SOUTH AFRICA WEEK 25 2021

NATIONAL INSTITUTE FOR COMMUNICABLE DISEASES

Division of the National Health Laboratory Service

### **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 26 June 2021 (Week 25 of 2021).

# HIGHLIGHTS

- In the period 1 March 2020 through 26 June 2021, 12,923,183 (11,683,258 PCR and 1,239,925 antigen) tests for SARS-CoV-2 have been reported nationally.
- The number of tests reported in week 25 of 2021 (n=388,931) was higher than the weekly number of tests reported since mid-January 2021.
- The testing rate in week 25 was 652 per 100,000 persons; highest in Gauteng (1177 per 100,000 persons) and lowest in Limpopo (225 per 100,000 persons).
- In week 25 the percentage testing positive was 27.5%, which was 3.4% higher than the previous week.
- The percentage testing positive in week 25 was highest in Gauteng (36.8%), Limpopo (35.5%), North West (30.6%) and Mpumalanga (26.0%) provinces. The percentage testing positive was between 10% and 20% in the Free State, Northern Cape, Western Cape, Eastern Cape and KwaZulu-Natal provinces.
- In week 25, compared to the previous week, the percentage testing positive remained the same in the Free State, decreased in the Northern Cape and increased in all other 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.

SOUTH AFRICA WEEK 25 2021

#### 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.

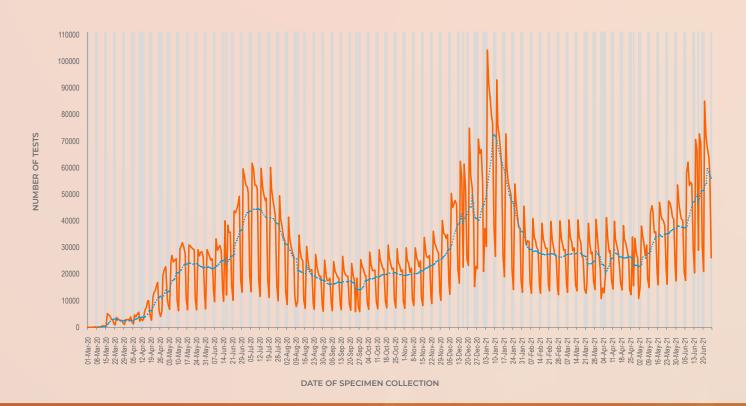
Health district and sub-district (in the metros) level results were mapped based on geo-locatable public and private sector testing facilities. Estimates of overall prevalence were derived using regression techniques. Estimates were adjusted to produce district-specific positive test prevalences based 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 26 June 2021 (week 25 of 2021).

# Testing volumes and proportion testing positive

From 1 March 2020 through 26 June 2021, 12,923,183 SARS-CoV-2 tests were reported; 11,683,258 PCR and 1,239,925 antigen tests. The number of tests reported increased weekly from week 10 of 2020, with the highest number of tests reported during the first wave occurring in week 28 of 2020 (n=307,913), and subsequently decreased. Weekly testing volumes increased again from week 48 of 2020 (beginning 22 November 2020), with the highest weekly number of tests since the start of the pandemic reported in week 1 of 2021 (n=500,987). In week 25 of 2021, 388,931 tests were reported, higher than the weekly number of tests reported since mid-January 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).

SOUTH AFRICA WEEK 25 2021



**Figure 1.** Number of SARS-CoV-2 tests reported by date of specimen collection, South Africa, 1 March 2020 – 26 June 2021. Blue dotted 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 25 of 2021 was 15.8% (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 started increasing from week 46 of 2020, to a peak of 34.6% in week 53 of 2020. The percentage testing positive in week 25 of 2021 was 27.5%, 3.4% higher than observed in the previous week (24.1%, P<0.001), and higher than observed since week 1 of 2021 (beginning 3 January) (Figure 2).

#### SOUTH AFRICA WEEK 25 2021

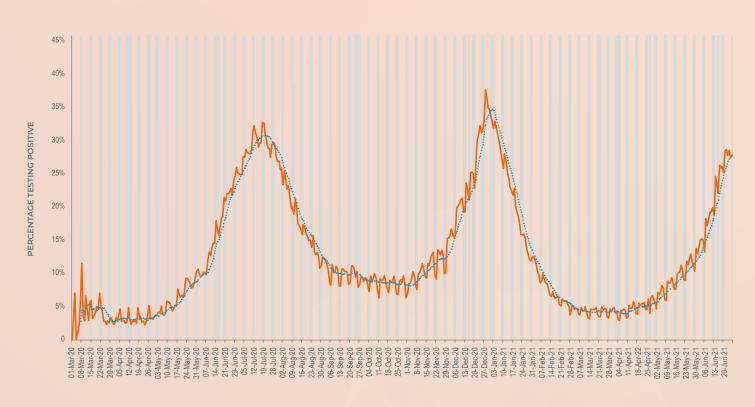
 Table 1. Weekly number of SARS-CoV-2 tests and positive tests reported, South Africa, 1 March 2020 – 26 June 2021

Week number	Week beginning	No. of tests n (%)	No. of positive tests	Percentage testing positive (%)
10	01-Mar-20	456 (0.0)	13	2.9
11	08-Mar-20	2380 (0.0)	103	4.3
12	15-Mar-20	21567 (0.2)	897	4.2
13	22-Mar-20	17544 (0.1)	544	3.1
14	29-Mar-20	18249 (0.1)	521	2.9
15	05-Apr-20	26299 (0.2)	796	3.0
16	12-Apr-20	43752 (0.3)	1295	3.0
17	19-Apr-20	79176 (0.6)	2177	2.7
18	26-Apr-20	93815 (0.7)	3208	3.4
19	03-May-20	142711 (1.1)	6018	4.2
20	10-May-20	165374 (1.3)	8092	4.9
21	17-May-20	166544 (1.3)	11379	6.8
22	24-May-20	156139 (1.2)	12967	8.3
23	31-May-20	153571 (1.2)	15079	9.8
24	07-Jun-20	173903 (1.3)	22362	12.9
25	14-Jun-20	186090 (1.4)	32653	17.5
26	21-Jun-20	252098 (2.0)	55049	21.8
27	28-Jun-20	302743 (2.3)	75309	24.9
28	05-Jul-20	307913 (2.4)	86039	27.9
29	12-Jul-20	285599 (2.2)	84927	29.7
30	19-Jul-20	270898 (2.1)	78636	29.0
31	26-Jul-20	216394 (1.7)	58393	27.0
32	02-Aug-20	179573 (1.4)	40996	22.8
33	09-Aug-20	141103 (1.1)	26265	18.6
34	16-Aug-20	135014 (1.0)	21377	15.8
35	23-Aug-20	123333 (1.0)	16331	13.2
36	<u> 30-Aug-20</u>	112762 (0.9)	12790	11.3
37	06-Sep-20	116997 (0.9)	11953	10.2
38	13-Sep-20	120715 (0.9)	12012	10.0
39	20-Sep-20	98819 (0.8)	10098	10.2
40	27-Sep-20	123062 (1.0)	11008	8.9
41	04-Oct-20	131044 (1.0)	11778	9.0
42	11-Oct-20	137974 (1.1)	12077	8.8
43	18-Oct-20	142171 (1.1)	12069	8.5
44	25-Oct-20	135849 (1.1)	11479	8.4
45	01-Nov-20	138820 (1.1)	12135	8.7
46	08-Nov-20	147007 (1.1)	14845	10.1
47	15-Nov-20	160646 (1.2)	18763	11.7
48	22-Nov-20	175688 (1.4)	22052	12.6
49	29-Nov-20	203147 (1.6)	30767	15.1
50	06-Dec-20	267921 (2.1)	53311	19.9
51	13-Dec-20	294461 (2.3)	68577	23.3
52	20-Dec-20	284556 (2.2)	81959	28.8
53	27-Dec-20	334383 (2.6)	115732	34.6
1	03-Jan-21	500987 (3.9)	151009	30.1
2	10-Jan-21	417866 (3.2)	104772	25.1

SOUTH AFRICA WEEK 25 2021

3	17-Jan-21	327308 (2.5)	63242	19.3
4	24-Jan-21	249401 (1.9)	34625	13.9
5	31-Jan-21	203422 (1.6)	22329	11.0
6	07-Feb-21	193100 (1.5)	16445	8.5
7	14-Feb-21	190258 (1.5)	12137	6.4
8	21-Feb-21	184299 (1.4)	10363	5.6
9	28-Feb-21	189204 (1.5)	8666	4.6
10	07-Mar-21	192535 (1.5)	8312	4.3
<u> </u>	14-Mar-21	185221 (1.4)	8133	4.4
12	21-Mar-21	171618 (1.3)	7335	4.3
13	28-Mar-21	163048 (1.3)	7045	4.3
14	04-Apr-21	179887 (1.4)	7260	4.0
15	11-Apr-21	183281 (1.4)	8815	4.8
16	18-Apr-21	183434 (1.4)	9436	5.1
17	25-Apr-21	158533 (1.2)	9153	5.8
18	02-May-21	192921 (1.5)	13384	6.9
19	09-May-21	236814 (1.8)	19816	8.4
20	16-May-21	244088 (1.9)	24075	9.9
21	23-May-21	257147 (2.0)	29519	11.5
22	30-May-21	259298 (2.0)	35630	13.7
23	06-Jun-21	326340 (2.5)	58461	17.9
24	13-Jun-21	355982 (2.8)	85928	24.1
25	20-Jun-21	388931 (3.0)	107067	27.5
	Total	12,923,183(100.0)	2,047,788	15.8

SOUTH AFRICA WEEK 25 2021



DATE OF SPECIMEN COLLECTION

**Figure 2.** Percentage of tests positive for SARS-CoV-2 by date of specimen collection, South Africa, 1 March 2020 – 26 June 2021. Blue dotted line shows the 7-day moving average of the percentage testing positive. Grey bars highlight weekend days and public holidays.

#### Testing in private and public sectors

From 1 March 2020 through 26 June 2021. 5.595.473 tests were reported in the public sector, with 15.9% testing positive. Over this same period, the private sector reported 7,327,710 tests, with 15.8% testing positive (Table 2). Overall, the public sector has reported 43.3% of tests and accounted for 43.4% 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%). From week 24 to week 25 of 2021, the percentage testing positive increased by 3.6% in the public sector (19.9% in week 24 to 23.5% in week 25, P<0.001) and by 2.9% in the

private sector (27.0% in week 24 to 29.9% in week 25, P<0.001). In week 25 the percentage testing positive in the private sector (29.9%) was 6.4% higher than in the public sector (23.5%, P<0.001). The private sector reported 68.3% of positive tests in week 25.

The mean turnaround time for PCR tests reported in week 25 of 2021 was 1.2 days; 1.9 days in the public sector and 0.8 days in the private sector (Figure 3). Turnaround times for public sector PCR tests were >2 days in the Free State, Gauteng and Mpumalanga provinces in week 25 (Figure 4). Decreases in turnaround times were observed in the Northern Cape and KwaZulu-Natal provinces in the past week. Nineteen of the 28 (67.9%) NHLS laboratories performing PCR testing for SARS-CoV-2 had turnaround times ≤2 days in week 25 (Figure 5).

### SOUTH AFRICA WEEK 25 2021

			c sector	Priva	Private sector		Public sector percentage of	
Week	Week	Tests	Cases	Tests	Positive tests	Tests (%)	Positive tests	of PTP
number 10	beginning 01-Mar-20	294	n (%) 10 (3.4)	162	n (%) 	64.5	<u>(%)</u> 76.9	1.837
<u>10</u>	08-Mar-20	401	27 (6.7)	1979		16.8	26.2	1.753
12	15-Mar-20	1442	81 (5.6)	20125	816 (4.1)	6.7	9.0	1.385
12	22-Mar-20	3478	149 (4.3)	14066	395 (2.8)	19.8	27.4	1.505
<u>13</u> 14	29-Mar-20	5868	194 (3.3)	12381	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)	19585	623 (3.2)	55.2	51.9	0.874
17	19-Apr-20	55110	1595 (2.9)	24066	582 (2.4)	69.6	73.3	1.197
18	26-Apr-20	67469	2453 (3.6)	26346	755 (2.9)	71.9	76.5	1.269
19	03-May-20	94338	4507 (4.8)	48373	1511 (3.1)	66.1	74.9	1.529
20	10-May-20	108000	5443 (5.0)	57374	2649 (4.6)	65.3	67.3	1.092
21	17-May-20	98648	7031 (7.1)	67896	4348 (6.4)	59.2	61.8	1.113
22	24-May-20	77597	6411 (8.3)	78542	6556 (8.3)	49.7	49.4	0.990
23	31-May-20	63945	6626 (10.4)	89626	8453 (9.4)	41.6	43.9	1.099
24	07-Jun-20	64655	8039 (12.4)	109248	14323 (13.1)	37.2	35.9	0.948
25	14-Jun-20	61149	11982 (19.6)	124941	20671 (16.5)	32.9	36.7	1.184
26	21-Jun-20	90455	20425 (22.6)	161643	34624 (21.4)	35.9	37.1	1.054
27	28-Jun-20	106371	27244 (25.6)	196372	48065 (24.5)	35.1	36.2	1.046
28	05-Jul-20	117727	32239 (27.4)	190186	53800 (28.3)	38.2	37.5	0.968
29	12-Jul-20	110664	31383 (28.4)	174935	53544 (30.6)	38.7	37.0	0.927
30	19-Jul-20	105217	30319 (28.8)	165681	48317 (29.2)	38.8	38.6	0.988
31	26-Jul-20	81248	22782 (28.0)	135146	35611 (26.4)	37.5	39.0	1.064
32	02-Aug-20	70566	16996 (24.1)	109007	24000 (22.0)	39.3	41.5	1.094
33	09-Aug-20	58661	11172 (19.0)	82442	15093 (18.3)	41.6	42.5	1.040
34	16-Aug-20	56138	9621 (17.1)	78876	11756 (14.9)	41.6	45.0	1.150
35	23-Aug-20	50319	7790 (15.5)	73014	8541 (11.7)	40.8	47.7	1.323
36	<u>30-Aug-20</u>	45422	6096 (13.4)	67340	6694 (9.9)	40.3	47.7	1.350
37	06-Sep-20	51055	6421 (12.6)	65942	5532 (8.4)	43.6	53.7	1.499
<u> </u>	13-Sep-20 20-Sep-20	<u>53707</u> 44841	6547 (12.2) 5530 (12.3)	<u>67008</u> 53978	5465 (8.2)	<u> </u>	<u> </u>	<u>1.495</u> 1.457
<u> </u>	20-Sep-20 27-Sep-20	48629	<u>5568 (12.5)</u>	74433	<u> </u>	39.5	50.6	1.437
<u>40</u> 41	04-Oct-20	50434	5689 (11.3)	80610	6089 (7.6)	39.3	48.3	1.493
42	11-Oct-20	<u> </u>	5702 (10.7)	84523	6375 (7.5)	38.7	47.2	<u>1.435</u> 1.414
43	18-Oct-20	56123	6045 (10.8)	86048	6024 (7.0)	39.5	50.1	1.539
44	25-Oct-20	51286	5721 (11.2)	84563	5758 (6.8)	37.8	49.8	1.638
45	01-Nov-20	52999	6061 (11.4)	85821	6074 (7.1)	38.2	49.9	1.616
46	08-Nov-20	58913	8097 (13.7)	88094	6748 (7.7)	40.1	54.5	1.794
<u></u> 47	15-Nov-20	67582	10584 (15.7)	93064	8179 (8.8)	42.1	56.4	1.782
48	22-Nov-20	74574	12200 (16.4)	101114	9852 (9.7)	42.4	55.3	1.679
<u>48</u> 49	22-Nov-20 29-Nov-20	81269	15730 (19.4)	121878	15037 (12.3)	40.0	<u>53.5</u>	1.569
50	06-Dec-20	107909	24715 (22.9)	121878	28596 (17.9)	40.0	46.4	1.282
<u>50</u>	13-Dec-20	117212	29815 (25.4)	177249	38762 (21.9)	39.8	43.5	1.262
<u>51</u>	20-Dec-20	109913	34128 (31.1)	174643	47831 (27.4)	39.6	41.6	1.183
<u> </u>	27-Dec-20	151626	<u>34128 (31.1)</u> 52930 (34.9)	174643	62802 (34.4)	45.3	45.7	1.016
<u> </u>	03-Jan-21	236881	71048 (30.0)	264106	79961 (30.3)	45.3	47.0	0.991
2	10-Jan-21	203973	52948 (26.0)	213893	51824 (24.2)	48.8	50.5	1.071
2	17-Jan-21	165628	34451 (20.8)	161680	28791 (17.8)	<u>40.0</u> 50.6	<u>50.5</u>	1.168
<u> </u>	24-Jan-21	123203	18988 (15.4)	126198	15637 (12.4)	<u>50.6</u>	<u> </u>	1.160
<u> </u>	31-Jan-21	99600	12039 (12.1)	120190	10290 (9.9)	49.4	<u>53.9</u>	1.244
6	07-Feb-21	91194	8490 (9.3)	103822	7955 (7.8)	49.0	<u>51.6</u>	1.193
6 7	14-Feb-21	86100	<u>8490 (9.3)</u> 6639 (7.7)	101906	7955 (7.8) 5498 (5.3)	47.2	<u> </u>	1.193
8	21-Feb-21	82375	5780 (7.0)	104158	<u>5498 (5.3)</u> 4583 (4.5)	<u> </u>	<u>54.7</u>	1.461 1.560
9	28-Feb-21	<u>87764</u>	4663 (5.3)	101924	<u>4583 (4.5)</u> 4003 (3.9)	44.7	<u> </u>	1.346
10	07-Mar-21	92084	4572 (5.0)	101440	3740 (3.7)	46.4	<u>55.0</u>	<u>1.346</u> 1.334
			4572 (5.0) 4432 (4.9)	95534		47.8	<u>55.0</u>	<u>1.334</u> 1.276
<u>11</u> 12	<u>14-Mar-21</u> 21-Mar-21	<u>89687</u> 76024	<u> </u>	<u>95534</u> 95594	<u>3701 (3.9)</u> 3883 (4.1)	<u> </u>	<u> </u>	<u>1.276</u> 1.118
12			<u> </u>	<u>95594</u> 92413	<u></u>			
5	28-Mar-21	70635	5446 4 91	97415	179/1591	43.3	48.9	1.254

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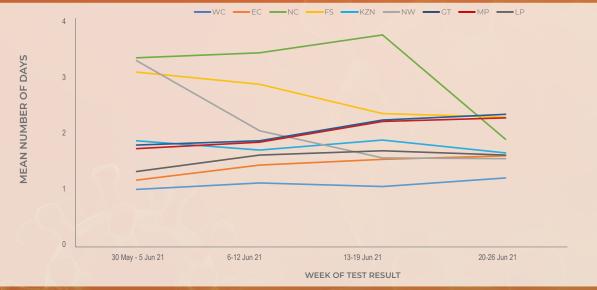
#### SOUTH AFRICA WEEK 25 2021

15	11-Apr-21	84648	4345 (5.1)	98633	4470 (4.5)	46.2	49.3	1.133
16	18-Apr-21	79260	4689 (5.9)	104174	4747 (4.6)	43.2	49.7	1.298
17	25-Apr-21	69217	4103 (5.9)	89316	5050 (5.7)	43.7	44.8	1.048
18	02-May-21	80393	5425 (6.7)	112528	7959 (7.1)	41.7	40.5	0.954
19	09-May-21	89171	7279 (8.2)	147643	12537 (8.5)	37.7	36.7	0.961
20	16-May-21	97186	9063 (9.3)	146902	15012 (10.2)	39.8	37.6	0.913
21	23-May-21	117452	11670 (9.9)	139695	17849 (12.8)	45.7	39.5	0.778
22	30-May-21	103095	11607 (11.3)	156203	24023 (15.4)	39.8	32.6	0.732
23	06-Jun-21	139823	19467 (13.9)	186517	38994 (20.9)	42.8	33.3	0.666
24	<u>13-Jun-21</u>	144179	28760 (19.9)	211803	57168 (27.0)	40.5	33.5	0.739
25	20-Jun-21	144590	33991 (23.5)	244341	73076 (29.9)	37.2	31.7	0.786
	Total	5,595,473	887,875 (15.9)	7,327,710	1,159,913 (15.8)	43.3	43.4	1.002

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 public sector)/ (no. of cases/total tests in private sector)



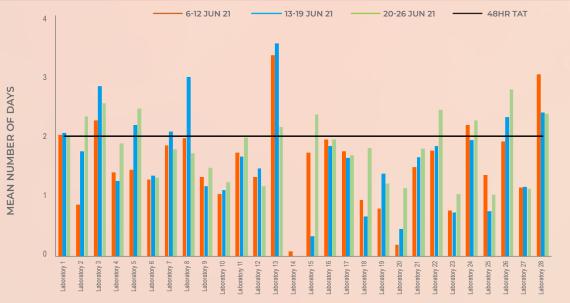
Figure 3. Mean number of days between date of specimen collection and date of test result for PCR tests, by week of test result, South Africa, 30 May – 26 June 2021



**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, 30 May – 26 June 2021. WC, Western Cape; EC, Eastern Cape; FS, Free State; KZN, KwaZulu-Natal; CT, Gauteng; NC, Northern Cape; NW, North West; MP, Mpumalanga; LP, Limpopo

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#### SOUTH AFRICA WEEK 25 2021



PUBLIC SECTOR LABORATORY

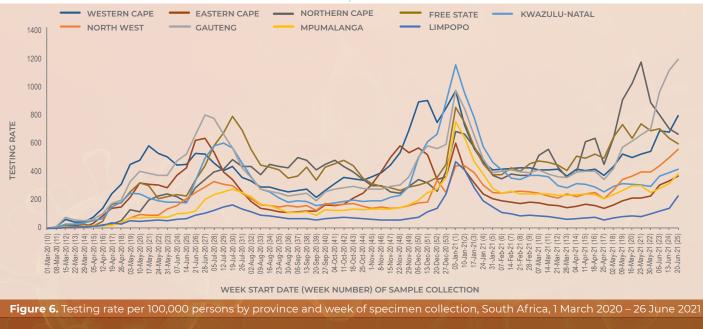
**Figure 5.** Mean number of days between date of specimen collection and date of test result for PCR tests, by public sector laboratory, 6 – 26 June 2021. The horizontal black line indicates 48-hour turnaround time (TAT).

#### Testing by province

Gauteng reported the largest number of tests (46.9%), followed by Western Cape (14.2%) and KwaZulu-Natal (12.2%) provinces in week 25 of 2021 (Table 3). The overall testing rate increased from 597 per 100,000 persons in week 24 to 652 per 100,000 in week 25. The testing rate ranged from 1177 per 100,000 persons in Gauteng to 225 per 100,000 persons in Limpopo (Figure 6). Testing rates have increased in most provinces over recent weeks, and in week 25 the largest increases were observed in the Western Cape, Gauteng and Limpopo provinces. Testing rates have decreased in the Northern Cape and Free State in the past few weeks.

The percentage testing positive in week 25 was highest in Gauteng (36.8%), Limpopo (35.5%), North West (30.6%) and

Mpumalanga (26.0%) provinces. The percentage testing positive was between 10% and 20% in the Free State, Northern Cape, Western Cape, Eastern Cape and KwaZulu-Natal provinces (Figure 7 and Table 3). Compared to the previous week, the percentage testing positive in week 25 increased in 7 of the 9 provinces (Western Cape (P<0.001), Eastern Cape (P<0.001), KwaZulu-Natal (P<0.001), Gauteng (P<0.001), North West (P<0.001), Mpumalanga (P<0.001) and Limpopo (P<0.001)), with increases of >5% compared to the previous week in Limpopo. The percentage testing positive decreased in the Northern Cape province (P=0.012) and remained the same in the Free State province (P=0.149). The percentage testing positive was higher than the national average, not weighted for population size, in the North West, Gauteng and Limpopo provinces (Figure 7).



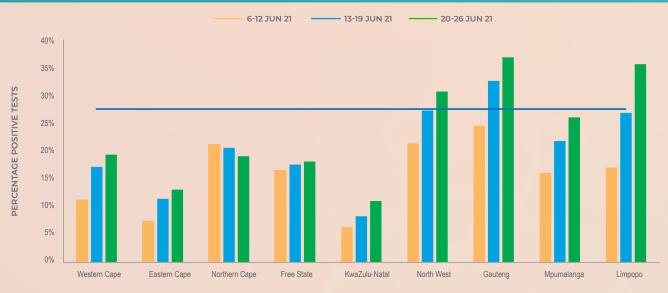
#### SOUTH AFRICA WEEK 25 2021

Table 3. Weekly number of tests and positive tests reported, by province, South Africa, 6 – 26 June 2021

		6-12	Jun 2021	13-19	Jun 2021	20-2	5 Jun 2021		
Province	<b>Population</b> <sup>a</sup>	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 <sup>b</sup>
Western Cape	7005741	47766	5403 (11.3)	46957	8027 (17.1)	55039	10604 (19.3)	786	2.2%
Eastern Cape	6734001	20274	1508 (7.4)	22397	2569 (11.5)	24505	3189 (13.0)	364	1.5%
Northern Cape	1292786	10210	2168 (21.2)	8982	1846 (20.6)	8472	1613 (19.0)	655	-1.5%
Free State	2928903	20307	3381 (16.6)	18340	3220 (17.6)	17267	3128 (18.1)	590	0.6%
KwaZulu-Natal	11531628	41912	2685 (6.4)	44981	3733 (8.3)	47586	5251 (11.0)	413	2.7%
North West	4108816	17883	3822 (21.4)	20338	5531 (27.2)	22626	6927 (30.6)	551	3.4%
Gauteng	15488137	147678	36167 (24.5)	170655	55527 (32.5)	182240	67043 (36.8)	1177	4.3%
Mpumalanga	4679786	13011	2091 (16.1)	14681	3189 (21.7)	17610	4576 (26.0)	376	4.3%
Limpopo	5852553	6960	1183 (17.0)	8240	2206 (26.8)	13153	4669 (35.5)	225	8.7%
Unknown		339	53 (15.6)	411	80 (19.5)	433	67 (15.5)		
Total	59622350	326340	58461 (17.9)	355982	85928 (24.1)	388931	107067 (27.5)	652	3.4%

a 2020 Mid-year population Statistics SA

<sup>b</sup>Current week compared to previous week



PROVINCE

Figure 7. Weekly percentage testing positive, by province, South Africa, 6 – 26 June 2021. The horizontal blue line shows the national mean for week 25, beginning 20 June 2021

#### Testing in the public sector

In the public sector, the percentage testing positive continued to increase in the past week (19.9% in week 24 to 23.5% in week 25, P<0.001) (Table 4). The percentage testing positive in week 25 was highest in Gauteng (39.0%), Limpopo (36.5%) and North West

(26.1%) provinces. The percentage testing positive in the public sector remains higher than the national average, not weighted for population size, in the North West, Gauteng and Limpopo provinces (Figure 8).

SOUTH AFRICA WEEK 25 2021

Table 4. Weekly number of tests and positive tests reported in the public sector, by province, South Africa, 6 – 26 June 2021

	6-12 Jun 2021 13-19 Jun 20		un 2021	021 20-26 J		
Province	No. of tests	No. positive tests (%)	No. of tests	No. positive tests (%)	No. of tests	No. positive tests (%)
Western Cape	18068	1733 (9.6)	17528	2916 (16.6)	20051	3765 (18.8)
Eastern Cape	12815	595 (4.6)	14302	1053 (7.4)	15227	1554 (10.2)
Northern Cape	6856	1387 (20.2)	6264	1246 (19.9)	5810	1055 (18.2)
Free State	11414	1463 (12.8)	9717	1357 (14.0)	8572	1239 (14.5)
KwaZulu-Natal	25346	1033 (4.1)	26762	1589 (5.9)	27096	2337 (8.6)
North West	8520	1552 (18.2)	9731	2173 (22.3)	10016	2619 (26.1)
Gauteng	49638	10763 (21.7)	51645	16854 (32.6)	47581	18563 (39.0)
Mpumalanga	5159	629 (12.2)	5688	900 (15.8)	5917	1281 (21.6)
Limpopo	2006	312 (15.6)	2541	671 (26.4)	4320	1578 (36.5)
Unknown	1	O (0.0)	1	1 (0.0)	0	0 (0.0)
Total	139823	19467 (13.9)	144179	28760 (19.9)	144590	33991 (23.5)

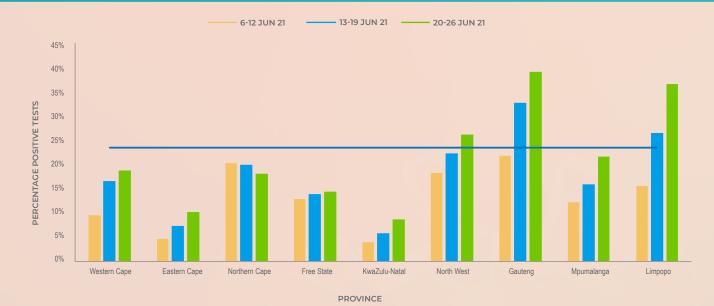


Figure 8. Weekly percentage testing positive in the public sector, by province, South Africa, 6 – 26 June 2021. The horizontal blue line shows the national mean for week 25 of 2021, beginning 20 June 2021.

# Facilities with high proportions testing positive

The data on testing at facility level for week 25 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). 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 and at least five positive results in the week of 20-26 June 2021. Nineteen of the 25 public facilities showing the highest PTP are in Gauteng, with three in Limpopo, two in Mpumalanga and one in North West.

SOUTH AFRICA WEEK 25 2021

Table 5.1 Public sector healthcare facilities with a high proportion testing positive, 20-26 June 2021

Facility Name	Province	Tests	PTP (95% CI)
Facility 1	Gauteng	37	1.000 (1.000;1.000)
Facility 2	Limpopo	37	0.784 (0.651;0.916)
Facility 3	Limpopo	32	0.781 (0.638;0.924)
Facility 4	North West	45	0.756 (0.630;0.881)
Facility 5	Gauteng	75	0.733 (0.633;0.833)
Facility 6	Gauteng	37	0.730 (0.587;0.873)
Facility 7	Gauteng	60	0.700 (0.584;0.816)
Facility 8	Mpumalanga	26	0.692 (0.515;0.870)
Facility 9	Limpopo	32	0.688 (0.527;0.848)
Facility 10	Gauteng	91	0.681 (0.586;0.777)
Facility 11	Gauteng	169	0.669 (0.598;0.740)
Facility 12	Gauteng	35	0.657 (0.500;0.814)
Facility 13	Gauteng	29	0.655 (0.482;0.828)
Facility 14	Mpumalanga	40	0.650 (0.502;0.798)
Facility 15	Gauteng	129	0.643 (0.561;0.726)
Facility 16	Gauteng	78	0.641 (0.535;0.747)
Facility 17	Gauteng	36	0.639 (0.482;0.796)
Facility 18	Gauteng	35	0.629 (0.468;0.789)
Facility 19	Gauteng	102	0.627 (0.534;0.721)
Facility 20	Gauteng	48	0.625 (0.488;0.762)
Facility 21	Gauteng	146	0.623 (0.545;0.702)
Facility 22	Gauteng	58	0.621 (0.496;0.746)
Facility 23	Gauteng	139	0.619 (0.538;0.699)
Facility 24	Gauteng	26	0.615 (0.428;0.802)
Facility 25	Gauteng	67	0.612 (0.495;0.729)

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

Table 5.2 shows the 25 private sector clinics, hospitals and testing laboratories (where specimens were not tied to a particular facility), that had 25 or more specimens tested and at least five positive results in the week of 20-26 June 2021, with the highest proportion testing positive nationally. The private-sector facilities with the 25 highest proportions testing positive are concentrated almost exclusively in Gauteng (21), with two in Limpopo and one each in the Eastern Cape and Mpumalanga.



SOUTH AFRICA WEEK 25 2021

Table 5.2 Private sector healthcare facilities with a high proportion testing positive, 20-26 June 2021

Facility Name	Province	Tests	PTP (95% CI)
Facility 1	Gauteng	162	0.630 (0.555;0.704)
Facility 2	Limpopo	29	0.621 (0.444;0.797)
Facility 3	Mpumalanga	187	0.615 (0.545;0.685)
Facility 4	Gauteng	139	0.612 (0.530;0.693)
Facility 5	Gauteng	32	0.594 (0.424;0.764)
Facility 6	Gauteng	91	0.593 (0.492;0.694)
Facility 7	Gauteng	104	0.587 (0.492;0.681)
Facility 8	Gauteng	65	0.585 (0.465;0.704)
Facility 9	Gauteng	199	0.578 (0.509;0.647)
Facility 10	Gauteng	174	0.575 (0.501;0.648)
Facility 11	Gauteng	124	0.573 (0.486;0.660)
Facility 12	Gauteng	138	0.572 (0.490;0.655)
Facility 13	Eastern Cape	35	0.571 (0.407;0.735)
Facility 14	Gauteng	44	0.568 (0.422;0.715)
Facility 15	Gauteng	741	0.568 (0.532;0.604)
Facility 16	Gauteng	218	0.564 (0.498;0.630)
Facility 17	Gauteng	39	0.564 (0.408;0.720)
Facility 18	Gauteng	64	0.563 (0.441;0.684)
Facility 19	Limpopo	260	0.562 (0.501;0.622)
Facility 20	Gauteng	579	0.560 (0.519;0.600)
Facility 21	Gauteng	138	0.551 (0.468;0.634)
Facility 22	Gauteng	379	0.546 (0.496;0.596)
Facility 23	Gauteng	355	0.544 (0.492;0.595)
Facility 24	Gauteng	46	0.543 (0.400;0.687)
Facility 25	Gauteng	296	0.534 (0.477;0.591)

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 82% of private testing facilities) in the week from 20-26 June 2021 have been located within the spatial framework of the health districts and health sub-districts (in the metros). Districts with fewer than 20 tests reported during the week have been excluded from the analysis.

The results, for the 25 municipalities and metropolitan health sub-districts showing the greatest proportions testing positive (PTP) are shown in the table below. Ten of the 25 districts are in Gauteng, with nine in Limpopo. All 25 districts with the highest PTP showed a PTP in the current week in excess of 30%. This week, 23 districts exceeded 40%, and 6 exceeded 50%. PTP exceeded 30% in a further 33 districts (20 last week). Significant increases were observed in 12 of the 25 districts with the highest PTP (7 in Gauteng, three in Limpopo, and one each in Mpumalanga and North West).

SOUTH AFRICA WEEK 25 2021

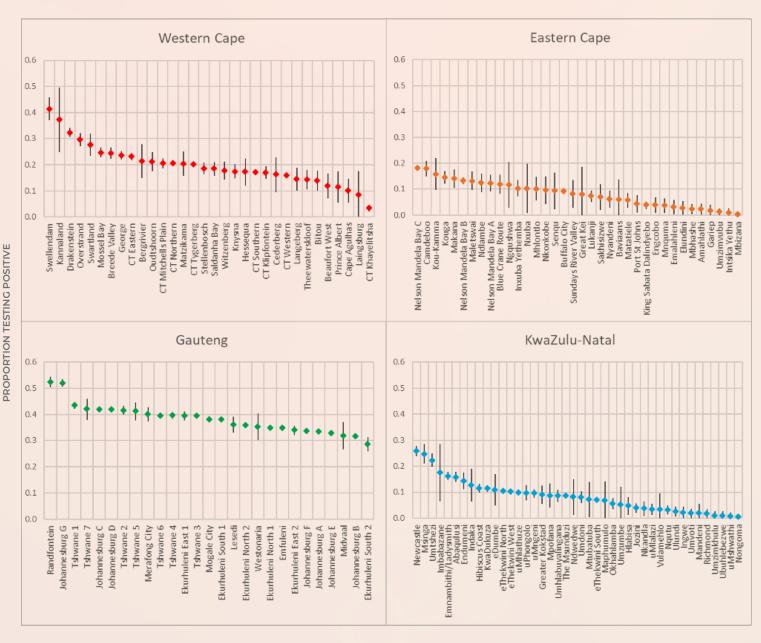
**Table 6.** Health sub-districts with the highest proportion testing positive based on public and private sector data for the week of20-26 June 2021

Health district or sub-district	Province	PTP (95% CI)	Previous week
Greater Taung	North West	0.687 (0.553-0.822)	0.107 (0.075-0.138)
Makhuduthamaga	Limpopo	0.553 (0.496-0.611)	0.587 (0.476-0.697)
Randfontein	Gauteng	0.524 (0.504-0.544)	0.557 (0.537-0.576)
Johannesburg G	Gauteng	0.520 (0.505-0.535)	0.481 (0.465-0.496)
Modimolle	Limpopo	0.518 (0.445-0.591)	0.239 (0.189-0.289)
Thembisile	Mpumalanga	0.505 (0.454-0.555)	0.322 (0.273-0.372)
Bela-Bela	Limpopo	0.492 (0.411-0.572)	0.443 (0.349-0.538)
Thabazimbi	Limpopo	0.487 (0.455-0.519)	0.371 (0.338-0.405)
Makhado	Limpopo	0.486 (0.451-0.521)	0.351 (0.306-0.397)
Dr JS Moroka	Mpumalanga	0.451 (0.408-0.495)	0.376 (0.313-0.438)
Moretele	North West	0.437 (0.385-0.489)	0.380 (0.311-0.448)
Tshwane 1	Gauteng	0.435 (0.422-0.448)	0.362 (0.348-0.376)
Tshwane 7	Gauteng	0.420 (0.379-0.461)	0.401 (0.353-0.448)
Johannesburg C	Gauteng	0.419 (0.410-0.428)	0.338 (0.329-0.346)
Johannesburg D	Gauteng	0.419 (0.407-0.430)	0.322 (0.310-0.334)
Tshwane 2	Gauteng	0.416 (0.400-0.432)	0.377 (0.359-0.394)
Swellendam	Western Cape	0.414 (0.370-0.458)	0.446 (0.391-0.501)
Lepele-Nkumpi	Limpopo	0.414 (0.371-0.457)	0.332 (0.282-0.381)
Tshwane 5	Gauteng	0.412 (0.378-0.445)	0.437 (0.397-0.476)
Thulamela	Limpopo	0.403 (0.366-0.440)	0.347 (0.290-0.403)
Richtersveld	Northern Cape	0.403 (0.292-0.513)	0.268 (0.161-0.375)
Greater Tubatse	Limpopo	0.401 (0.353-0.450)	0.307 (0.238-0.375)
Merafong City	Gauteng	0.400 (0.374-0.427)	0.344 (0.317-0.370)
Tshwane 6	Gauteng	0.396 (0.385-0.407)	0.363 (0.352-0.375)
Elias Motsoaledi	Limpopo	0.396 (0.339-0.453)	0.281 (0.215-0.347)

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

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

SOUTH AFRICA WEEK 25 2021

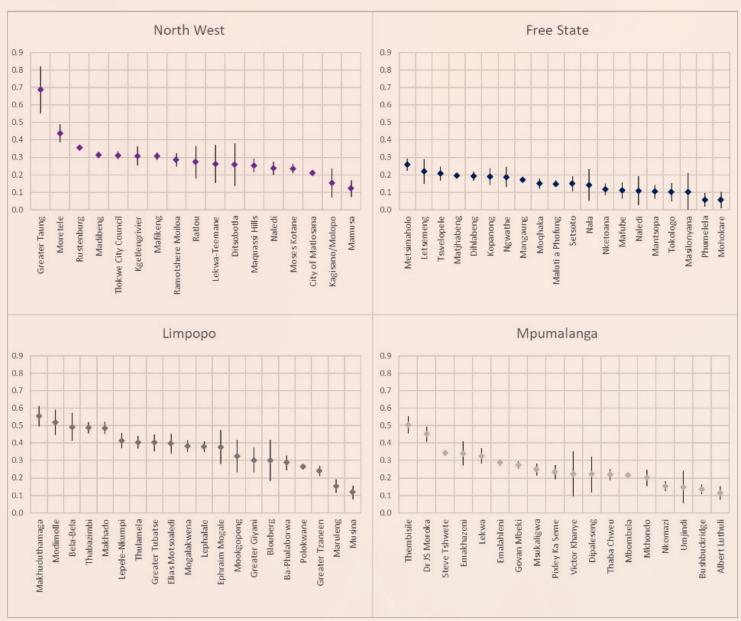


HEALTH SUB-DISTRICT

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 20-26 June 2021.

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SOUTH AFRICA WEEK 25 2021



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 20-26 June 2021.



SOUTH AFRICA WEEK 25 2021

PROPORTION TESTING POSITIVE

Northern Cape 0.6 0.5 0.4 0.3 0.2 ł 0.1 0.0 !Kheis /Khara Hais Phokwane Kareeberg Thembelihle Dikgatlong Ga-Segonyana Nama Khoi Ubuntu Khâi-Ma loe Morolong Kai !Garib Sol Plaatjie Emthanjeni Siyancuma Karoo Hoogland Tsantsabane **Reno sterberg** Um sobomvu Kamiesberg Siyathemba Hantam Kgatelopele

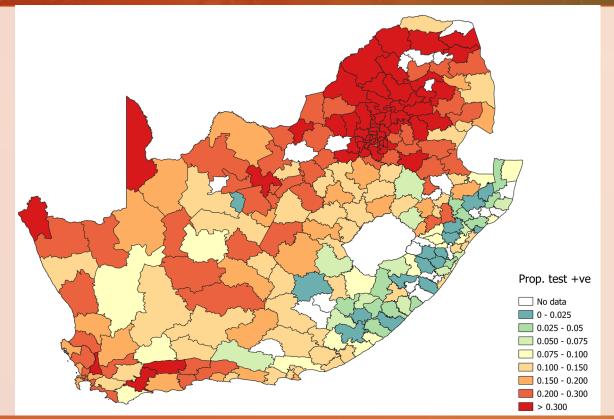
HEALTH SUB-DISTRICT

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 20-26 June 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).



SOUTH AFRICA WEEK 25 2021



**Figure 10.** Proportion testing positive by health sub-district in South Africa for the week of 20-26 June 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%.

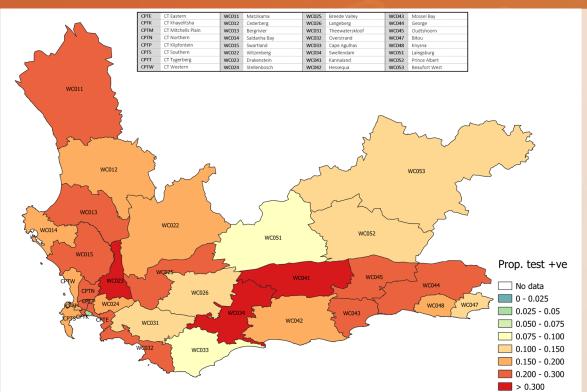
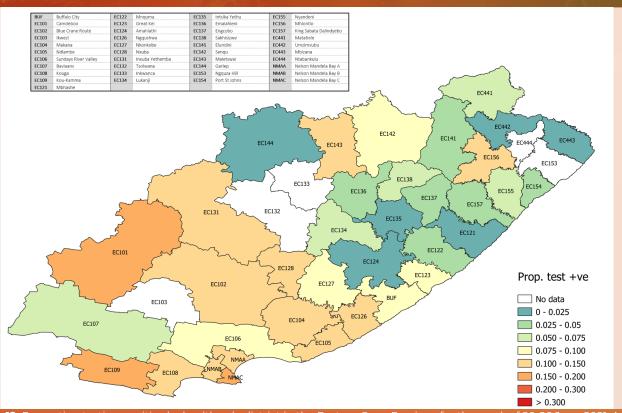


Figure 11. Proportion testing positive by health sub-district in the Western Cape Province for the week of 20-26 June 2021. Areas shaded white represent districts in which either (i) no tests were reported, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%

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SOUTH AFRICA WEEK 25 2021



**Figure 12.** Proportion testing positive by health sub-district in the Eastern Cape Province for the week of 20-26 June 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%.

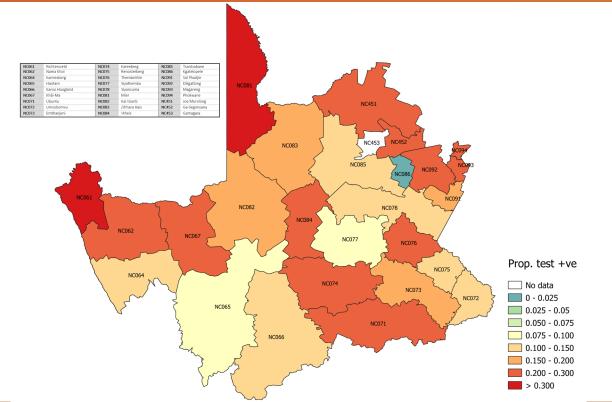
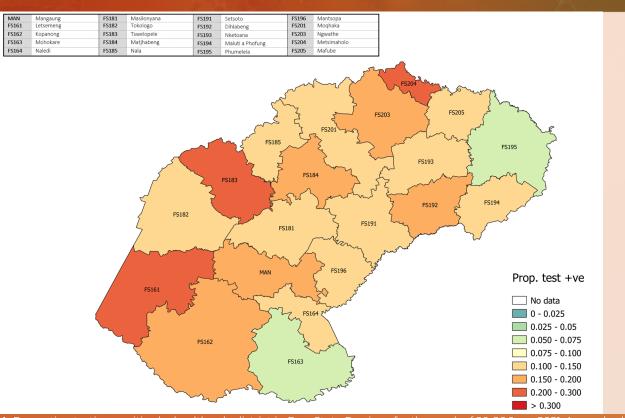


Figure 13. Proportion testing positive by health sub-district in Northern Cape Province for the week of 20-26 June 2021. Areas shaded white represent districts in which either (i) no tests were reported, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

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SOUTH AFRICA | WEEK 25 2021



**Figure 14.** Proportion testing positive by health sub-district in Free State Province for the week of 20-26 June 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%.

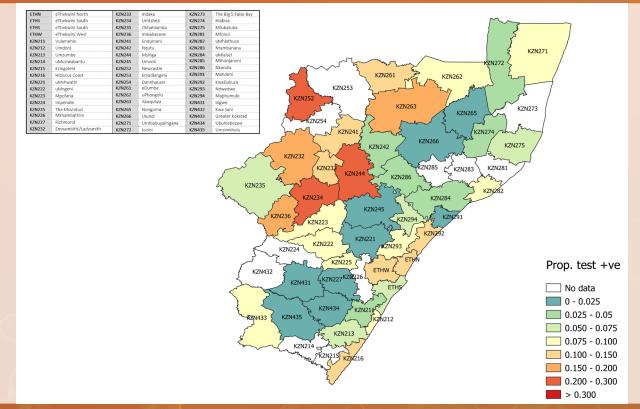


Figure 15. Proportion testing positive by health sub-district in KwaZulu-Natal Province for the week of 20-26 June 2021. Areas shaded white represent districts in which either (i) no tests were reported, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

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#### SOUTH AFRICA WEEK 25 2021

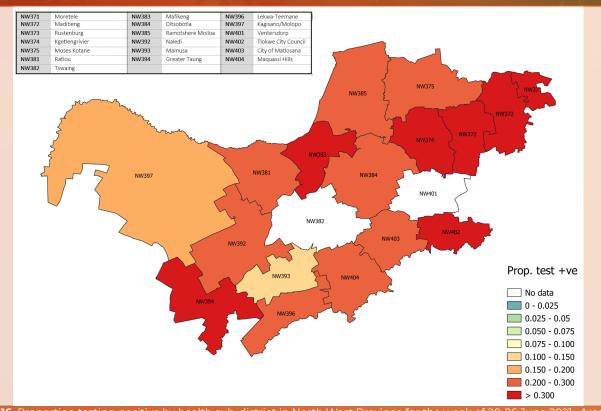


Figure 16. Proportion testing positive by health sub-district in North West Province for the week of 20-26 June 2021. Areas shaded white represent districts in which either (i) no tests were reported, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

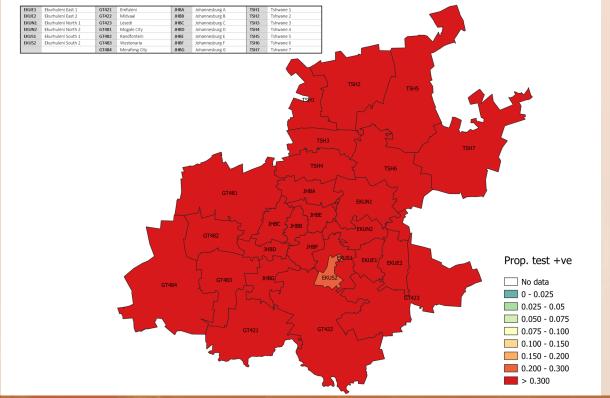
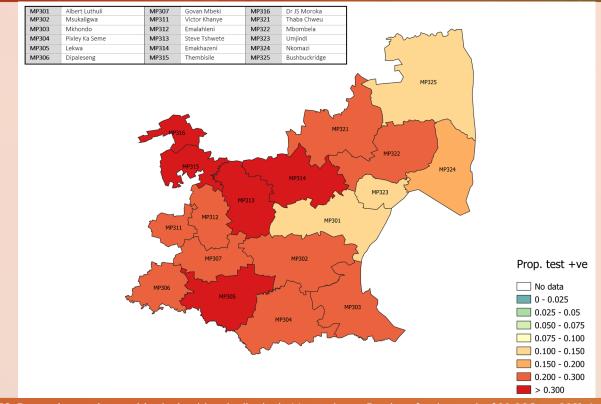


Figure 17. Proportion testing positive by health sub-district in Gauteng Province for the week of 20-26 June 2021. Areas shaded white represent districts in which either (i) no tests were reported, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

SOUTH AFRICA WEEK 25 2021



**Figure 18.** Proportion testing positive by health sub-district in Mpumalanga Province for the week of 20-26 June 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%.

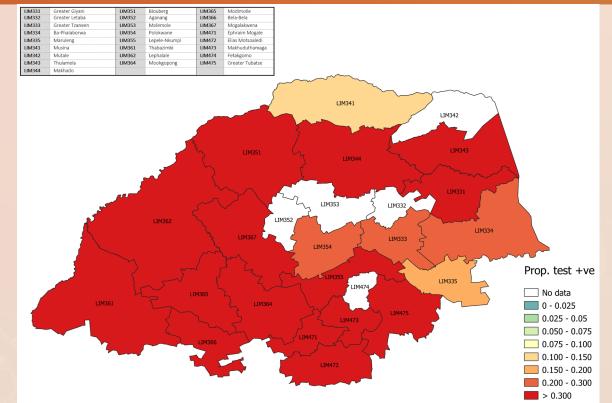


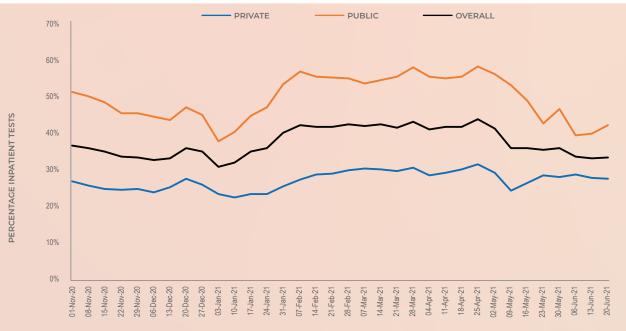
Figure 19. Proportion testing positive by health sub-district in Limpopo Province for the week of 20-26 June 2021. Areas shaded white represent districts in which either (i) no tests were reported, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

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SOUTH AFRICA WEEK 25 2021

#### Testing by patient admission status

In week 25 of 2021, 33.2% of reported tests were for hospitalised patients; 41.9% in the public sector and 27.3% in the private sector (Figure 20). The percentage testing positive in week 25 was higher among outpatients (29.6%) compared to inpatients (22.4%), with increases continuing to be observed in both groups (Figure 21). In week 25 the mean laboratory turnaround time for PCR tests in the public sector was higher among outpatients (2.2 days) compared to inpatients (1.5 days) (Figure 22).



WEEK START DATE OF SPECIMEN COLLECTION

Figure 20. Percentage of inpatient tests reported by health sector, 1 November 2020 – 26 June 2021



Figure 21. Percentage testing positive by patient admission status, 2 May – 26 June 2021

SOUTH AFRICA WEEK 25 2021



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, 30 May – 26 June 2021

#### Testing by age and sex

The mean age of individuals tested in week 25 of 2021 was 38.2 years, and was similar for males (38.2 years) and females (38.3 years). The majority of reported tests (58.2%) were in individuals in the 20-49 years' age group although the distribution of tests was slightly skewed towards younger age groups in females compared to males (Figure 23). In week 25, the testing rate was higher in females (678 per 100,000 persons) than in

males (602 per 100,000 persons) (Figure 24). Testing rates in week 25 were highest in the 50-54 years age group (1164 per 100,000 persons). The percentage testing positive was highest in individuals aged 50-54, 55-59 and 75-79 years (31.0%). In males, the percentage testing positive was highest in individuals aged 75-79 years (31.3%). In females, the highest percentage testing positive was observed in individuals aged 50-54 and 55-59 years (32.1%).

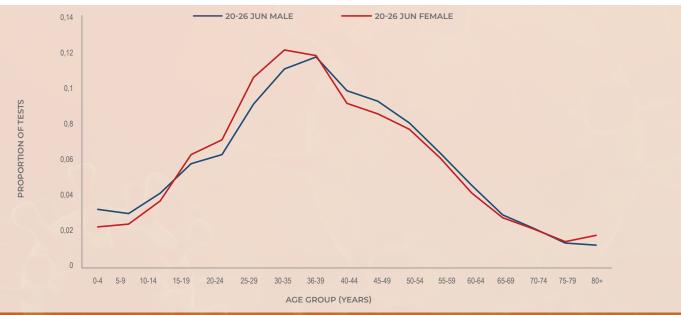
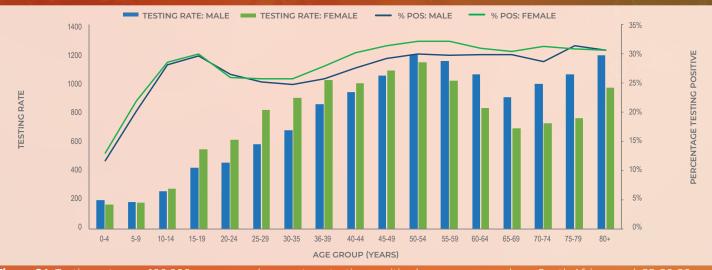


Figure 23. Proportion of tests by age group and sex, South Africa, week 25, 20-26 June 2021

SOUTH AFRICA WEEK 25 2021

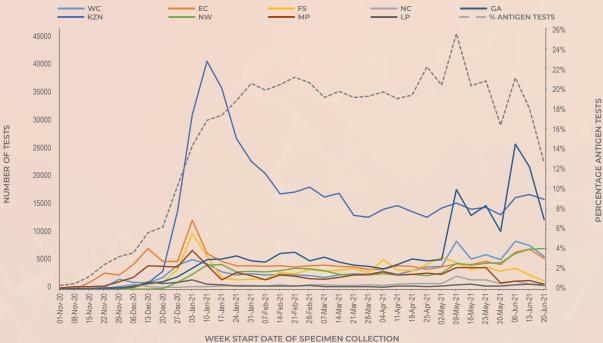


**Figure 24.** Testing rates per 100,000 persons and percentage testing positive by age group and sex, South Africa, week 25, 20-26 June 2021

#### Testing by test type

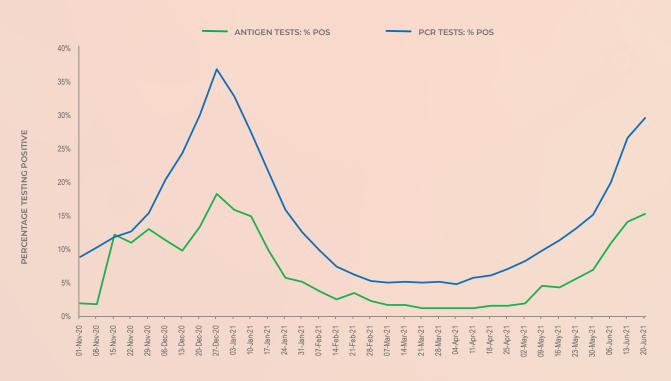
Up to the end of week 25 of 2021, 9.6% (1,239,925/12,923,183) of all reported tests were antigen tests. In week 25, 12.6% (48,860/388,931) of reported tests were antigen tests (Figure 25). Overall, 79.9% of antigen tests have been performed in the public sector, and in week 25 the public sector accounted for 75.0% (36,645/48,860) of antigen tests. Since antigen testing began in November 2020, the majority of antigen tests have been reported from KwaZulu-Natal (38.0%), Gauteng (16.5%) and Eastern Cape (11.6%) provinces. In the past few weeks, KwaZulu-Natal and

Gauteng have performed the highest weekly number of antigen tests. The percentage testing positive was higher for PCR tests compared to antigen tests, and in week 25 it was 29.3% for PCR tests and 15.1% for antigen tests (Figure 26). The mean turnaround time for antigen tests reported in week 25 was 7.2 days in the public sector and remained at 0.1 days in the private sector (Figure 27). The number of antigen tests reported is likely underestimated as antigen tests are increasingly being used outside of laboratory settings and results may not be reported or reporting may be delayed. In addition, if only positive antigen tests were reported, this would have resulted in an overestimation of percentage testing positive.



**Figure 25.** Number of antigen tests by province, and overall percentage antigen tests, South Africa, 1 November 2020 – 26 June 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

SOUTH AFRICA WEEK 25 2021



WEEK START DATE OF SPECIMEN COLLECTION

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

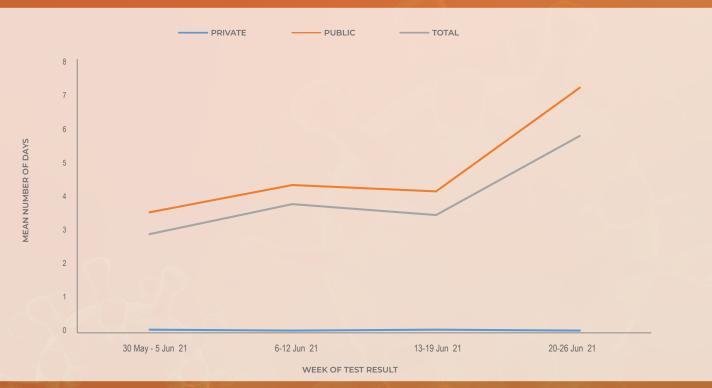


Figure 27. Mean number of days between date of specimen collection and date of test result for antigen tests, by week of test result, South Africa, 30 May- 26 June 2021

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#### Limitations

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

### CONCLUSIONS

The number of tests reported in week 25 (n= 388,931) was higher than the weekly number of tests reported since mid-January 2021. Gauteng (46.9%), Western Cape (14.2%) and KwaZulu-Natal (12.2%) provinces reported the largest number of tests in week 25. The overall testing rate in week 25 was 652 per 100,000 persons; highest in Gauteng (1177 per 100,000 persons) and lowest in Limpopo (225 per 100,000 persons). Testing rates have decreased in the Northern Cape and Free State. Antigen tests accounted for 12.6% (48,860/388,931) of all tests reported in week 25, however the number of antigen tests is likely underestimated due to under-reporting and delayed reporting of antigen tests. The overall mean laboratory turnaround time for PCR tests was 1.2 days in week 25; 1.9 days in the public sector and 0.8 days in the private sector.

The percentage testing positive continued to increase and in week 25 of 2021, the percentage testing positive was 27.5%, which increased by 3.4% compared to the previous week. The percentage testing positive in week 25 was highest in Gauteng (36.8%), Limpopo (35.5%), North West (30.6%) and Mpumalanga (26.0%) provinces. The percentage testing positive was between 10% and 20% in the Free State, Northern Cape, Western Cape, Eastern Cape and KwaZulu-Natal provinces. Compared to the previous week, the percentage testing positive in week 25 remained the same in the Free State, decreased in the Northern Cape and increased significantly in all other provinces.