

SOUTH AFRICA WEEK 34 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 28 August 2021 (Week 34 of 2021).

HIGHLIGHTS

- In the period 1 March 2020 through 28 August 2021, 16,312,309 (14,276,828 PCR) and 2,035,481 antigen) tests for SARS-CoV-2 have been reported nationally.
- The number of tests reported in week 34 of 2021 (n=331,050) was slightly lower than the weekly number of tests reported in the previous week.
- The testing rate in week 34 was 555 per 100,000 persons; highest in the Western Cape (816 per 100,000 persons) and lowest in Limpopo (134 per 100,000 persons).
- In week 34 the percentage testing positive was 20.1%, which was 2.9% lower than the previous week.
- The percentage testing positive in week 34 was highest in the Northern Cape (29.0%), Western Cape (27.1%) and Free State (25.0%) provinces. The percentage testing positive was between 20% and 24% in the Eastern Cape, KwaZulu-Natal and Mpumalanga provinces, and was less than 20% in the North West, Gauteng and Limpopo provinces.
- In week 34, compared to the previous week, the percentage testing positive decreased in all provinces, except the Free State where the percentage testing positive was unchanged.
- 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 (NMCSS). 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 28 August 2021 (week 34 of 2021).

Testing volumes and proportion testing positive

From 1 March 2020 through 28 August 2021, 16,312,309 SARS-CoV-2 tests were reported; 14,276,828 PCR and 2,035,481 antigen tests. The highest weekly number of tests reported during the first wave occurred in week 28 of 2020 (beginning 5 July, n=307,916). In the second wave, the highest weekly number of tests were reported in week 1 of 2021 (beginning 3 January, n=501,140). In the third wave, the weekly number of tests started increasing in week 19 of 2021 (beginning 9 May), and increased weekly to a peak in week 26 of 2021 (beginning 27 June, n=481,322). The number of tests reported in week 34 was 331,050, slightly lower than the previous week. 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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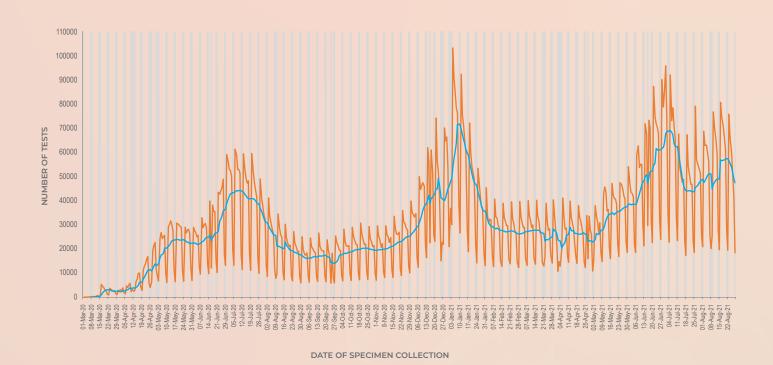


Figure 1. Number of SARS-CoV-2 tests reported by date of specimen collection, South Africa, 1 March 2020 – 28 August 2021. Blue line shows the 7-day moving average of the number of tests reported. Grey bars highlight weekend days and public holidays.

The overall percentage testing positive from week 10 of 2020 through week 34 of 2021 was 18.0% (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. In the third wave of infections, the percentage testing positive peaked at 31.9% in week 27 of 2021 (beginning 4 July), and has subsequently decreased. The percentage testing positive in week 34 of 2021 was 20.1%, which was 2.9% lower than the previous week (23.1%, P<0.001) (Figure 2).

Table 1. Weekly number of SARS-CoV-2 tests and positive tests reported, South Africa, 1 March 2020 – 28 August 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 (0.1)	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 (0.5)	2177	2.7
18	26-Apr-20	93819 (0.6)	3209	3.4
19	03-May-20	142713 (0.9)	6018	4.2
20	10-May-20	165379 (1.0)	8092	4.9
<u>23</u> 21	17-May-20	166544 (1.0)	11379	6.8
22	24-May-20	156141 (1.0)	12967	8.3
23	31-May-20	153571 (0.9)	15079	9.8
	07-Jun-20	173905 (1.1)	22363	
24 25	07-3411-20 14-Jun-20		32653	
	21-Jun-20	252100 (1.5)	55049	
	28-Jun-20	302752 (1.9)	75313	24.9
	05-Jul-20	307917 (1.9)	86041	27.9
<u>29</u>	12-Jul-20	285603 (1.8)	84927	29.7
30	19-Jul-20	270900 (1.7)	78636	29.0
31	26-Jul-20	216397 (1.3)	58394	27.0
32	02-Aug-20	179576 (1.1)	40996	22.8
33	09-Aug-20	141106 (0.9)	26266	18.6
34	16-Aug-20	135022 (0.8)	21379	15.8
35	23-Aug-20	123337 (0.8)	16331	13.2
36	30-Aug-20	112764 (0.7)	12790	11.3
37	06-Sep-20	116998 (0.7)	11953	10.2
38	13-Sep-20	120717 (0.7)	12012	10.0
39	20-Sep-20	98822 (0.6)	10098	10.2
40	27-Sep-20	123062 (0.8)	11008	8.9
41	04-Oct-20	131046 (0.8)	11779	9.0
42	11-Oct-20	137981 (0.8)	12078	8.8
43	18-Oct-20	142175 (0.9)	12069	8.5
44	25-Oct-20	135853 (0.8)	11479	8.4
45	01-Nov-20	138844 (0.9)	12138	8.7
46	08-Nov-20	147009 (0.9)	14845	10.1
47	15-Nov-20	160649 (1.0)	18765	11.7
48	22-Nov-20	175696 (1.1)	22054	12.6
49	29-Nov-20	203153 (1.2)	30769	15.1
50	06-Dec-20	267929 (1.6)	53314	19.9
51	13-Dec-20	294511 (1.8)	68578	23.3
52	20-Dec-20	284615 (1.7)	81963	28.8
<u></u>	27-Dec-20	334403 (2.1)	115740	34.6
<u></u>	03-Jan-21	501140 (3.1)		30.1
2	10-Jan-21	417933 (2.6)	104790	25.1
	10 3411 21	117 333 (2.0)		

3	17-Jan-21	327374 (2.0)	63256	19.3
4	24-Jan-21	249484 (1.5)	34637	13.9
5	31-Jan-21	203623 (1.2)	22358	11.0
6	07-Feb-21	193249 (1.2)	16466	8.5
7	14-Feb-21	190604 (1.2)	12182	6.4
8	21-Feb-21	184631 (1.1)	10380	5.6
9	28-Feb-21	189404 (1.2)	8685	4.6
10	07-Mar-21	193356 (1.2)	8324	4.3
11	14-Mar-21	185458 (1.1)	8151	4.4
12	21-Mar-21	172986 (1.1)	7350	4.2
13	28-Mar-21	163829 (1.0)	7059	4.3
14	04-Apr-21	180596 (1.1)	7282	4.0
15	11-Apr-21	184535 (1.1)	8842	4.8
16	18-Apr-21	184814 (1.1)	9462	5.1
17	25-Apr-21	159901 (1.0)	9177	5.7
18	02-May-21	193719 (1.2)	13439	6.9
19	09-May-21	239379 (1.5)	19879	8.3
20	16-May-21	247622 (1.5)	24147	9.8
21	23-May-21	260910 (1.6)	29603	11.3
22	30-May-21	268343 (1.6)	35856	13.4
23	06-Jun-21	333714 (2.0)	58697	17.6
24	13-Jun-21	364456 (2.2)	86399	23.7
25	20-Jun-21	426034 (2.6)	116397	27.3
26	27-Jun-21	481322 (3.0)	143465	29.8
27	04-Jul-21	435350 (2.7)	138937	31.9
28	11-Jul-21	314086 (1.9)	98955	31.5
29	18-Jul-21	305380 (1.9)	86375	28.3
30	25-Jul-21	339039 (2.1)	86344	25.5
31	01-Aug-21	357285 (2.2)	85733	24.0
32	08-Aug-21	342480 (2.1)	81151	23.7
33	15-Aug-21	400692 (2.5)	92401	23.1
34	22-Aug-21	331050 (2.0)	66685	20.1
	Total	16,312,309 (100.0)	2,938,765	18.0

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Figure 2. Percentage of tests positive for SARS-CoV-2 by date of specimen collection, South Africa, 1 March 2020 – 28 August 2021. Blue line shows the 7-day moving average of the percentage testing positive. Grey bars highlight weekend days and public holidays.

DATE OF SPECIMEN COLLECTION

Testing in private and public sectors

From 1 March 2020 through 28 August 2021 7,380,873 tests were reported in the public sector with 18.3% testing positive. Over this same period the private sector reported 8,931,436 tests with 17.8% testing positive (Table 2). Overall the public sector has reported 45.2% of tests and accounted for 45.9% 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%). In the third wave of infections the peak percentage testing positive was observed in week 28 of 2021 (beginning 11 July) in the public sector (30.3%) and in week 27 of 2021 (beginning 4 July) in the private sector (33.6%). From week 33 to week 34 of 2021 the percentage

testing positive decreased by 2.3% in the public sector (25.1% in week 33 to 22.8% in week 34, P<0.001) and by 3.4% in the private sector (20.5% in week 33 to 17.1% in week 34, P<0.001). In week 34 the percentage testing positive in the public sector (22.8%) was 5.7% higher than in the private sector (17.1%, P<0.001).

The mean turnaround time for PCR tests reported in week 34 of 2021 was 1.5 days; 2.2 days in the public sector and 0.7 days in the private sector (Figure 3). Turnaround times for public sector PCR tests increased in the Free State, Eastern Cape and Northern Cape and were >2 days in the Eastern Cape, Northern Cape, Free State and Mpumalanga provinces in the past week (Figure 4). Seventeen of the 28 (60.7%) NHLS laboratories performing PCR testing for SARS-CoV-2 had turnaround times ≤2 days in week 34 (Figure 5).

Table 2. Weekly number of tests and positive tests reported by healthcare sector South Africa 1 March 2020 – 28 August 2021

Week	Week		ic sector Cases		te sector Positive tests		r proportion of Positive tests	Ratio of PTP
number	beginning	Tests	n (%)	Tests	n (%)	Tests (%)	(%)	OIPIP
10	01-Mar-20	294	10 (3.4)	162	3 (1.9)	64.5	76.9	1.837
11	08-Mar-20	<u>4</u> 01	27 (6.7)	1979	76 (3.8)	<u></u>	26.2	1.753
12	15-Mar-20	<u> </u>	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		1.526
14	29-Mar-20	57,5 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)	<u> </u>	73.3	1.197
1/_ 18	26-Apr-20	67469	2453 (3.6)	26350	756 (2.9)	0 <u>3.</u> 6 71.9	75.5 76.4	1.267
<u>18</u> 19	03-May-20	94338	4507 (4.8)	<u>20330</u> 48375	1511 (3.1)	66.1	74.9	1.530
20	10-May-20	108002	5443 (5.0)	57377	2649 (4.6)	65.3	67.3	1.092
<u>20</u> _ 21	17-May-20	98648	7031 (7.1)	67896	4348 (6.4)	65.3 59.2	61.8	1.113
21 22	24-May-20	77597	6411 (8.3)	<u>78544</u>	6556 (8.3)	<u></u>	49.4	0.990
23	31-May-20	63945	6626 (10.4)		8453 (9.4)	49.7 41.6	<u>43.4</u> 43.9	1.099
23 24	07-Jun-20	63945 64655	8039 (12.4)	109250	6453 (9.4) 14324 (13.1)	37.2	43.9 35.9	
								0.948
<u>25</u>	14-Jun-20	61149	11982 (19.6)	124942	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)	196378	48068 (24.5)	35.1	36.2	1.046
28	05-Jul-20	117727	32239 (27.4)	190190	53802 (28.3)	38.2	37.5	0.968
29	12-Jul-20	110664	31383 (28.4)	174939	53544 (30.6)	38.7	37.0	0.927
30	19-Jul-20	105218	30319 (28.8)	165682	48317 (29.2)	38.8	38.6	0.988
31	26-Jul-20	81248	22782 (28.0)	135149	35612 (26.4)	37.5	39.0	1.064
32	02-Aug-20	70566	16996 (24.1)	109010	24000 (22.0)	39.3	41.5	1.094
33	09-Aug-20	58661	11172 (19.0)	82445	15094 (18.3)	41.6	42.5	1.040
34	16-Aug-20	56144	9623 (17.1)	78878	11756 (14.9)	41.6	45.0	1.150
35	23-Aug-20	50320	7790 (15.5)	73017	8541 (11.7)	40.8	47.7	1.323
36	30-Aug-20	45422	6096 (13.4)	67342	6694 (9.9)	40.3	47.7	1.350
37	06-Sep-20	51055	6421 (12.6)	65943	5532 (8.4)	43.6	53.7	1.499
38	13-Sep-20	53707	6547 (12.2)	67010	5465 (8.2)	44.5	54.5	1.495
39	20-Sep-20	44842	5530 (12.3)	53980	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	50436	5690 (11.3)	80610	6089 (7.6)	38.5	48.3	1.494
42	11-Oct-20	53452	5702 (10.7)	84529	6376 (7.5)	38.7	47.2	1.414
43	18-Oct-20	56123	6045 (10.8)	86052	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)	85845	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	<u>5</u>	1.782
4 /48				101122				
	22-Nov-20	74574	12200 (16.4)		9854 (9.7)	42.4	<u>55.3</u>	1.679
<u>49</u>	29-Nov-20	81271	15730 (19.4)	121882	15039 (12.3)	40.0	51.1	1.569
50	06-Dec-20	107911	24716 (22.9)	160018	28598 (17.9)	40.3	46.4	1.282
<u>51</u>	13-Dec-20	117249	29815 (25.4)	177262	38763 (21.9)	39.8	43.5	1.163
52	20-Dec-20	109914	34128 (31.0)	174701	47835 (27.4)	38.6	41.6	1.134
53	27-Dec-20	151637	52934 (34.9)	182766	62806 (34.4)	45.3	45.7	1.016
1	03-Jan-21	237014	71064 (30.0)	264126	79967 (30.3)	47.3	47.1	0.990
2	10-Jan-21	204024	52959 (26.0)	213909	51831 (24.2)	48.8	50.5	1.071
3	17-Jan-21	165682	34462 (20.8)	161692	28794 (17.8)	50.6	54.5	1.168
4	24-Jan-21	123275	19000 (15.4)	126209	15637 (12.4)	49.4	54.9	1.244
5	31-Jan-21	99787	12066 (12.1)	103836	10292 (9.9)	49.0	54.0	1.220
6	07-Feb-21	91331	8510 (9.3)	101918	7956 (7.8)	47.3	51.7	1.194
7	14-Feb-21	86439	6681 (7.7)	104165	5501 (5.3)	45.4	54.8	1.464
8	21-Feb-21	82701	5796 (7.0)	101930	4584 (4.5)	<u>43.4</u> 44.8	54.8 55.8	1.558
9	28-Feb-21	87951	4678 (5.3)	101453	4007 (3.9)	46.4	53.9	1.347
10	07-Mar-21	92871	4581 (4.9)	100485	3743 (3.7)	48.0	55.0	1.324
(11)	14-Mar-21	89915	4448 (4.9)	95543	3703 (3.9)	48.5	54.6	1.276
12	21-Mar-21	77377	3466 (4.5)	95609	3884 (4.1)	44.7	47.2	1.103
13	28-Mar-21	71170	3455 (4.9)	92659	3604 (3.9)	43.4	48.9	1.248

	Total	7,380,873	1,350,213 (18.3)	8,931,436	1,588,552 (17.8)	45.2	45.9	1.029
34	22-Aug-21	176658	40227 (22.8)	154392	26458 (17.1)	53.4	60.3	1.329
33	15-Aug-21	227195	56915 (25.1)	173497	35486 (20.5)	56.7	61.6	1.225
32	08-Aug-21	185175	46532 (25.1)	157305	34619 (22.0)	54.1	57.3	1.142
31	01-Aug-21	190778	46684 (24.5)	166507	39049 (23.5)	53.4	54.5	1.043
30	25-Jul-21	183981	47082 (25.6)	155058	39262 (25.3)	54.3	54.5	1.011
29	18-Jul-21	153698	43956 (28.6)	151682	42419 (28.0)	50.3	50.9	1.023
28	11-Jul-21	153765	46653 (30.3)	160321	52302 (32.6)	49.0	47.1	0.930
27	04-Jul-21	209148	62975 (30.1)	226202	75962 (33.6)	48.0	45.3	0.897
26	27-Jun-21	231105	62216 (26.9)	250217	81249 (32.5)	48.0	43.4	0.829
25	20-Jun-21	176385	41928 (23.8)	249649	74469 (29.8)	41.4	36.0	0.797
24	13-Jun-21	152191	29086 (19.1)	212265	57313 (27.0)	41.8	33.7	0.708
23	06-Jun-21	146474	19622 (13.4)	187240	39075 (20.9)	43.9	33.4	0.642
22	30-May-21	111426	11765 (10.6)	156917	24091 (15.4)	41.5	32.8	0.688
21	23-May-21	121039	11731 (9.7)	139871	17872 (12.8)	46.4	39.6	0.759
20	16-May-21	100636	9123 (9.1)	146986	15024 (10.2)	40.6	37.8	0.887
19	09-May-21	91644	7332 (8.0)	147735	12547 (8.5)	38.3	36.9	0.942
18	02-May-21	81075	5468 (6.7)	112644	7971 (7.1)	41.9	40.7	0.953
17	25-Apr-21	70503	4124 (5.8)	89398	5053 (5.7)	44.1	44.9	1.035
16	18-Apr-21	80566	4713 (5.8)	104248	4749 (4.6)	43.6	49.8	1.284
15	11-Apr-21	85837	4363 (5.1)	98698	4479 (4.5)	46.5	49.3	1.120
14	04-Apr-21	79378	3356 (4.2)	101218	3926 (3.9)	44.0	46.1	1.090

^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)

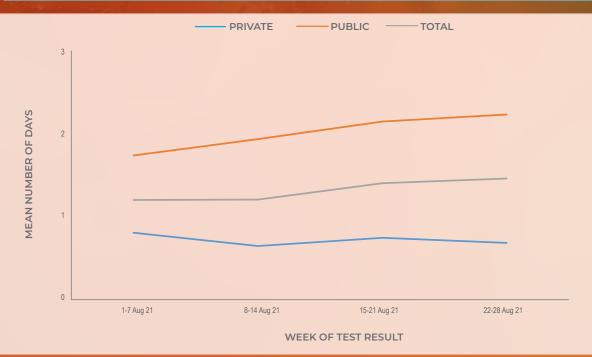


Figure 3. Mean number of days between date of specimen collection and date of test result for PCR tests by week of test result, South Africa, 1 – 28 August 2021

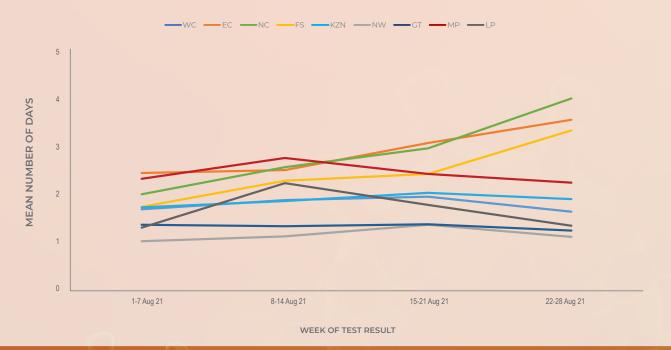


Figure 4. Mean number of days between date of specimen collection and date of test result for PCR tests by week of test result and province public sector South Africa 1 – 28 August 2021. WC Western Cape; EC Eastern Cape; FS Free State; KZN KwaZulu-Natal; GT Gauteng; NC Northern Cape; NW North West; MP Mpumalanga; LP Limpopo

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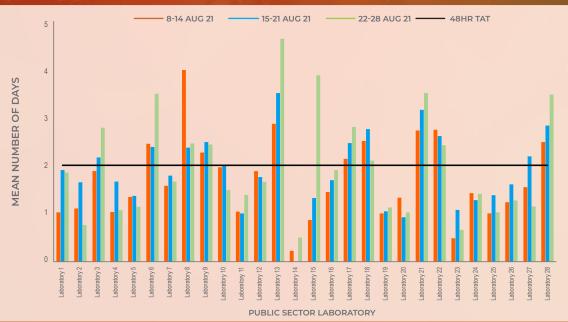


Figure 5. Mean number of days between date of specimen collection and date of test result for PCR tests by public sector <u>laboratory 8 - 28 August 2021.</u> The horizontal black line indicates 48-hour turnaround time (TAT).

Testing by province

KwaZulu-Natal reported the largest proportion of tests (27.5%) followed by Gauteng (22.5%) and Western Cape (17.3%) in week 34 of 2021 (Table 3). The overall testing rate decreased from 672 per 100,000 persons in week 33 to 555 per 100,000 in week 34. The testing rate ranged from 816 per 100,000 persons in the Western Cape to 134 per 100,000 persons in Limpopo (Figure 6). In week 34 testing rates decreased in all provinces.

The percentage testing positive in week 34 was highest in the Northern Cape (29.0%), Western Cape (27.1%) and Free State (25.0%) provinces. The percentage testing

positive was between 20% and 24% in the Eastern Cape, KwaZulu-Natal and Mpumalanga provinces, and was less than 20% in the North West, Gauteng and Limpopo provinces (Figure 7 and Table 3). Compared to the previous week the percentage testing positive in week 34 decreased (p<0.001) in all provinces, except the Free State where the percentage testing positive remained unchanged (P=0.593). The percentage testing positive was higher than the national average not weighted for population size in the Western Cape, Eastern Cape, Northern Cape, Free State and KwaZulu-Natal provinces (Figure 7).

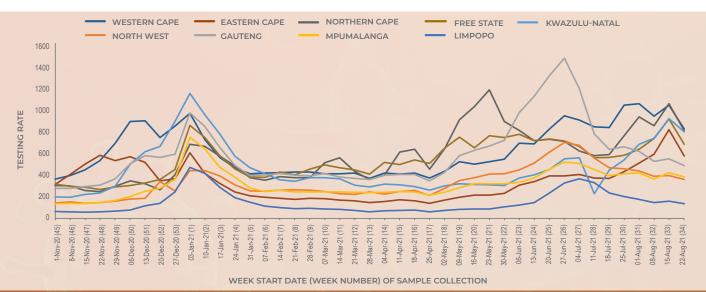


Figure 6. Testing rate per 100,000 persons by province and week of specimen collection, South Africa, 1 November 2020 – 28 August 2021

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Table 3. Weekly number of tests and positive tests reported by province South Africa 8 - 28 August 2021

		8-14	Aug 2021	15-21	Aug 2021	22-28	3 Aug 2021		
Province	Population ^a	No. of tests	No. positive tests (%)	No. of tests	No. positive tests (%)	No. of tests	No. positive tests (%)	Tests per 100,000 persons	Change in percentage positive ^b
Western Cape	7005741	65362	21161 (32.4)	72230	21160 (29.3)	57183	15509 (27.1)	816	-2.2%
Eastern Cape	6734001	39415	9136 (23.2)	54469	13054 (24.0)	38340	8437 (22.0)	569	-2.0%
Northern Cape	1292786	10933	3784 (34.6)	13525	4546 (33.6)	10336	2995 (29.0)	800	-4.6%
Free State	2928903	21306	5013 (23.5)	26528	6679 (25.2)	19760	4932 (25.0)	675	-0.2%
KwaZulu-Natal	11531628	84132	20112 (23.9)	104968	26246 (25.0)	90972	20340 (22.4)	789	-2.6%
North West	4108816	15767	3632 (23.0)	16052	3814 (23.8)	14501	2803 (19.3)	353	-4.4%
Gauteng	15488137	80325	11686 (14.5)	84184	10088 (12.0)	74399	6830 (9.2)	480	-2.8%
Mpumalanga	4679786	16770	4692 (28.0)	19518	4886 (25.0)	17662	3558 (20.1)	377	-4.9%
Limpopo	5852553	8459	1935 (22.9)	9180	1922 (20.9)	7825	1276 (16.3)	134	-4.6%
Unknown		11	O (O.O)	38	6 (15.8)	72	5 (6.9)		
Total	59622350	342480	81151 (23.7)	400692	92401 (23.1)	331050	66685 (20.1)	555	-2.9%

a 2020 Mid-year population Statistics SA

b Current week compared to previous week



Figure 7. Weekly percentage testing positive by province, South Africa, 8 - 28 August 2021. The horizontal blue line shows the national mean for week 34, beginning 22 August 2021

Testing in the public sector

In the public sector the percentage testing positive decreased by 2.3% in the past week (25.1% in week 33 to 22.8% in week 34) (Table 4). The percentage testing positive in week 34 was highest in the Northern Cape

(30.7%), Western Cape (29.9%)and Free State (26.1%) provinces. The percentage testing positive in the public sector was higher than the national average not weighted for population size in the Western Cape, Northern Cape, Free State, KwaZulu-Natal, North West and Mpumalanga 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 8 - 28 August 2021

	8-14 Au	ug 2021	15-21 A	ug 2021	22-28 A	ug 2021
Province	No. of tests	No. positive tests (%)	No. of tests	No. positive tests (%)	No. of tests	No. positive tests (%)
Western Cape	31568	11823 (37.5)	34827	11580 (33.3)	27488	8223 (29.9)
Eastern Cape	30029	6844 (22.8)	41775	9769 (23.4)	26082	5469 (21.0)
Northern Cape	7417	2660 (35.9)	9670	3331 (34.4)	6422	1970 (30.7)
Free State	13619	2997 (22.0)	17803	4445 (25.0)	11415	2979 (26.1)
KwaZulu-Natal	54525	12709 (23.3)	71488	17917 (25.1)	62548	14403 (23.0)
North West	8865	2253 (25.4)	9070	2483 (27.4)	7977	1968 (24.7)
Gauteng	27382	4346 (15.9)	28921	4041 (14.0)	24398	2881 (11.8)
Mpumalanga	8401	2118 (25.2)	10225	2512 (24.6)	7408	1758 (23.7)
Limpopo	3368	782 (23.2)	3391	834 (24.6)	2859	572 (20.0)
Unknown	1	O (O.O)	25	3 (12.0)	61	4 (6.6)
Total	185175	46532 (25.1)	227195	56915 (25.1)	176658	40227 (22.8)



Figure 8. Weekly percentage testing positive in the public sector by province, South Africa, 8 - 28 August 2021. The horizontal blue line shows the national mean for week 34 of 2021, beginning 22 August 2021.

Facilities with high proportions testing positive

The data on testing at facility level for the public sector for week 34 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 22-28 August 2021. Nine of the 25 public facilities showing the highest PTP are in the Western Cape, with five in each of KwaZulu-Natal and North West, three in the Northern Cape, and two in the Free State.

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Table 5.1 Public sector healthcare facilities with a high proportion testing positive 22-28 August 2021

Facility Name	Province	Tests	PTP (95% CI)
Facility 1	Western Cape	67	0.791 (0.694;0.888)
Facility 2	Northern Cape	29	0.759 (0.603;0.914)
Facility 3	KwaZulu-Natal	28	0.750 (0.590;0.910)
Facility 4	Western Cape	25	0.720 (0.544;0.896)
Facility 5	North West	303	0.706 (0.655;0.758)
Facility 6	Western Cape	55	0.691 (0.569;0.813)
Facility 7	Free State	43	0.674 (0.534;0.814)
Facility 8	KwaZulu-Natal	165	0.673 (0.601;0.744)
Facility 9	Western Cape	131	0.649 (0.567;0.731)
Facility 10	Mpumalanga	48	0.646 (0.511;0.781)
Facility 11	KwaZulu-Natal	94	0.638 (0.541;0.735)
Facility 12	North West	33	0.636 (0.472;0.800)
Facility 13	North West	27	0.630 (0.447;0.812)
Facility 14	Northern Cape	45	0.622 (0.481;0.764)
Facility 15	KwaZulu-Natal	34	0.618 (0.454;0.781)
Facility 16	Western Cape	87	0.609 (0.507;0.712)
Facility 17	Western Cape	66	0.606 (0.488;0.724)
Facility 18	North West	25	0.600 (0.408;0.792)
Facility 19	Northern Cape	40	0.600 (0.448;0.752)
Facility 20	Free State	55	0.600 (0.471;0.729)
Facility 21	North West	47	0.596 (0.455;0.736)
Facility 22	KwaZulu-Natal	42	0.595 (0.447;0.744)
Facility 23	Western Cape	91	0.593 (0.492;0.694)
Facility 24	Western Cape	27	0.593 (0.407;0.778)
Facility 25	Western Cape	39	0.590 (0.435;0.744)

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 22-28 August 2021 with the highest proportion testing positive nationally. The private-sector facilities with the 25 highest proportions testing positive are concentrated in the Western Cape (with 11 facilities), seven in KwaZulu-Natal, and two each in Mpumalanga and the Northern Cape.

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Table 5.2 Private sector healthcare facilities with a high proportion testing positive 22-28 August 2021

Facility Name	Province	Tests	PTP (95% CI)
Facility 1	Northern Cape	32	0.656 (0.492;0.821)
Facility 2	KwaZulu-Natal	46	0.543 (0.400;0.687)
Facility 3	KwaZulu-Natal	28	0.464 (0.280;0.649)
Facility 4	Western Cape	50	0.460 (0.322;0.598)
Facility 5	Western Cape	34	0.441 (0.274;0.608)
Facility 6	Western Cape	125	0.440 (0.353;0.527)
Facility 7	KwaZulu-Natal	79	0.430 (0.321;0.540)
Facility 8	KwaZulu-Natal	84	0.429 (0.323;0.534)
Facility 9	Western Cape	641	0.415 (0.377;0.453)
Facility 10	Western Cape	143	0.413 (0.332;0.493)
Facility 11	Western Cape	689	0.409 (0.373;0.446)
Facility 12	KwaZulu-Natal	40	0.400 (0.248;0.552)
Facility 13	Free State	97	0.392 (0.295;0.489)
Facility 14	Western Cape	207	0.391 (0.325;0.458)
Facility 15	Gauteng	47	0.383 (0.244;0.522)
Facility 16	Mpumalanga	89	0.371 (0.270;0.471)
Facility 17	Western Cape	1205	0.368 (0.341;0.396)
Facility 18	Western Cape	208	0.365 (0.300;0.431)
Facility 19	Northern Cape	58	0.362 (0.238;0.486)
Facility 20	Western Cape	31	0.355 (0.186;0.523)
Facility 21	Western Cape	82	0.354 (0.250;0.457)
Facility 22	KwaZulu-Natal	54	0.352 (0.224;0.479)
Facility 23	Mpumalanga	332	0.349 (0.298;0.401)
Facility 24	Eastern Cape	84	0.345 (0.244;0.447)
Facility 25	KwaZulu-Natal	32	0.344 (0.179;0.508)

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 84% of private testing facilities) in the week from 22-28 August 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 districts showing high PTP are diffuse: ten of the 25 districts are in the Western Cape, five in the North West, four in the Northern Cape, and two each in KwaZulu-Natal and Mpumalanga.

For the ninth consecutive week, all 25 districts with the highest PTP showed a PTP in the current week in excess of 30%, and 15 districts exceeded 40% (25 last week). Three exceeded 50% (last week, six). PTP exceeded 30% in a further 29 districts (52 last week). Significant increases were observed in two of the 25 districts with the highest PTP (Kai Garib in the Northern Cape; and Gariep in the Eastern Cape).

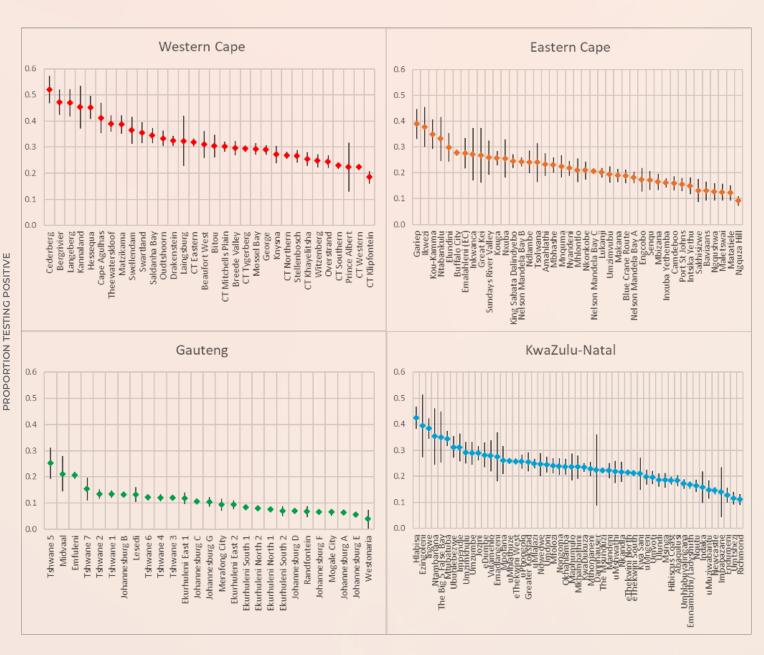
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Table 6. Health sub-districts with the highest proportion testing positive based on public and private sector data for the week of

Health district or sub-district	Province	PTP (95% CI)	Previous week
Kai Garib	Northern Cape	0.550 (0.441-0.659)	0.337 (0.296-0.379)
Kareeberg	Northern Cape	0.526 (0.423-0.629)	0.452 (0.384-0.520)
Cederberg	Western Cape	0.520 (0.468-0.572)	0.557 (0.508-0.605)
Bergrivier	Western Cape	0.472 (0.423-0.521)	0.534 (0.488-0.580)
Langeberg	Western Cape	0.470 (0.417-0.523)	0.497 (0.449-0.544)
Ubuntu	Northern Cape	0.459 (0.390-0.529)	0.466 (0.398-0.535)
Lekwa-Teemane	North West	0.457 (0.331-0.583)	0.523 (0.438-0.609)
Tswaing	North West	0.454 (0.367-0.541)	0.450 (0.355-0.545)
Greater Taung	North West	0.454 (0.345-0.562)	0.372 (0.257-0.487)
Kannaland	Western Cape	0.453 (0.372-0.534)	0.426 (0.353-0.499)
Hessequa	Western Cape	0.453 (0.408-0.497)	0.442 (0.402-0.481)
Maquassi Hills	North West	0.431 (0.400-0.462)	0.433 (0.403-0.464)
Hlabisa	KwaZulu-Natal	0.424 (0.382-0.467)	0.374 (0.338-0.411)
Cape Agulhas	Western Cape	0.412 (0.353-0.470)	0.383 (0.338-0.428)
Tsantsabane	Northern Cape	0.410 (0.336-0.484)	0.368 (0.294-0.441)
Ezingoleni	KwaZulu-Natal	0.394 (0.273-0.515)	0.304 (0.176-0.432)
Theewaterskloof	Western Cape	0.390 (0.359-0.421)	0.401 (0.371-0.431)
Gariep	Eastern Cape	0.389 (0.331-0.447)	0.246 (0.224-0.268)
Ditsobotla	North West	0.389 (0.314-0.463)	0.510 (0.435-0.584)
Matzikama	Western Cape	0.387 (0.351-0.422)	0.404 (0.378-0.431)
Karoo Hoogland	Northern Cape	0.385 (0.285-0.484)	0.272 (0.176-0.367)
Ingwe	KwaZulu-Natal	0.384 (0.345-0.424)	0.361 (0.323-0.400)
Phokwane	Northern Cape	0.379 (0.324-0.435)	0.318 (0.267-0.369)
Ikwezi	Eastern Cape	0.378 (0.301-0.455)	0.336 (0.282-0.390)
Moqhaka	Free State	0.374 (0.341-0.406)	0.380 (0.347-0.413)

testing positive that are higher than, and CIs that do not overlap with, the previous week proportions and CIs. Elements have current week proportions testing positive that are previous week proportions and Cls.

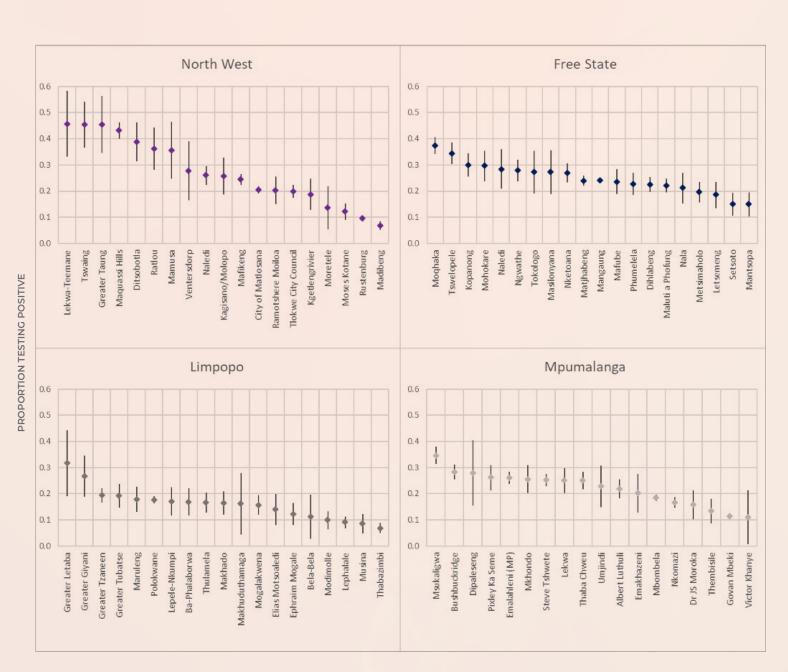
The data for the current week for every district with a non-zero proportion testing positive or where the range of confidence interval is not more than 30% (15% either side of the point estimate) and where more than 20 tests were conducted in the present week is presented graphically below.



HEALTH SUB-DISTRICT

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 22-28 August 2021.

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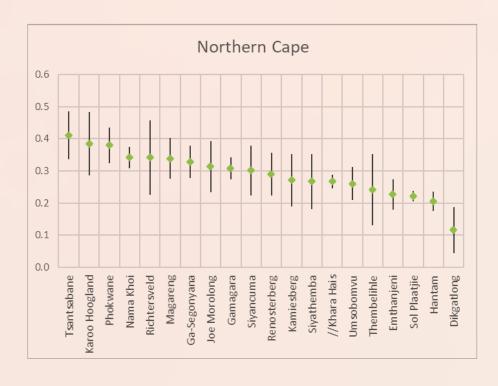


HEALTH SUB-DISTRICT

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 22-28 August 2021.

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PROPORTION TESTING POSITIVE



HEALTH SUB-DISTRICT

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 22-28 August 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).

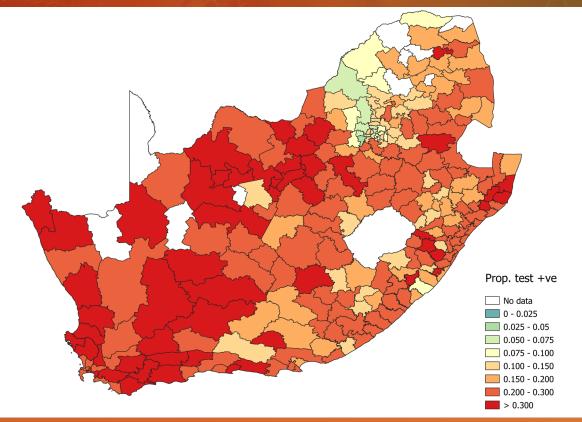


Figure 10. Proportion testing positive by health sub-district in South Africa for the week of 22-28 August 2021. Areas shaded white represent districts in which either (i) no tests were reported (ii) all tests were negative or (iii) the confidence interval exceeded 30%.

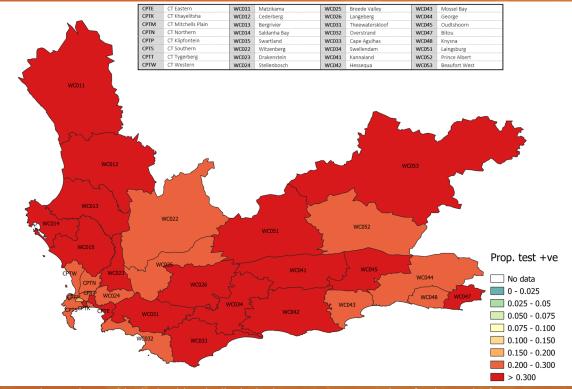


Figure 11. Proportion testing positive by health sub-district in the Western Cape Province for the week of 22-28 August 2021. Areas shaded white represent districts in which either (i) no tests were reported (ii) all tests were negative or (iii) the confidence interval exceeded 30%

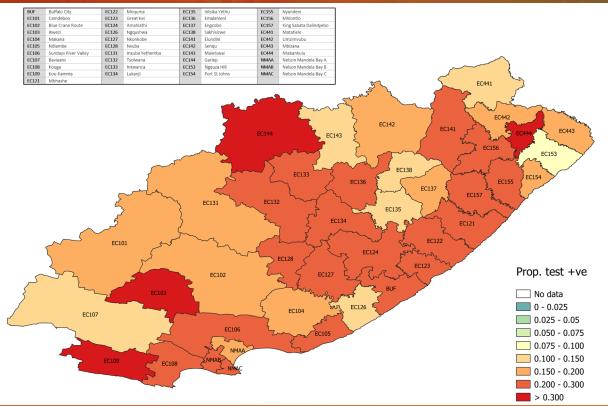


Figure 12. Proportion testing positive by health sub-district in the Eastern Cape Province for the week of 22-28 August 2021. Areas shaded white represent districts in which either (i) no tests were reported (ii) all tests were negative or (iii) the confidence interval exceeded 30%.

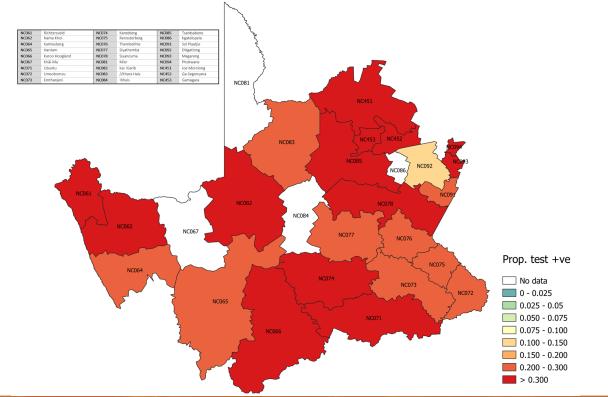


Figure 13. Proportion testing positive by health sub-district in Northern Cape Province for the week of 22-28 August 2021. Areas shaded white represent districts in which either (i) no tests were reported (ii) all tests were negative or (iii) the confidence interval exceeded 30%.

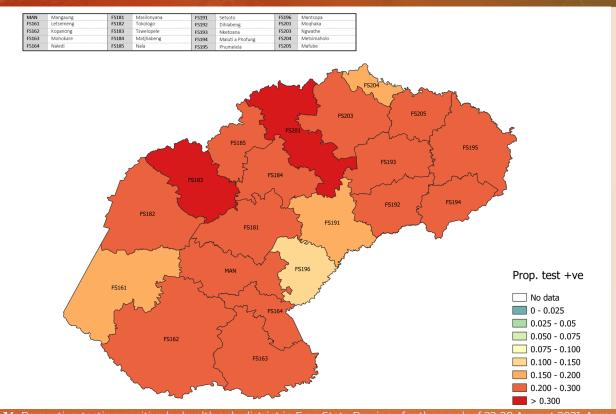


Figure 14. Proportion testing positive by health sub-district in Free State Province for the week of 22-28 August 2021. Areas shaded white represent districts in which either (i) no tests were reported (ii) all tests were negative or (iii) the confidence interval exceeded 30%.

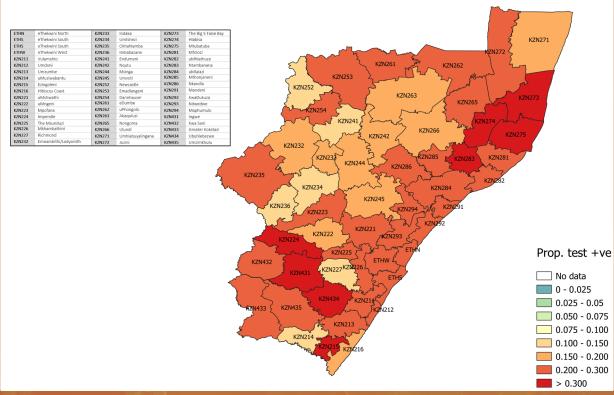


Figure 15. Proportion testing positive by health sub-district in KwaZulu-Natal Province for the week of 22-28 August 2021. Areas shaded white represent districts in which either (i) no tests were reported (ii) all tests were negative or (iii) the confidence interval exceeded 30%.

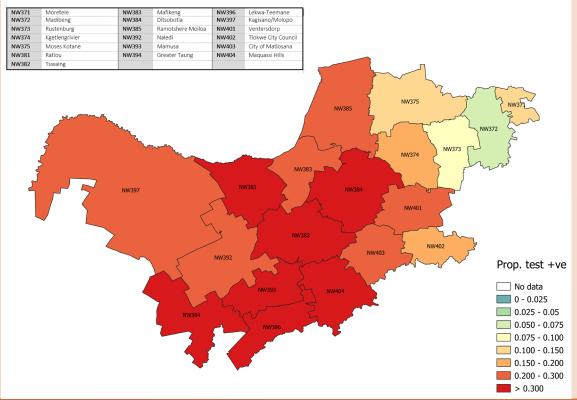


Figure 16. Proportion testing positive by health sub-district in North West Province for the week of 22-28 August 2021. Areas shaded white represent districts in which either (i) no tests were reported (ii) all tests were negative or (iii) the confidence interval exceeded 30%.

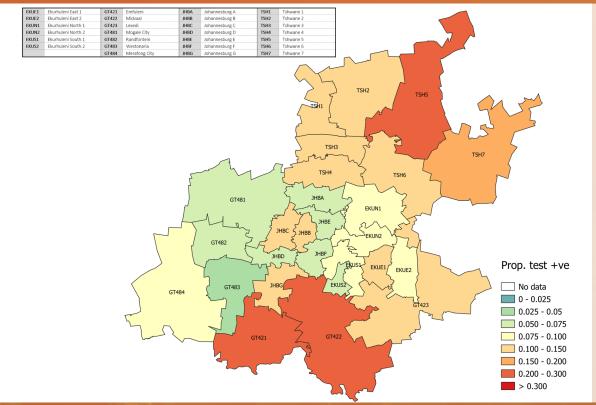


Figure 17. Proportion testing positive by health sub-district in Gauteng Province for the week of 22-28 August 2021. Areas shaded white represent districts in which either (i) no tests were reported (ii) all tests were negative or (iii) the confidence interval exceeded 30%.

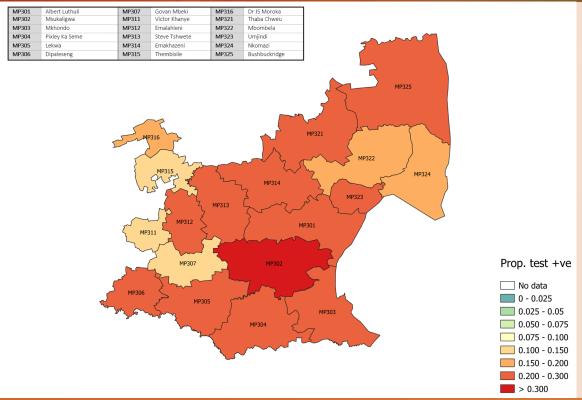


Figure 18. Proportion testing positive by health sub-district in Mpumalanga Province for the week of 22-28 August 2021. Areas shaded white represent districts in which either (i) no tests were reported (ii) all tests were negative or (iii) the confidence interval exceeded 30%.

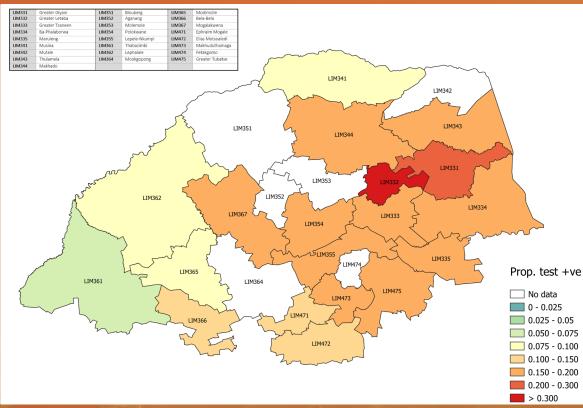


Figure 19. Proportion testing positive by health sub-district in Limpopo Province for the week of 22-28 August 2021. Areas shaded white represent districts in which either (i) no tests were reported (ii) all tests were negative or (iii) the confidence interval exceeded 30%.

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Testing by patient admission status

In week 34 of 2021 35.8% of reported tests were for hospitalised patients; 42.0% in the public sector and 27.8% in the private sector (Figure 20). The percentage testing positive in week 34 was higher among outpatients (21.9%) compared to inpatients

(17.8%), and decreased from the previous week in both groups (Figure 21). In week 34 the mean laboratory turnaround time for PCR tests in the public sector was higher, and had increased, among outpatients (2.7 days) compared to inpatients (1.5 days) (Figure 22).

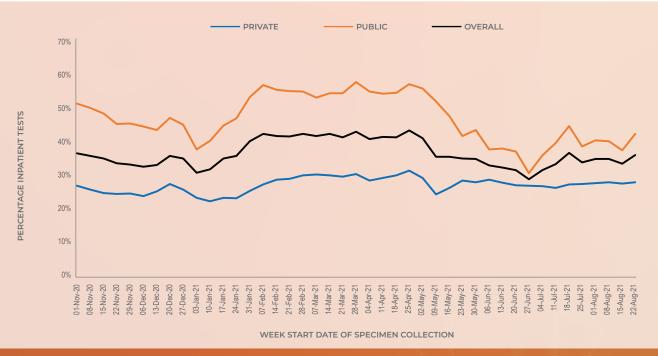


Figure 20. Percentage of inpatient tests reported by health sector, 1 November 2020 – 28 August 2021

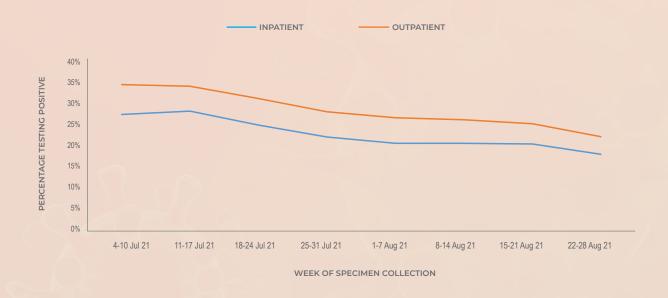


Figure 21. Percentage testing positive by patient admission status, 4 July - 28 August 2021

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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, 1 – 28 August 2021

Testing by age and sex

The median age of individuals tested in week 34 of 2021 was 34 years (interquartile range (IQR) 20-48) and was similar among males (35 years; IQR 20-49) and females (34 years; IQR 21-48). The majority of reported tests (53.4%) were in individuals in the 20-49 years' age group, with an additional peak in individuals aged 15-19 years (Figure 23). In week 34 the testing rate was slightly higher among females (577 per 100,000

persons) than males (503 per 100,000 persons) (Figure 24). Testing rates in week 34 were highest in the ≥80 years age group (888 per 100,000 persons). Overall, the percentage testing positive was highest in individuals aged 15-19 years (24.9%), and in this same age group in males (25.3%) and females (24.7%).

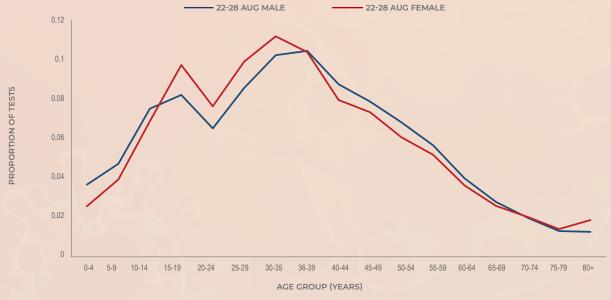


Figure 23. Proportion of tests by age group and sex South Africa, week 34, 22-28 August 2021

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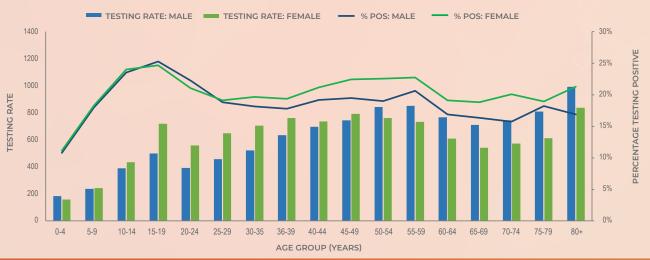


Figure 24. Testing rates per 100,000 persons and percentage testing positive by age group and sex, South Africa, week 34, 22-28 August 2021

Testing by test type

Up to the end of week 34 of 2021 12.5% (2,035,481/16,312,309) of all reported tests were antigen tests. In week 34, 19.5% (64,545/331,050) of reported tests were antigen tests (Figure 25). Overall 82.4% of antigen tests have been performed in the public sector, and in week 34 the public sector accounted for 84.6% of antigen tests. The majority of antigen tests have been reported from KwaZulu-Natal (33.7%) and Gauteng (19.3%) provinces. In the past few weeks KwaZulu-Natal has reported the highest weekly number of antigen

tests. The percentage testing positive in week 34 was higher for PCR (21.3%) tests compared to antigen (15.3%) tests (Figure 26). The mean turnaround time for antigen tests reported in week 34 was 6.7 days in the public sector and remained low (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.

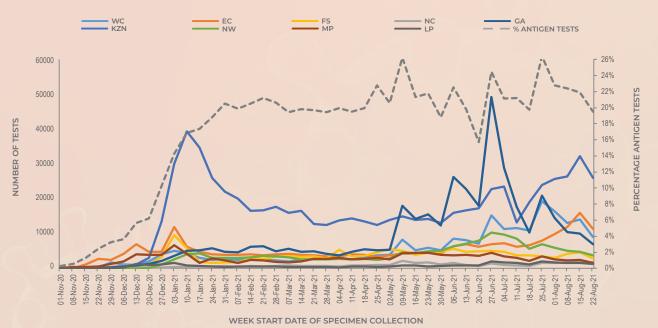


Figure 25. Number of antigen tests by province and overall percentage antigen tests South Africa 1 November 2020 – 28 August 2021. WC Western Cape; EC Eastern Cape; FS Free State; KZN KwaZulu-Natal; GA Gauteng; NC Northern Cape; NW North West: MP Moumalanga: LP Limpopo

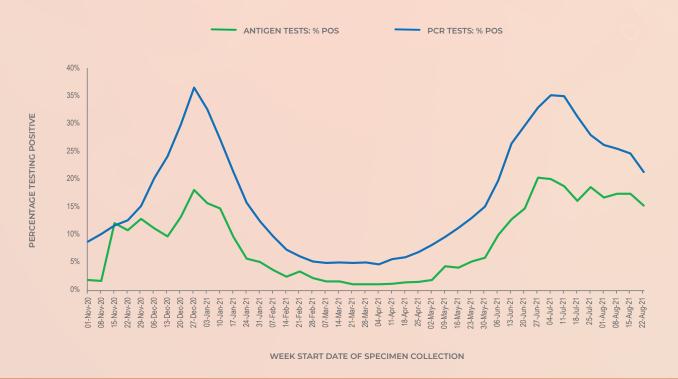


Figure 26. Percentage of laboratory tests positive for SARS-CoV-2 by test type and date of specimen collection, South Africa, 1 November 2020 – 28 August 2021

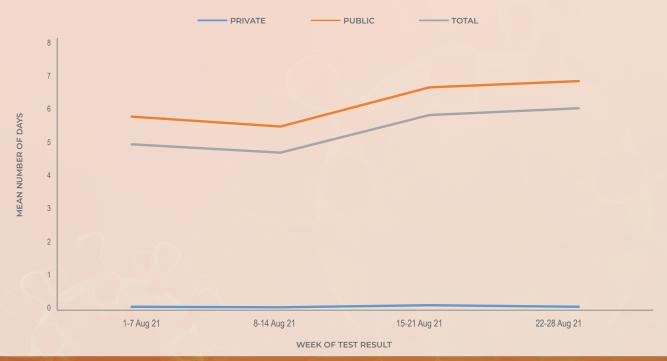


Figure 27. Mean number of days between date of specimen collection and date of test result for antigen tests by week of test result. South Africa. 1 – 28 August 2021

SOUTH AFRICA | WEEK 34 2021

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, PCR vs. antigenbased tests or prioritisation of severe or at-risk cases during epidemic waves) 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 34 (n=331,050) was slightly lower than the number of tests reported in the previous week. KwaZulu-Natal (27.5%), Gauteng (22.5%) and Western Cape (17.3%) provinces reported the largest number of tests in week 34. The overall testing rate in week 34 was 555 per 100,000 persons; highest in the Western Cape (816 per 100,000 persons) and lowest in Limpopo (134 per 100,000 persons). Testing rates decreased in all provinces in the past week. Antigen tests accounted for 19.5% (64,545/ 331,050) of all tests reported in week 34 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 1.5 days in week 34; 2.2 days in the public sector and 0.7 days in the private sector.

The percentage testing positive in week 34 was 20.1%, which was 2.9% lower than the previous week. The percentage testing positive in week 34 was highest in the Northern Cape (29.0%), Western Cape (27.1%) and Free State (25.0%) provinces. The percentage testing positive was between 20% and 24% in the Eastern Cape, KwaZulu-Natal and Mpumalanga provinces, and was less than 20% in the North West, Gauteng and Limpopo provinces. Compared to the previous week the percentage testing positive in week 34 decreased in all provinces, except the Free State where the percentage testing positive was unchanged.