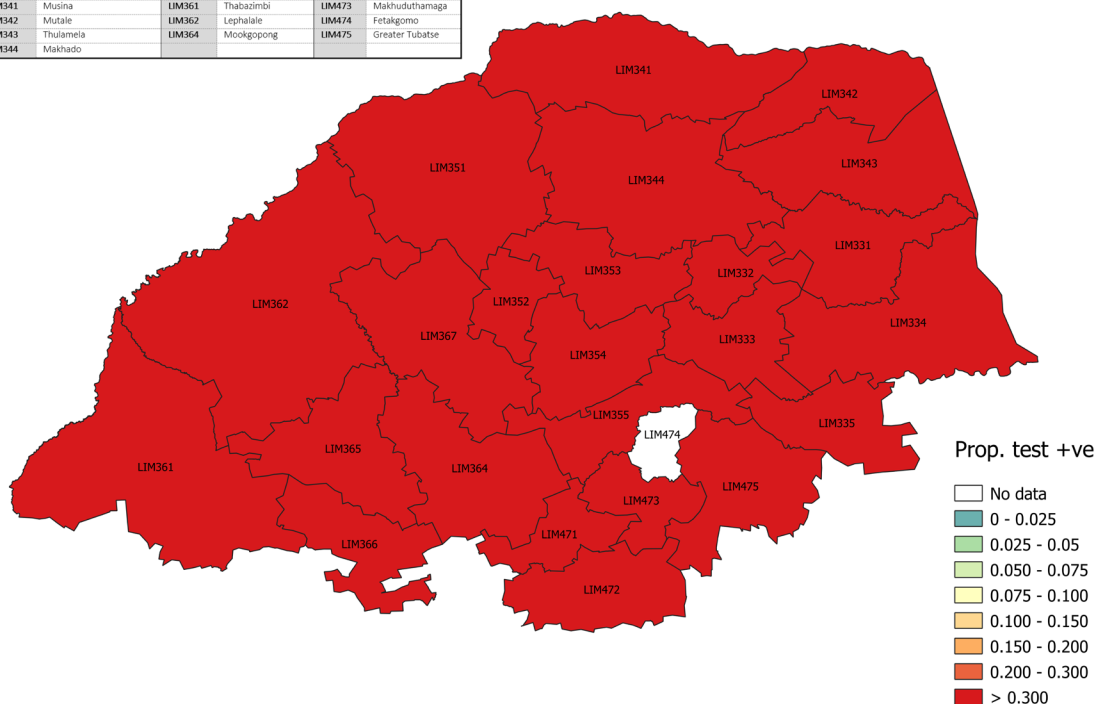


Figure 19. Proportion testing positive by health sub-district in Limpopo Province for the week of 11-17 July 2021. Areas shaded white represent districts in which either (i) no tests were reported, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

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Testing by patient admission status

In week 28 of 2021, 34.5% of reported tests were for hospitalised patients; 42.8% in the public sector and 26.3% in the private sector (Figure 20). The percentage testing positive in week 28 was higher among outpatients (35.2%) compared to inpatients

(27.9%), and were similar to the previous week (Figure 21). In week 28 the mean laboratory turnaround time for PCR tests in the public sector was higher among outpatients (2.1 days) compared to inpatients (1.3 days) (Figure 22).

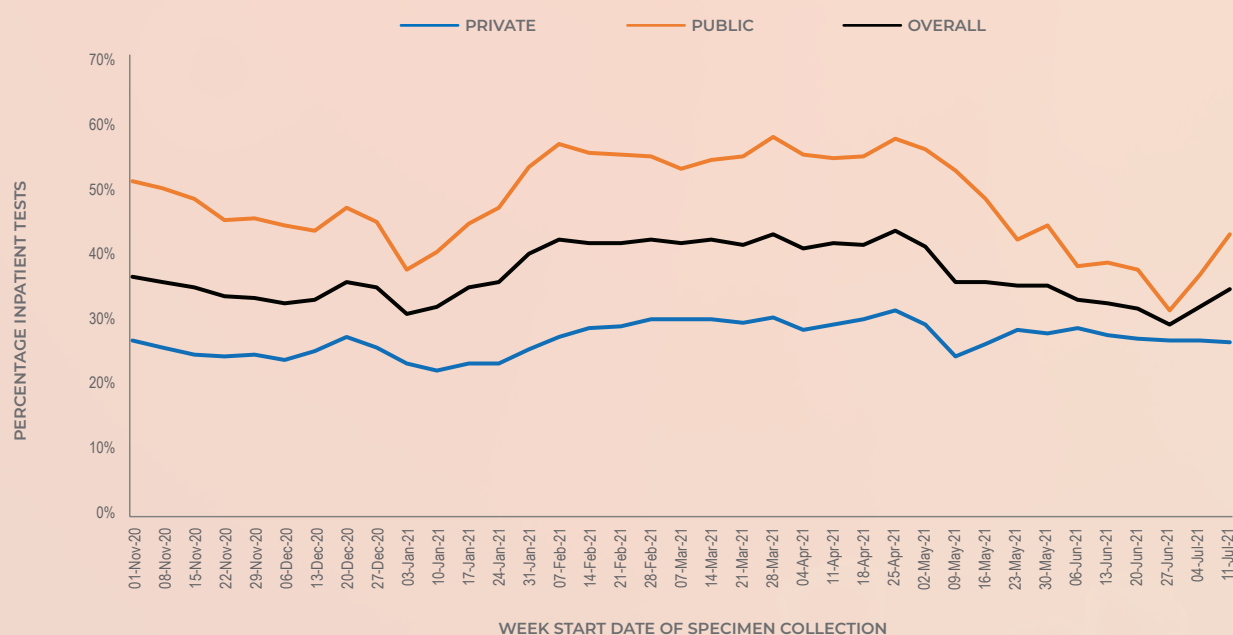


Figure 20. Percentage of inpatient tests reported by health sector, 1 November 2020 – 17 July 2021

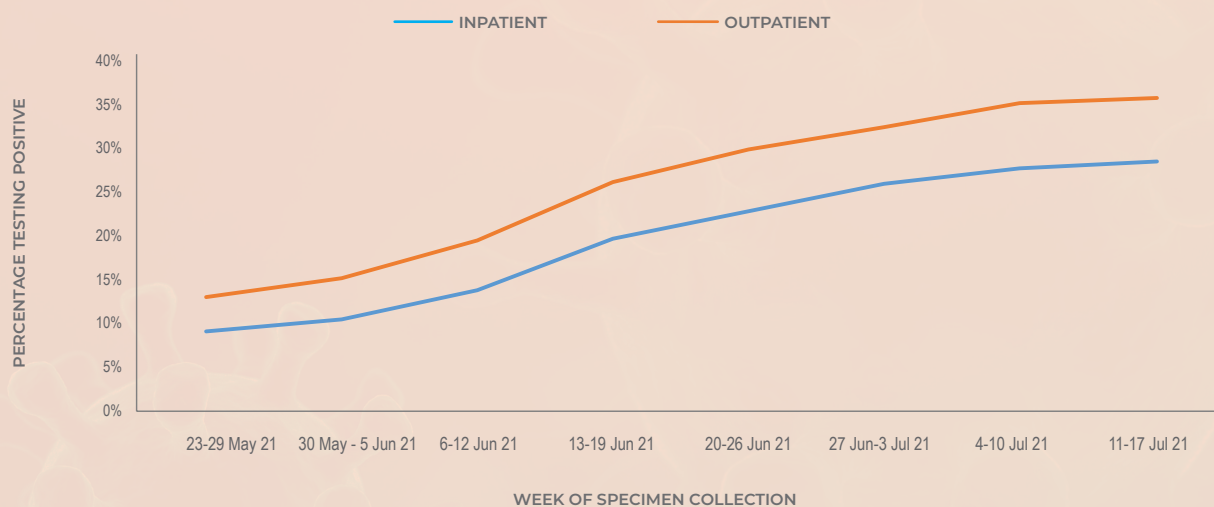


Figure 21. Percentage testing positive by patient admission status, 23 May – 17 July 2021

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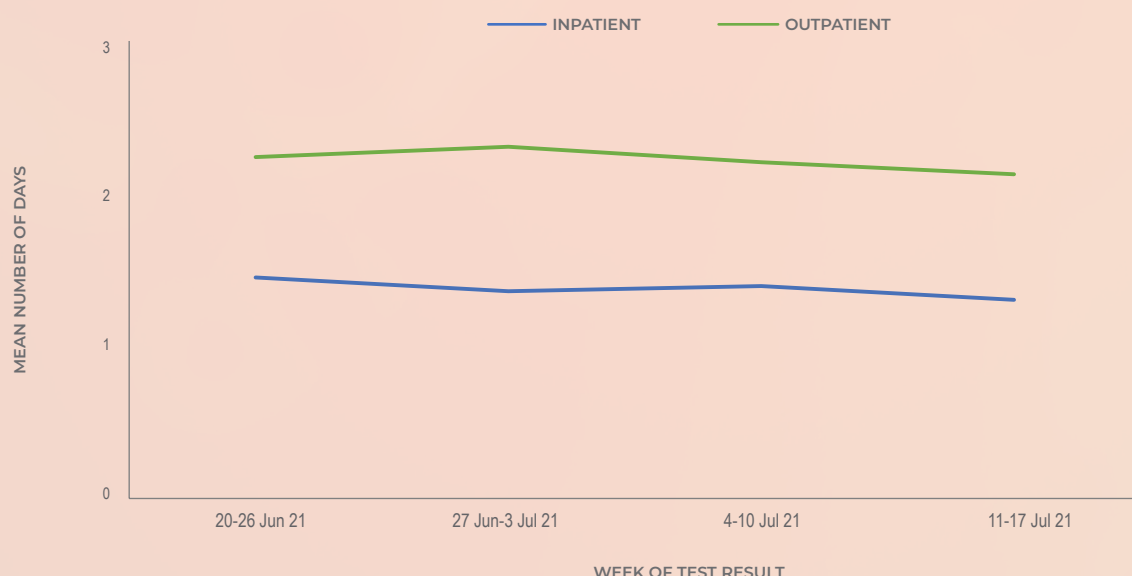


Figure 22. Mean number of days between date of specimen collection and date of test result for PCR tests in the public sector by patient admission status, 20 June – 17 July 2021

Testing by age and sex

The median age of individuals tested in week 28 of 2021 was 38 years (interquartile range (IQR) 28-51), and was similar among males (39 years; IQR 28-51) and females (38 years; IQR 28-51). The majority of reported tests (61.2%) were in individuals in the 20-49 years' age group (Figure 23). In week 28, the testing rate was slightly higher among females (498 per 100,000 persons) than males (460 per 100,000 persons) (Figure 24). Testing

rates in week 28 were highest in the ≥ 80 years age group (943 per 100,000 persons). The percentage testing positive was highest in individuals aged 55-59 years (38.7%), 75-79 years (38.5%) and 50-54 years (38.1%). The percentage testing positive was highest in males aged 70-74 years (37.9%), and in females aged 75-79 years (41%).

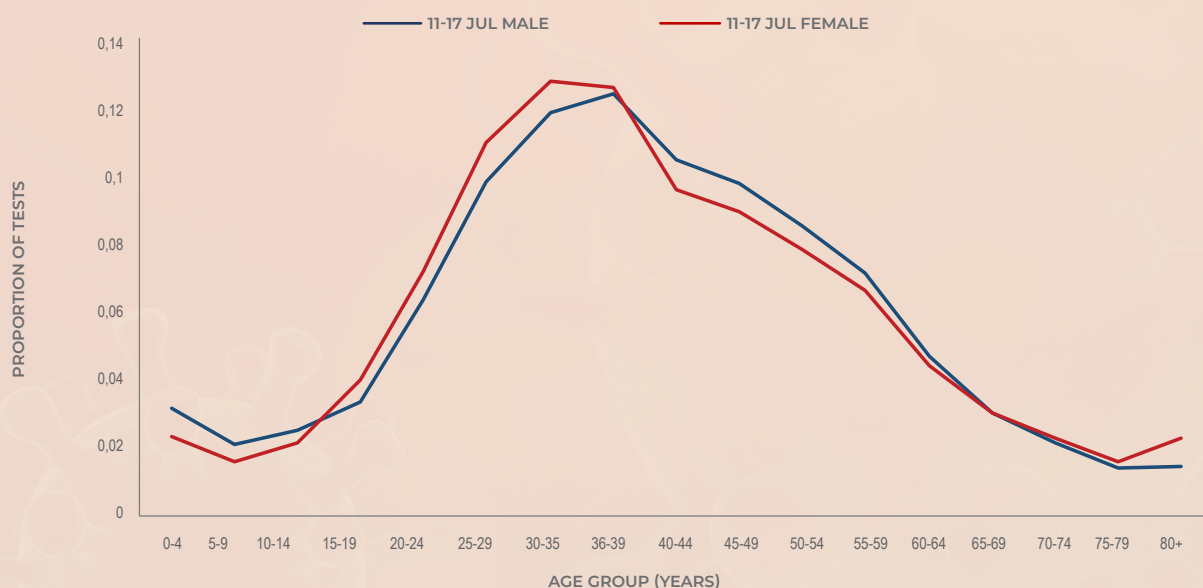


Figure 23. Proportion of tests by age group and sex, South Africa, week 28, 11-17 July 2021

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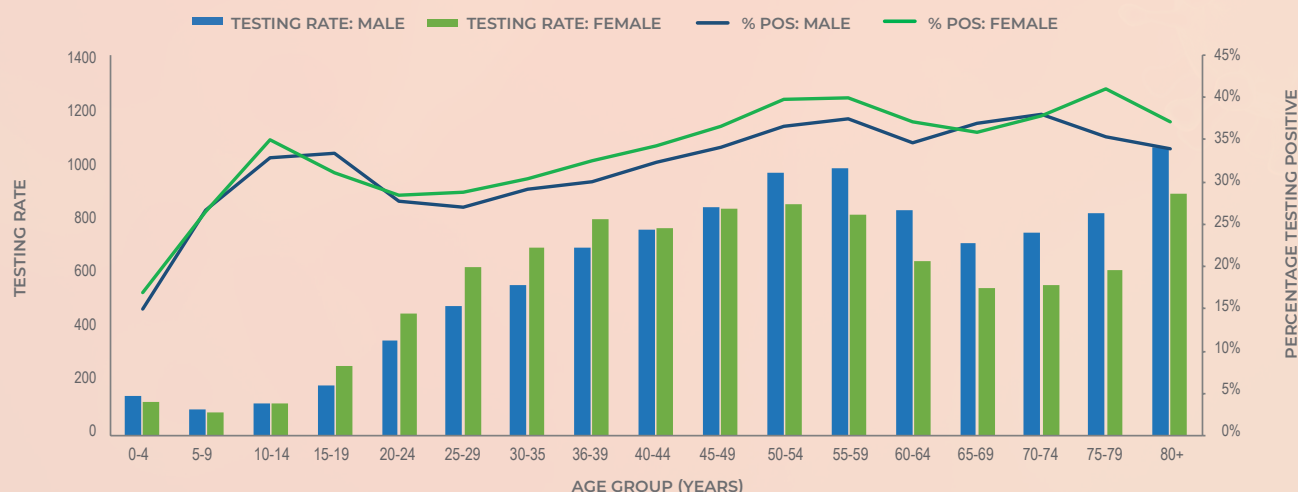


Figure 24. Testing rates per 100,000 persons and percentage testing positive by age group and sex, South Africa, week 28, 11-17 July 2021

Testing by test type

Up to the end of week 28 of 2021, 10.8% (1,523,947/14,175,399) of all reported tests were antigen tests. In week 28, 17.2% (50,168/291,686) of reported tests were antigen tests (Figure 25). Overall, 81.1% of antigen tests have been performed in the public sector, and in week 28 the public sector accounted for 77.0% of antigen tests. Since antigen testing began in November 2020, the majority of antigen tests have been reported from KwaZulu-Natal (34.8%) and Gauteng (19.8%) provinces. In the past few weeks, KwaZulu-Natal and Gauteng have performed the highest weekly number of antigen tests, although the weekly number of antigen tests reported in these provinces has decreased

in the past two weeks. The percentage testing positive remained higher for PCR tests compared to antigen tests, and in week 28 it was 34.9% for PCR tests and 20.5% for antigen tests (Figure 26). The mean turnaround time for antigen tests reported in week 28 increased to 7.7 days in the public sector and remained at 0.1 days in the private sector (Figure 27). The number of antigen tests reported is likely underestimated as antigen tests are increasingly being used outside of laboratory settings and results may not be reported or reporting may be delayed. In addition, if only positive antigen tests were reported, this would have resulted in an overestimation of percentage testing positive.

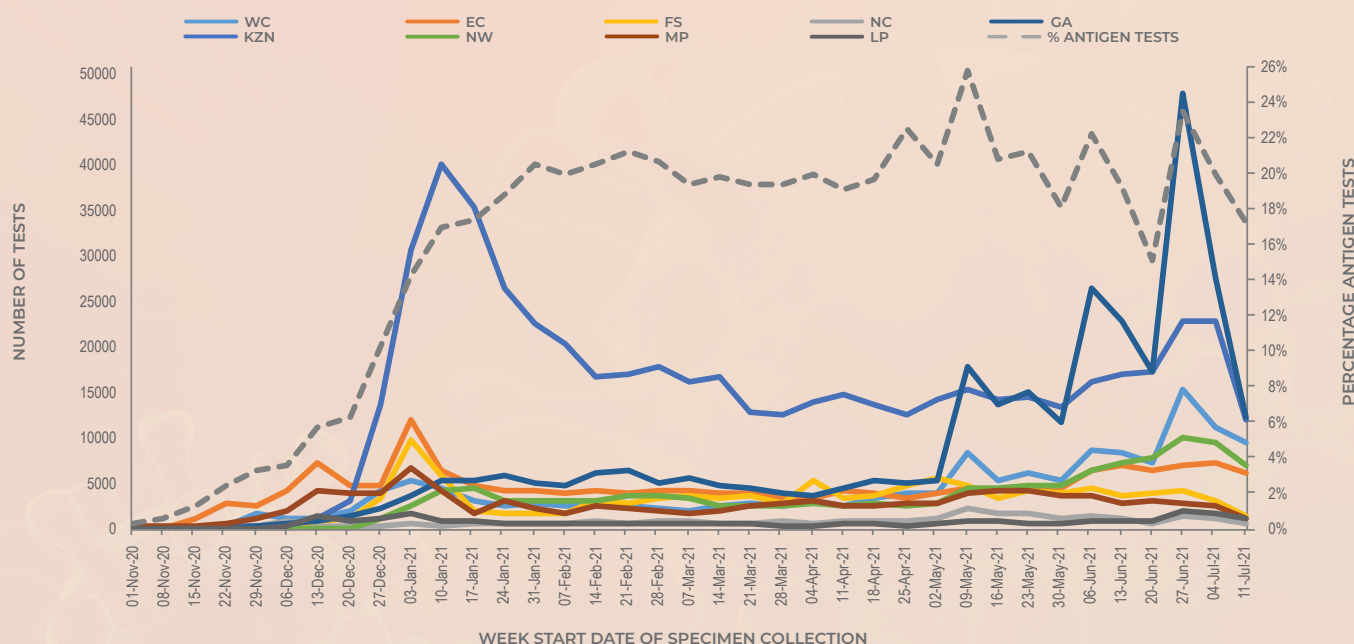


Figure 25. Number of antigen tests by province, and overall percentage antigen tests, South Africa, 1 November 2020 – 17 July 2021. WC, Western Cape; EC, Eastern Cape; FS, Free State; KZN, KwaZulu-Natal; GA, Gauteng; NC, Northern Cape; NW, North West; MP, Mpumalanga; LP, Limpopo

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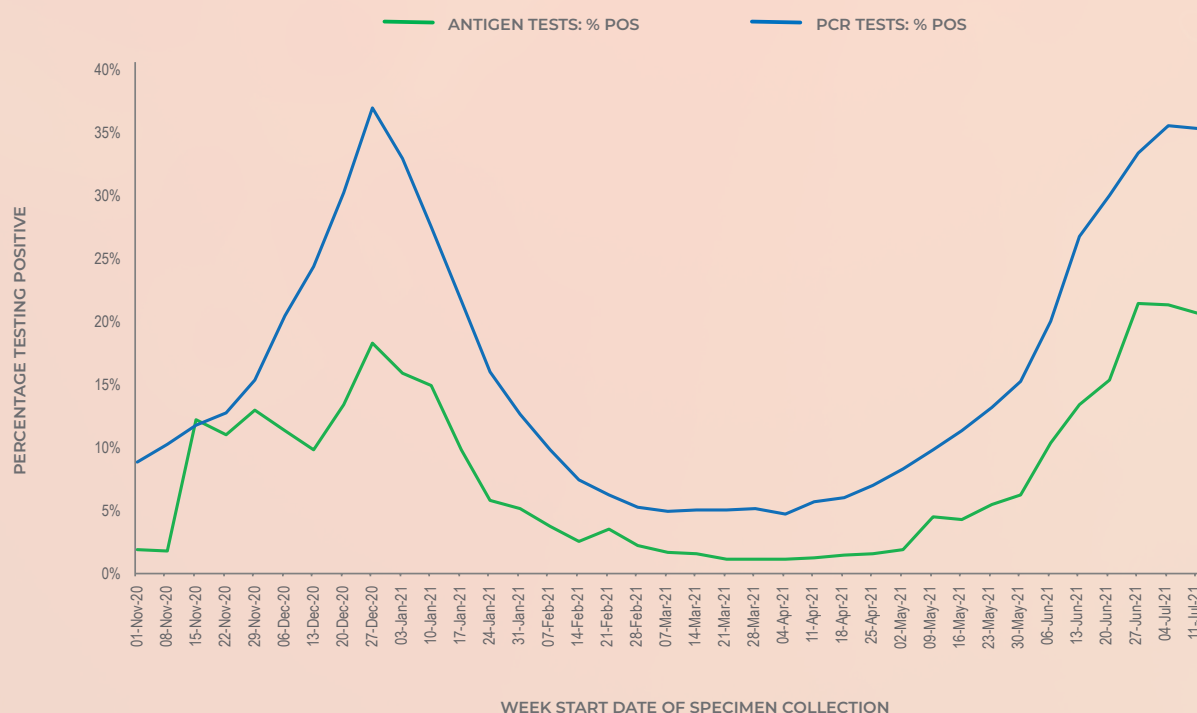


Figure 26. Percentage of laboratory tests positive for SARS-CoV-2 by test type and date of specimen collection, South Africa, 1 November 2020 – 17 July 2021

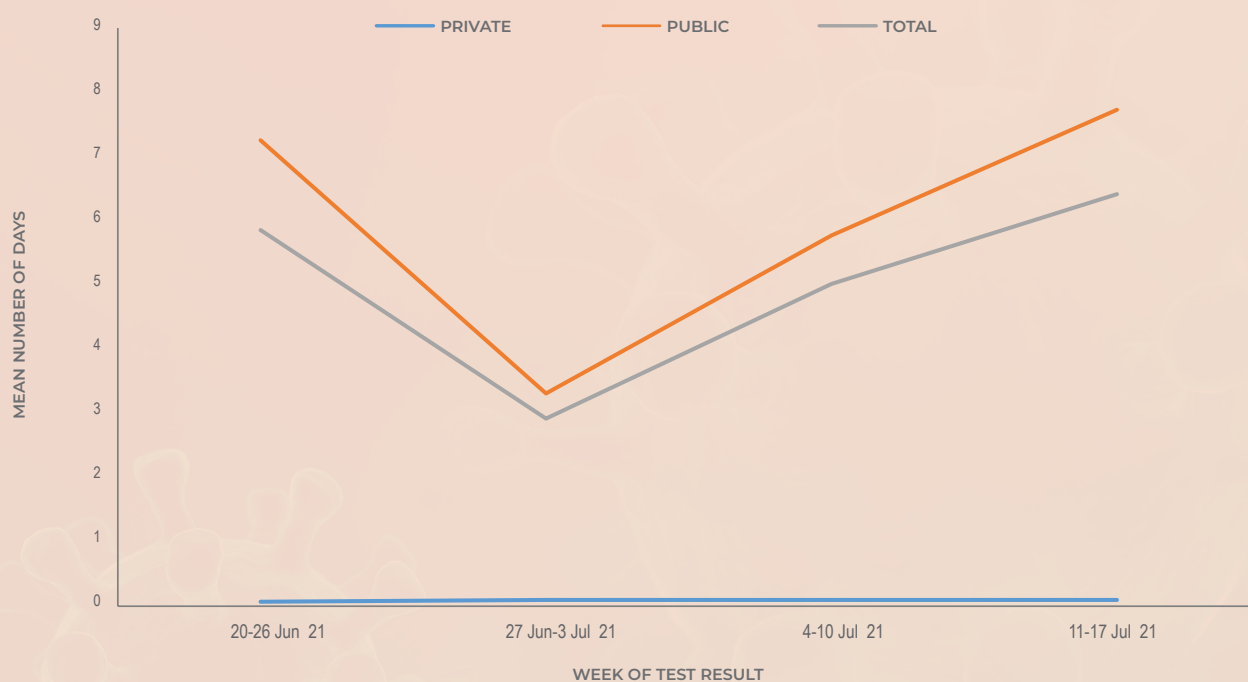


Figure 27. Mean number of days between date of specimen collection and date of test result for antigen tests, by week of test result, South Africa, 20 June - 17 July 2021

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Limitations

- A backlog in testing of samples by laboratories affects the reported number of tests. As a result, numbers tested during this period may change in subsequent reports.
- If higher-priority specimens were tested preferentially, this would likely result in an inflated proportion testing positive.
- Different and changing testing strategies (targeted vs. mass testing and PCR vs. antigen-based tests) used by different provinces makes percentage testing positive and number of reported tests difficult to interpret and compare.
- Health district and sub-district level were mapped based on the testing facility and not place of residence.
- Patient admission status was categorised based on the reported patient facility and may not reflect whether the patient was actually admitted to hospital.
- Antigen tests may be underestimated as they are used in a number of different settings and results may not be reported.

CONCLUSIONS

The number of tests reported in week 28 (n=291,686) was lower than the number of tests reported in recent weeks. Gauteng (38.3%) and Western Cape (19.1%) provinces reported the largest number of tests in week 28. The overall testing rate in week 28 was 489 per 100,000 persons; highest in Western Cape (795 per 100,000 persons) and lowest in KwaZulu-Natal (207 per 100,000 persons). Testing rates decreased in all provinces in the past week, most notably in Gauteng, KwaZulu-Natal, North West and Free State provinces. Antigen tests accounted for 17.2% (50,168/291,686) of all tests reported in week 28, however the number of antigen tests is likely underestimated due to under-reporting and delayed reporting of antigen tests. The overall mean laboratory turnaround time for PCR tests was 1.2 days in week 28; 1.8 days in the public sector and 0.8 days in the private sector.

The percentage testing positive in week 28 was 32.4%, which was unchanged from the previous week (32.3%). The percentage testing positive in week 28 was highest in Limpopo (48.1%), Mpumalanga (39.0%), North West (37.2%), Gauteng (36.0%) and Western Cape (30.1%) provinces. The percentage testing positive was between 20% and 30% in the Northern Cape and Free State, and was <20% in the Eastern Cape and KwaZulu-Natal provinces. Compared to the previous week, the percentage testing positive in week 28 increased in the Western Cape, Eastern Cape, Northern Cape, Free State, KwaZulu-Natal and Mpumalanga, and decreased in the North West, Gauteng and Limpopo.