

SOUTH AFRICA WEEK 35 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 4 September 2021 (Week 35 of 2021).

HIGHLIGHTS

- In the period 1 March 2020 through 4 September 2021, 16,661,567 (14,547,639 PCR and 2,113,928 antigen) tests for SARS-CoV-2 have been reported nationally.
- The number of tests reported in week 35 of 2021 (n=297,486) was the lowest weekly number of tests reported since the beginning of June 2021.
- The testing rate in week 35 was 499 per 100,000 persons; highest in the Northern Cape (853 per 100,000 persons) and lowest in Limpopo (112 per 100,000 persons).
- In week 35 the percentage testing positive was 16.2%, which was 4.2% lower than the previous week.
- The percentage testing positive in week 35 was highest in the Northern Cape (26.7%), Free State (21.6%) and Western Cape (20.9%) provinces. The percentage testing positive was between 10% and 20% in the Eastern Cape, KwaZulu-Natal, North West, Limpopo and Mpumalanga provinces, and was less than 10% in Gauteng.
- In week 35 compared to the previous week, the percentage testing positive decreased in all provinces.
- 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 4 September 2021 (week 35 of 2021).

Testing volumes and proportion testing positive

From 1 March 2020 through 4 September 2021, 16,661,567 SARS-CoV-2 tests were reported; 14,547,639 PCR and 2,113,928 antigen tests. The highest weekly number of tests reported during the first wave occurred in week 28 of 2020 (beginning 5 July, n=307,917). In the second wave, the highest weekly number of tests were reported in week 1 of 2021 (beginning 3 January, n=501,146). 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=481,666). The number of tests reported in week 35 was 297,486, the lowest since the beginning of June 2021. 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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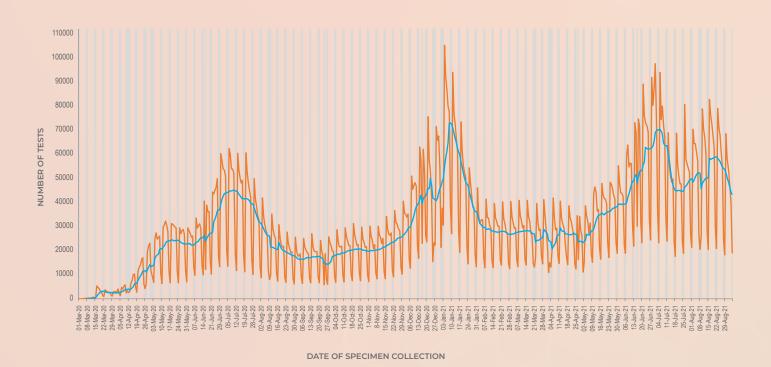


Figure 1. Number of SARS-CoV-2 tests reported by date of specimen collection, South Africa, 1 March 2020 – 4 September 2021. Blue line shows the 7-day moving average of the number of tests reported. Grey bars highlight weekend days and public holidays.

The overall percentage testing positive from week 10 of 2020 through week 35 of 2021 was 17.7% (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 35 of 2021 was 16.2%, which was 4.2% lower than the previous week (20.4%, P<0.001) (Figure 2).

Table 1. Weekly number of SARS-CoV-2 tests and positive tests reported, South Africa, 1 March 2020 – 4 September 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
21	17-May-20	166544 (1.0)	11379	6.8
22	24-May-20	156141 (0.9)	12967	8.3
23	31-May-20	153571 (0.9)	15079	9.8
<u></u>	07-Jun-20	173905 (1.0)	22363	12.9
25	14-Jun-20	186091 (1.1)	32653	17.5
<u>25</u> 26	21-Jun-20	252100 (1.5)	55049	21.8
<u>25</u> 27	28-Jun-20	302752 (1.8)		24.9
	05-Jul-20	307917 (1.8)	86041	27.9
<u></u>	12-Jul-20	285603 (1.7)	84927	29.7
<u> </u>	19-Jul-20	270900 (1.6)		29.0
	26-Jul-20	216397 (1.3)	58394	
31 32	02-Aug-20	179576 (1.1)	40996	
33	02-Aug-20 09-Aug-20	141106 (0.8)	26266	
	16-Aug-20	135022 (0.8)	21379	15.6 15.8
35	23-Aug-20	123337 (0.7)	16331	13.2
		123337 (0.7)	12792	
	06-Sep-20		11953	11.5 10.2
		116998 (0.7)		
	13-Sep-20	120717 (0.7)	12012	10.0
39	20-Sep-20	98822 (0.6)	10098	10.2
40	27-Sep-20	123062 (0.7)	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
<u>45</u>	01-Nov-20	138844 (0.8)	12138	8.7
<u>46</u>	08-Nov-20	147009 (0.9)	14845	10.1
<u>47</u>	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	267930 (1.6)	53314	19.9
51	13-Dec-20	294515 (1.8)	68578	23.3
52	20-Dec-20	284630 (1.7)	81963	28.8
53	27-Dec-20	334403 (2.0)	115740	34.6
11	03-Jan-21	501146 (3.0)	151031	30.1
22	10-Jan-21	417934 (2.5)	104790	25.1

3	17-Jan-21	327374 (2.0)	63256	19.3
4	24-Jan-21	249493 (1.5)	34638	13.9
5	31-Jan-21	203632 (1.2)	22359	11.0
6	07-Feb-21	193250 (1.2)	16467	8.5
7	14-Feb-21	190605 (1.1)	12182	6.4
8	21-Feb-21	184637 (1.1)	10382	5.6
9	28-Feb-21	189409 (1.1)	8685	4.6
10	07-Mar-21	193358 (1.2)	8324	4.3
11	14-Mar-21	185458 (1.1)	8151	4.4
12	21-Mar-21	172988 (1.0)	7350	4.2
13	28-Mar-21	163837 (1.0)	7060	4.3
14	04-Apr-21	180618 (1.1)	7282	4.0
15	11-Apr-21	184549 (1.1)	8842	4.8
16	18-Apr-21	184819 (1.1)	9462	5.1
17	25-Apr-21	159956 (1.0)	9179	5.7
18	02-May-21	193741 (1.2)	13441	6.9
19	09-May-21	239387 (1.4)	19880	8.3
20	16-May-21	247629 (1.5)	24148	9.8
21	23-May-21	261197 (1.6)	29617	11.3
22	30-May-21	269116 (1.6)	35868	13.3
23	06-Jun-21	334001 (2.0)	58707	17.6
24	13-Jun-21	364730 (2.2)	86410	23.7
25	20-Jun-21	426717 (2.6)	116405	27.3
26	27-Jun-21	481666 (2.9)	143475	29.8
27	04-Jul-21	435974 (2.6)	138956	31.9
28	11-Jul-21	314227 (1.9)	98970	31.5
29	18-Jul-21	305858 (1.8)	86426	28.3
30	25-Jul-21	339997 (2.0)	86392	25.4
31	01-Aug-21	358770 (2.2)	85925	23.9
32	08-Aug-21	344134 (2.1)	81268	23.6
33	15-Aug-21	404070 (2.4)	92895	23.0
34	22-Aug-21	371243 (2.2)	75594	20.4
35	29-Aug-21	297486 (1.8)	48154	16.2

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Figure 2. Percentage of tests positive for SARS-CoV-2 by date of specimen collection, South Africa, 1 March 2020 – 4 September 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 4 September 2021 7,585,587 tests were reported in the public sector with 18.3% testing positive. Over this same period the private sector reported 9,075,980 tests with 17.7% testing positive (Table 2). Overall the public sector has reported 45.5% of tests and accounted for 46.4% 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 34 to week 35 of 2021 the percentage

testing positive decreased by 3.6% in the public sector (22.7% in week 34 to 19.1% in week 35, P<0.001) and by 4.2% in the private sector (17.2% in week 34 to 13.0% in week 35, P<0.001). In week 35 the percentage testing positive in the public sector (19.1%) was 6.1% higher than in the private sector (13.0%, P<0.001).

The mean turnaround time for PCR tests reported in week 35 of 2021 was 1.5 days; 2.4 days in the public sector and 0.6 days in the private sector (Figure 3). Turnaround times for public sector PCR tests increased in the Eastern Cape and Mpumalanga provinces, decreased in the Northern Cape and were >2 days in these three provinces and in the Free State in the past week (Figure 4). Fifteen of the 28 (53.6%) NHLS laboratories performing PCR testing for SARS-CoV-2 had turnaround times ≤2 days in week 35 (Figure 5).

Table 2. Weekly number of tests and positive tests reported by healthcare sector South Africa 1 March 2020 – 4 September 2021

Week			ic sector Cases		te sector Positive tests		Positive tests	Ratio of PTP ^a
umber	beginning	Tests	n (%)	Tests	n (%)	Tests (%)	(%)	OT PIP
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)	26350	756 (2.9)	71.9	76.4	1.267
19	03-May-20	94338	4507 (4.8)	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
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)	78544	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)	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)	37.3 	<u> </u>	1.094
33	09-Aug-20	58661	11172 (19.0)	82445	15094 (18.3)	33.5 41.6	42.5	1.040
<u> </u>	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
<u> </u>	30-Aug-20	45424	6097 (13.4)	67350	6695 (9.9)	40.3	47.7	1.350
<u> </u>	06-Sep-20	51055	6421 (12.6)	65943	5532 (8.4)	<u> </u>	53.7	1.499
<u>37</u> 38	13-Sep-20	53707	6547 (12.2)	67010	5465 (8.2)	<u> </u>	54.5	1.495
<u>30</u> 39	20-Sep-20	44842	5530 (12.3)	53980	4568 (8.5)	45.4	54.8	1.457
<u> </u>	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)	39.5 38.5	48.3	1.494
42	11-Oct-20	50450 53452	5702 (10.7)	84529		38.5 38.7	47.2	1.434
43	18-Oct-20	<u></u>	6045 (10.8)	86052	6376 (7.5) 6024 (7.0)	38.7 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	56.4	1.782
48	22-Nov-20	74574	12200 (16.4)	101122	9854 (9.7)	42.4	55.3	1.679
49	29-Nov-20	81271	15730 (19.4)	121882	15039 (12.3)	40.0	51.1	1.569
50	06-Dec-20	107912	24716 (22.9)	160018	28598 (17.9)	40.3	46.4	1.282
51	13-Dec-20	117249	29815 (25.4)	177266	38763 (21.9)	39.8	43.5	1.163
52	20-Dec-20	109915	34128 (31.0)	174715	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	237019	71064 (30.0)	264127	79967 (30.3)	47.3	47.1	0.990
2	10-Jan-21	204024	52959 (26.0)	213910	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	123283	19001 (15.4)	126210	15637 (12.4)	<u> </u>	54.9	1.244
5	31-Jan-21	99794	12066 (12.1)	103838	10293 (9.9)	49.0	54.0	1.220
<u></u>	07-Feb-21	91332	8511 (9.3)	103838	7956 (7.8)	<u>49.0</u> 47.3	51.7	1.194
		1 1 1						
7	14-Feb-21	86439	6681 (7.7)	104166	5501 (5.3)	45.3	54.8	1.464
8	21-Feb-21	82707	5798 (7.0)	101930	4584 (4.5)	44.8	55.8	1.559
9	28-Feb-21	87956	4678 (5.3)	101453	4007 (3.9)	46.4	53.9	1.347
10	07-Mar-21	92873	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	77379	3466 (4.5)	95609	3884 (4.1)	44.7	47.2	1.103
13	28-Mar-21	71178	3456 (4.9)	92659	3604 (3.9)	43.4	49.0	1.248

14	04-Apr-21	79397	3356 (4.2)	101221	3926 (3.9)	44.0	46.1	1.090
15	11-Apr-21	85851	4363 (5.1)	98698	4479 (4.5)	46.5	49.3	1.120
16	18-Apr-21	80571	4713 (5.8)	104248	4749 (4.6)	43.6	49.8	1.284
17	25-Apr-21	70558	4126 (5.8)	89398	5053 (5.7)	44.1	45.0	1.035
18	02-May-21	81097	5470 (6.7)	112644	7971 (7.1)	41.9	40.7	0.953
19	09-May-21	91651	7333 (8.0)	147736	12547 (8.5)	38.3	36.9	0.942
20	16-May-21	100643	9124 (9.1)	146986	15024 (10.2)	40.6	37.8	0.887
21	23-May-21	121323	11744 (9.7)	139874	17873 (12.8)	46.4	39.7	0.758
22	30-May-21	112194	11775 (10.5)	156922	24093 (15.4)	41.7	32.8	0.684
23	06-Jun-21	146714	19629 (13.4)	187287	39078 (20.9)	43.9	33.4	0.641
24	13-Jun-21	152459	29093 (19.1)	212271	57317 (27.0)	41.8	33.7	0.707
25	20-Jun-21	177056	41933 (23.7)	249661	74472 (29.8)	41.5	36.0	0.794
26	27-Jun-21	231436	62222 (26.9)	250230	81253 (32.5)	48.0	43.4	0.828
27	04-Jul-21	209760	62989 (30.0)	226214	75967 (33.6)	48.1	45.3	0.894
28	11-Jul-21	153899	46662 (30.3)	160328	52308 (32.6)	49.0	47.1	0.929
29	18-Jul-21	154166	44004 (28.5)	151692	42422 (28.0)	50.4	50.9	1.021
30	25-Jul-21	184810	47111 (25.5)	155187	39281 (25.3)	54.4	54.5	1.007
31	01-Aug-21	192062	46848 (24.4)	166708	39077 (23.4)	53.5	54.5	1.041
32	08-Aug-21	186521	46615 (25.0)	157613	34653 (22.0)	54.2	57.4	1.137
33	15-Aug-21	230200	57348 (24.9)	173870	35547 (20.4)	57.0	61.7	1.219
34	22-Aug-21	215203	48797 (22.7)	156040	26797 (17.2)	58.0	64.6	1.320
35	29-Aug-21	155752	29711 (19.1)	141734	18443 (13.0)	52.4	61.7	1.466
	Total	7,585,587	1,389,334 (18.3)	9,075,980	1,607,509 (17.7)	45.5	46.4	1.034



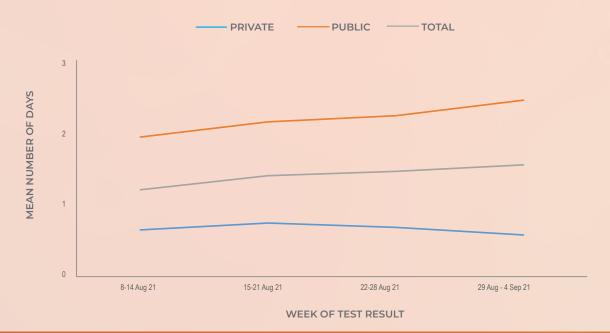


Figure 3. Mean number of days between date of specimen collection and date of test result for PCR tests by week of test result, South Africa, 8 August – 4 September 2021

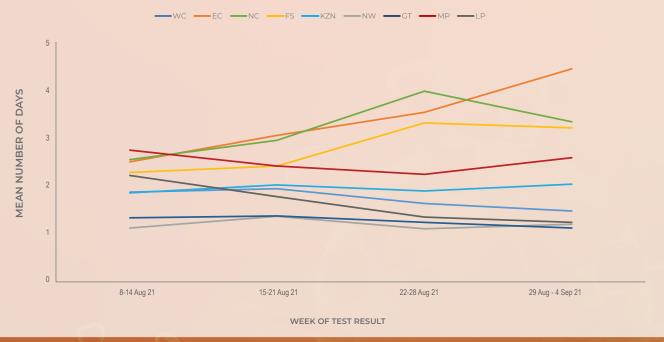


Figure 4. Mean number of days between date of specimen collection and date of test result for PCR tests by week of test result and province public sector South Africa 8 August – 4 September 2021. WC Western Cape; EC Eastern Cape; FS Free State; KZN KwaZulu-Natal; GT Gauteng; NC Northern Cape; NW North West; MP Mpumalanga; LP Limpopo

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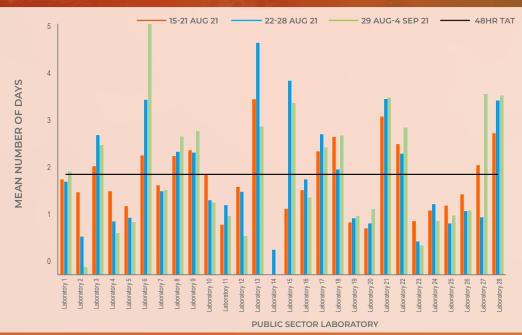


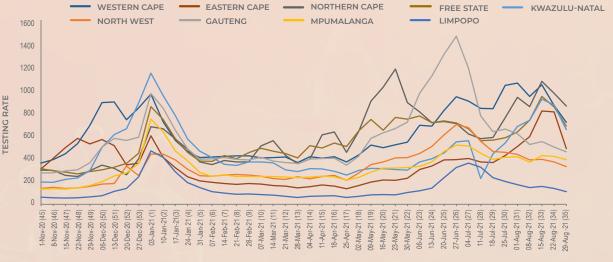
Figure 5. Mean number of days between date of specimen collection and date of test result for PCR tests by public sector laboratory 15 August – 4 September 2021. The horizontal black line indicates 48-hour turnaround time (TAT).

Testing by province

KwaZulu-Natal reported the largest proportion of tests (25.1%) followed by Gauteng (23.9%) and Western Cape (16.8%) in week 35 of 2021 (Table 3). The overall testing rate decreased from 623 per 100,000 persons in week 34 to 499 per 100,000 in week 35. The testing rate ranged from 853 per 100,000 persons in the Northern Cape to 112 per 100,000 persons in Limpopo (Figure 6). In week 35 testing rates decreased in all provinces.

The percentage testing positive in week 35 was highest in the Northern Cape (26.7%), Free State (21.6%) and Western Cape (20.9%) provinces. The percentage

testing positive was between 10% and 20% in the Eastern Cape, KwaZulu-Natal, North West, Limpopo and Mpumalanga provinces, and was less than 10% in Gauteng (Figure 7 and Table 3). Compared to the previous week the percentage testing positive in week 35 decreased (p<0.001) in all provinces. 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, KwaZulu-Natal and North West provinces (Figure 7).



WEEK START DATE (WEEK NUMBER) OF SAMPLE COLLECTION

Figure 6. Testing rate per 100,000 persons by province and week of specimen collection, South Africa, 1 November 2020 - 4 September 2021

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Table 3. Weekly number of tests and positive tests reported by province, South Africa, 15 August - 4 September 2021

		15-21	Aug 2021	22-28	Aug 2021	29 Aug	– 4 Sep 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	72726	21266 (29.2)	60178	16206 (26.9)	49880	10411 (20.9)	712	-6.1%
Eastern Cape	6734001	54620	13077 (23.9)	54135	12155 (22.5)	32734	6393 (19.5)	486	-2.9%
Northern Cape	1292786	13828	4639 (33.5)	12464	3632 (29.1)	11032	2951 (26.7)	853	-2.4%
Free State	2928903	27492	6735 (24.5)	24816	6032 (24.3)	19869	4287 (21.6)	678	-2.7%
KwaZulu-Natal	11531628	105621	26380 (25.0)	99683	22175 (22.2)	74751	14187 (19.0)	648	-3.3%
North West	4108816	16129	3828 (23.7)	15148	2910 (19.2)	13451	2272 (16.9)	327	-2.3%
Gauteng	15488137	84590	10109 (12.0)	77195	7194 (9.3)	70961	4387 (6.2)	458	-3.1%
Mpumalanga	4679786	19813	4921 (24.8)	19465	3932 (20.2)	18235	2407 (13.2)	390	-7.0%
Limpopo	5852553	9216	1935 (21.0)	8149	1357 (16.7)	6551	856 (13.1)	112	-3.6%
Unknown		35	5 (14.3)	10	1 (10.0)	22	3 (13.6)		
Total	59622350	404070	92895 (23.0)	371243	75594 (20.4)	297486	48154 (16.2)	499	-4.2%

a 2020 Mid-year population Statistics SA

b Current week compared to previous week



Figure 7. Weekly percentage testing positive by province, South Africa, 15 August – 4 September 2021. The horizontal blue line shows the national mean for week 35, beginning 29 August 2021

Testing in the public sector

In the public sector the percentage testing positive decreased by 3.6% in the past week (22.7% in week 34 to 19.1% in week 35) (Table 4). The percentage testing positive in week 35 was highest in the Northern Cape

(29.6%), Western Cape (23.3%) and Free State (23.2%) 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 and North West 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, 15 August – 4 September 2021

	15-21 A	ug 2021	22-28 Aug 2021		29 Aug - 4	4 Sep 2021
Province	No. of tests	No. positive tests (%)	No. of tests	No. positive tests (%)	No. of tests	No. positive tests (%)
Western Cape	35126	11669 (33.2)	30362	8889 (29.3)	23545	5484 (23.3)
Eastern Cape	41924	9790 (23.4)	41821	9168 (21.9)	22520	4081 (18.1)
Northern Cape	9972	3424 (34.3)	8519	2601 (30.5)	7507	2221 (29.6)
Free State	18765	4501 (24.0)	16422	4071 (24.8)	12087	2801 (23.2)
KwaZulu-Natal	72004	18013 (25.0)	70786	16143 (22.8)	51327	10129 (19.7)
North West	9147	2497 (27.3)	8558	2073 (24.2)	7325	1675 (22.9)
Gauteng	29300	4060 (13.9)	26414	3089 (11.7)	22241	1694 (7.6)
Mpumalanga	10516	2547 (24.2)	9163	2117 (23.1)	6926	1252 (18.1)
Limpopo	3421	844 (24.7)	3155	646 (20.5)	2270	374 (16.5)
Unknown	25	3 (12.0)	3	0 (0.0)	4	0 (0.0)
Total	230200	57348 (24.9)	215203	48797 (22.7)	155752	29711 (19.1)



Figure 8. Weekly percentage testing positive in the public sector by province, South Africa, 15 August – 4 September 2021. The horizontal blue line shows the national mean for week 35 of 2021, beginning 29 August 2021.

Facilities with high proportions testing positive

The data on testing at facility level for the public sector for week 35 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 29 August – 4 September 2021. Nine of the 25 public facilities showing the highest PTP are in the Northern Cape, with six in the North West, five in the Western Cape, and three in KwaZulu-Natal.

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Table 5.1 Public sector healthcare facilities with a high proportion testing positive 29 August - 4 September 2021

Facility Name	Province	Tests	PTP (95% CI)
Facility 1	Western Cape	36	0.769 (0.632;0.907)
Facility 2	Western Cape	60	0.656 (0.536;0.776)
Facility 3	Western Cape	30	0.643 (0.471;0.814)
Facility 4	KwaZulu-Natal	39	0.619 (0.467;0.771)
Facility 5	North West	28	0.607 (0.426;0.788)
Facility 6	Northern Cape	39	0.585 (0.430;0.740)
Facility 7	Northern Cape	33	0.560 (0.391;0.729)
Facility 8	Western Cape	38	0.556 (0.398;0.714)
Facility 9	Northern Cape	38	0.554 (0.396;0.712)
Facility 10	North West	107	0.554 (0.460;0.648)
Facility 11	Northern Cape	32	0.531 (0.358;0.704)
Facility 12	North West	37	0.522 (0.361;0.683)
Facility 13	KwaZulu-Natal	204	0.521 (0.452;0.589)
Facility 14	Eastern Cape	49	0.520 (0.380;0.660)
Facility 15	Northern Cape	29	0.519 (0.338;0.701)
Facility 16	North West	357	0.511 (0.459;0.563)
Facility 17	Western Cape	31	0.500 (0.324;0.676)
Facility 18	Northern Cape	45	0.491 (0.345;0.637)
Facility 19	Gauteng	35	0.488 (0.323;0.654)
Facility 20	Northern Cape	42	0.483 (0.332;0.634)
Facility 21	North West	175	0.481 (0.407;0.556)
Facility 22	Northern Cape	32	0.480 (0.307;0.653)
Facility 23	North West	172	0.477 (0.403;0.552)
Facility 24	Northern Cape	27	0.474 (0.286;0.663)
Facility 25	KwaZulu-Natal	45	0.473 (0.327;0.619)

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 29 August - 4 September 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 nine facilities), eight in KwaZulu-Natal, three in the Eastern Cape and two each in North West and Gauteng.

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Table 5.2 Private sector healthcare facilities with a high proportion testing positive 29 August - 4 September 2021

Facility Name	Province	Tests	PTP (95% CI)
Facility 1	Western Cape	428	0.369 (0.323;0.415)
Facility 2	Gauteng	30	0.367 (0.194;0.539)
Facility 3	Western Cape	74	0.365 (0.255;0.475)
Facility 4	Western Cape	101	0.356 (0.263;0.450)
Facility 5	Western Cape	205	0.351 (0.286;0.417)
Facility 6	Western Cape	36	0.333 (0.179;0.487)
Facility 7	Western Cape	187	0.332 (0.264;0.399)
Facility 8	Eastern Cape	1879	0.324 (0.303;0.345)
Facility 9	Western Cape	115	0.322 (0.236;0.407)
Facility 10	KwaZulu-Natal	47	0.319 (0.186;0.452)
Facility 11	North West	88	0.318 (0.221;0.415)
Facility 12	KwaZulu-Natal	29	0.310 (0.142;0.479)
Facility 13	Mpumalanga	84	0.310 (0.211;0.408)
Facility 14	KwaZulu-Natal	36	0.306 (0.155;0.456)
Facility 15	KwaZulu-Natal	92	0.304 (0.210;0.398)
Facility 16	Western Cape	333	0.303 (0.254;0.353)
Facility 17	Gauteng	43	0.302 (0.165;0.440)
Facility 18	Western Cape	630	0.298 (0.263;0.334)
Facility 19	KwaZulu-Natal	54	0.296 (0.175;0.418)
Facility 20	KwaZulu-Natal	141	0.291 (0.216;0.366)
Facility 21	North West	31	0.290 (0.131;0.450)
Facility 22	Eastern Cape	123	0.285 (0.205;0.364)
Facility 23	Eastern Cape	716	0.279 (0.246;0.312)
Facility 24	KwaZulu-Natal	208	0.279 (0.218;0.340)
Facility 25	KwaZulu-Natal	724	0.278 (0.245;0.310)

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 29 August – 4 September 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 concentrated in the Northern Cape (10) and Western Cape (7). Three districts are in each of North West and KwaZulu-Natal. For the tenth consecutive week, all 25 districts with the highest PTP showed a PTP in the current week in excess of 30%, and 6 districts exceeded 40% (15 last week). No district exceeded 50% (last week, three). PTP exceeded 30% in a further 14 districts (29 last week).

A significant increase over the week was observed in one of the 25 districts with the highest PTP (Dikgatlong in the Northern Cape), while significant decreases over the week were noted in Cederberg and Langeberg in the Western Cape.

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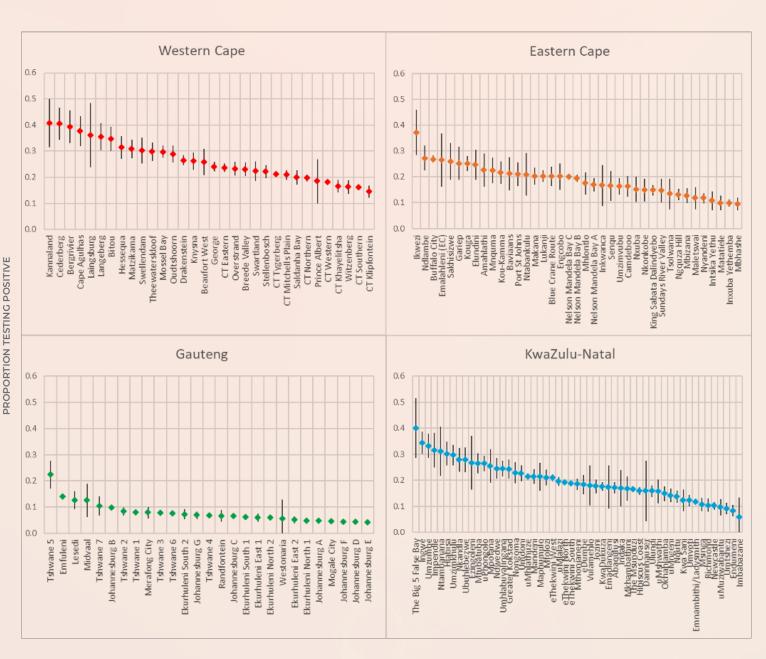
Table 6. Health sub-districts with the highest proportion testing positive based on public and private sector data for the week of

Health district or sub-district	Province	PTP (95% CI)	Previous week
Richtersveld	Northern Cape	0.476 (0.363-0.590)	0.341 (0.245-0.437)
Tswaing	North West	0.427 (0.346-0.509)	0.452 (0.366-0.537)
Kannaland	Western Cape	0.408 (0.315-0.500)	0.440 (0.362-0.517)
Magareng	Northern Cape	0.407 (0.336-0.478)	0.336 (0.274-0.399)
Cederberg	Western Cape	0.405 (0.342-0.467)	0.520 (0.468-0.572)
The Big 5 False Bay	KwaZulu-Natal	0.400 (0.285-0.515)	0.380 (0.282-0.478)
Kai Garib	Northern Cape	0.398 (0.343-0.453)	0.467 (0.414-0.519)
Kheis	Northern Cape	0.395 (0.301-0.489)	0.351 (0.223-0.480)
Bergrivier	Western Cape	0.394 (0.332-0.456)	0.477 (0.428-0.526)
Maquassi Hills	North West	0.380 (0.346-0.415)	0.409 (0.380-0.439)
Mier	Northern Cape	0.378 (0.279-0.477)	0.463 (0.320-0.606)
Ga-Segonyana	Northern Cape	0.378 (0.329-0.427)	0.329 (0.279-0.378)
Ubuntu	Northern Cape	0.377 (0.305-0.449)	0.453 (0.388-0.519)
Kareeberg	Northern Cape	0.377 (0.284-0.469)	0.526 (0.424-0.628)
Cape Agulhas	Western Cape	0.376 (0.318-0.434)	0.393 (0.338-0.449)
Ikwezi	Eastern Cape	0.371 (0.284-0.458)	0.376 (0.317-0.434)
Laingsburg	Western Cape	0.362 (0.239-0.485)	0.324 (0.229-0.420)
Dikgatlong	Northern Cape	0.356 (0.246-0.467)	0.139 (0.063-0.215)
Langeberg	Western Cape	0.356 (0.303-0.408)	0.472 (0.419-0.525)
Lekwa-Teemane	North West	0.354 (0.252-0.457)	0.509 (0.403-0.614)
Bitou	Western Cape	0.346 (0.300-0.392)	0.304 (0.261-0.347)
Ingwe	KwaZulu-Natal	0.344 (0.302-0.387)	0.383 (0.344-0.422)
Moqhaka	Free State	0.337 (0.307-0.368)	0.362 (0.331-0.394)
Tsantsabane	Northern Cape	0.336 (0.278-0.393)	0.393 (0.326-0.460)
Umzumbe	KwaZulu-Natal	0.332 (0.285-0.379)	0.270 (0.231-0.309)

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.

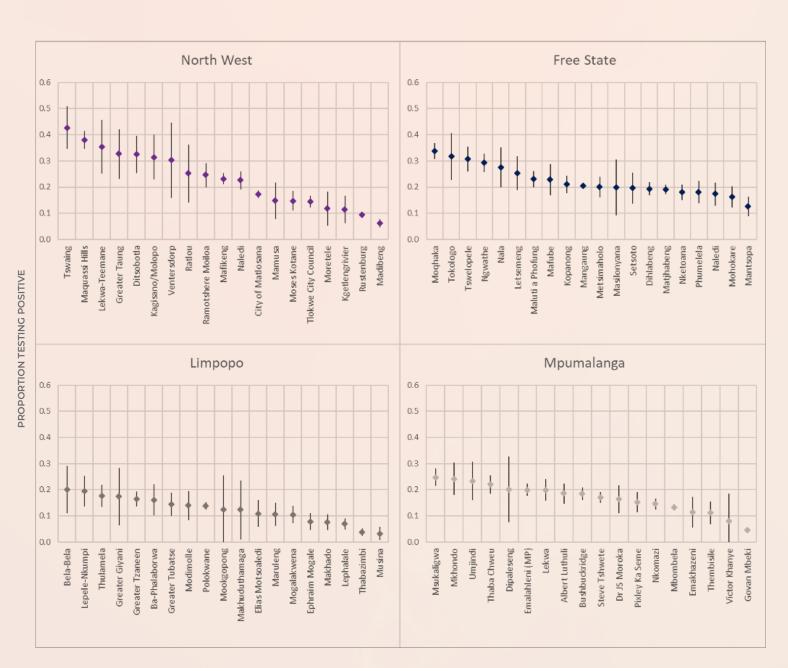
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HEALTH SUB-DISTRICT

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 29 August – 4 September 2021.

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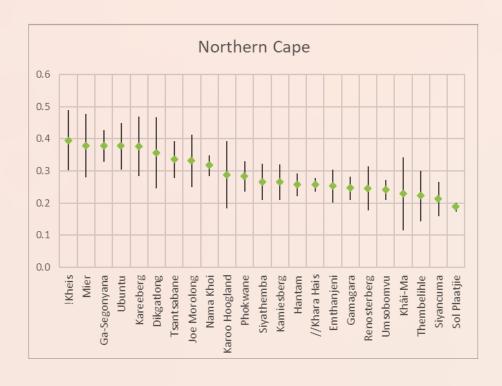


HEALTH SUB-DISTRICT

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 29 August – 4 September 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 29 August – 4 September 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).

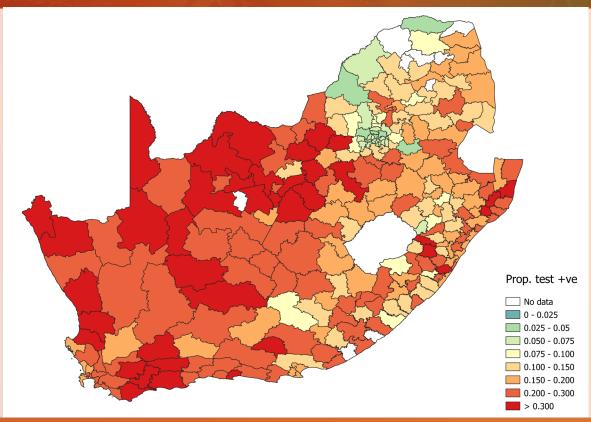


Figure 10. Proportion testing positive by health sub-district in South Africa for the week of 29 August – 4 September 2021. Areas shaded white represent districts in which either (i) no tests were reported (ii) all tests were negative or (iii) the confidence interval exceeded 30%.

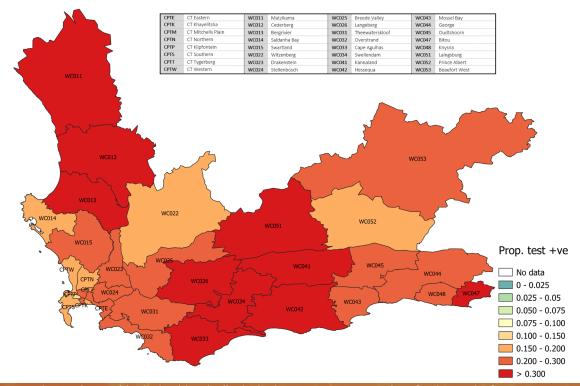


Figure 11. Proportion testing positive by health sub-district in the Western Cape Province for the week of 29 August – 4 September 2021. Areas shaded white represent districts in which either (i) no tests were reported (ii) all tests were negative or (iii) the confidence interval exceeded 30%

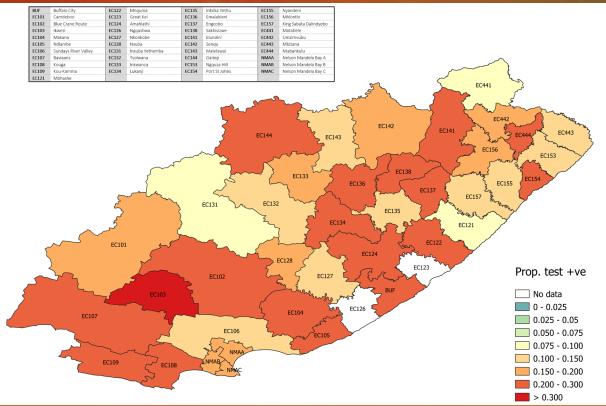


Figure 12. Proportion testing positive by health sub-district in the Eastern Cape Province for the week of 29 August – 4 September 2021. Areas shaded white represent districts in which either (i) no tests were reported (ii) all tests were negative or (iii) the confidence interval exceeded 30%.

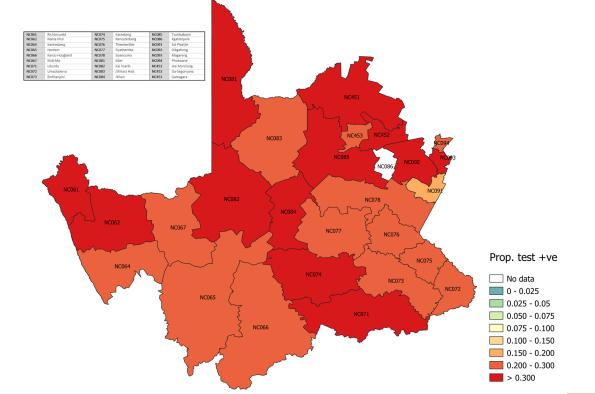


Figure 13. Proportion testing positive by health sub-district in Northern Cape Province for the week of 29 August – 4 September 2021. Areas shaded white represent districts in which either (i) no tests were reported (ii) all tests were negative or (iii) the confidence interval exceeded 30%.

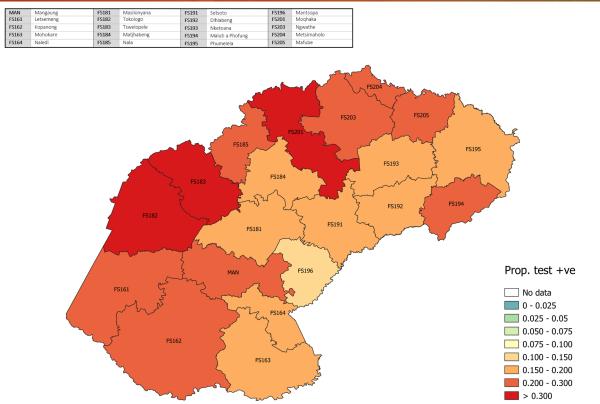


Figure 14. Proportion testing positive by health sub-district in Free State Province for the week of 29 August – 4 September 2021. Areas shaded white represent districts in which either (i) no tests were reported (ii) all tests were negative or (iii) the confidence interval exceeded 30%.

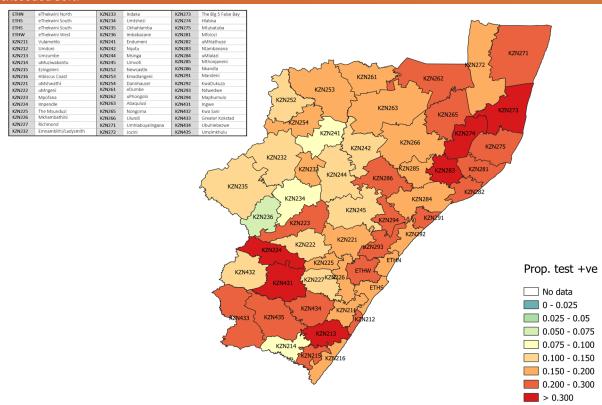


Figure 15. Proportion testing positive by health sub-district in KwaZulu-Natal Province for the week of 29 August – 4 September 2021. Areas shaded white represent districts in which either (i) no tests were reported (ii) all tests were negative or (iii) the confidence interval exceeded 30%.

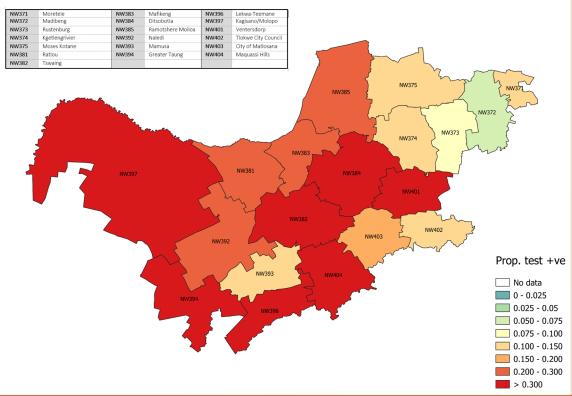


Figure 16. Proportion testing positive by health sub-district in North West Province for the week of 29 August – 4 September 2021. Areas shaded white represent districts in which either (i) no tests were reported (ii) all tests were negative or (iii) the confidence interval exceeded 30%.

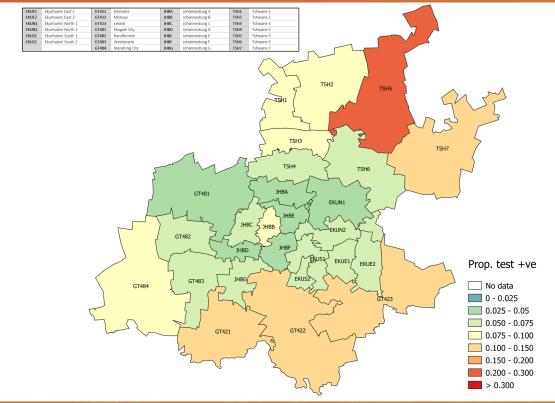


Figure 17. Proportion testing positive by health sub-district in Gauteng Province for the week of 29 August – 4 September 2021. Areas shaded white represent districts in which either (i) no tests were reported (ii) all tests were negative or (iii) the confidence interval exceeded 30%.

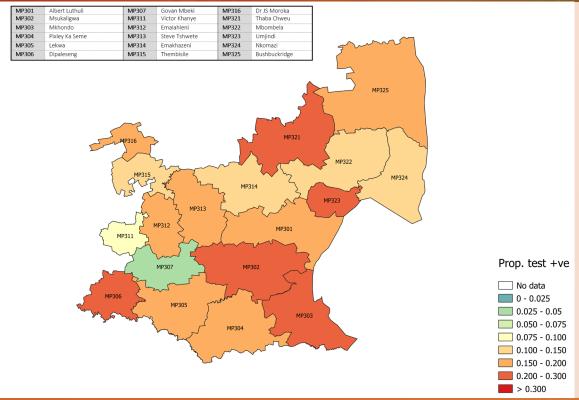


Figure 18. Proportion testing positive by health sub-district in Mpumalanga Province for the week of 29 August – 4 September 2021. Areas shaded white represent districts in which either (i) no tests were reported (ii) all tests were negative or (iii) the confidence interval exceeded 30%.

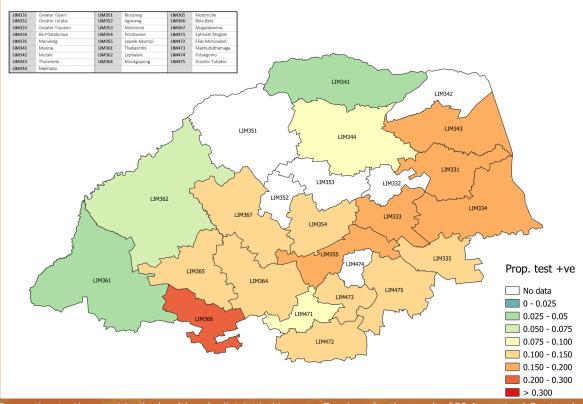


Figure 19. Proportion testing positive by health sub-district in Limpopo Province for the week of 29 August – 4 September 2021. Areas shaded white represent districts in which either (i) no tests were reported (ii) all tests were negative or (iii) the confidence interval exceeded 30%.

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Testing by patient admission status

In week 35 of 2021 36.9% of reported tests were for hospitalised patients; 43.8% in the public sector and 28.3% in the private sector (Figure 20). The percentage testing positive in week 35 was higher among outpatients (17.7%) compared to inpatients

(14.5%), and decreased from the previous week in both groups (Figure 21). In week 35 the mean laboratory turnaround time for PCR tests in the public sector was higher among outpatients (3.0 days) compared to inpatients (1.6 days) (Figure 22).

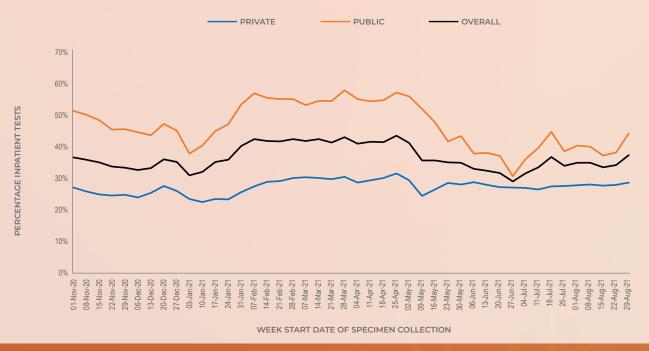


Figure 20. Percentage of inpatient tests reported by health sector, 1 November 2020 - 4 September 2021



Figure 21. Percentage testing positive by patient admission status, 11 July – 4 September 2021

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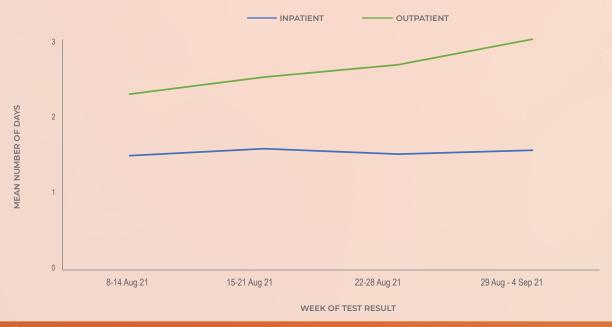


Figure 22. Mean number of days between date of specimen collection and date of test result for PCR tests in the public sector by patient admission status, 8 August – 4 September 2021

Testing by age and sex

The median age of individuals tested in week 35 of 2021 was 34 years (interquartile range (IQR) 22-49) and was similar among males (35 years; IQR 22-49) and females (34 years; IQR 22-49). The majority of reported tests (54.1%) were in individuals in the 20-49 years' age group, with additional peaks in individuals aged 10-14 years among males and 15-19 years among females (Figure 23). In week 35 the testing rate was higher

among females (506 per 100,000 persons) than males (465 per 100,000 persons) (Figure 24). Testing rates in week 35 were highest in the ≥80 years age group (865 per 100,000 persons). Overall, the percentage testing positive was highest in individuals aged 15-19 years (21.7%), and in this same age group in males (22.6%) and females (21.0%).

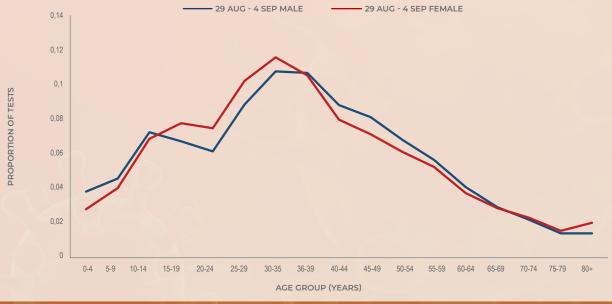


Figure 23. Proportion of tests by age group and sex South Africa, week 35, 29 August - 4 September 2021

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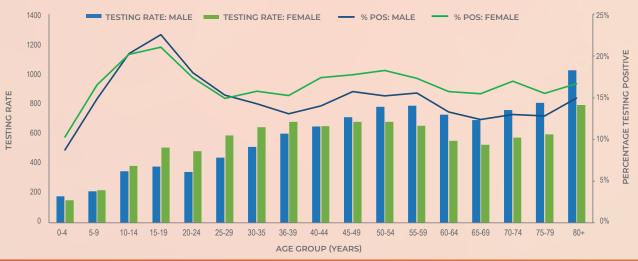


Figure 24. Testing rates per 100,000 persons and percentage testing positive by age group and sex, South Africa, week 35, 29 August – 4 September 2021

Testing by test type

Up to the end of week 35 of 2021 12.5% (2,113,928/16,661,567) of all reported tests were antigen tests. In week 35, 18.6% (55,471/297,486) of reported tests were antigen tests (Figure 25). Overall 82.5% of antigen tests have been performed in the public sector, and in week 35 the public sector accounted for 77.4% of antigen tests. The majority of antigen tests have been reported from KwaZulu-Natal (33.6%) and Gauteng (19.1%) provinces. In the past few weeks KwaZulu-Natal has reported the highest weekly number of antigen

tests. The percentage testing positive in week 35 was higher for PCR (17.3%) tests compared to antigen (11.4%) tests (Figure 26). The mean turnaround time for antigen tests reported in week 35 was 6.0 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.

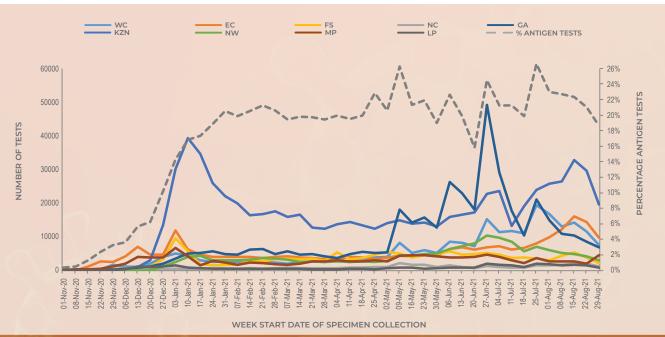


Figure 25. Number of antigen tests by province and overall percentage antigen tests South Africa 1 November 2020 – 4 September 2021. WC Western Cape; EC Eastern Cape; FS Free State; KZN KwaZulu-Natal; GA Gauteng; NC Northern Cape; NW North West; MP Mpumalanga; LP Limpopo

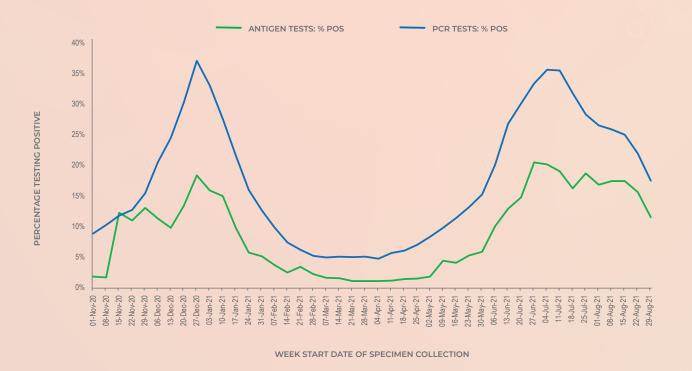


Figure 26. Percentage of laboratory tests positive for SARS-CoV-2 by test type and date of specimen collection, South Africa, 1 November 2020 – 4 September 2021



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 August – 4 September 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, 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 35 (n=297,486) was the lowest number of tests reported since early June 2021. KwaZulu-Natal (25.1%), Gauteng (23.9%) and Western Cape (16.8%) provinces reported the largest number of tests in week 35. The overall testing rate in week 35 was 499 per 100,000 persons; highest in the Northern Cape (853 per 100,000 persons) and lowest in Limpopo (112 per 100,000 persons). Testing rates decreased in all provinces in the past week. Antigen tests accounted for 18.6% (55,471/297,486) of all tests reported in week 35 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 35; 2.4 days in the public sector and 0.6 days in the private sector.

The percentage testing positive in week 35 was 16.2%, which was 4.2% lower than the previous week. The percentage testing positive in week 35 was highest in the Northern Cape (26.7%), Free State (21.6%) and Western Cape (20.9%) provinces. The percentage testing positive was between 10% and 20% in the Eastern Cape, KwaZulu-Natal, North West, Limpopo and Mpumalanga provinces, and was less than 10% in Gauteng. Compared to the previous week, the percentage testing positive in week 35 decreased in all provinces.