

COVID-19 TESTING SUMMARY



NATIONAL INSTITUTE FOR
COMMUNICABLE DISEASES

Division of the National Health Laboratory Service

SOUTH AFRICA WEEK 18 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 8 May 2021 (Week 18 of 2021).

HIGHLIGHTS

- In the period 1 March 2020 through 8 May 2021, 10,796,360 tests (9,994,082 PCR and 802,278 antigen tests) for SARS-CoV-2 have been reported nationally.
- Although higher than the previous week, the number of tests reported in week 18 of 2021 (n=174,693) was similar to the volume of tests reported in recent weeks.
- The testing rate in week 18 was 293 per 100,000 persons; highest in the Northern Cape (550 per 100,000 persons) and lowest in Limpopo (65 per 100,000 persons).
- In week 18 the percentage testing positive was 7.2%, higher than the previous few weeks.
- The percentage testing positive in week 18 was highest in the Northern Cape (25.4%), Free State (17.4%) and North West (13.4%) provinces. The percentage testing positive was <9% in all other provinces.
- In week 18, compared to the previous week, the percentage testing positive increased in the Northern Cape, Free State, Western Cape, Gauteng, Kwazulu-Natal, Northwest and Mpumalanga. The percentage testing positive was unchanged in the Eastern Cape and Limpopo provinces.
- Mean laboratory turnaround time for PCR tests reported in week 18 was 0.9 days; 1.5 days in the public sector and 0.6 days in the private sector.

COVID-19 TESTING SUMMARY

SOUTH AFRICA | WEEK 18 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 (NMCCSS). Date of specimen receipt in the laboratory was used when date of specimen collection was missing. Proportion testing positive (PTP) was calculated as the number of positive tests/total number of tests and presented as percentage by multiplying with 100. We used 2020 mid-year population estimates from Statistics South Africa to calculate the testing rate, expressed as tests per 100,000 persons. Patient admission status for

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

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

The report includes tests reported between 1 March 2020 (week 10 of 2020), the week when the first case of COVID-19 was confirmed, and 8 May 2021 (week 18 of 2021).

Testing volumes and proportion testing positive

From 1 March 2020 through 8 May 2021, 10,796,360 SARS-CoV-2 tests were reported; 9,994,082 PCR and 802,278 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=307,911), and subsequently decreased. Weekly testing volumes increased again from week 48 (beginning 22 November 2020), with the highest weekly number of tests since the start of the pandemic reported in week 1 of 2021 (n=500,944). In week 18 of 2021, 174,693 tests were reported, higher than the previous week but similar to the weekly testing volumes over recent weeks. All tests for samples collected in the previous week may not yet be reflected. Reduced testing volumes were observed over weekends and public holidays (Figure 1).

COVID-19 TESTING SUMMARY

SOUTH AFRICA WEEK 18 2021

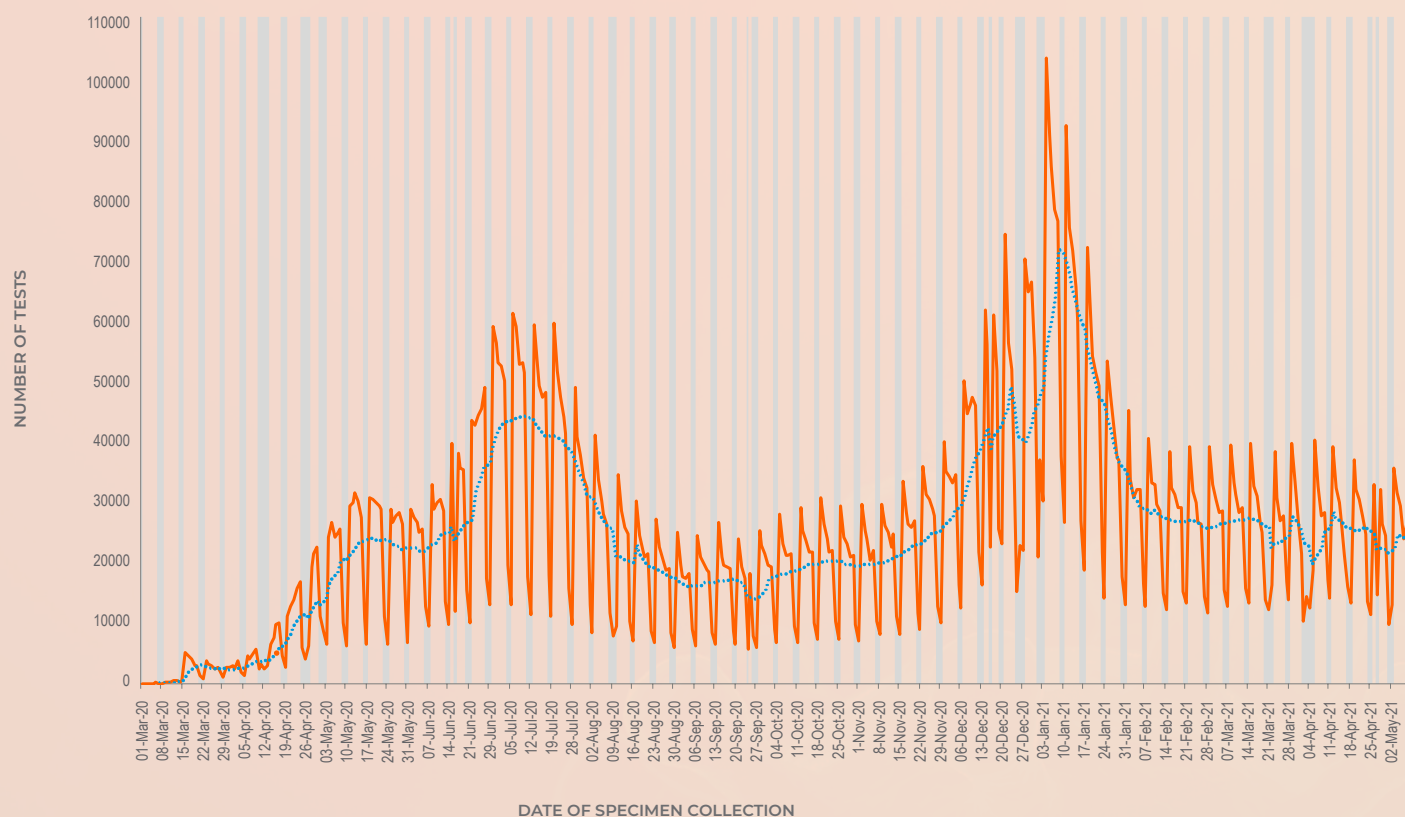


Figure 1. Number of SARS-CoV-2 tests reported by date of specimen collection, South Africa, 1 March 2020 – 8 May 2021. Blue dotted line shows the 7-day moving average of the number of tests reported. Grey bars highlight weekend days and public holidays.

The overall percentage testing positive from week 10 of 2020 through week 18 of 2021 was 15.6% (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 18 of 2021 was 7.2%, higher than observed in the previous week (6.0%, $P < 0.001$) (Figure 2).

COVID-19 TESTING SUMMARY

SOUTH AFRICA | WEEK 18 2021

Table 1. Weekly number of SARS-CoV-2 tests and positive tests reported, South Africa, 1 March 2020 – 8 May 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	2382 (0.0)	103	4.3
12	15-Mar-20	21567 (0.2)	897	4.2
13	22-Mar-20	17544 (0.2)	544	3.1
14	29-Mar-20	18248 (0.2)	521	2.9
15	05-Apr-20	26299 (0.2)	796	3.0
16	12-Apr-20	43752 (0.4)	1295	3.0
17	19-Apr-20	79176 (0.7)	2177	2.7
18	26-Apr-20	93810 (0.9)	3205	3.4
19	03-May-20	142708 (1.3)	6018	4.2
20	10-May-20	165374 (1.5)	8092	4.9
21	17-May-20	166542 (1.5)	11379	6.8
22	24-May-20	156137 (1.4)	12967	8.3
23	31-May-20	153569 (1.4)	15079	9.8
24	07-Jun-20	173901 (1.6)	22361	12.9
25	14-Jun-20	186080 (1.7)	32649	17.5
26	21-Jun-20	252096 (2.3)	55049	21.8
27	28-Jun-20	302742 (2.8)	75309	24.9
28	05-Jul-20	307912 (2.9)	86038	27.9
29	12-Jul-20	285599 (2.6)	84927	29.7
30	19-Jul-20	270892 (2.5)	78635	29.0
31	26-Jul-20	216390 (2.0)	58393	27.0
32	02-Aug-20	179572 (1.7)	40996	22.8
33	09-Aug-20	141103 (1.3)	26265	18.6
34	16-Aug-20	135012 (1.3)	21377	15.8
35	23-Aug-20	123342 (1.1)	16333	13.2
36	30-Aug-20	112772 (1.0)	12795	11.3
37	06-Sep-20	117007 (1.1)	11955	10.2
38	13-Sep-20	120726 (1.1)	12018	10.0
39	20-Sep-20	98828 (0.9)	10103	10.2
40	27-Sep-20	123081 (1.1)	11011	8.9
41	04-Oct-20	131063 (1.2)	11782	9.0
42	11-Oct-20	138038 (1.3)	12094	8.8
43	18-Oct-20	142177 (1.3)	12070	8.5
44	25-Oct-20	135847 (1.3)	11478	8.4
45	01-Nov-20	138819 (1.3)	12135	8.7
46	08-Nov-20	147006 (1.4)	14845	10.1
47	15-Nov-20	160642 (1.5)	18762	11.7
48	22-Nov-20	175684 (1.6)	22051	12.6
49	29-Nov-20	203143 (1.9)	30766	15.1
50	06-Dec-20	267913 (2.5)	53310	19.9
51	13-Dec-20	294451 (2.7)	68575	23.3
52	20-Dec-20	284354 (2.6)	81949	28.8
53	27-Dec-20	334302 (3.1)	115726	34.6
1	03-Jan-21	500944 (4.6)	150995	30.1
2	10-Jan-21	417825 (3.9)	104764	25.1
3	17-Jan-21	327256 (3.0)	63231	19.3

COVID-19 TESTING SUMMARY

SOUTH AFRICA | WEEK 18 2021

4	24-Jan-21	249342 (2.3)	34613	13.9
5	31-Jan-21	203352 (1.9)	22316	11.0
6	07-Feb-21	192314 (1.8)	16437	8.5
7	14-Feb-21	187318 (1.7)	12123	6.5
8	21-Feb-21	181417 (1.7)	10351	5.7
9	28-Feb-21	186241 (1.7)	8658	4.6
10	07-Mar-21	189641 (1.8)	8300	4.4
11	14-Mar-21	181894 (1.7)	8114	4.5
12	21-Mar-21	168811 (1.6)	7318	4.3
13	28-Mar-21	159968 (1.5)	7030	4.4
14	04-Apr-21	177289 (1.6)	7242	4.1
15	11-Apr-21	179980 (1.7)	8769	4.9
16	18-Apr-21	178738 (1.7)	9378	5.2
17	25-Apr-21	151279 (1.4)	9063	6.0
18	02-May-21	174693 (1.6)	12595	7.2
Total		10796360(100.0)	1686140	15.6

COVID-19 TESTING SUMMARY

SOUTH AFRICA WEEK 18 2021

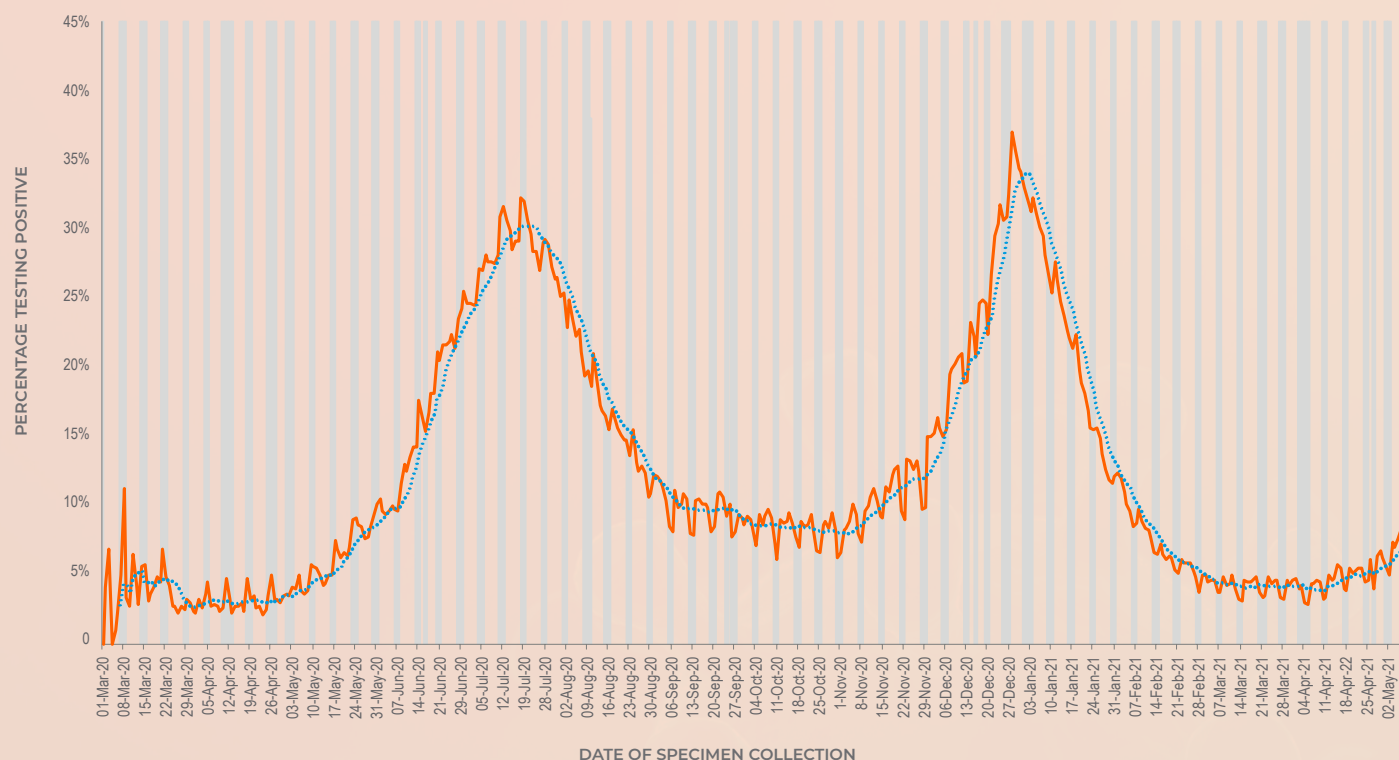


Figure 2. Percentage of tests positive for SARS-CoV-2 by date of specimen collection, South Africa, 1 March 2020 – 8 May 2021. Blue dotted line shows the 7-day moving average of the percentage testing positive. Grey bars highlight weekend days and public holidays.

Testing in private and public sectors

From 1 March 2020 through 8 May 2021, 4,737,536 tests were reported in the public sector, with 16.2% testing positive. Over this same period, the private sector reported 6,058,824 tests, with 15.2% testing positive (Table 2). Overall, the public sector has reported 43.9% of tests and accounted for 45.4% 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 17 to week 18 of 2021, the percentage testing positive increased in the public sector (6.2% in week 17 to 7.1% in week 18, $P<0.001$) and in the private sector (5.9%

in week 17 to 7.3% in week 18, $P<0.001$). In week 18 of 2021 the percentage testing positive was similar in the private sector (7.3%) and public sector (7.1%) ($P=0.108$).

The mean turnaround time for PCR tests reported in week 18 of 2021 was 0.9 days; 1.5 days in the public sector and 0.6 days in the private sector (Figure 3). Turnaround times for public sector PCR tests were ≤ 2 days in all provinces except the Free State (2.2 days) in week 18 (Figure 4). Increases in turnaround time were observed in North West in the past week. Twenty-three of the 28 (82.1%) NHLS laboratories performing PCR testing for SARS-CoV-2 had turnaround times ≤ 2 days in week 18 (Figure 5).

COVID-19 TESTING SUMMARY

SOUTH AFRICA | WEEK 18 2021

Table 2. Weekly number of tests and positive tests reported, by healthcare sector, South Africa, 1 March 2020 – 8 May 2021

Week number	Week beginning	Public sector		Private sector		Public sector percentage of		Ratio of PTP ^a
		Tests	Cases n (%)	Tests	Positive tests n (%)	Tests (%)	Positive tests (%)	
10	01-Mar-20	294	10 (3.4)	162	3 (1.9)	64.5	76.9	1.837
11	08-Mar-20	401	27 (6.7)	1981	76 (3.8)	16.8	26.2	1.755
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)	14066	395 (2.8)	19.8	27.4	1.526
14	29-Mar-20	5868	194 (3.3)	12380	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)	26341	752 (2.9)	71.9	76.5	1.274
19	03-May-20	94338	4507 (4.8)	48370	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)	67894	4348 (6.4)	59.2	61.8	1.113
22	24-May-20	77597	6411 (8.3)	78540	6556 (8.3)	49.7	49.4	0.990
23	31-May-20	63945	6626 (10.4)	89624	8453 (9.4)	41.6	43.9	1.099
24	07-Jun-20	64655	8039 (12.4)	109246	14322 (13.1)	37.2	36.0	0.948
25	14-Jun-20	61149	11982 (19.6)	124931	20667 (16.5)	32.9	36.7	1.184
26	21-Jun-20	90454	20425 (22.6)	161642	34624 (21.4)	35.9	37.1	1.054
27	28-Jun-20	106370	27244 (25.6)	196372	48065 (24.5)	35.1	36.2	1.046
28	05-Jul-20	117727	32239 (27.4)	190185	53799 (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	105215	30319 (28.8)	165677	48316 (29.2)	38.8	38.6	0.988
31	26-Jul-20	81246	22782 (28.0)	135144	35611 (26.4)	37.5	39.0	1.064
32	02-Aug-20	70566	16996 (24.1)	109006	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)	78874	11756 (14.9)	41.6	45.0	1.150
35	23-Aug-20	50319	7790 (15.5)	73023	8543 (11.7)	40.8	47.7	1.323
36	30-Aug-20	45421	6096 (13.4)	67351	6699 (9.9)	40.3	47.6	1.349
37	06-Sep-20	51055	6421 (12.6)	65952	5534 (8.4)	43.6	53.7	1.499
38	13-Sep-20	53706	6547 (12.2)	67020	5471 (8.2)	44.5	54.5	1.493
39	20-Sep-20	44841	5530 (12.3)	53987	4573 (8.5)	45.4	54.7	1.456
40	27-Sep-20	48629	5568 (11.4)	74452	5443 (7.3)	39.5	50.6	1.566
41	04-Oct-20	50434	5689 (11.3)	80629	6093 (7.6)	38.5	48.3	1.493
42	11-Oct-20	53451	5702 (10.7)	84587	6392 (7.6)	38.7	47.1	1.412
43	18-Oct-20	56122	6044 (10.8)	86055	6026 (7.0)	39.5	50.1	1.538
44	25-Oct-20	51285	5721 (11.2)	84562	5757 (6.8)	37.8	49.8	1.639
45	01-Nov-20	52998	6061 (11.4)	85821	6074 (7.1)	38.2	49.9	1.616
46	08-Nov-20	58913	8097 (13.7)	88093	6748 (7.7)	40.1	54.5	1.794
47	15-Nov-20	67582	10584 (15.7)	93060	8178 (8.8)	42.1	56.4	1.782
48	22-Nov-20	74572	12199 (16.4)	101112	9852 (9.7)	42.4	55.3	1.679
49	29-Nov-20	81268	15730 (19.4)	121875	15036 (12.3)	40.0	51.1	1.569
50	06-Dec-20	107909	24715 (22.9)	160004	28595 (17.9)	40.3	46.4	1.282
51	13-Dec-20	117211	29815 (25.4)	177240	38760 (21.9)	39.8	43.5	1.163
52	20-Dec-20	109838	34124 (31.1)	174516	47825 (27.4)	38.6	41.6	1.134
53	27-Dec-20	151621	52930 (34.9)	182681	62796 (34.4)	45.4	45.7	1.016
1	03-Jan-21	236857	71045 (30.0)	264087	79950 (30.3)	47.3	47.1	0.991
2	10-Jan-21	203954	52946 (26.0)	213871	51818 (24.2)	48.8	50.5	1.071
3	17-Jan-21	165594	34446 (20.8)	161662	28785 (17.8)	50.6	54.5	1.168
4	24-Jan-21	123163	18979 (15.4)	126179	15634 (12.4)	49.4	54.8	1.244
5	31-Jan-21	99541	12028 (12.1)	103811	10288 (9.9)	49.0	53.9	1.219
6	07-Feb-21	91142	8484 (9.3)	101172	7953 (7.9)	47.4	51.6	1.184
7	14-Feb-21	86017	6628 (7.7)	101301	5495 (5.4)	45.9	54.7	1.421
8	21-Feb-21	82218	5769 (7.0)	99199	4582 (4.6)	45.3	55.7	1.519
9	28-Feb-21	87667	4660 (5.3)	98574	3998 (4.1)	47.1	53.8	1.311
10	07-Mar-21	91940	4565 (5.0)	97701	3735 (3.8)	48.5	55.0	1.299
11	14-Mar-21	89425	4415 (4.9)	92469	3699 (4.0)	49.2	54.4	1.234
12	21-Mar-21	75803	3437 (4.5)	93008	3881 (4.2)	44.9	47.0	1.087

COVID-19 TESTING SUMMARY

SOUTH AFRICA WEEK 18 2021

13	28-Mar-21	70317	3439 (4.9)	89651	3591 (4.0)	44.0	48.9	1.221
14	04-Apr-21	77262	3329 (4.3)	100027	3913 (3.9)	43.6	46.0	1.101
15	11-Apr-21	83451	4314 (5.2)	96529	4455 (4.6)	46.4	49.2	1.120
16	18-Apr-21	77786	4640 (6.0)	100952	4738 (4.7)	43.5	49.5	1.271
17	25-Apr-21	65455	4039 (6.2)	85824	5024 (5.9)	43.3	44.6	1.054
18	02-May-21	67432	4777 (7.1)	107261	7818 (7.3)	38.6	37.9	0.972
Total		4737536	765121 (16.2)	6058824	921019 (15.2)	43.9	45.4	1.062

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

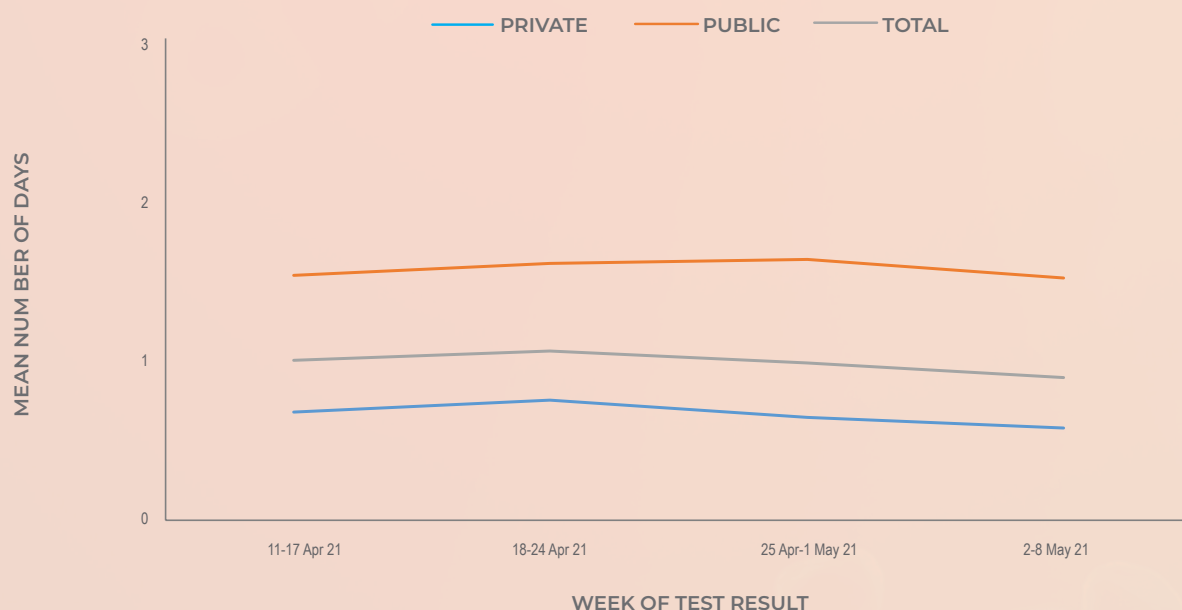


Figure 3. Mean number of days between date of specimen collection and date of test result for PCR tests, by week of test result, South Africa, 11 April – 8 May 2021

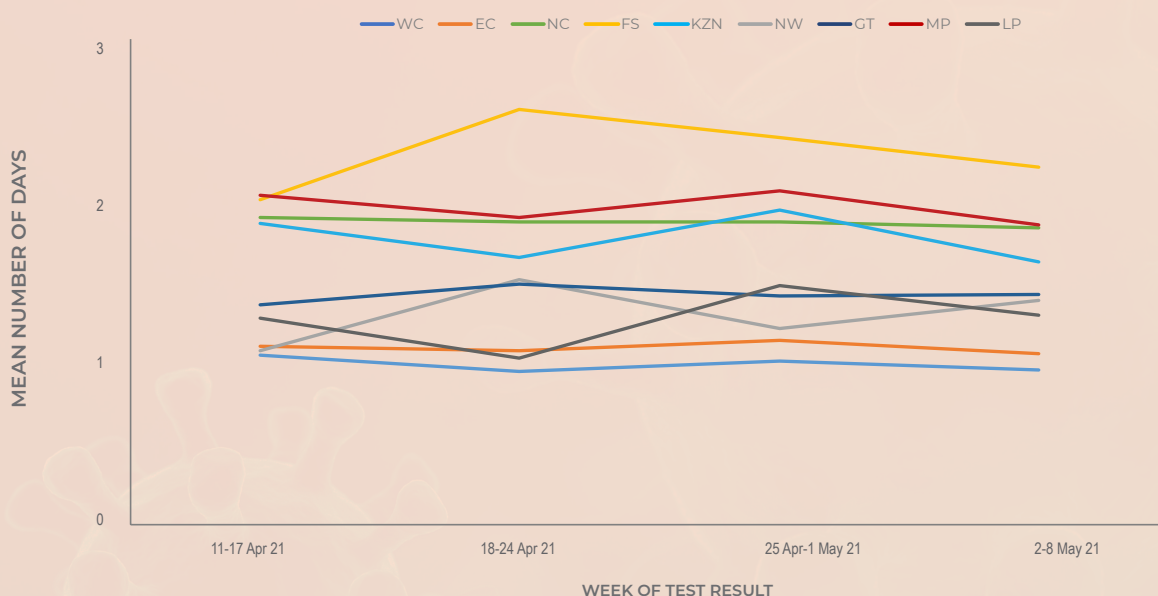


Figure 4. Mean number of days between date of specimen collection and date of test result for PCR tests, by week of test result and province, public sector, South Africa, 11 April – 8 May 2021. WC, Western Cape; EC, Eastern Cape; FS, Free State; KZN, KwaZulu-Natal; GT, Gauteng; NC, Northern Cape; NW, North West; MP, Mpumalanga; LP, Limpopo

COVID-19 TESTING SUMMARY

SOUTH AFRICA

WEEK 18 2021

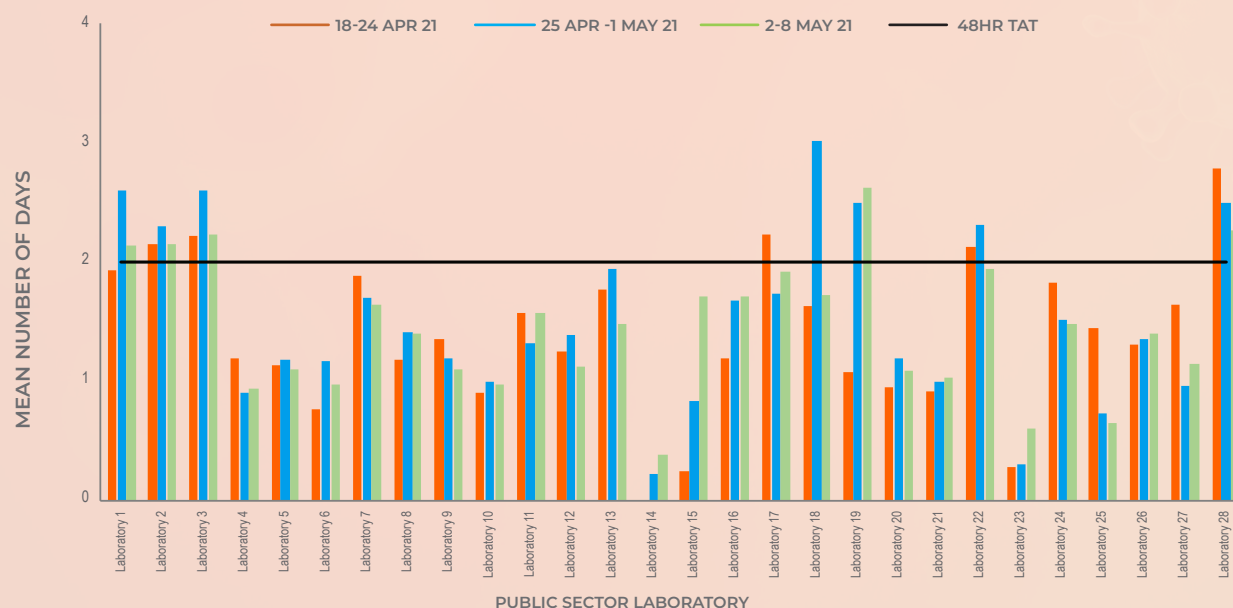


Figure 5. Mean number of days between date of specimen collection and date of test result for PCR tests, by public sector laboratory, 18 April - 8 May 2021. The horizontal black line indicates 48-hour turnaround time (TAT).

Testing by province

The majority of tests continued to be reported in Gauteng (34.3%), KwaZulu-Natal (17.6%) and Western Cape (16.6%) provinces in week 18 of 2021 (Table 3). The overall testing rate increased from 239 per 100,000 persons in week 17 to 293 per 100,000 in week 18. The testing rate ranged from 550 per 100,000 persons in the Northern Cape to 65 per 100,000 persons in Limpopo (Figure 6). Testing rates increased in all provinces in the past week except in Mpumalanga where they continued to decrease.

The percentage testing positive in week 18 was highest in the Northern Cape (25.4%), Free State (17.4%) and

North West (13.4%) provinces (Figure 7 and Table 3). The percentage testing positive was <9% in all other provinces in week 18. Compared to the previous week, the percentage testing positive in week 18 increased in the Northern Cape (by 3.1%, $P<0.001$), Free State (by 1.8%, $P<0.001$), Western Cape (by 0.7%, $P<0.001$), Gauteng (by 1.3%, $P<0.001$), Mpumalanga (by 2.9%, $P<0.001$), North West (by 1.1%, $P=0.027$) and KwaZulu-Natal (by 0.3%, $P=0.018$). The percentage testing positive was unchanged in the Eastern Cape ($P=0.841$) and Limpopo ($P=0.118$) provinces. The percentage testing positive was higher than the national average, not weighted for population size, in the Northern Cape, Free State, North West and Mpumalanga (Figure 7).

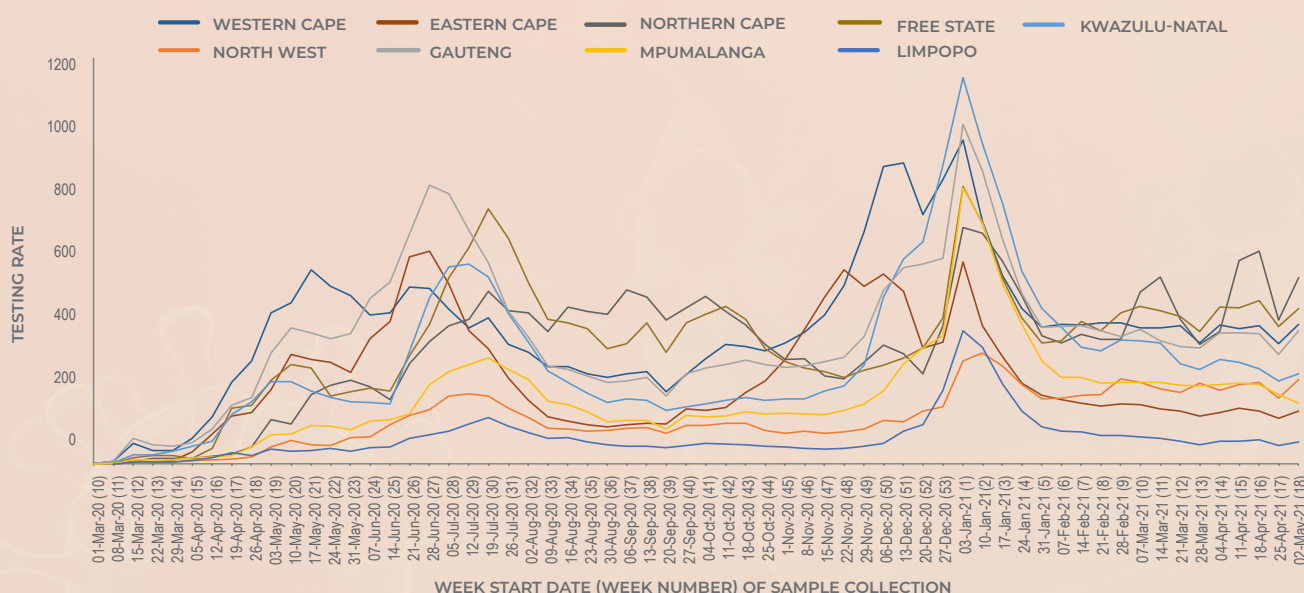


Figure 6. Testing rate per 100,000 persons by province and week of specimen collection, South Africa, 1 March 2020 – 8 May 2021

COVID-19 TESTING SUMMARY

SOUTH AFRICA WEEK 18 2021

Table 3. Weekly number of tests and positive tests reported, by province, South Africa, 18 April – 8 May 2021

Province	Population ^a	18-24 Apr 2021		25 Apr-1 May 2021		2-8 May 2021		Tests per 100,000 persons	Change in percentage positive ^b
		No. of tests	No. positive tests (%)	No. of tests	No. positive tests (%)	No. of tests	No. positive tests (%)		
Western Cape	7005741	28596	995 (3.5)	24914	978 (3.9)	28953	1335 (4.6)	413	0.7%
Eastern Cape	6734001	10486	147 (1.4)	9041	142 (1.6)	10581	170 (1.6)	157	0.0%
Northern Cape	1292786	8128	1331 (16.4)	5497	1226 (22.3)	7115	1806 (25.4)	550	3.1%
Free State	2928903	14114	1836 (13.0)	11887	1858 (15.6)	13428	2334 (17.4)	458	1.8%
KwaZulu-Natal	11531628	32393	589 (1.8)	28411	500 (1.8)	30819	624 (2.0)	267	0.3%
North West	4108816	9869	1129 (11.4)	8001	987 (12.3)	10266	1380 (13.4)	250	1.1%
Gauteng	15488137	59719	2440 (4.1)	50281	2608 (5.2)	60984	3964 (6.5)	394	1.3%
Mpumalanga	4679786	10985	713 (6.5)	9586	577 (6.0)	8442	749 (8.9)	180	2.9%
Limpopo	5852553	4231	192 (4.5)	3239	160 (4.9)	3785	219 (5.8)	65	0.8%
Unknown		217	6 (2.8)	422	27 (6.4)	320	14 (4.4)		
Total	59622350	178738	9378 (5.2)	151279	9063 (6.0)	174693	12595 (7.2)	293	1.2%

^a 2020 Mid-year population Statistics SA

^b Current week compared to previous week



Figure 7. Weekly percentage testing positive, by province, South Africa, 18 April – 8 May 2021. The horizontal blue line shows the national mean for week 18, beginning 2 May 2021

Testing in the public sector

In the public sector, the percentage testing positive increased in the past week (6.2% in week 17 to 7.1% in week 18, $P < 0.001$) (Table 4). The percentage testing positive in week 18 was highest in the Northern Cape

(25.2%), Free State (16.2%) and North West (15.7%) provinces. The percentage testing positive in the public sector remains higher than the national average, not weighted for population size, in the Northern Cape, Free State, North West and Mpumalanga provinces (Figure 8).

COVID-19 TESTING SUMMARY

SOUTH AFRICA WEEK 18 2021

Table 4. Weekly number of tests and positive tests reported in the public sector, by province, South Africa, 18 April – 8 May 2021

Province	18-24 Apr 2021		25 Apr-1 May 2021		2-8 May 2021	
	No. of tests	No. positive tests (%)	No. of tests	No. positive tests (%)	No. of tests	No. positive tests (%)
Western Cape	8929	340 (3.8)	7287	258 (3.5)	8359	388 (4.6)
Eastern Cape	6324	58 (0.9)	5467	68 (1.2)	6054	64 (1.1)
Northern Cape	5599	834 (14.9)	3440	767 (22.3)	3946	993 (25.2)
Free State	8136	1038 (12.8)	6678	926 (13.9)	6014	974 (16.2)
KwaZulu-Natal	21061	396 (1.9)	18609	276 (1.5)	19018	334 (1.8)
North West	4273	617 (14.4)	3547	521 (14.7)	4192	660 (15.7)
Gauteng	16912	924 (5.5)	14147	881 (6.2)	15808	1060 (6.7)
Mpumalanga	5424	359 (6.6)	5043	259 (5.1)	2927	228 (7.8)
Limpopo	1120	73 (6.5)	956	63 (6.6)	1002	67 (6.7)
Unknown	8	1 (0.0)	281	20 (0.0)	112	9 (8.0)
Total	77786	4640 (6.0)	65455	4039 (6.2)	67432	4777 (7.1)



Figure 8. Weekly percentage testing positive in the public sector, by province, South Africa, 18 April – 8 May 2021. The horizontal blue line shows the national mean for week 18 of 2021, beginning 2 May 2021.

Facilities with high proportions testing positive

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 2 - 8 May 2021, with the highest proportion testing positive nationally.

The distribution of public sector facilities in the table follows the pattern from previous recent weeks. Fourteen of the 25 facilities showing the highest PTP are in the Northern Cape, four in the Free State, and three in Gauteng.

COVID-19 TESTING SUMMARY

SOUTH AFRICA | WEEK 18 2021

Table 5.1 Public sector healthcare facilities with a high proportion testing positive, 2 – 8 May 2021

Facility Name	Province	Tests	PTP (95% CI)
Facility 1	Northern Cape	55	0.436 (0.305;0.567)
Facility 2	North West	46	0.435 (0.292;0.578)
Facility 3	Northern Cape	53	0.415 (0.282;0.548)
Facility 4	Northern Cape	25	0.400 (0.208;0.592)
Facility 5	Northern Cape	75	0.387 (0.276;0.497)
Facility 6	Mpumalanga	26	0.385 (0.198;0.572)
Facility 7	Northern Cape	149	0.383 (0.305;0.461)
Facility 8	Free State	29	0.379 (0.203;0.556)
Facility 9	Northern Cape	74	0.378 (0.268;0.489)
Facility 10	Northern Cape	53	0.377 (0.247;0.508)
Facility 11	Northern Cape	80	0.375 (0.269;0.481)
Facility 12	Northern Cape	73	0.370 (0.259;0.481)
Facility 13	Free State	56	0.357 (0.232;0.483)
Facility 14	Northern Cape	45	0.356 (0.216;0.495)
Facility 15	Northern Cape	51	0.353 (0.222;0.484)
Facility 16	Gauteng	37	0.351 (0.198;0.505)
Facility 17	Northern Cape	138	0.341 (0.262;0.420)
Facility 18	Free State	158	0.335 (0.262;0.409)
Facility 19	Northern Cape	76	0.329 (0.223;0.435)
Facility 20	Free State	52	0.327 (0.199;0.454)
Facility 21	Northern Cape	413	0.322 (0.277;0.367)
Facility 22	Mpumalanga	27	0.296 (0.124;0.469)
Facility 23	Gauteng	102	0.294 (0.206;0.383)
Facility 24	Gauteng	41	0.293 (0.153;0.432)
Facility 25	North West	351	0.288 (0.240;0.335)

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 2 – 8 May 2021, with the highest proportion testing positive nationally. Private-sector facilities with high proportions testing positive are concentrated in the Free State (8), with seven in the North West, and six in Gauteng.

COVID-19 TESTING SUMMARY

SOUTH AFRICA | WEEK 18 2021

Table 5.2 Private sector healthcare facilities with a high proportion testing positive, 2 – 8 May 2021

Facility Name	Province	Tests	PTP (95% CI)
Facility 1	North West	207	0.304 (0.242;0.367)
Facility 2	North West	44	0.295 (0.161;0.430)
Facility 3	Free State	98	0.286 (0.196;0.375)
Facility 4	Northern Cape	836	0.273 (0.243;0.303)
Facility 5	North West	48	0.271 (0.145;0.397)
Facility 6	North West	27	0.259 (0.094;0.425)
Facility 7	Gauteng	28	0.250 (0.090;0.410)
Facility 8	Gauteng	60	0.250 (0.140;0.360)
Facility 9	Free State	137	0.248 (0.176;0.321)
Facility 10	Free State	368	0.245 (0.201;0.288)
Facility 11	Free State	99	0.242 (0.158;0.327)
Facility 12	North West	153	0.242 (0.174;0.310)
Facility 13	Gauteng	26	0.231 (0.069;0.393)
Facility 14	Free State	409	0.225 (0.184;0.265)
Facility 15	Gauteng	599	0.224 (0.190;0.257)
Facility 16	North West	41	0.220 (0.093;0.346)
Facility 17	Free State	1072	0.218 (0.194;0.243)
Facility 18	Gauteng	266	0.218 (0.168;0.268)
Facility 19	Northern Cape	60	0.217 (0.112;0.321)
Facility 20	Free State	60	0.217 (0.112;0.321)
Facility 21	Mpumalanga	762	0.209 (0.180;0.238)
Facility 22	Free State	48	0.208 (0.093;0.323)
Facility 23	North West	130	0.208 (0.138;0.277)
Facility 24	Northern Cape	263	0.205 (0.157;0.254)
Facility 25	Gauteng	429	0.203 (0.165;0.241)

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 2 – 8 May 2021 have been located within the spatial framework of the health districts and health sub-districts (in the metros). Estimates of overall prevalence were derived using regression techniques. These estimates were then 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. 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. Districts showing high PTP remain largely as in previous recent weeks: Northern Cape (12), Free State (6) and North West (4) account for 22 of the 25 districts. Six districts (five in the Northern Cape; one in the North West) showed a PTP in the current week in excess of 30%, compared to four in the preceding week. PTP exceeded 20% in 21 districts (12 in the previous week). Significant increases were observed in three districts: Thembelihle, Siyancuma, and Sol Plaatjie in the Northern Cape.

COVID-19 TESTING SUMMARY

SOUTH AFRICA | WEEK 18 2021

Table 6. Health sub-districts with the highest proportion testing positive based on public and private sector data for the week of 2–8 May 2021

Health district or sub-district	Province	PTP (95% CI)	Previous week
Thembelihle	Northern Cape	0.432 (0.313-0.552)	0.160 (0.068-0.253)
Siyancuma	Northern Cape	0.361 (0.295-0.427)	0.164 (0.092-0.236)
Kagisano/Molopo	North West	0.324 (0.245-0.404)	0.178 (0.109-0.247)
Phokwane	Northern Cape	0.316 (0.257-0.374)	0.232 (0.157-0.308)
Sol Plaatjie	Northern Cape	0.307 (0.290-0.323)	0.243 (0.225-0.261)
Ga-Segonyana	Northern Cape	0.305 (0.248-0.362)	0.238 (0.182-0.293)
Modimolle	Limpopo	0.294 (0.145-0.443)	0.160 (0.029-0.291)
Siyathemba	Northern Cape	0.277 (0.237-0.317)	0.241 (0.198-0.285)
Naledi	North West	0.272 (0.221-0.323)	...
Joe Morolong	Northern Cape	0.268 (0.167-0.368)	0.314 (0.197-0.431)
Emthanjeni	Northern Cape	0.253 (0.192-0.314)	0.151 (0.094-0.207)
Hantam	Northern Cape	0.250 (0.126-0.374)	0.353 (0.237-0.469)
Tsantsabane	Northern Cape	0.229 (0.118-0.339)	0.167 (0.060-0.275)
Mafikeng	North West	0.224 (0.200-0.248)	0.220 (0.192-0.248)
Mafube	Free State	0.224 (0.106-0.341)	0.259 (0.139-0.379)
Maquassi Hills	North West	0.221 (0.161-0.280)	0.249 (0.193-0.305)
Dihlabeng	Free State	0.220 (0.193-0.247)	0.206 (0.178-0.234)
Metsimaholo	Free State	0.218 (0.169-0.266)	0.203 (0.153-0.252)
Dikgatlong	Northern Cape	0.213 (0.116-0.310)	0.355 (0.255-0.455)
Magareng	Northern Cape	0.202 (0.137-0.267)	0.142 (0.050-0.233)
Moqhaka	Free State	0.201 (0.157-0.245)	0.186 (0.138-0.233)
Nala	Free State	0.198 (0.092-0.305)	0.133 (0.055-0.211)
Midvaal	Gauteng	0.192 (0.116-0.269)	0.113 (0.043-0.183)
Setsoto	Free State	0.192 (0.124-0.260)	0.272 (0.204-0.340)
Tshwane 7	Gauteng	0.186 (0.127-0.245)	0.151 (0.082-0.221)

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

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

COVID-19 TESTING SUMMARY

SOUTH AFRICA WEEK 18 2021

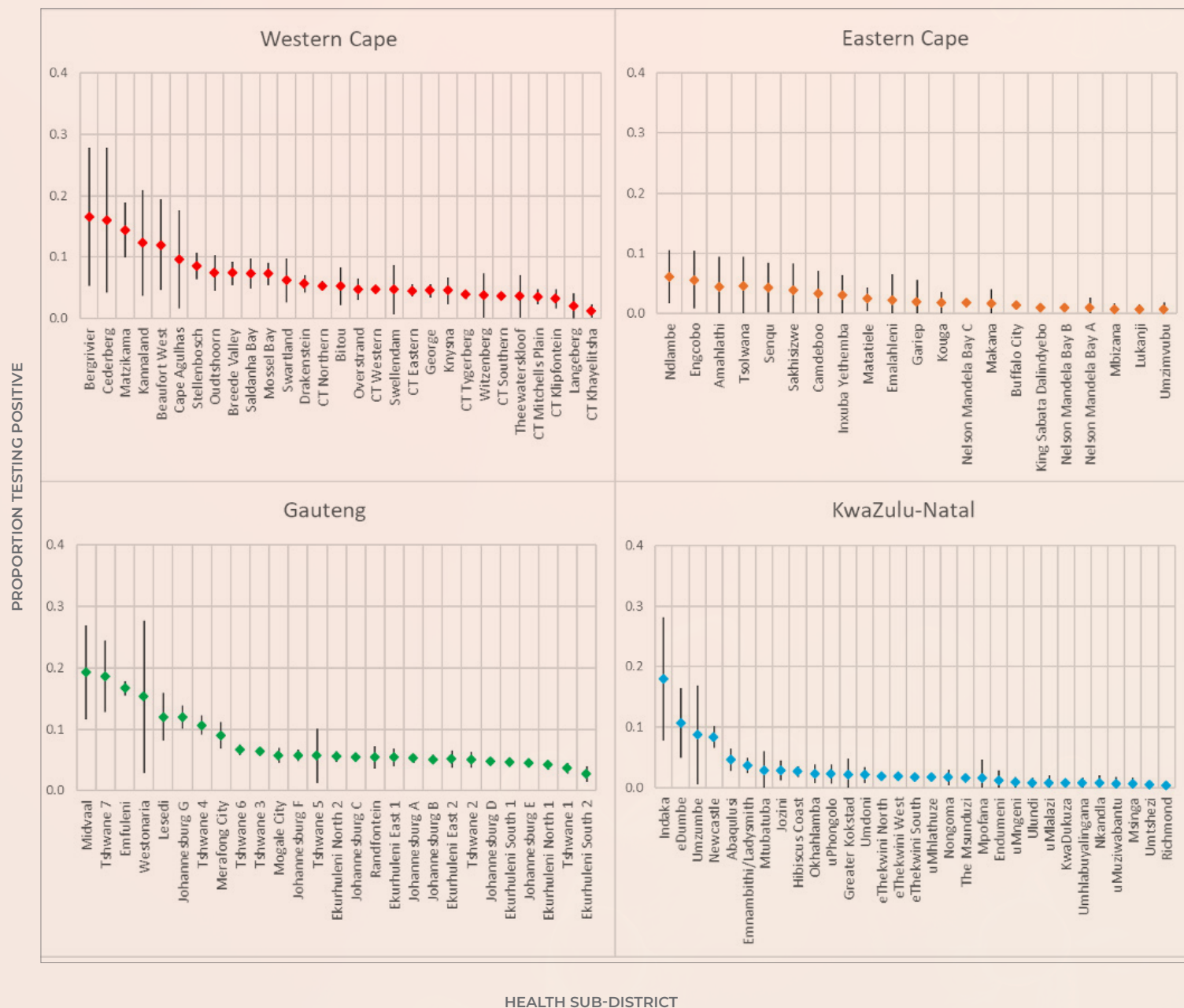


Figure 9.1 Proportions testing positive by health sub-district in the Western Cape, Eastern Cape, Gauteng and KwaZulu-Natal provinces based on public and private sector data for the week of 2-8 May 2021.

COVID-19 TESTING SUMMARY

SOUTH AFRICA WEEK 18 2021

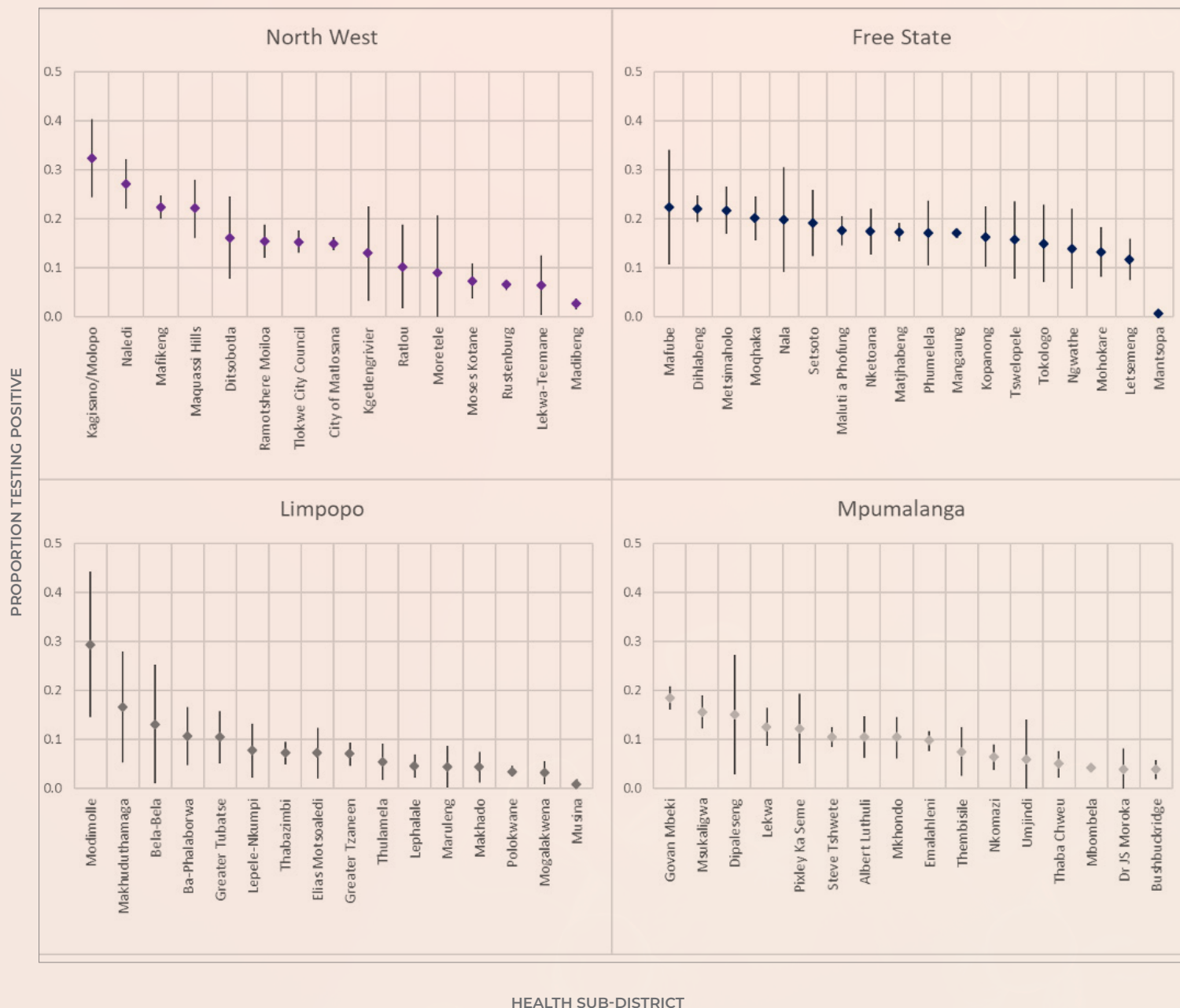


Figure 9.2 Proportions testing positive by health sub-district in the North West, Free State, Limpopo and Mpumalanga provinces based on public and private sector data for the week of 2 - 8 May 2021.

COVID-19 TESTING SUMMARY

SOUTH AFRICA WEEK 18 2021

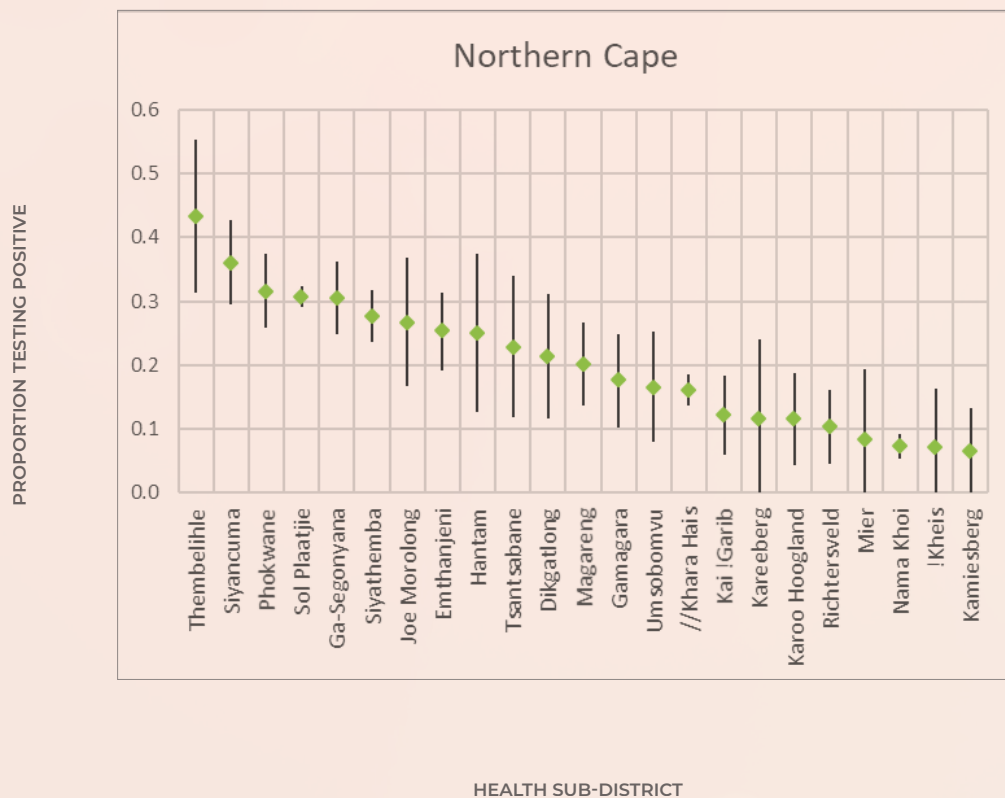


Figure 9.3 Proportions testing positive by health sub-districts in the Northern Cape Province based on public and private sector data for the week of 2– 8 May 2021.

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).

COVID-19 TESTING SUMMARY

SOUTH AFRICA WEEK 18 2021

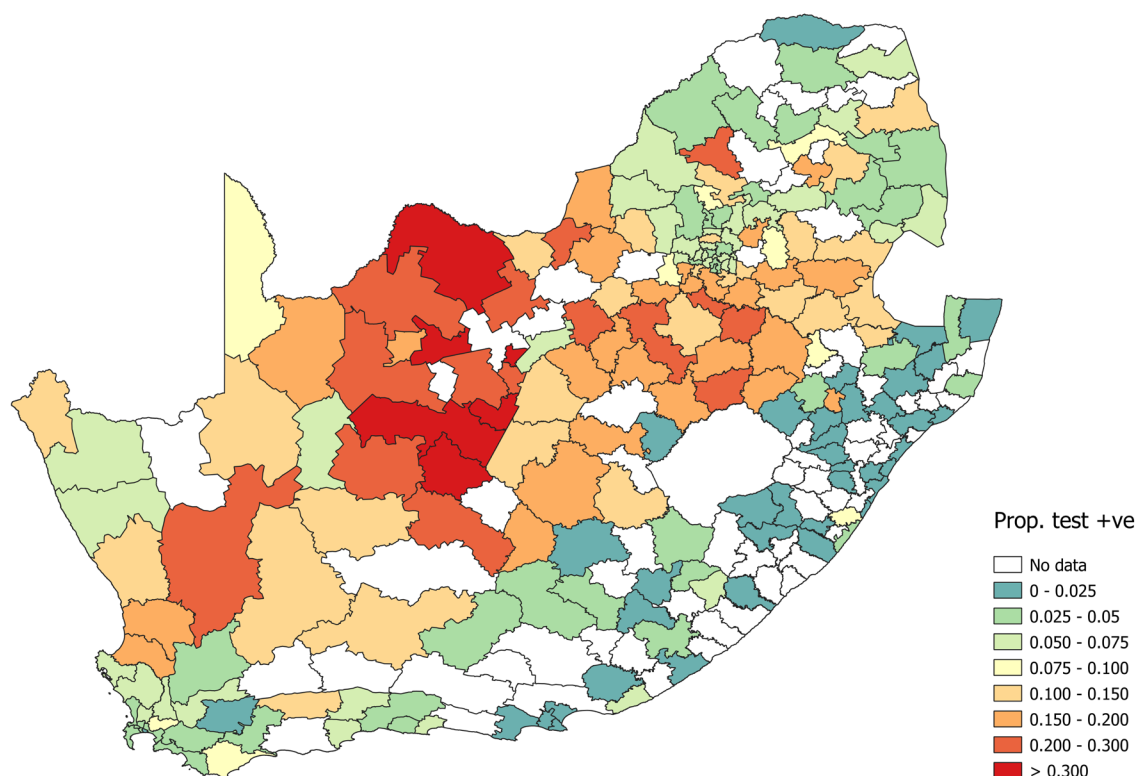


Figure 10. Proportion testing positive by health sub-district in South Africa for the week of 2 – 8 May 2021. Areas shaded white represent districts in which either (i) no tests were reported, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

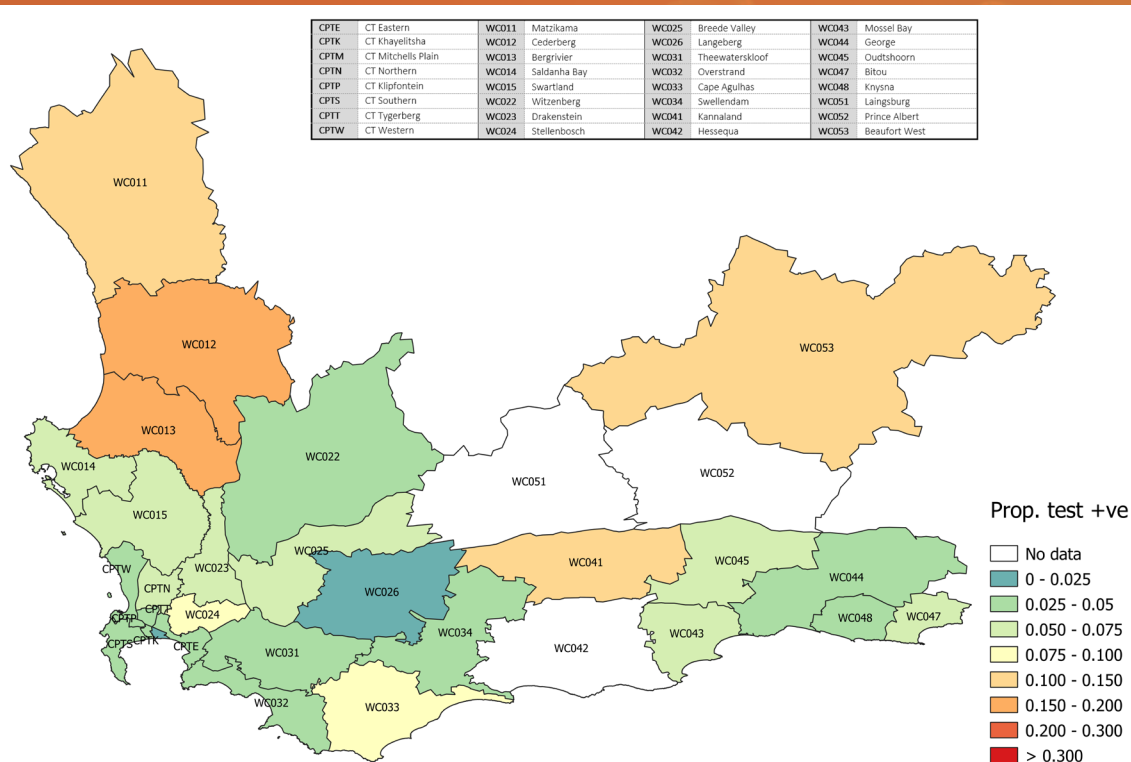


Figure 11. Proportion testing positive by health sub-district in the Western Cape Province for the week of 2 – 8 May 2021. Areas shaded white represent districts in which either (i) no tests were reported, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

COVID-19 TESTING SUMMARY

SOUTH AFRICA

WEEK 18 2021

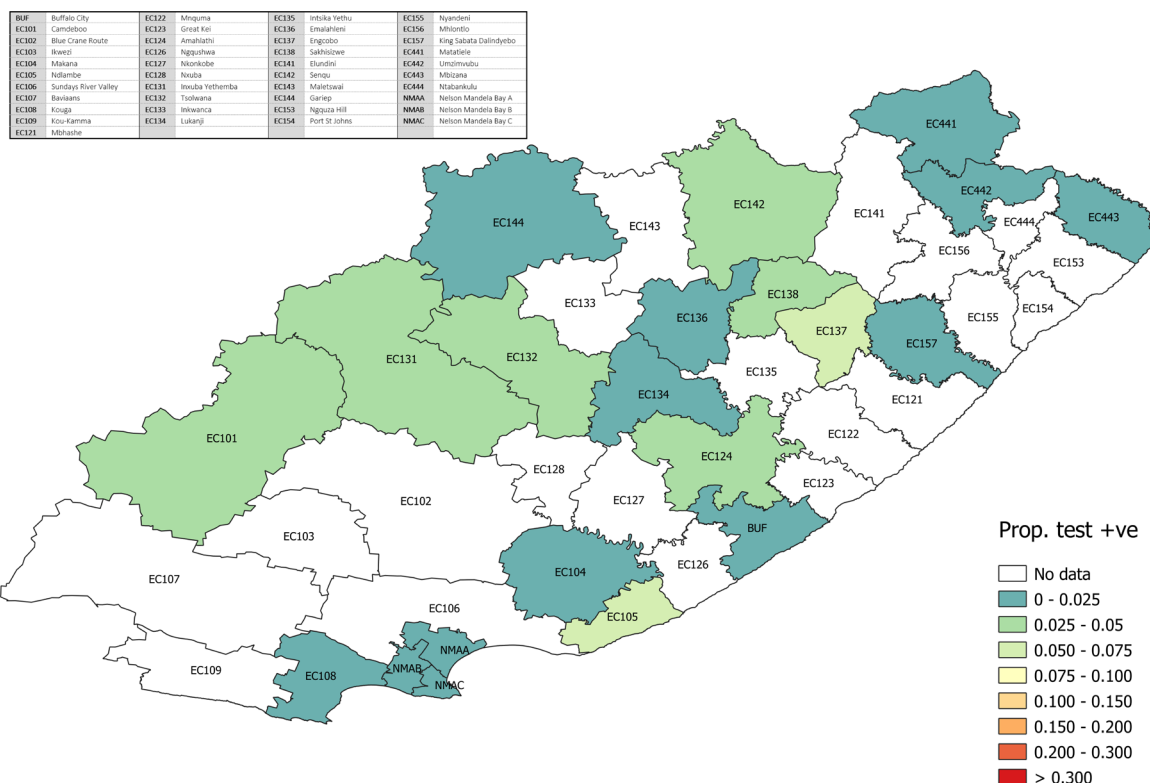


Figure 12. Proportion testing positive by health sub-district in the Eastern Cape Province for the week of 2 – 8 May 2021. Areas shaded white represent districts in which either (i) no tests were reported, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

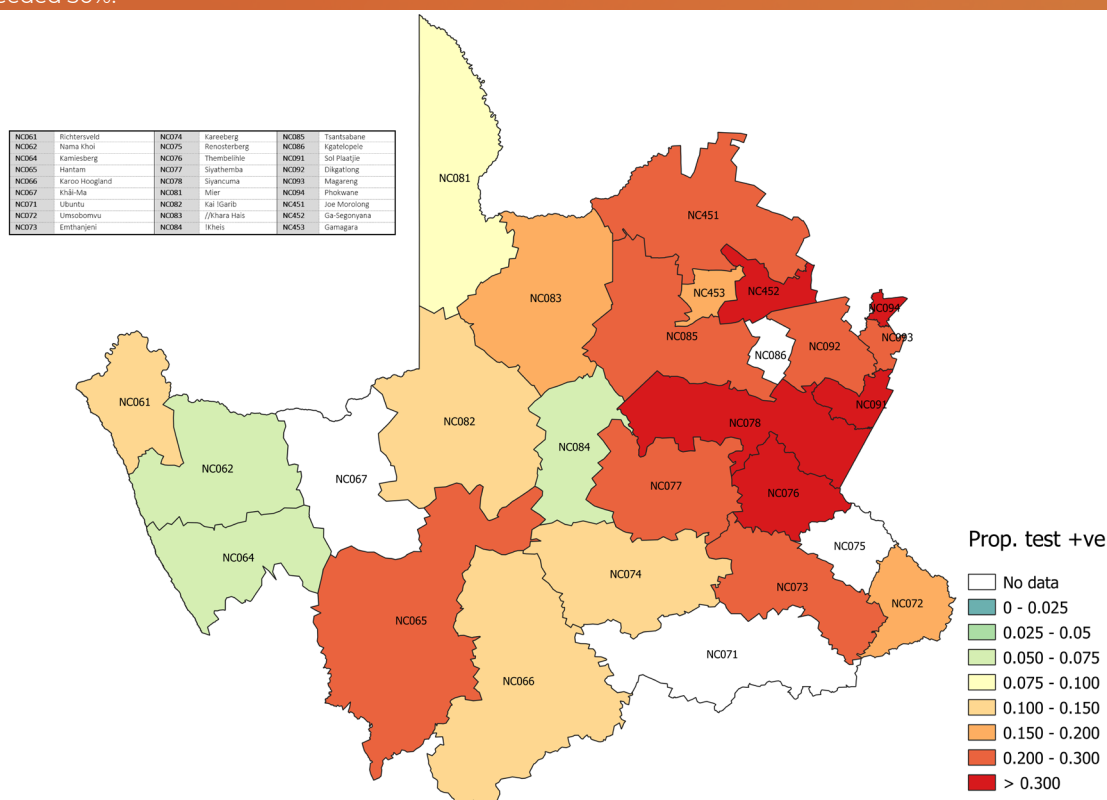


Figure 13. Proportion testing positive by health sub-district in Northern Cape Province for the week of 2 – 8 May 2021. Areas shaded white represent districts in which either (i) no tests were reported, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

COVID-19 TESTING SUMMARY

SOUTH AFRICA

WEEK 18 2021

MAN	Mangaung	FS181	Masibong	FS191	Sekoto	FS196	Mantop
FS161	Letsemeng	FS182	Tokologo	FS192	Dikabang	FS201	Mogaka
FS162	Kopong	FS183	Tswelopele	FS193	Nietana	FS203	Ngwath
FS163	Mohokane	FS184	Matjhabeng	FS194	Maluti a Phofung	FS204	Metsimaholo
FS164	Naledi	FS185	Nala	FS195	Phumelela	FS205	Mafube

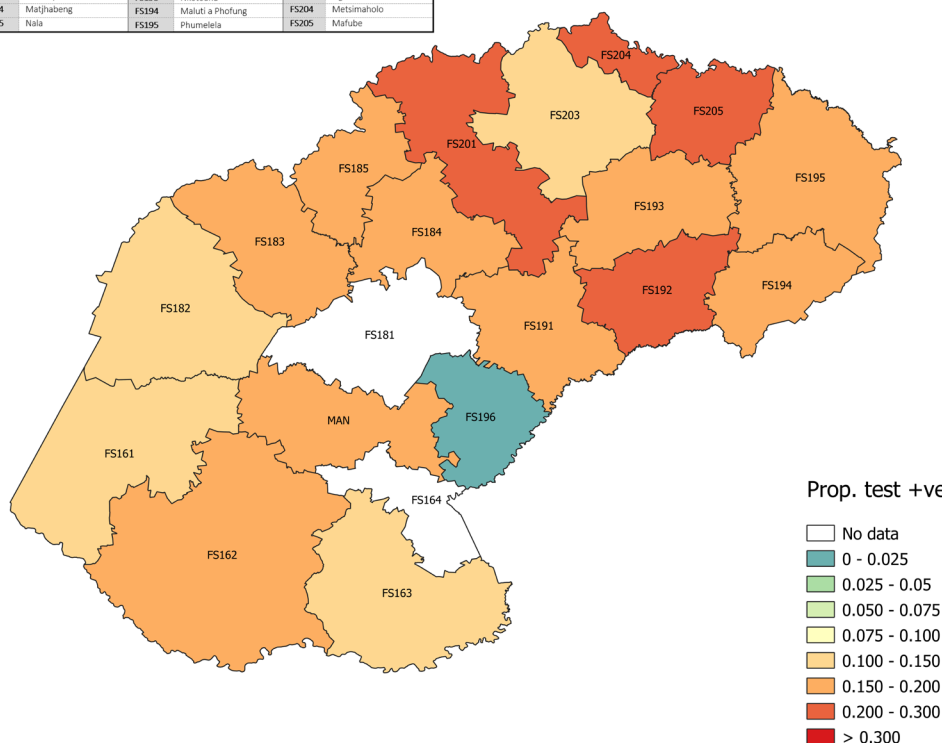


Figure 14. Proportion testing positive by health sub-district in Free State Province for the week of 2 – 8 May 2021. Areas shaded white represent districts in which either (i) no tests were reported, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

ETHN	eThekweni North	KZN233	Indaka	KZN273	The Big 5 False Bay
ETHS	eThekweni South	KZN234	Umtsheni	KZN274	Hiabisa
ETHS	eThekweni South	KZN235	Okhahlamba	KZN275	Mtubatuba
ETHW	eThekweni West	KZN236	Imbabazane	KZN281	Mfotzi
KZN211	Vulamehlo	KZN241	Endumeni	KZN282	uMhlathuze
KZN212	Umdoni	KZN242	Nqutu	KZN283	ntambanana
KZN213	Umtsheni	KZN244	Misinga	KZN284	uMlalazi
KZN214	uMuzwabantu	KZN245	Umvoti	KZN285	Mthonjaneni
KZN215	Ezingolweni	KZN252	Newcastle	KZN286	Nanda
KZN216	Hibiscus Coast	KZN253	Emadlangeni	KZN291	Mandeni
KZN221	uMshwathi	KZN254	Danahausen	KZN292	KwaDukuza
KZN222	uMngeni	KZN261	eDumbe	KZN293	Ndweni
KZN223	Mpofana	KZN262	uPhongolo	KZN294	Maphumulo
KZN224	Impendle	KZN263	Abagulusi	KZN431	Ingwe
KZN225	The Moundlet	KZN265	Nongoma	KZN432	Kwa Sani
KZN226	Mkhambathini	KZN266	Ulundi	KZN433	Greater Kokstad
KZN227	Richmond	KZN271	Umhlabuyalingana	KZN434	Uthulebeze
KZN232	Emnambithi/Lady Smith	KZN272	Jozini	KZN435	Umtsheni

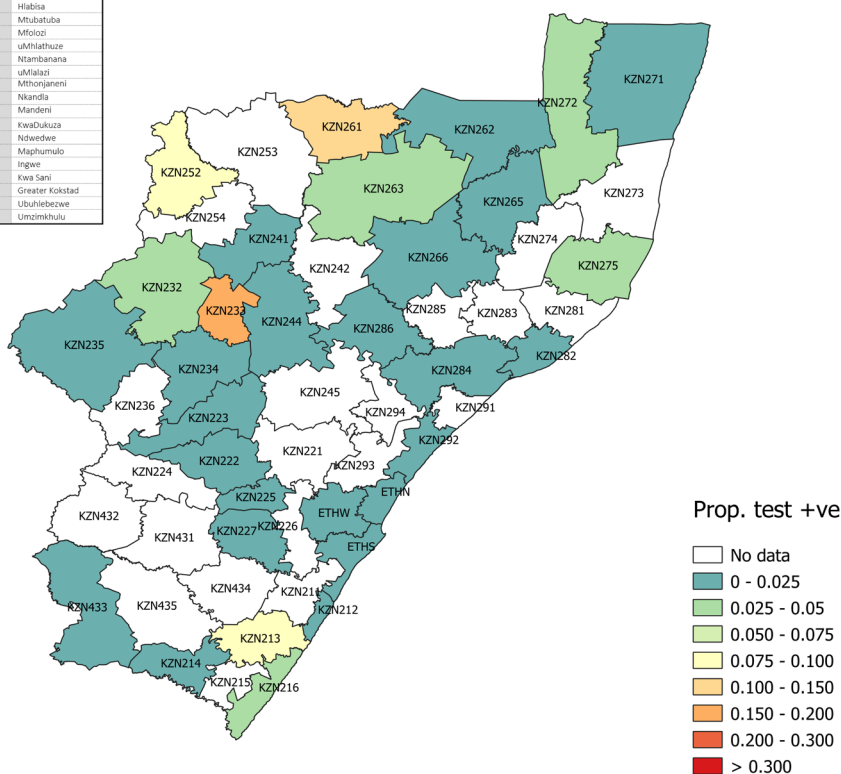


Figure 15. Proportion testing positive by health sub-district in KwaZulu-Natal Province for the week of 2 – 8 May 2021. Areas shaded white represent districts in which either (i) no tests were reported, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

COVID-19 TESTING SUMMARY

SOUTH AFRICA WEEK 18 2021

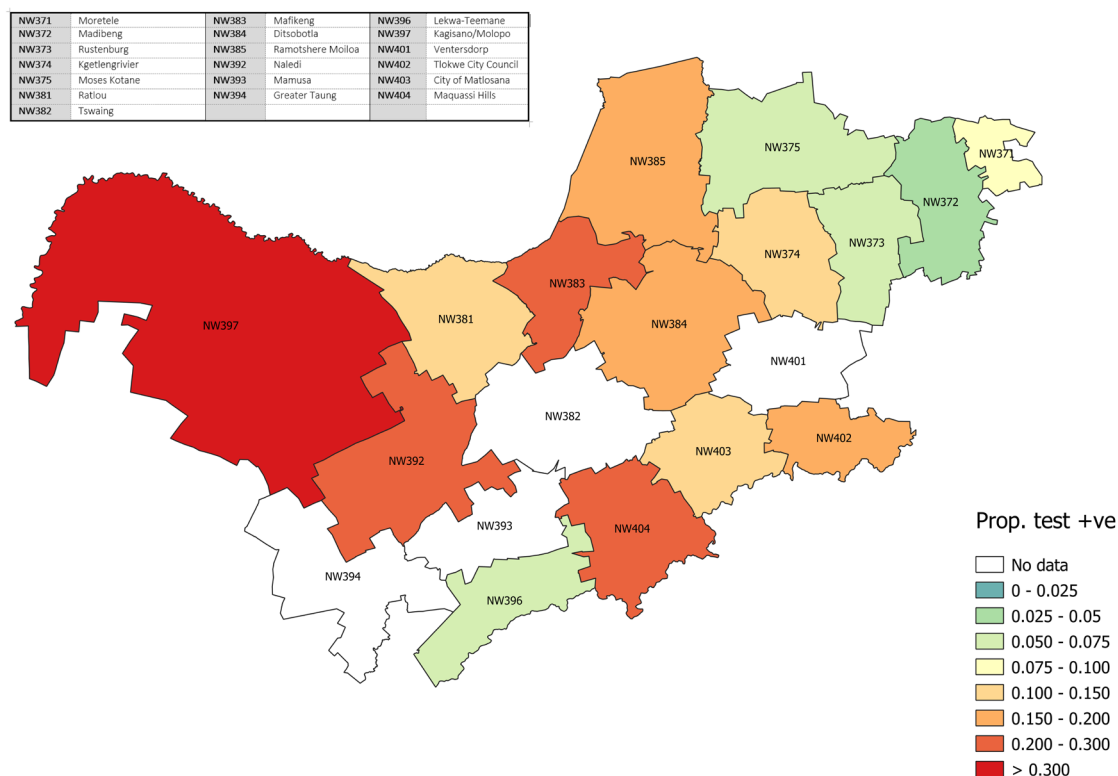


Figure 16. Proportion testing positive by health sub-district in North West Province for the week of 2 – 8 May 2021. Areas shaded white represent districts in which either (i) no tests were reported, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

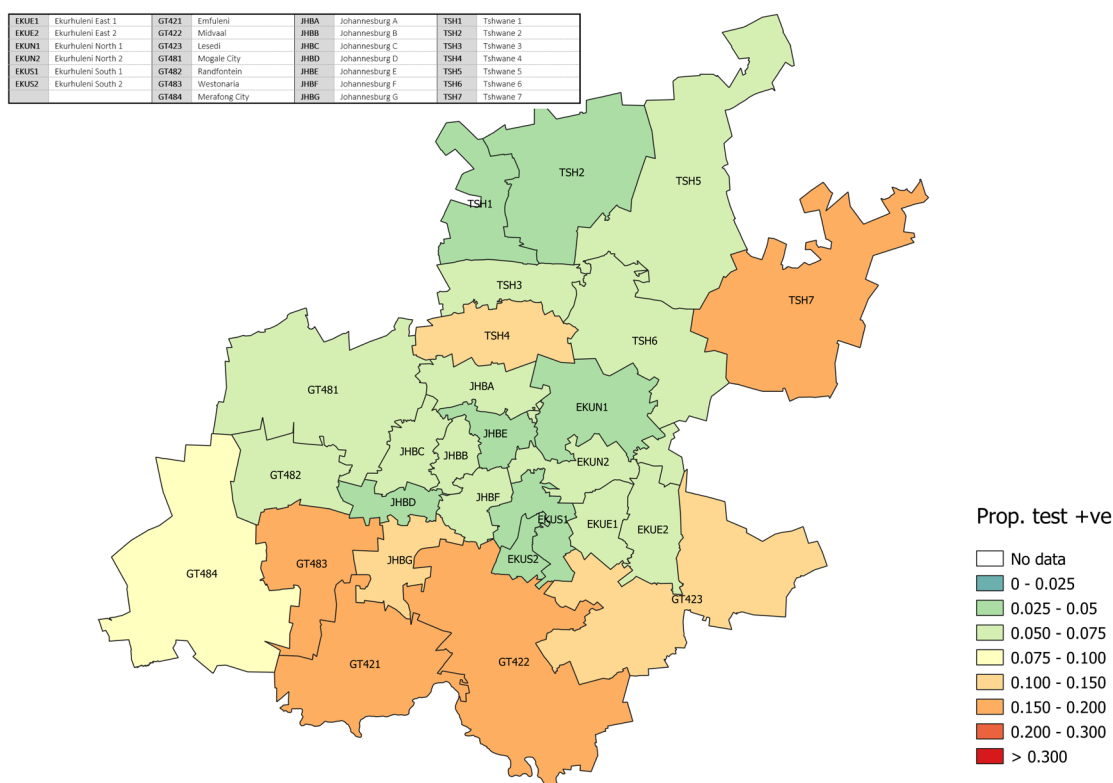


Figure 17. Proportion testing positive by health sub-district in Gauteng Province for the week of 2 – 8 May 2021. Areas shaded white represent districts in which either (i) no tests were reported, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

COVID-19 TESTING SUMMARY

SOUTH AFRICA WEEK 18 2021

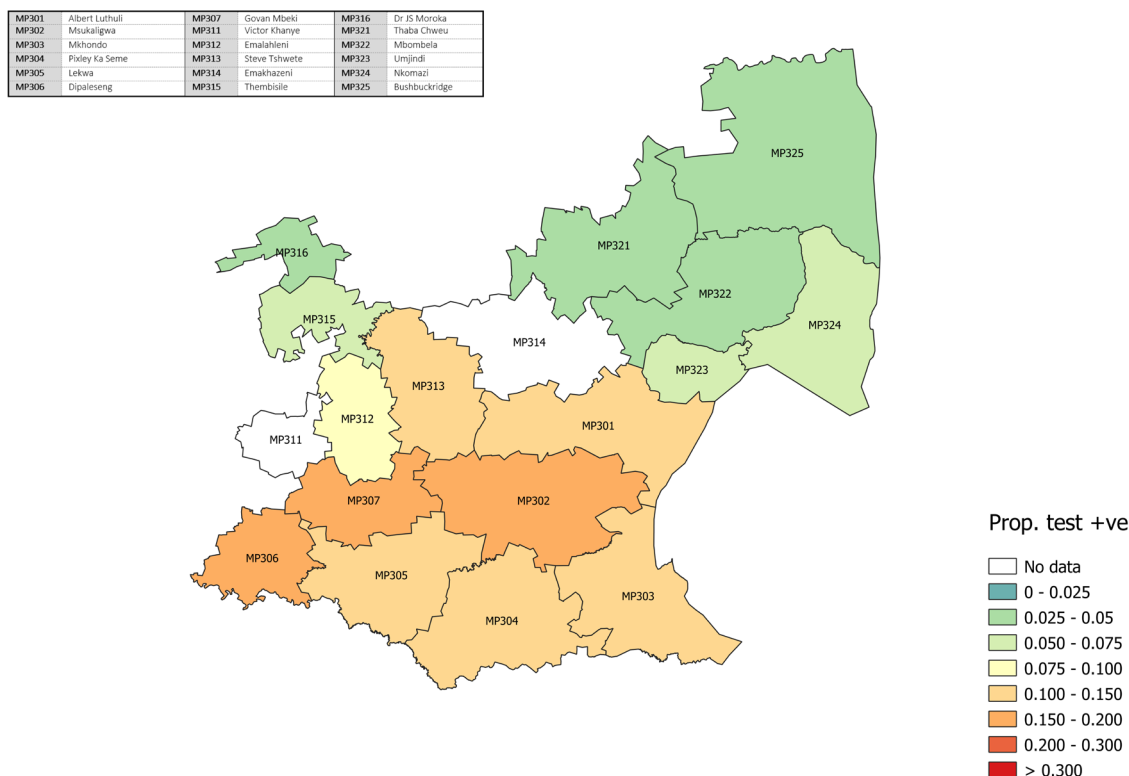


Figure 18. Proportion testing positive by health sub-district in Mpumalanga Province for the week of 2 – 8 May 2021. Areas shaded white represent districts in which either (i) no tests were reported, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

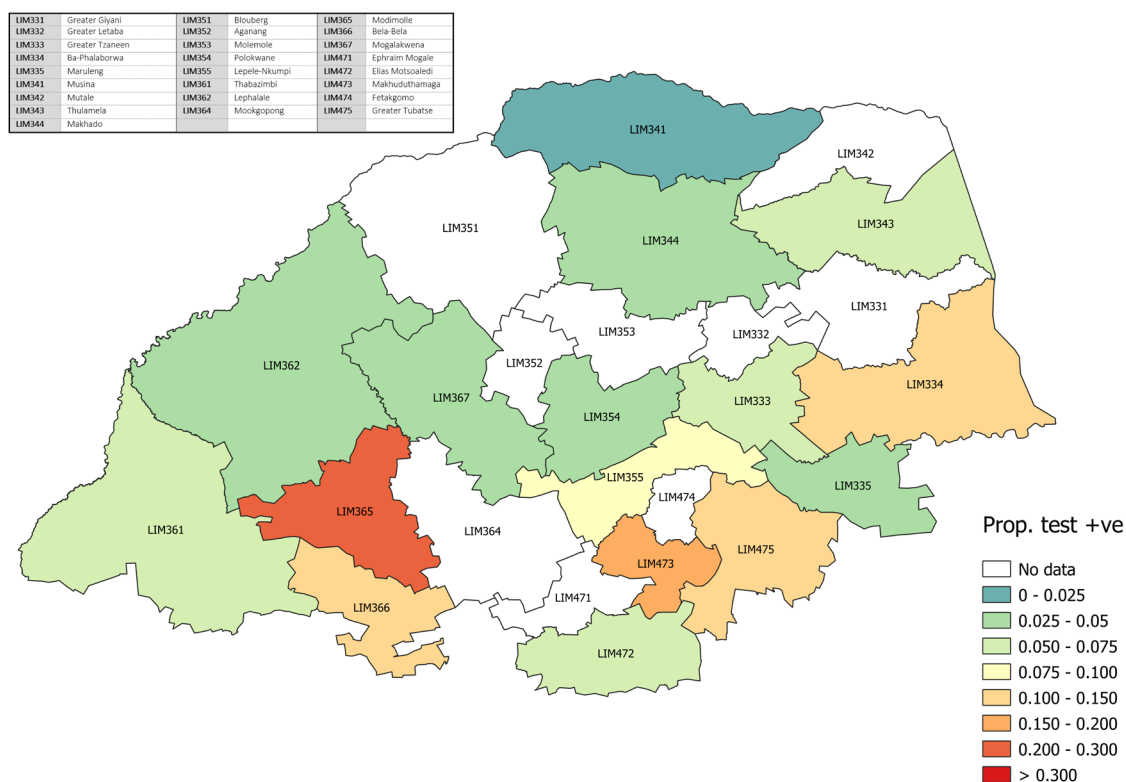


Figure 19. Proportion testing positive by health sub-district in Limpopo Province for the week of 2 – 8 May 2021. Areas shaded white represent districts in which either (i) no tests were reported, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

COVID-19 TESTING SUMMARY

SOUTH AFRICA WEEK 18 2021

Testing by patient admission status

In week 18 of 2021, 41.3% of reported tests were for hospitalised patients; 62.2% in the public sector and 26.7% in the private sector (Figure 20). The percentage testing positive in week 18 was higher among outpatients (8.6%) compared to inpatients (5.9%),

with increases observed in both groups (Figure 21). In week 18 the mean laboratory turnaround time for PCR tests in the public sector continued to be lower for inpatients (1.3 days) compared to outpatients (1.8 days) (Figure 22).

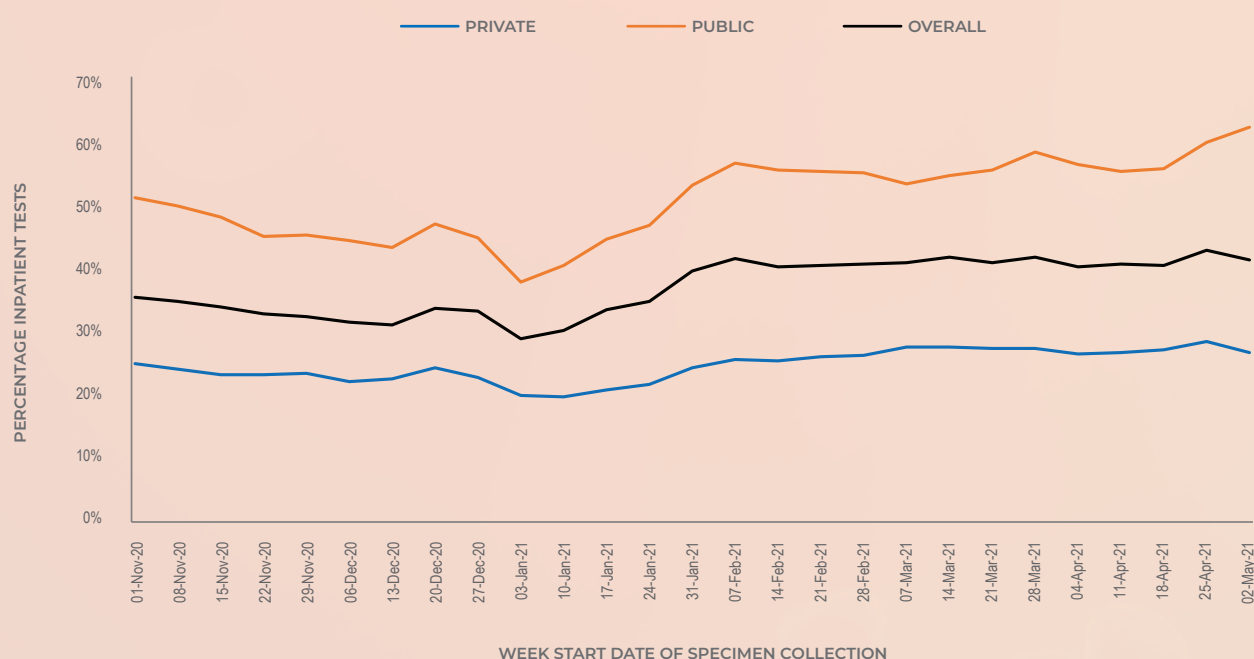


Figure 20. Percentage of inpatient tests reported by health sector, 1 November 2020 – 8 May 2021

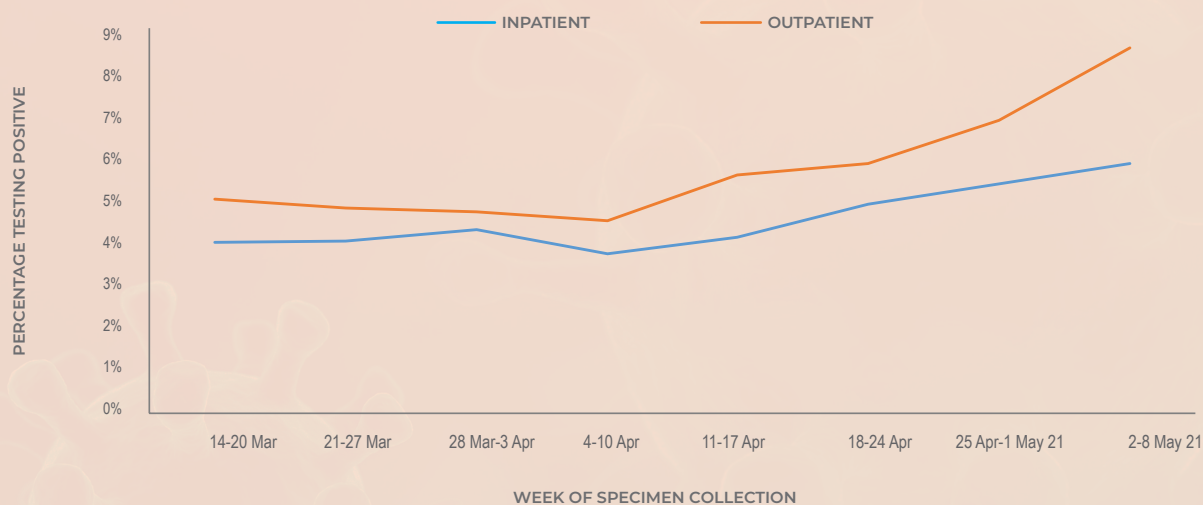


Figure 21. Percentage testing positive by patient admission status, 14 March – 8 May 2021

COVID-19 TESTING SUMMARY

SOUTH AFRICA WEEK 18 2021

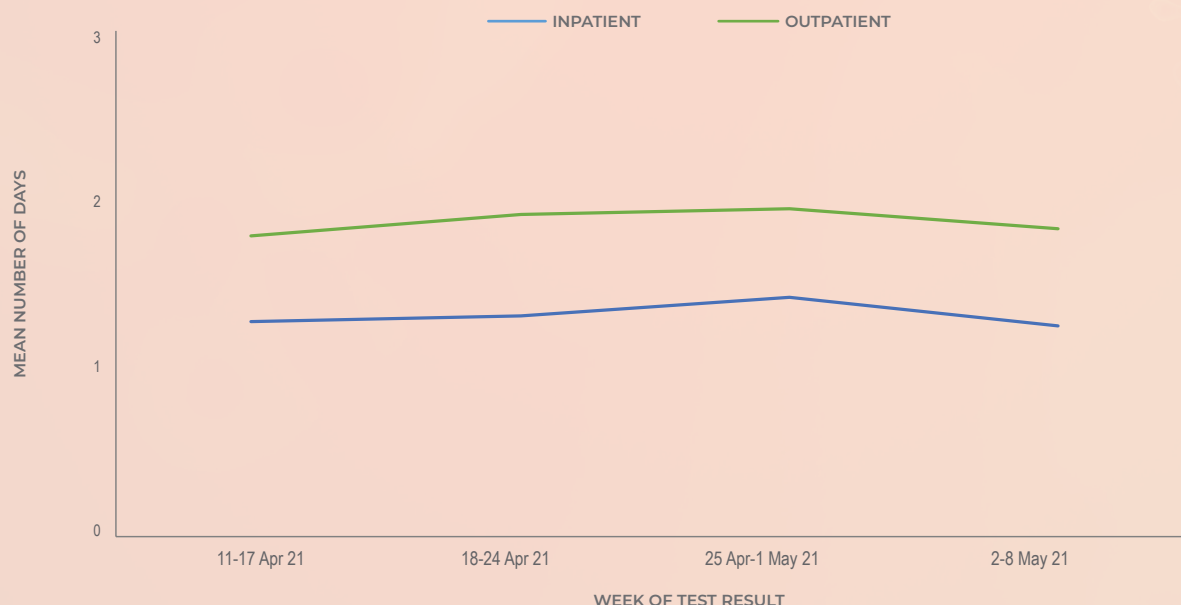


Figure 22. Mean number of days between date of specimen collection and date of test result for PCR tests in the public sector by patient admission status, 11 April – 8 May 2021

Testing by age and sex

The mean age of individuals tested in week 18 of 2021 was 39.9 years, and was slightly higher among males (40.2 years) compared to females (39.7 years) ($P < 0.001$). The majority of reported tests were in individuals in the 20-49 years' age group although the distribution of tests remained slightly skewed towards younger age groups in females compared to males (Figure 23). In week 18, the testing rate was higher in females

(293 per 100,000 persons) than in males (279 per 100,000 persons) (Figure 24). Apart from the 0-4 year age group, testing rates increased with increasing age and were highest in individuals ≥ 80 years of age (678 per 100,000 persons) in week 18. The percentage testing positive was highest in individuals aged 10-14 years (9.3%). In males, the percentage testing positive was highest in individuals aged 15-19 years (9.7%). In females, the highest percentages were observed in individuals aged 45-49 (10.3%), 55-54 (10.2%) and 10-14 years (10.2%).

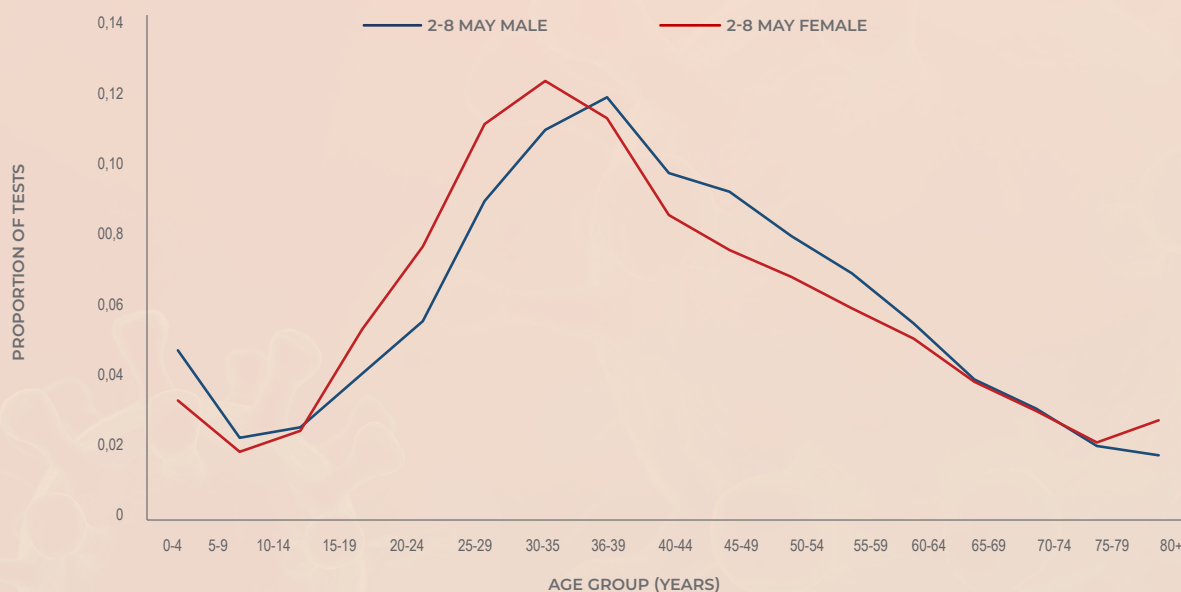


Figure 23. Proportion of tests by age group and sex, South Africa, week 18, 2-8 May 2021

COVID-19 TESTING SUMMARY

SOUTH AFRICA WEEK 18 2021

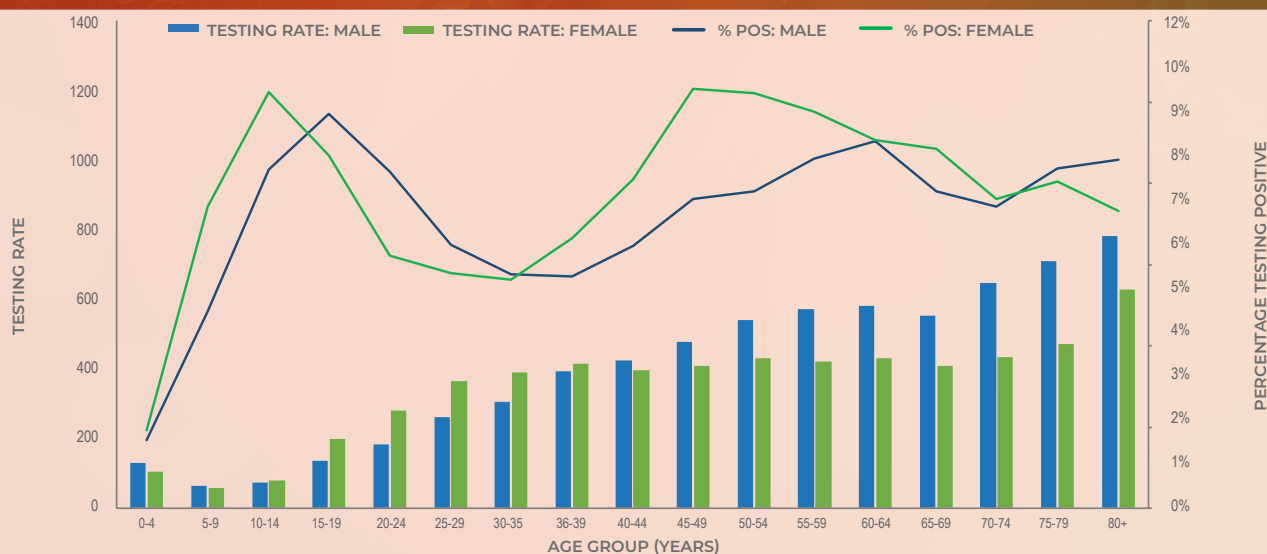


Figure 24. Testing rates per 100,000 persons and percentage testing positive by age group and sex, South Africa, week 18, 2-8 May 2021

Testing by test type

Up to the end of week 18 of 2021, 7.4% (802,278/10,796,360) of all reported tests were antigen tests. The percentage of antigen tests was highest (20.5%) in week 5 and has subsequently declined to 15.0% of all tests reported in week 18 (Figure 25). In week 18, 26,251 antigen tests were reported, of which 72.2% were in the public sector. The majority of antigen tests have been reported in KwaZulu-

Natal (44.8%) and Eastern Cape (13.2%) provinces. The percentage testing positive was higher for PCR tests compared to antigen tests, and in week 18 was 8.1% for PCR tests and 2.3% for antigen tests (Figure 26). The mean turnaround time for antigen tests reported in week 18 was 4.3 days in the public sector and 0.1 days in the private sector (Figure 27). Not all antigen tests are included in this report, efforts are ongoing to improve completeness.

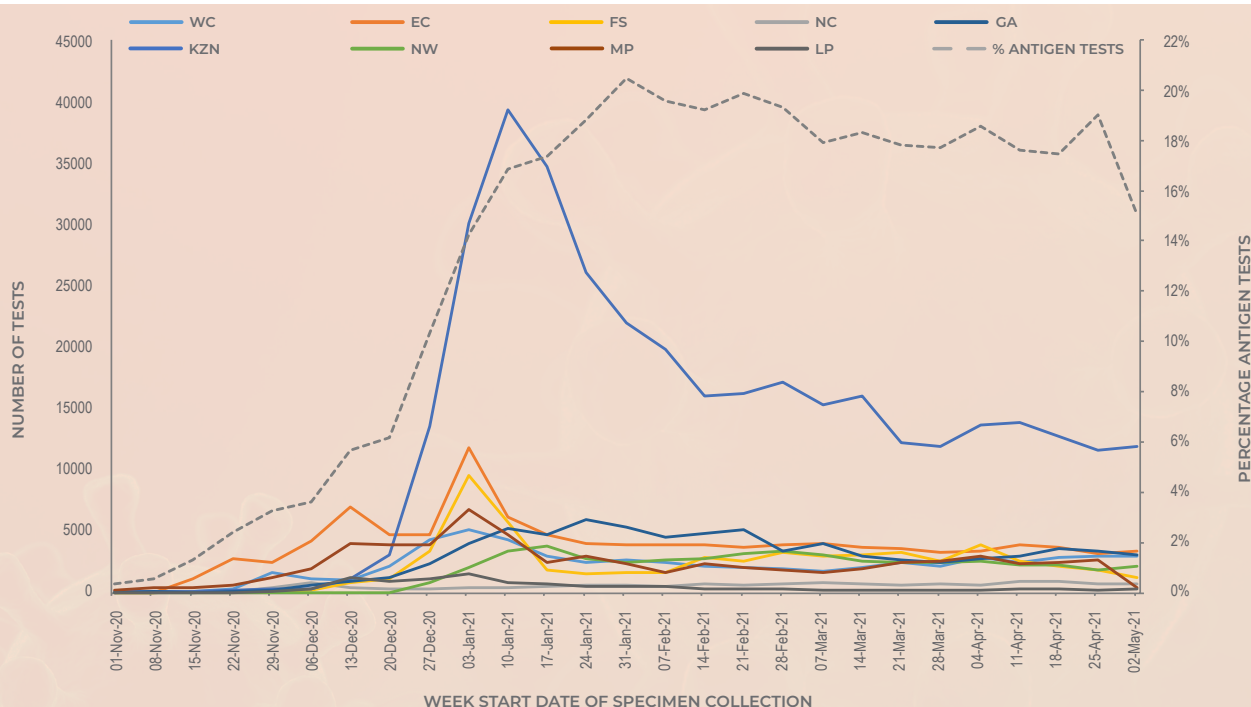


Figure 25. Number of antigen tests by province, and overall percentage antigen tests, South Africa, 1 November 2020 – 8 May 2021. WC, Western Cape; EC, Eastern Cape; FS, Free State; KZN, KwaZulu-Natal; GT, Gauteng; NC, Northern Cape; NW, North West; MP, Mpumalanga; LP, Limpopo

COVID-19 TESTING SUMMARY

SOUTH AFRICA WEEK 18 2021

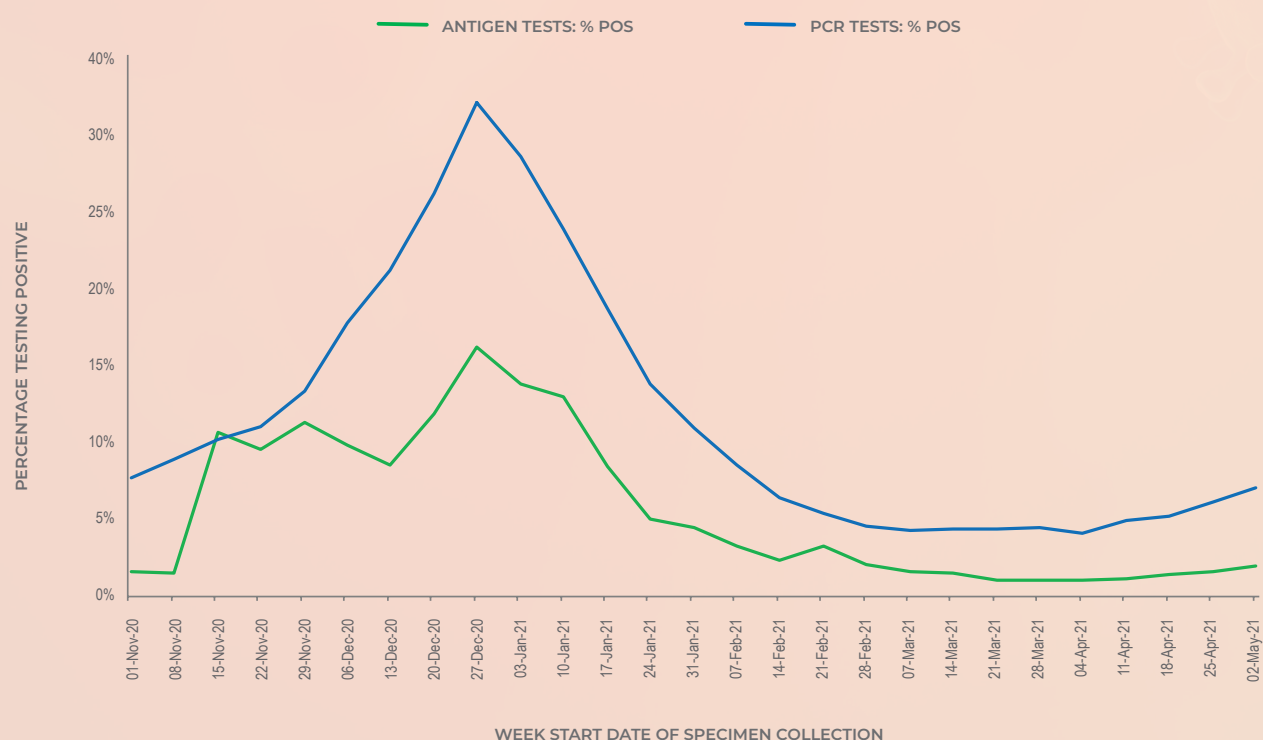


Figure 26. Percentage of laboratory tests positive for SARS-CoV-2 by test type and date of specimen collection, South Africa, 1 November 2020 – 8 May 2021

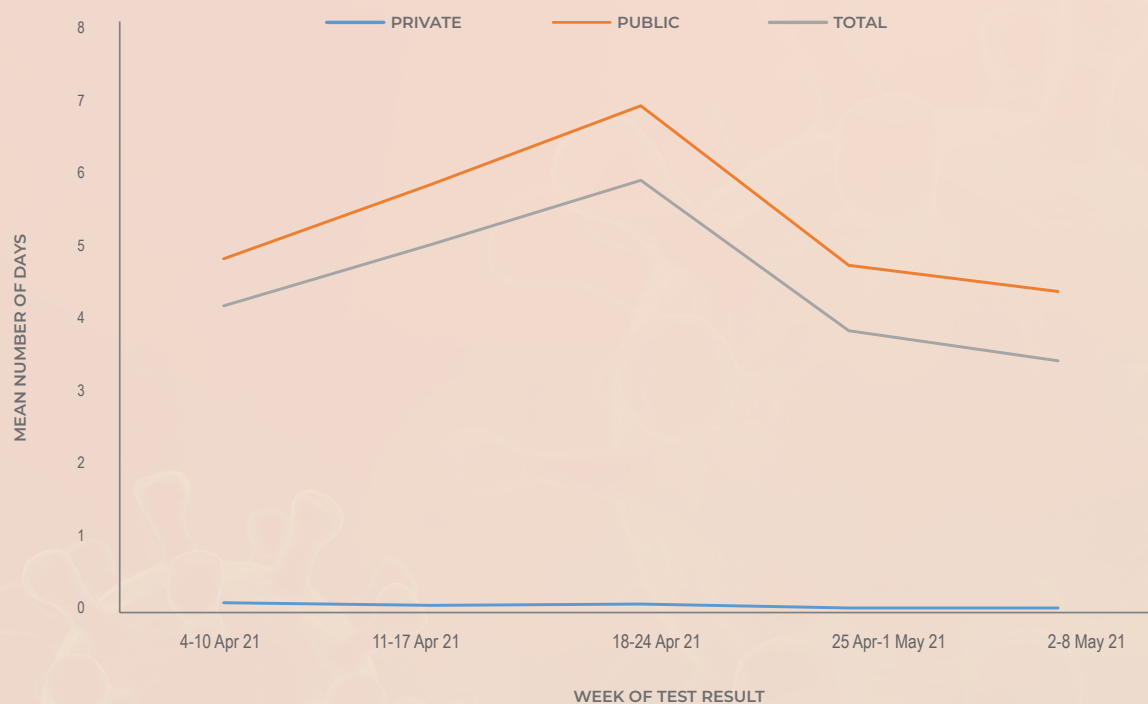


Figure 27. Mean number of days between date of specimen collection and date of test result for antigen tests, by week of test result, South Africa, 04 Apr – 8 May 2021

COVID-19 TESTING SUMMARY

SOUTH AFRICA | WEEK 18 2021

Limitations

- A backlog in testing of samples by laboratories affects the reported number of tests. As a result, numbers tested during this period may change in subsequent reports.
- If higher-priority specimens were tested preferentially, this would likely result in an inflated proportion testing positive.
- Different and changing testing strategies (targeted vs. mass testing 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 18 (n=174,693) was higher than the number of tests reported in week 17 but was however similar to the number of tests reported in recent weeks. Gauteng (34.3%), KwaZulu-Natal (17.6%) and Western Cape (16.6%) provinces reported the largest number of tests in week 18. The overall testing rate in week 18 was 293 per 100,000 persons; highest in the Northern Cape (550 per 100,000 persons) and lowest in Limpopo (65 per 100,000 persons). Testing rates increased in all provinces in the past week except in Mpumalanga where they continued to decrease. Antigen tests accounted for 15.0% (n=26,251) of all tests reported in week 18. The overall mean laboratory turnaround time for PCR tests was 0.9 days in week 18; 1.5 days in the public sector and 0.6 days in the private sector.

In the second wave of infections the percentage testing positive peaked at 34.6% in week 53 of 2020, and subsequently decreased. The percentage testing positive has increased in recent weeks and in week 18 of 2021 the percentage testing positive was 7.2%, which increased by 1.2% compared the previous week. The percentage testing positive in week 18 was highest in the Northern Cape (25.4%), Free State (17.4%) and North West (13.4%) provinces. The percentage testing positive was <9% in all other provinces. Compared to the previous week, the percentage testing positive increased in the Northern Cape, Free State, Western Cape, Gauteng, Mpumalanga, KwaZulu-Natal and North West. The percentage testing positive was unchanged in the Eastern Cape, and Limpopo provinces.