

COVID-19 TESTING SUMMARY



NATIONAL INSTITUTE FOR
COMMUNICABLE DISEASES

Division of the National Health Laboratory Service

SOUTH AFRICA WEEK 10 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 13 March 2021 (Week 10 of 2021).

HIGHLIGHTS

- In the period 1 March 2020 through 13 March 2021, 9,384,884 PCR and antigen tests for SARS-CoV-2 have been performed nationally.
- The number of tests performed in week 10 of 2021 (n=174,377) was similar to the previous few weeks.
- Testing rate in week 10 was 292 per 100,000 persons; highest in the Northern Cape (468 per 100,000 persons) and lowest in Limpopo (77 per 100,000 persons).
- In week 10 the percentage testing positive was 4.5%, which had decreased from a peak of 34.7% in week 53 of 2020 and was lower than observed since May 2020.
- The percentage testing positive in week 10 was highest in the Northern Cape (9.4%) and Mpumalanga (9.1%) provinces. The percentage testing positive was 5-8% in the Free State, North West and Limpopo, and was <5% in the Western Cape, Eastern Cape, KwaZulu-Natal and Gauteng.
- In week 10, compared to the previous week, the percentage testing positive increased in the Free State, decreased in the Western Cape, Eastern Cape, KwaZulu-Natal and Gauteng, and remained unchanged in the Northern Cape, North West, Mpumalanga and Limpopo.
- Mean laboratory turnaround time in week 10 was 1.3 days; 1.5 days in the public sector and 1.2 days in the private sector.

COVID-19 TESTING SUMMARY

SOUTH AFRICA | WEEK 10 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 for PCR-based tests and 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 conducted between 1 March 2020 (week 10 of 2020), the week when the first case of COVID-19 was confirmed, and 13 March 2021 (week 10 of 2021).

Testing volumes and proportion testing positive

From 1 March 2020 through 13 March 2021, 9,384,884 laboratory tests (PCR and antigen tests) for SARS-CoV-2 were performed. The number of tests performed increased weekly from week 10 of 2020, with the highest number of tests performed during the first wave occurring in week 28 of 2020 (n=307,902), and subsequently decreased. Weekly testing volumes increased again from week 47 (beginning 15 November 2020), with the highest weekly number of tests since the start of the pandemic performed in week 1 of 2021 (n=498,354). In week 10 of 2021, 174,377 tests were performed, lower than the number of weekly tests performed since week 48 (beginning 22 November 2020). Weekly testing volumes have remained relatively consistent since week 6 of 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).

COVID-19 TESTING SUMMARY

SOUTH AFRICA WEEK 10 2021

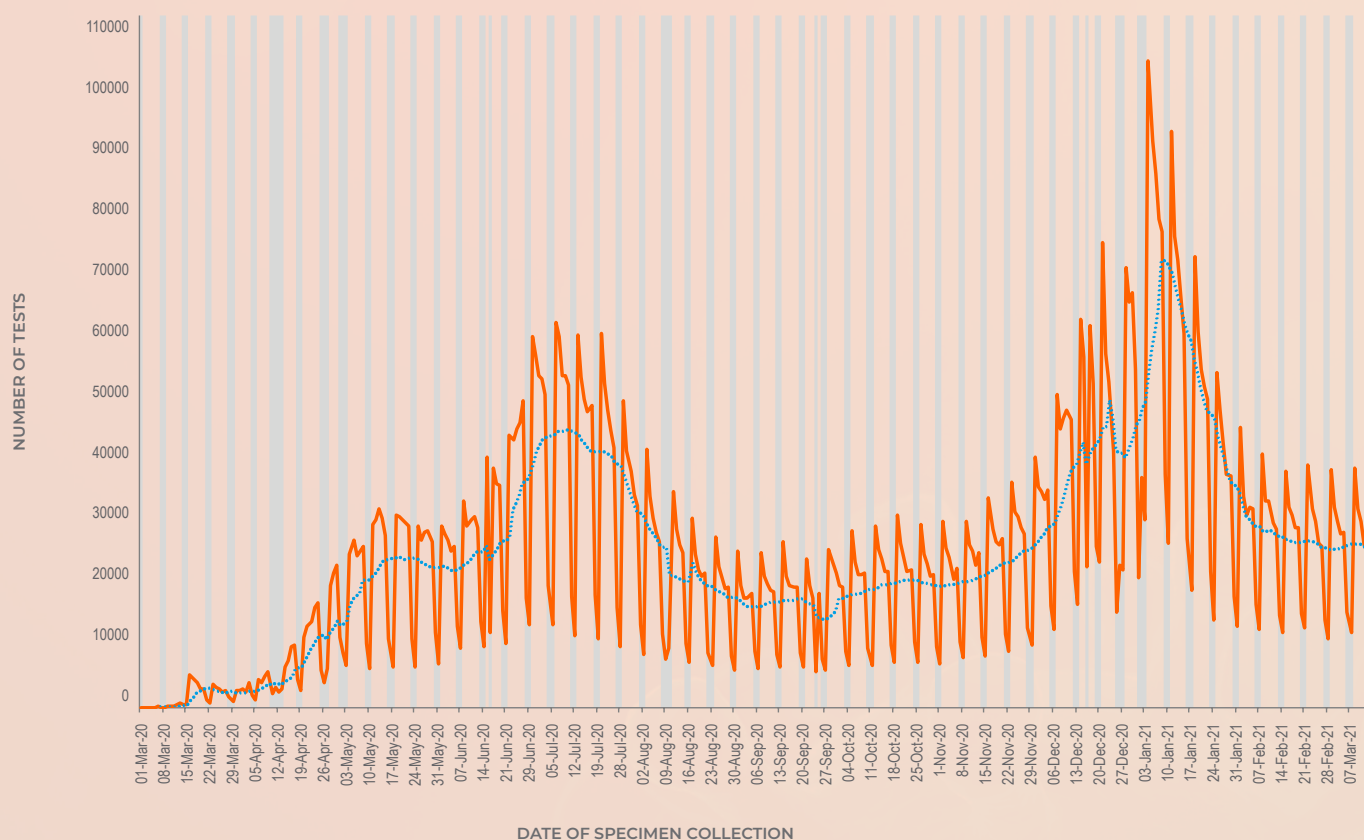


Figure 1. Number of laboratory tests conducted by date of specimen collection, South Africa, 1 March 2020 – 13 March 2021. Blue dotted line shows the 7-day moving average of the number of tests conducted. Grey bars highlight weekend days and public holidays.

The overall percentage testing positive from week 10 of 2020 through week 10 of 2021 was 17.2% (Table 1). During the first wave of infections, the percentage testing positive peaked at 29.7% in week 29 of 2020, and subsequently decreased to 8.4% in week 44 of 2020. During the second wave of infections the percentage testing positive started increasing from week 46 of 2020, to a peak of 34.7% in week 53 of 2020. The percentage testing positive in week 10 of 2021 was 4.5%, 0.3% lower than observed in week 9 ($P < 0.001$) and the lowest percentage testing positive since the start of the first wave (May 2020) (Figure 2).

COVID-19 TESTING SUMMARY

SOUTH AFRICA | WEEK 10 2021

Table 1. Weekly number of tests conducted and positive tests, South Africa, 1 March 2020 – 13 March 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	17542 (0.2)	543	3.1
14	29-Mar-20	18246 (0.2)	520	2.8
15	05-Apr-20	26298 (0.3)	796	3.0
16	12-Apr-20	43749 (0.5)	1295	3.0
17	19-Apr-20	79174 (0.8)	2177	2.7
18	26-Apr-20	93810 (1.0)	3205	3.4
19	03-May-20	142705 (1.5)	6018	4.2
20	10-May-20	165370 (1.8)	8091	4.9
21	17-May-20	166541 (1.8)	11379	6.8
22	24-May-20	156135 (1.7)	12967	8.3
23	31-May-20	153565 (1.6)	15079	9.8
24	07-Jun-20	173894 (1.9)	22359	12.9
25	14-Jun-20	186074 (2.0)	32649	17.5
26	21-Jun-20	252085 (2.7)	55045	21.8
27	28-Jun-20	302732 (3.2)	75307	24.9
28	05-Jul-20	307902 (3.3)	86032	27.9
29	12-Jul-20	285590 (3.0)	84925	29.7
30	19-Jul-20	270881 (2.9)	78634	29.0
31	26-Jul-20	216378 (2.3)	58393	27.0
32	02-Aug-20	179563 (1.9)	40993	22.8
33	09-Aug-20	141101 (1.5)	26265	18.6
34	16-Aug-20	135008 (1.4)	21377	15.8
35	23-Aug-20	123329 (1.3)	16330	13.2
36	30-Aug-20	112758 (1.2)	12790	11.3
37	06-Sep-20	116992 (1.2)	11952	10.2
38	13-Sep-20	120710 (1.3)	12011	10.0
39	20-Sep-20	98816 (1.1)	10098	10.2
40	27-Sep-20	123057 (1.3)	11008	8.9
41	04-Oct-20	131037 (1.4)	11777	9.0
42	11-Oct-20	137959 (1.5)	12076	8.8
43	18-Oct-20	142157 (1.5)	12066	8.5
44	25-Oct-20	135839 (1.4)	11478	8.4
45	01-Nov-20	138806 (1.5)	12134	8.7
46	08-Nov-20	146992 (1.6)	14844	10.1
47	15-Nov-20	160631 (1.7)	18761	11.7
48	22-Nov-20	175674 (1.9)	22050	12.6
49	29-Nov-20	203055 (2.2)	30764	15.2
50	06-Dec-20	267417 (2.8)	53310	19.9
51	13-Dec-20	294095 (3.1)	68562	23.3
52	20-Dec-20	283864 (3.0)	81926	28.9
53	27-Dec-20	333371 (3.6)	115649	34.7
1	03-Jan-21	498354 (5.3)	150644	30.2
2	10-Jan-21	415636 (4.4)	104570	25.2
3	17-Jan-21	325978 (3.5)	63152	19.4
4	24-Jan-21	248423 (2.6)	34576	13.9
5	31-Jan-21	201799 (2.2)	22277	11.0
6	07-Feb-21	191215 (2.0)	16419	8.6
7	14-Feb-21	184571 (2.0)	12088	6.5
8	21-Feb-21	178223 (1.9)	10304	5.8
9	28-Feb-21	181003 (1.9)	8584	4.7
10	07-Mar-21	174377 (1.9)	7777	4.5
Total		9384884 (100.0)	1615039	17.2

COVID-19 TESTING SUMMARY

SOUTH AFRICA WEEK 10 2021

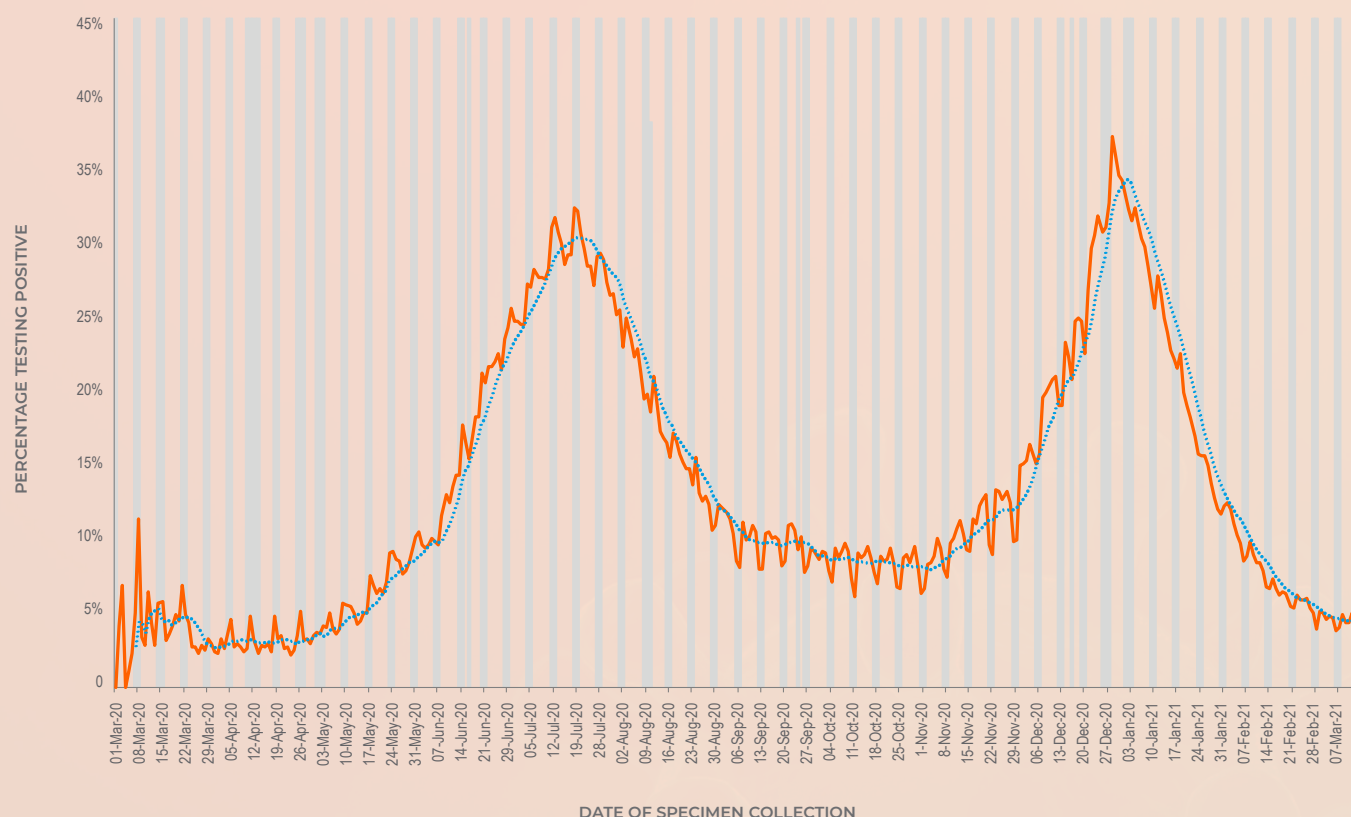


Figure 2. Percentage of laboratory tests positive for SARS-CoV-2 by date of specimen collection, South Africa, 1 March 2020 – 13 March 2021. Blue dotted line shows the 7-day moving average of the percentage testing positive. Grey bars highlight weekend days and public holidays.

Testing in private and public sectors

From 1 March 2020 through 13 March 2021, 4,095,013 laboratory tests were conducted in public sector laboratories, with 17.9% testing positive. Over this same period, private sector laboratories conducted 5,289,871 tests, with 16.7% testing positive (Table 2). Overall the public sector has conducted 43.6% of tests and accounted for 45.3% 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 (35.1%) and private sector (34.4%). From week 9 to week 10 of 2021, the percentage testing positive decreased by 0.3% in the public sector (5.5% to 5.2%, $P=0.003$),

and decreased by 0.3% (4.1% to 3.8%, $P=0.009$) in the private sector. In week 10 of 2021 the percentage testing positive was higher in the public sector (5.2%) compared to the private sector (3.8%) ($P<0.001$).

The mean turnaround time for PCR tests performed in week 10 of 2021 was 1.3 days; 1.5 days in the public sector and 1.2 days in the private sector (Figure 3). Turnaround times for public sector tests were ≤ 2 days in all provinces in week 10 (Figure 4). Twenty-six of the 28 (92.9%) NHLS laboratories performing PCR testing for SARS-CoV-2 had turnaround times ≤ 2 days in week 10 (Figure 5).

COVID-19 TESTING SUMMARY

SOUTH AFRICA | WEEK 10 2021

Table 2. Weekly number of tests conducted and positive tests, by healthcare sector, South Africa, 1 March 2020 – 13 March 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)	1979	76 (3.8)	16.8	26.2	1.753
12	15-Mar-20	1442	81 (5.6)	20125	816 (4.1)	6.7	9.0	1.385
13	22-Mar-20	3478	149 (4.3)	14064	394 (2.8)	19.8	27.4	1.529
14	29-Mar-20	5868	194 (3.3)	12378	326 (2.6)	32.2	37.3	1.255
15	05-Apr-20	11735	417 (3.6)	14563	379 (2.6)	44.6	52.4	1.365
16	12-Apr-20	24167	672 (2.8)	19582	623 (3.2)	55.2	51.9	0.874
17	19-Apr-20	55110	1595 (2.9)	24064	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)	48367	1511 (3.1)	66.1	74.9	1.529
20	10-May-20	107997	5443 (5.0)	57373	2648 (4.6)	65.3	67.3	1.092
21	17-May-20	98647	7031 (7.1)	67894	4348 (6.4)	59.2	61.8	1.113
22	24-May-20	77596	6411 (8.3)	78539	6556 (8.3)	49.7	49.4	0.990
23	31-May-20	63943	6626 (10.4)	89622	8453 (9.4)	41.6	43.9	1.099
24	07-Jun-20	64653	8038 (12.4)	109241	14321 (13.1)	37.2	35.9	0.948
25	14-Jun-20	61147	11982 (19.6)	124927	20667 (16.5)	32.9	36.7	1.184
26	21-Jun-20	90452	20425 (22.6)	161633	34620 (21.4)	35.9	37.1	1.054
27	28-Jun-20	106367	27244 (25.6)	196365	48063 (24.5)	35.1	36.2	1.046
28	05-Jul-20	117723	32238 (27.4)	190179	53794 (28.3)	38.2	37.5	0.968
29	12-Jul-20	110659	31383 (28.4)	174931	53542 (30.6)	38.7	37.0	0.927
30	19-Jul-20	105206	30319 (28.8)	165675	48315 (29.2)	38.8	38.6	0.988
31	26-Jul-20	81234	22782 (28.0)	135144	35611 (26.4)	37.5	39.0	1.064
32	02-Aug-20	70566	16996 (24.1)	108997	23997 (22.0)	39.3	41.5	1.094
33	09-Aug-20	58660	11172 (19.0)	82441	15093 (18.3)	41.6	42.5	1.040
34	16-Aug-20	56136	9621 (17.1)	78872	11756 (14.9)	41.6	45.0	1.150
35	23-Aug-20	50317	7790 (15.5)	73012	8540 (11.7)	40.8	47.7	1.324
36	30-Aug-20	45420	6096 (13.4)	67338	6694 (9.9)	40.3	47.7	1.350
37	06-Sep-20	51054	6421 (12.6)	65938	5531 (8.4)	43.6	53.7	1.499
38	13-Sep-20	53705	6547 (12.2)	67005	5464 (8.2)	44.5	54.5	1.495
39	20-Sep-20	44840	5530 (12.3)	53976	4568 (8.5)	45.4	54.8	1.457
40	27-Sep-20	48627	5568 (11.5)	74430	5440 (7.3)	39.5	50.6	1.567
41	04-Oct-20	50430	5688 (11.3)	80607	6089 (7.6)	38.5	48.3	1.493
42	11-Oct-20	53446	5702 (10.7)	84513	6374 (7.5)	38.7	47.2	1.415
43	18-Oct-20	56120	6044 (10.8)	86037	6022 (7.0)	39.5	50.1	1.539
44	25-Oct-20	51281	5721 (11.2)	84558	5757 (6.8)	37.8	49.8	1.639
45	01-Nov-20	52988	6061 (11.4)	85818	6073 (7.1)	38.2	50.0	1.616
46	08-Nov-20	58907	8097 (13.7)	88085	6747 (7.7)	40.1	54.5	1.795
47	15-Nov-20	67576	10584 (15.7)	93055	8177 (8.8)	42.1	56.4	1.782
48	22-Nov-20	74570	12199 (16.4)	101104	9851 (9.7)	42.4	55.3	1.679
49	29-Nov-20	81189	15730 (19.4)	121866	15034 (12.3)	40.0	51.1	1.571
50	06-Dec-20	107429	24715 (23.0)	159988	28595 (17.9)	40.2	46.4	1.287
51	13-Dec-20	116875	29805 (25.5)	177220	38757 (21.9)	39.7	43.5	1.166
52	20-Dec-20	109391	34119 (31.2)	174473	47807 (27.4)	38.5	41.6	1.138
53	27-Dec-20	150709	52873 (35.1)	182662	62776 (34.4)	45.2	45.7	1.021
1	03-Jan-21	234377	70744 (30.2)	263977	79900 (30.3)	47.0	47.0	0.997
2	10-Jan-21	202156	52824 (26.1)	213480	51746 (24.2)	48.6	50.5	1.078
3	17-Jan-21	164497	34395 (20.9)	161481	28757 (17.8)	50.5	54.5	1.174
4	24-Jan-21	122368	18952 (15.5)	126055	15624 (12.4)	49.3	54.8	1.250
5	31-Jan-21	98522	11999 (12.2)	103277	10278 (10.0)	48.8	53.9	1.224
6	07-Feb-21	89886	8452 (9.4)	101329	7967 (7.9)	47.0	51.5	1.196
7	14-Feb-21	83039	6577 (7.9)	101532	5511 (5.4)	45.0	54.4	1.459
8	21-Feb-21	78839	5690 (7.2)	99384	4614 (4.6)	44.2	55.2	1.555
9	28-Feb-21	82391	4567 (5.5)	98612	4017 (4.1)	45.5	53.2	1.361
10	07-Mar-21	78776	4104 (5.2)	95601	3673 (3.8)	45.2	52.8	1.356
Total		4095013	731410 (17.9)	5289871	883629 (16.7)	43.6	45.3	1.069

^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)

COVID-19 TESTING SUMMARY

SOUTH AFRICA WEEK 10 2021

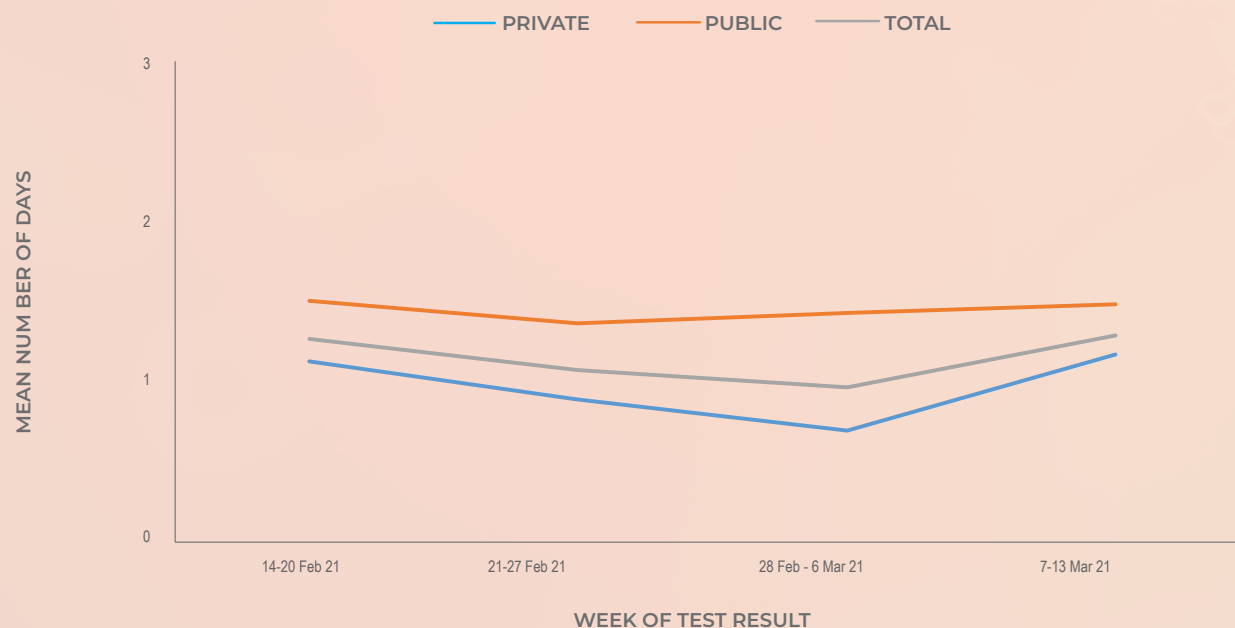


Figure 3. Mean number of days between date of specimen collection and date of test result, by week of test result, South Africa, 14 February – 13 March 2021

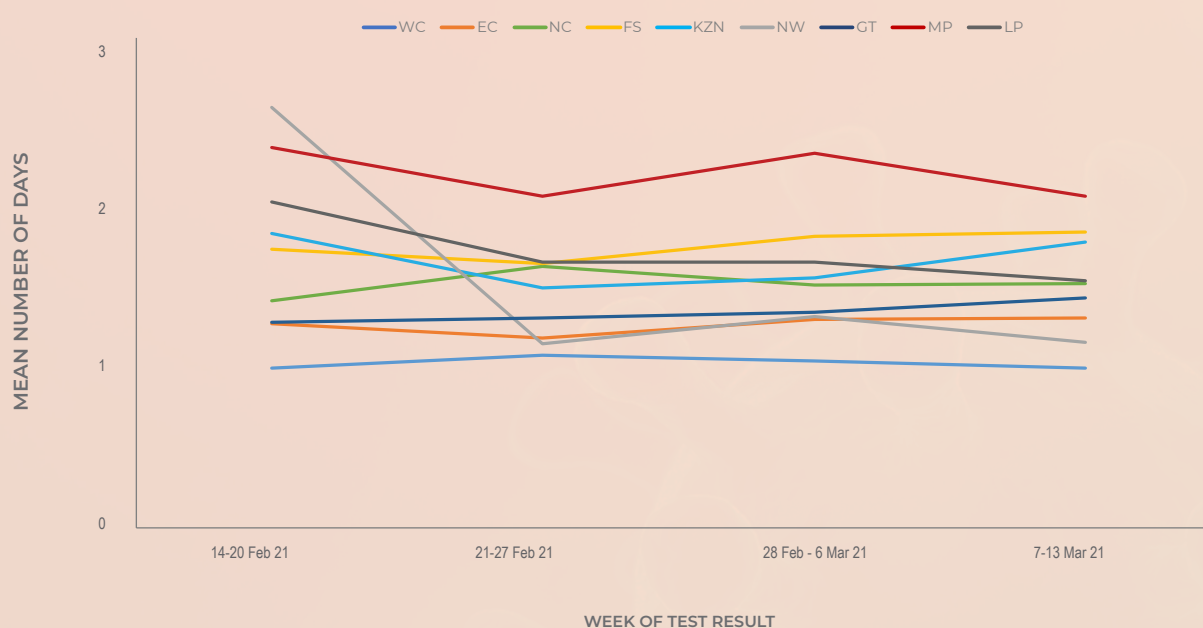


Figure 4. Mean number of days between date of specimen collection and date of test result, by week of test result and province, public sector, South Africa, 14 February – 13 March 2021. WC, Western Cape; EC, Eastern Cape; FS, Free State; KZN, KwaZulu-Natal; GT, Gauteng; NC, Northern Cape; NW, North West; MP, Mpumalanga; LP, Limpopo

COVID-19 TESTING SUMMARY

SOUTH AFRICA WEEK 10 2021

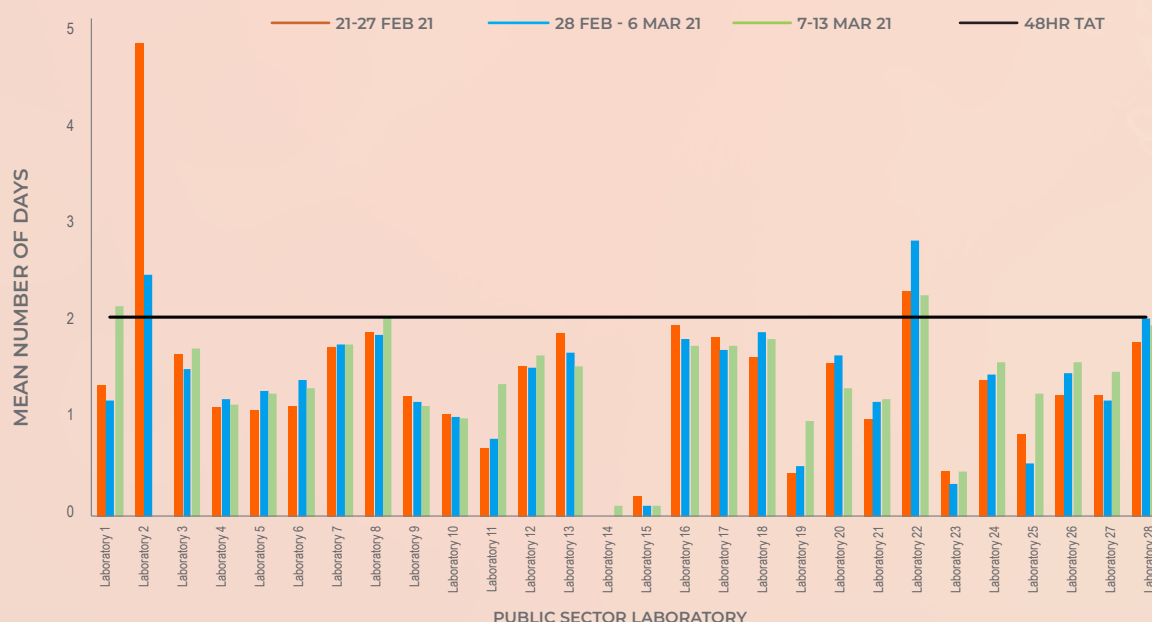


Figure 5. Mean number of days between date of specimen collection and date of test result, by public sector laboratory, 21 February – 13 March 2021. The horizontal black line indicates 48-hour turnaround time (TAT).

Testing by province

The majority of tests continued to be performed in Gauteng (33.7%), KwaZulu-Natal (22.1%) and Western Cape (15.6%) provinces in week 10 of 2021 (Table 3). The overall testing rate in week 10 was 292 per 100,000 persons; ranging from 468 per 100,000 persons in the Northern Cape to 77 per 100,000 persons in Limpopo (Figure 6). Testing rates have remained relatively consistent since week 4 of 2021, with an increase in the testing rate in Northern Cape observed in the past week.

The percentage testing positive in week 10 of 2021 was highest in the Northern Cape (9.4%) and Mpumalanga (9.1%)

provinces (Figure 7 and Table 3). The percentage testing positive was 5-8% in the Free State, North West and Limpopo, and was <5% in the Western Cape, Eastern Cape, KwaZulu-Natal and Gauteng in week 10. Compared to the previous week, the percentage testing positive in week 10 increased in the Free State ($P=0.008$), decreased in the Western Cape ($P=0.039$), Eastern Cape ($P=0.001$), KwaZulu-Natal ($P<0.001$) and Gauteng ($P<0.001$), and remained unchanged in the Northern Cape ($P=0.206$), North West ($P=0.909$), Mpumalanga ($P=0.078$) and Limpopo ($P=0.120$). The percentage testing positive was higher than the national average, not weighted for population size, in the Northern Cape, Free State, North West, Mpumalanga and Limpopo (Figure 7).

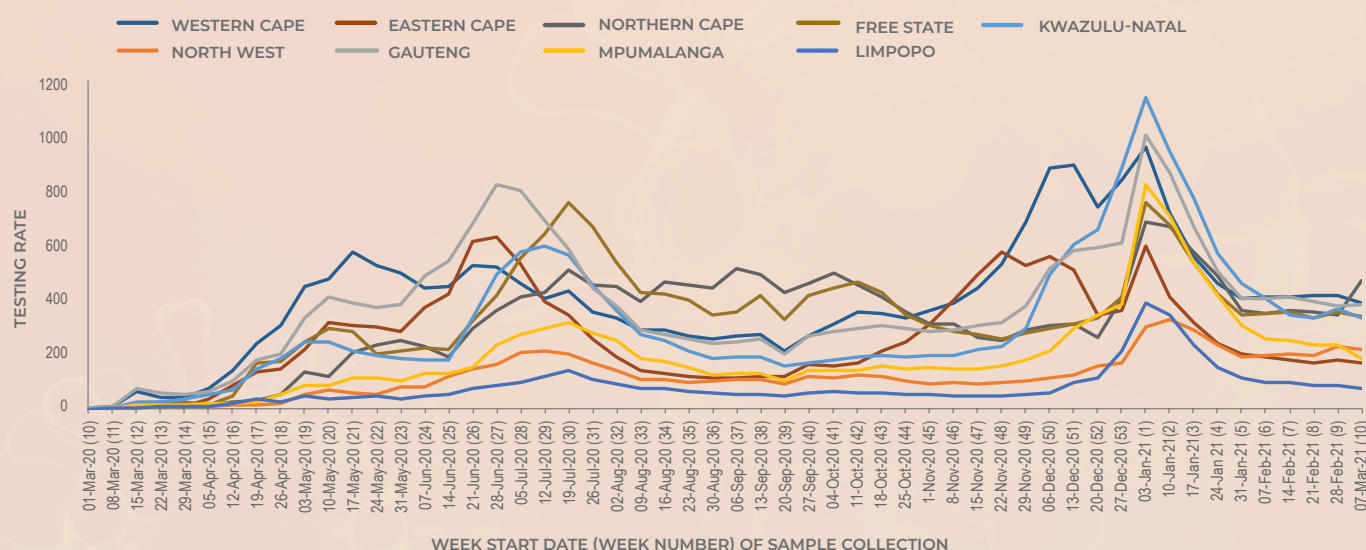


Figure 6. Testing rate per 100,000 persons by province and week of specimen collection, South Africa, 1 March 2020 – 13 March 2021

COVID-19 TESTING SUMMARY

SOUTH AFRICA WEEK 10 2021

Table 3. Weekly number of tests performed and positive tests, by province, South Africa, 21 February – 13 March 2021

Province	Population ^a	21 - 27 Feb 21		28 Feb - 6 Mar 21		7 - 13 Mar 21		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	29065	1567 (5.4)	29126	1369 (4.7)	27220	1181 (4.3)	389	-0.4%
Eastern Cape	6734001	11408	237 (2.1)	11892	220 (1.8)	11373	151 (1.3)	169	-0.5%
Northern Cape	1292786	4590	492 (10.7)	4422	382 (8.6)	6049	566 (9.4)	468	0.7%
Free State	2928903	9739	720 (7.4)	10368	683 (6.6)	9972	752 (7.5)	340	1.0%
KwaZulu-Natal	11531628	38397	2242 (5.8)	41812	1617 (3.9)	38540	1227 (3.2)	334	-0.7%
North West	4108816	8056	698 (8.7)	9332	636 (6.8)	8968	615 (6.9)	218	0.0%
Gauteng	15488137	60797	2963 (4.9)	57997	2456 (4.2)	58746	2250 (3.8)	379	-0.4%
Mpumalanga	4679786	10999	1009 (9.2)	10898	915 (8.4)	8681	791 (9.1)	185	0.7%
Limpopo	5852553	4878	376 (7.7)	4889	301 (6.2)	4495	243 (5.4)	77	-0.8%
Unknown		294	0 (0.0)	267	5 (1.9)	333	1 (0.3)		
Total	59622350	178223	10304 (5.8)	181003	8584 (4.7)	174377	7777 (4.5)	292	-0.3%

^a 2020 Mid-year population Statistics SA

^b Current week compared to previous week

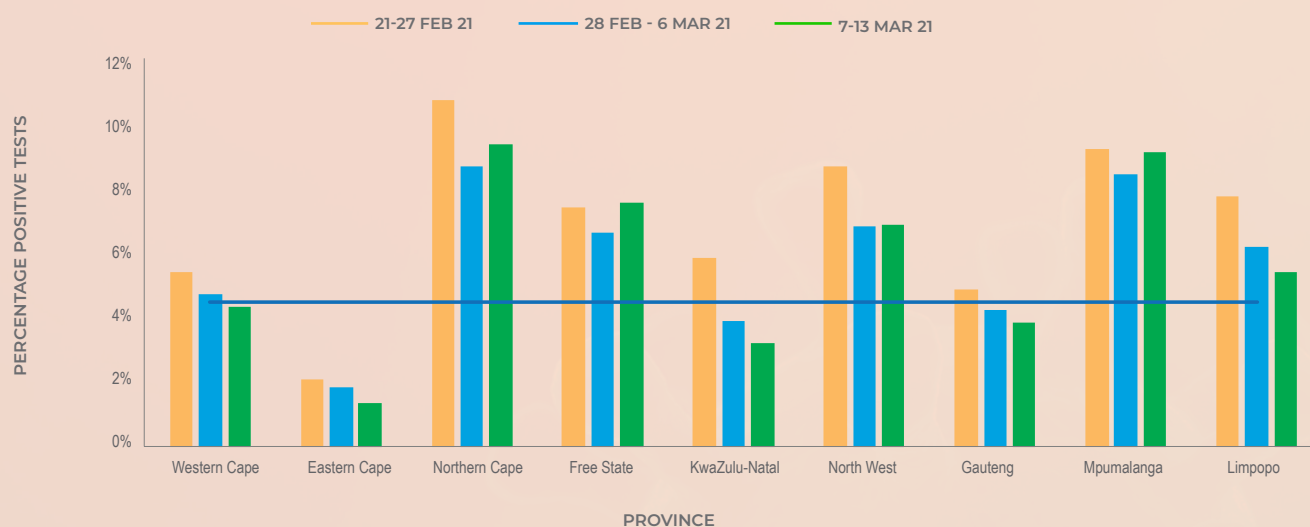


Figure 7. Weekly percentage testing positive, by province, South Africa, 21 February – 13 March 2021. The horizontal blue line shows the national mean for week 10, beginning 7 March 2021

Testing in the public sector

In the public sector, the percentage testing positive decreased in the past week (5.5% in week 9 to 5.2% in week 10 of 2021, $P=0.003$) (Table 4). The percentage testing positive in week 10 of 2021 was highest in the

Northern Cape (10.6%) and Free State (10.2%) provinces. The percentage testing positive in the public sector remains higher than the national average, not weighted for population size, in the Western Cape, Northern Cape, Free State, North West, Mpumalanga and Limpopo provinces (Figure 8).

COVID-19 TESTING SUMMARY

SOUTH AFRICA WEEK 10 2021

Table 4. Weekly number of tests conducted and positive tests in the public sector, by province, South Africa, 21 February – 13 March 2021

Province	21 - 27 Feb 2021		28 Feb – 6 Mar 2021		7 - 13 Mar 2021	
	No. of tests	No. positive tests (%)	No. of tests	No. positive tests (%)	No. of tests	No. positive tests (%)
Western Cape	10145	706 (7.0)	10162	597 (5.9)	9843	576 (5.9)
Eastern Cape	6826	126 (1.8)	7233	107 (1.5)	6995	74 (1.1)
Northern Cape	2694	302 (11.2)	2488	253 (10.2)	4142	437 (10.6)
Free State	4492	386 (8.6)	4606	338 (7.3)	4462	455 (10.2)
KwaZulu-Natal	25201	1699 (6.7)	28247	1242 (4.4)	25206	911 (3.6)
North West	3765	419 (11.1)	3523	270 (7.7)	3557	302 (8.5)
Gauteng	18870	1348 (7.1)	19081	1145 (6.0)	19699	963 (4.9)
Mpumalanga	5224	565 (10.8)	5325	492 (9.2)	3141	304 (9.7)
Limpopo	1403	139 (9.9)	1496	119 (8.0)	1435	81 (5.6)
Unknown	219	0 (0.0)	230	4 (1.7)	296	1 (0.3)
Total	78839	5690 (7.2)	82391	4567 (5.5)	78776	4104 (5.2)

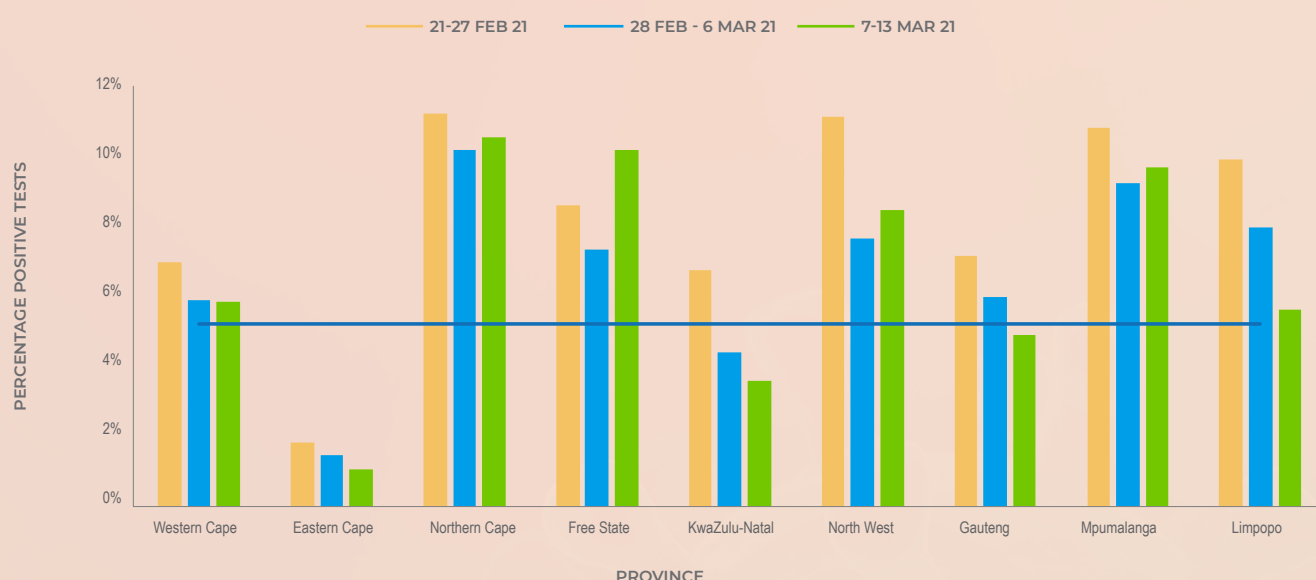


Figure 8. Weekly percentage testing positive in the public sector, by province, South Africa, 21 February – 13 March 2021. The horizontal blue line shows the national mean for week 10 of 2021, beginning 7 March 2021.

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 7 - 13 March 2021, with the highest proportion testing positive nationally. The distribution of public sector facilities remain spatially diffuse. Nine of the 25 facilities showing the highest PTP are in the Free State, 7 in KwaZulu-Natal, and three each in the North West and Northern Cape.

COVID-19 TESTING SUMMARY

SOUTH AFRICA | WEEK 10 2021

Table 5.1 Public sector healthcare facilities with a high proportion testing positive, 7 - 13 March 2021

Facility Name	Province	Tests	PTP (95% CI)
Facility 1	North West	74	0.405 (0.294;0.517)
Facility 2	Free State	35	0.400 (0.238;0.562)
Facility 3	Northern Cape	85	0.306 (0.208;0.404)
Facility 4	Free State	70	0.300 (0.193;0.407)
Facility 5	Free State	34	0.294 (0.141;0.447)
Facility 6	Free State	37	0.270 (0.127;0.413)
Facility 7	KwaZulu-Natal	112	0.250 (0.170;0.330)
Facility 8	Free State	25	0.240 (0.073;0.407)
Facility 9	Free State	25	0.240 (0.073;0.407)
Facility 10	KwaZulu-Natal	46	0.239 (0.116;0.362)
Facility 11	Northern Cape	73	0.233 (0.136;0.330)
Facility 12	Gauteng	26	0.231 (0.069;0.393)
Facility 13	Free State	72	0.222 (0.126;0.318)
Facility 14	North West	45	0.222 (0.101;0.344)
Facility 15	Free State	28	0.214 (0.062;0.366)
Facility 16	KwaZulu-Natal	42	0.214 (0.090;0.338)
Facility 17	KwaZulu-Natal	29	0.207 (0.059;0.354)
Facility 18	Mpumalanga	39	0.205 (0.078;0.332)
Facility 19	Western Cape	44	0.205 (0.085;0.324)
Facility 20	KwaZulu-Natal	88	0.205 (0.120;0.289)
Facility 21	Free State	60	0.200 (0.099;0.301)
Facility 22	Northern Cape	30	0.200 (0.057;0.343)
Facility 23	KwaZulu-Natal	26	0.192 (0.041;0.344)
Facility 24	North West	180	0.183 (0.127;0.240)
Facility 25	KwaZulu-Natal	77	0.182 (0.096;0.268)

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 7 - 13 March 2021, with the highest proportion testing positive nationally. Private-sector facilities with high proportions testing positive are concentrated in Gauteng (8), Mpumalanga (7), North West and the Western Cape (3 each).

COVID-19 TESTING SUMMARY

SOUTH AFRICA | WEEK 10 2021

Table 5.2 Private sector healthcare facilities with a high proportion testing positive, 7 - 13 March 2021

Facility Name	Province	Tests	PTP (95% CI)
Facility 1	Mpumalanga	54	0.259 (0.142;0.376)
Facility 2	Mpumalanga	57	0.246 (0.134;0.357)
Facility 3	Mpumalanga	45	0.222 (0.101;0.344)
Facility 4	Gauteng	32	0.188 (0.052;0.323)
Facility 5	Western Cape	42	0.167 (0.054;0.279)
Facility 6	Mpumalanga	91	0.165 (0.089;0.241)
Facility 7	Western Cape	137	0.161 (0.099;0.222)
Facility 8	KwaZulu-Natal	38	0.158 (0.042;0.274)
Facility 9	Free State	105	0.152 (0.084;0.221)
Facility 10	Limpopo	159	0.145 (0.090;0.199)
Facility 11	North West	71	0.127 (0.049;0.204)
Facility 12	North West	99	0.121 (0.057;0.186)
Facility 13	Gauteng	192	0.120 (0.074;0.166)
Facility 14	Mpumalanga	1082	0.116 (0.096;0.135)
Facility 15	Eastern Cape	52	0.115 (0.029;0.202)
Facility 16	Mpumalanga	595	0.113 (0.087;0.138)
Facility 17	Mpumalanga	277	0.112 (0.075;0.149)
Facility 18	Gauteng	140	0.107 (0.056;0.158)
Facility 19	Gauteng	95	0.105 (0.044;0.167)
Facility 20	Western Cape	107	0.103 (0.045;0.160)
Facility 21	North West	157	0.102 (0.055;0.149)
Facility 22	Gauteng	50	0.100 (0.017;0.183)
Facility 23	Gauteng	503	0.099 (0.073;0.126)
Facility 24	Gauteng	51	0.098 (0.016;0.180)
Facility 25	Gauteng	51	0.098 (0.016;0.180)

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

Health district-level results

The data from geo-locatable public testing (almost every public sector facility in the country) and private testing (approximately 85% of private testing facilities) in the week from 7 - 13 March 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 conducted 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 Table 6.

As proportions testing positive continue to decline, districts showing high PTP remain diffuse: Mpumalanga (6), the Northern Cape and Free State (5 each) and Western Cape (4) account for 20 of the 25 districts. As with the previous week, no district showed a PTP in excess of 30%. PTP exceeded 20% in 6 districts. Significant increases were observed in Maquassi Hills (North West), and Setsoto and Ngwathe (Free State). After showing a significant increase last week, Hantam in the Northern Cape, shows a statistically significant decrease this week, reflecting the passing of the localised outbreak in Calvinia.

COVID-19 TESTING SUMMARY

SOUTH AFRICA | WEEK 10 2021

Table 6. Health sub-districts with the highest proportion testing positive based on public and private sector data for the week of 7 - 13 March 2021

Health district or sub-district	Province	PTP (95% CI)	Previous week
Maquassi Hills	North West	0.290 (0.205-0.374)	0.092 (0.015-0.170)
Bergrivier	Western Cape	0.239 (0.120-0.357)	0.195 (0.080-0.311)
Maluti a Phofung	Free State	0.225 (0.188-0.261)	0.165 (0.131-0.199)
Thaba Chweu	Mpumalanga	0.223 (0.156-0.289)	0.136 (0.098-0.174)
Richtersveld	Northern Cape	0.206 (0.126-0.285)	0.159 (0.063-0.255)
Mantsopa	Free State	0.200 (0.120-0.279)	0.098 (0.037-0.159)
Nketoana	Free State	0.169 (0.101-0.237)	0.097 (0.047-0.147)
Setsoto	Free State	0.164 (0.085-0.244)	0.018 (0.002-0.034)
eDumbe	KwaZulu-Natal	0.162 (0.109-0.215)	0.081 (0.040-0.121)
Kamiesberg	Northern Cape	0.156 (0.070-0.241)	0.168 (0.084-0.252)
Matzikama	Western Cape	0.145 (0.095-0.195)	0.144 (0.096-0.192)
Cape Agulhas	Western Cape	0.145 (0.013-0.277)	...
Greater Tubatse	Limpopo	0.142 (0.091-0.192)	0.095 (0.057-0.133)
Tsantsabane	Northern Cape	0.137 (0.042-0.233)	0.148 (0.070-0.226)
Mkhondo	Mpumalanga	0.133 (0.079-0.188)	0.089 (0.047-0.130)
Mamusa	North West	0.133 (0.047-0.219)	0.034 (0.000-0.100)
Ngwathe	Free State	0.132 (0.064-0.200)	0.016 (0.000-0.047)
Hantam	Northern Cape	0.129 (0.089-0.159)	0.285 (0.209-0.362)
Lekwa	Mpumalanga	0.128 (0.083-0.173)	0.094 (0.060-0.127)
Umjindi	Mpumalanga	0.124 (0.031-0.216)	0.197 (0.104-0.290)
Cederberg	Western Cape	0.123 (0.022-0.224)	0.164 (0.071-0.258)
Ndwedwe	KwaZulu-Natal	0.117 (0.041-0.194)	0.052 (0.022-0.082)
Govan Mbeki	Mpumalanga	0.114 (0.092-0.136)	0.102 (0.081-0.123)
Joe Morolong	Northern Cape	0.113 (0.000-0.233)	0.156 (0.061-0.250)
Pixley Ka Seme	Mpumalanga	0.111 (0.077-0.144)	0.152 (0.118-0.187)

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 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) for the current week is presented graphically below.

SOUTH AFRICA WEEK 10 2021



www.nicd.ac.za TOLL-FREE NUMBER 0800 029 999 PAGE 14

COVID-19 TESTING SUMMARY

SOUTH AFRICA WEEK 10 2021

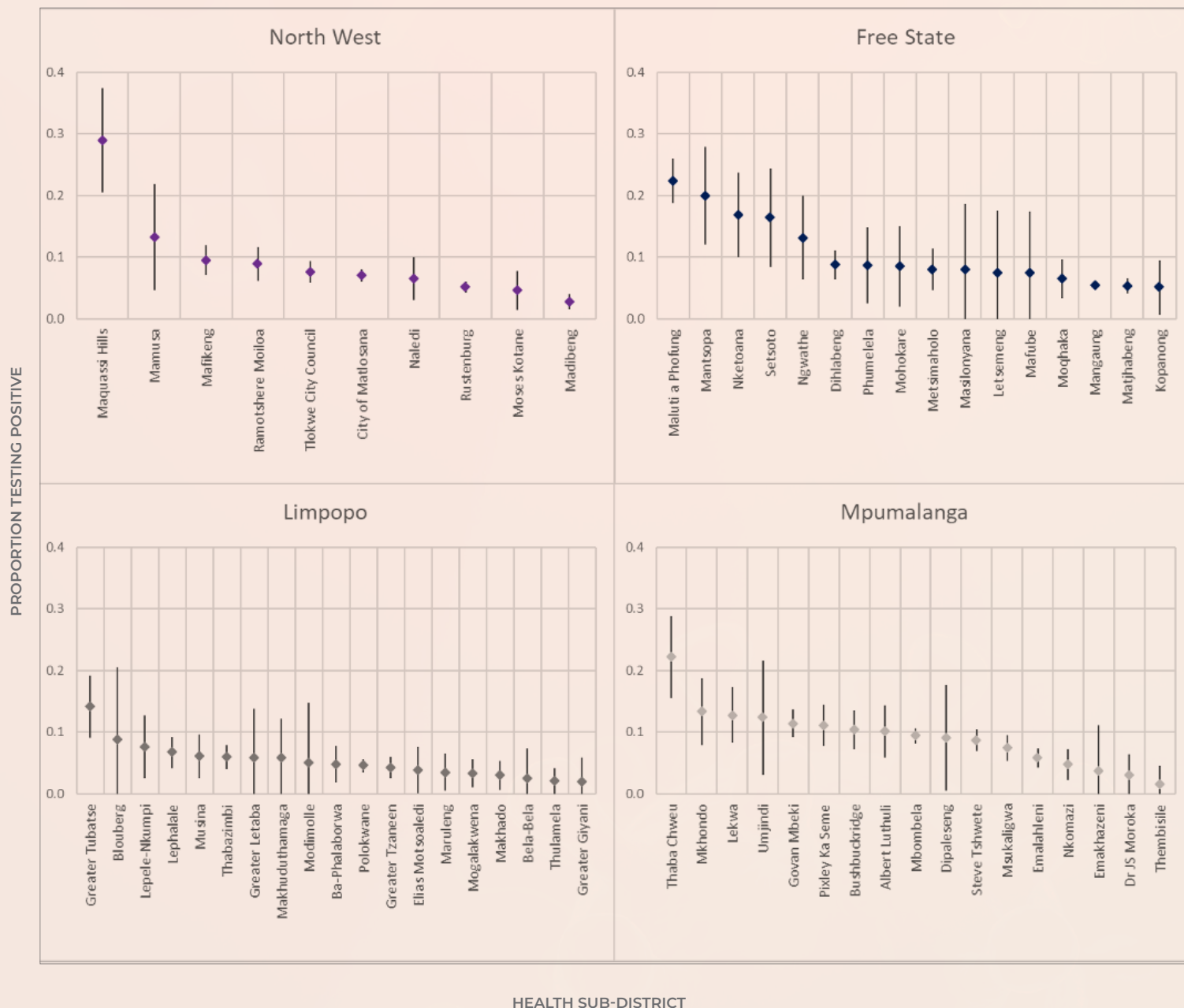


Figure 9.2 Proportions testing positive by health sub-district in the North West, Free State, Limpopo and Mpumalanga provinces based on public and private sector data for the week of 7 - 13 March 2021.

COVID-19 TESTING SUMMARY

SOUTH AFRICA WEEK 10 2021

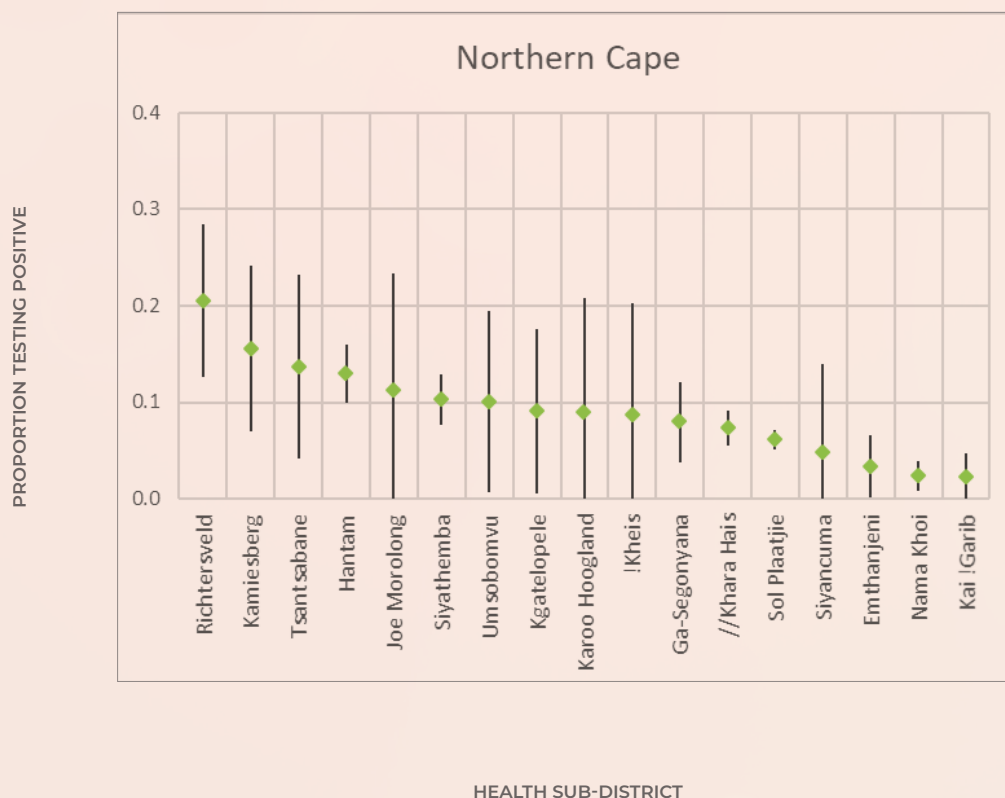


Figure 9.3 Proportions testing positive by health sub-districts in the Northern Cape Province based on public and private sector data for the week of 7 - 13 March 2021.

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 10 2021

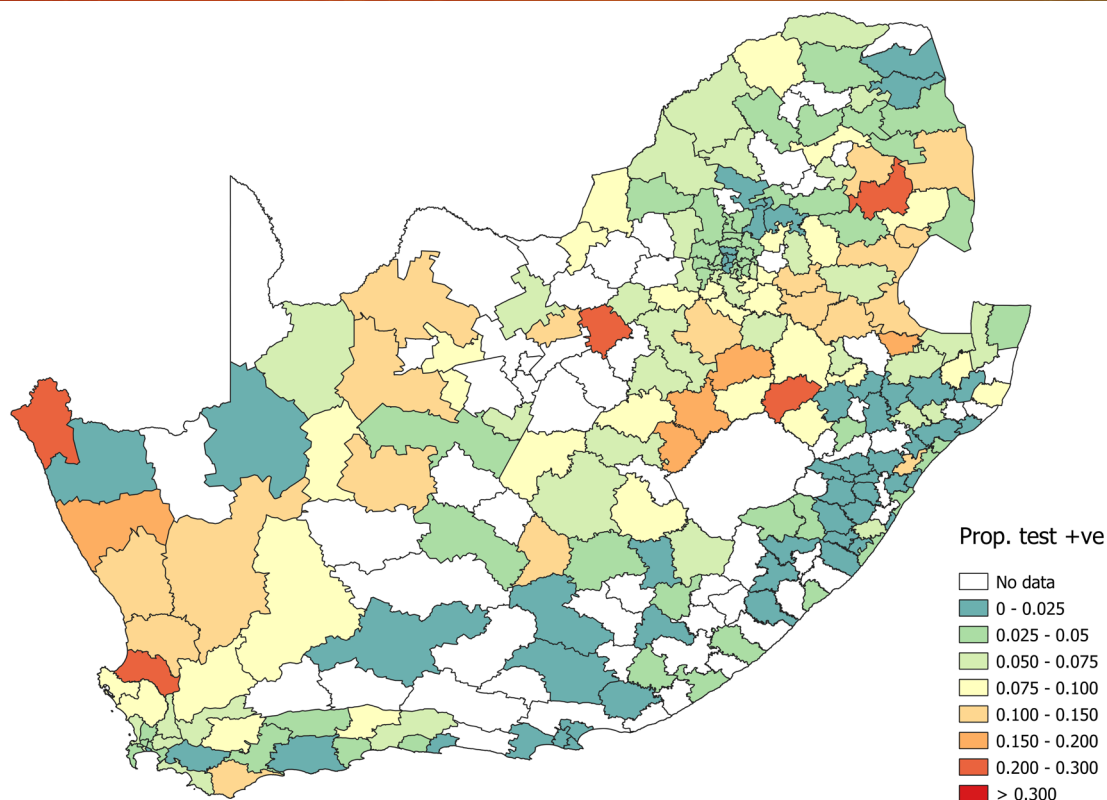


Figure 10. Proportion testing positive by health sub-district in South Africa for the week of 7 - 13 March 2021. Areas shaded white represent districts in which either (i) no tests were conducted, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

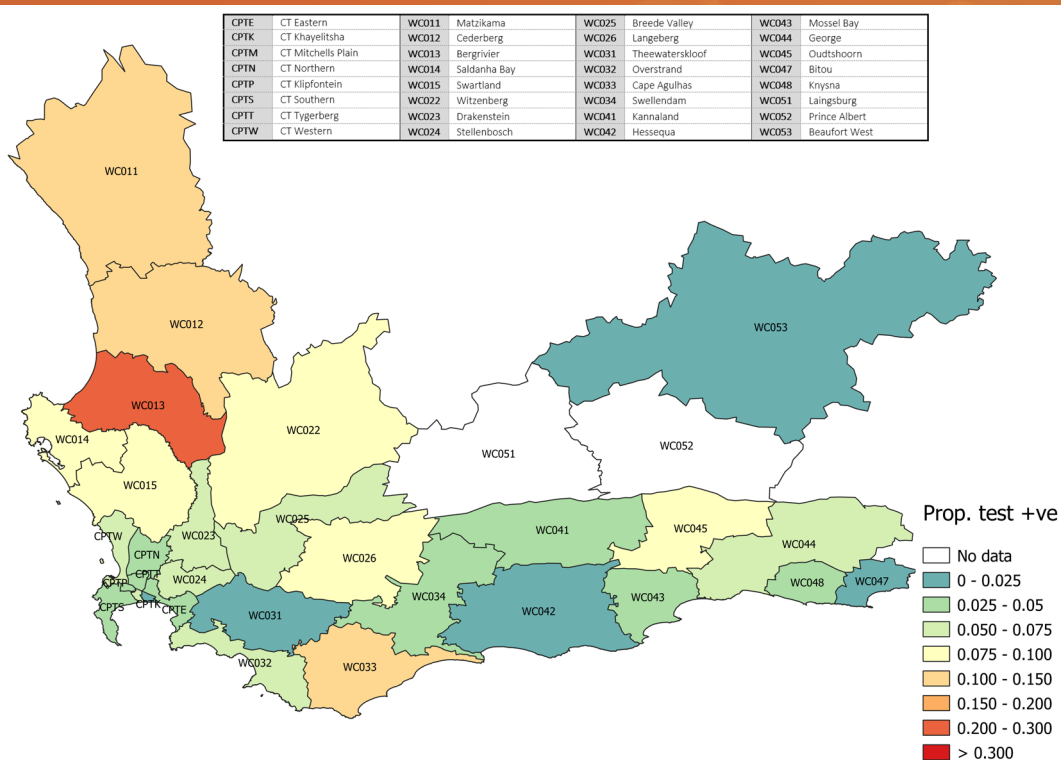


Figure 11. Proportion testing positive by health sub-district in the Western Cape province for the week of 7 - 13 March 2021. Areas shaded white represent districts in which either (i) no tests were conducted, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

COVID-19 TESTING SUMMARY

SOUTH AFRICA WEEK 10 2021

BUF	Buffalo City	EC122	Mngoma	EC135	Intsika Yethu	EC155	Nyanjeni
EC101	Camdeboo	EC123	Great Kei	EC136	Emalahleni	EC156	Mhlontlo
EC102	Blue Crane Route	EC124	Amahlathi	EC137	Engcobo	EC157	King Sabata Dalindyebo
EC103	Ilwesi	EC126	Ngqushwa	EC138	Sakhisizwe	EC441	Matatiele
EC104	Malana	EC127	Nqomkobe	EC141	Elundini	EC442	Umtzimvubu
EC105	Ndlambe	EC128	Nxuba	EC142	Sengq	EC443	Mbitana
EC106	Sundays River Valley	EC131	Inxuba Yethemba	EC143	Maletswai	EC444	Ntabankulu
EC107	Baviaans	EC132	Tsohwana	EC144	Gariep	NMAA	Nelson Mandela Bay A
EC108	Kouga	EC133	Inkwanca	EC153	Ngqiza Hill	NMAB	Nelson Mandela Bay B
EC109	Kou-Kamma	EC134	Lukanji	EC154	Port St Johns	NMAC	Nelson Mandela Bay C
EC121	Mehazhe						

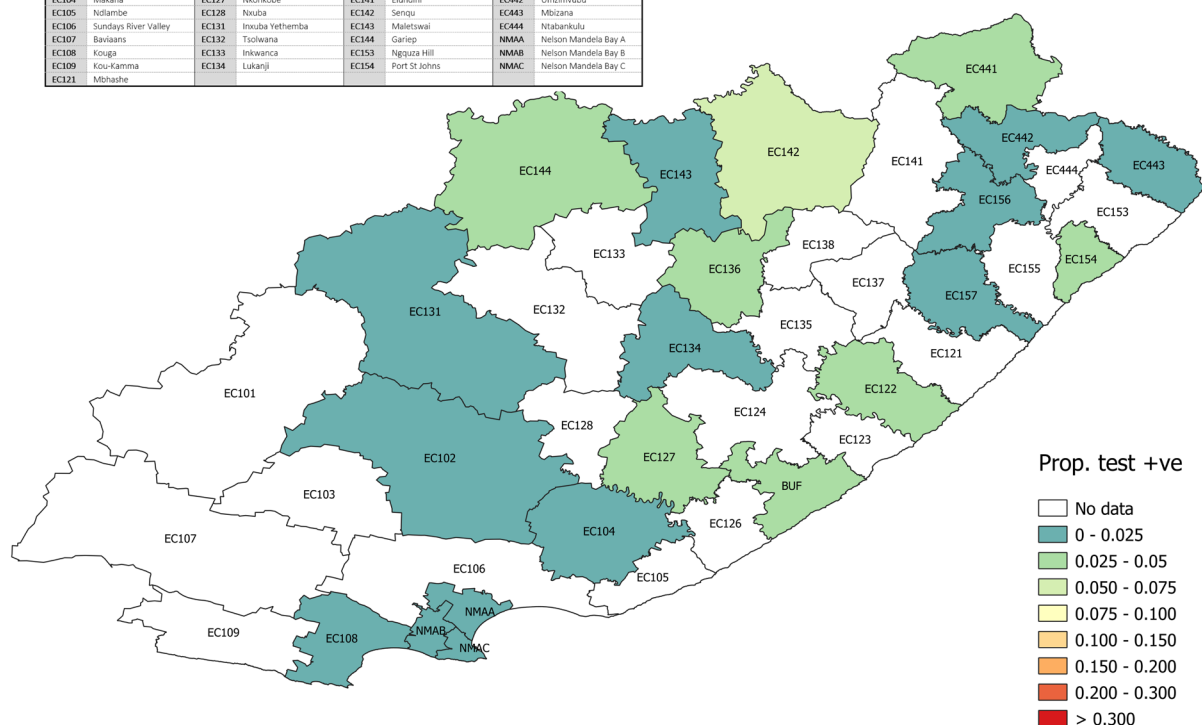


Figure 12. Proportion testing positive by health sub-district in the Eastern Cape province for the week of 7 - 13 March 2021. Areas shaded white represent districts in which either (i) no tests were conducted, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

NC061	Richtersveld	NC074	Kareeberg	NC085	Tsantabane
NC062	Nama Khoi	NC075	Renosterberg	NC086	Katlenepale
NC064	Kamiesberg	NC076	Thembelille	NC091	Sol Plaatje
NC065	Hantam	NC077	Siyathemba	NC092	Dikgatlong
NC066	Karoo Hoogland	NC078	Siyancuma	NC093	Maganneng
NC067	Knabkro	NC081	Mier	NC094	Phokwane
NC071	Uburu	NC082	Kal Gharib	NC451	Joe Morolong
NC072	Umsobomvu	NC083	//Kara Hais	NC452	Ga-Segonyana
NC073	Emthangeni	NC084	Ikheis	NC453	Gamagara

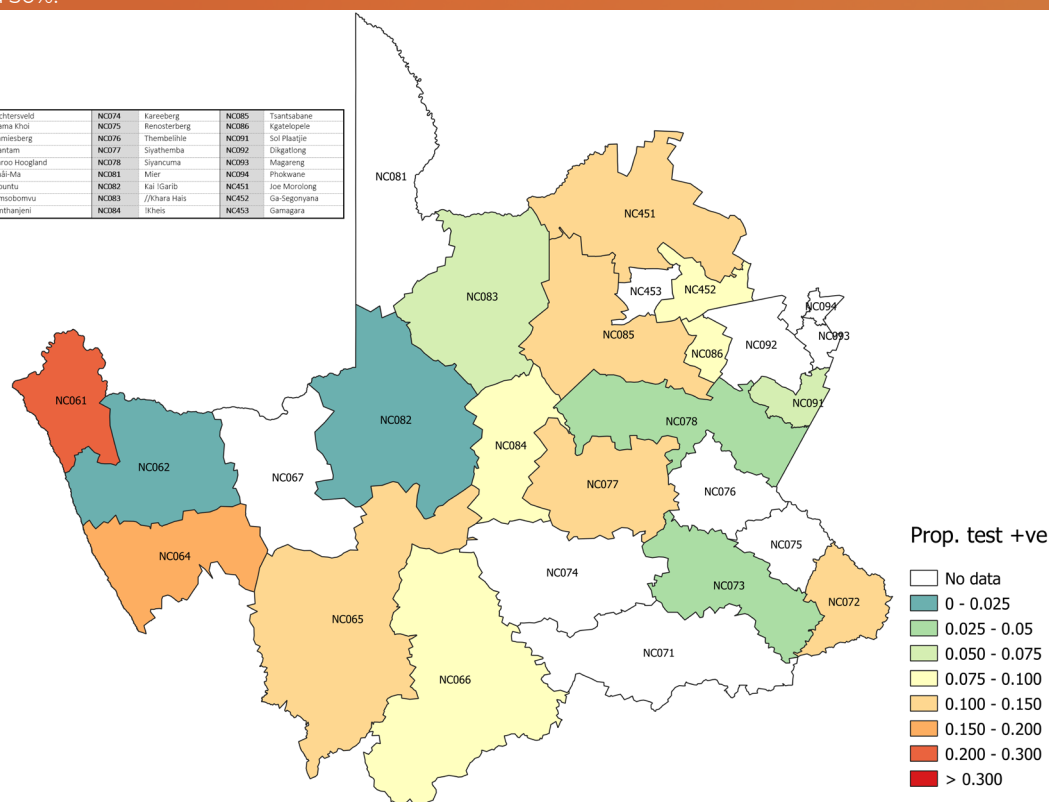


Figure 13. Proportion testing positive by health sub-district in Northern Cape Province for the week of 7 - 13 March 2021. Areas shaded white represent districts in which either (i) no tests were conducted, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

COVID-19 TESTING SUMMARY

SOUTH AFRICA

WEEK 10 2021

MAN	Mangaung	FS181	Masibong	FS191	Setsof	FS196	Mantsoa
FS161	Letsemeng	FS182	Tokologo	FS192	Dikabeng	FS201	Mophaka
FS162	Kopong	FS183	Tswelopele	FS193	Nketoana	FS203	Ngwatho
FS163	Mohokare	FS184	Matjhabeng	FS194	Maluti a Phofung	FS204	Metsimholo
FS164	Naledi	FS185	Nala	FS195	Phumelela	FS205	Mafube

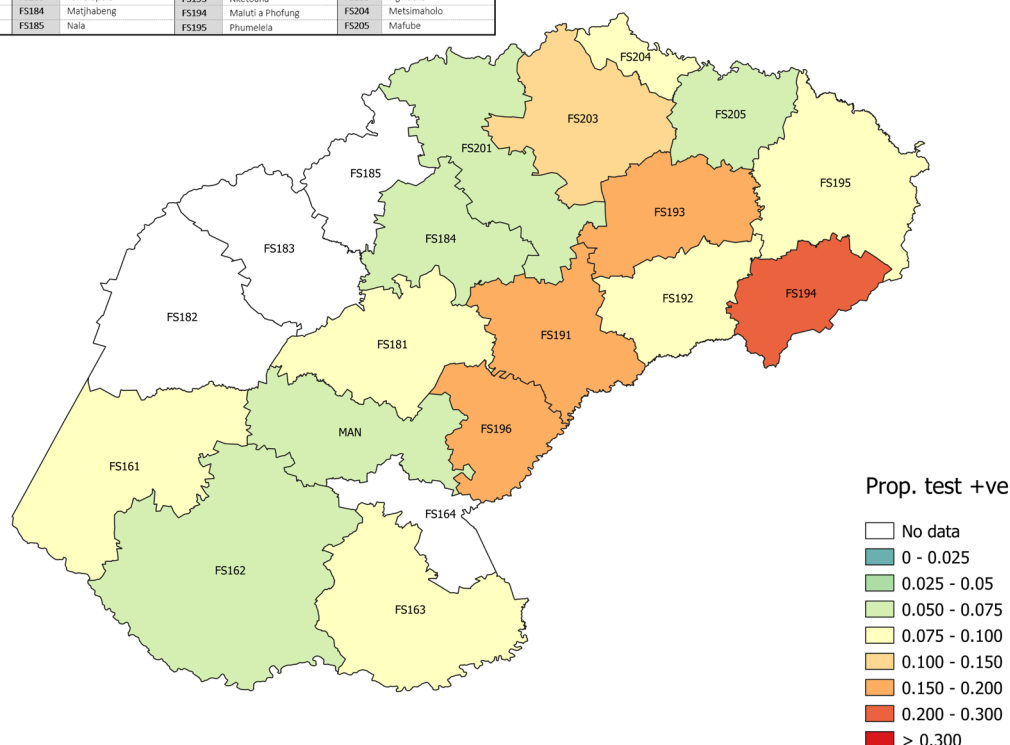


Figure 14. Proportion testing positive by health sub-district in Free State Province for the week of 7 - 13 March 2021. Areas shaded white represent districts in which either (i) no tests were conducted, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

ETHN	eThekweni North	KZN233	Indaka	KZN273	The Big 5 False Bay
ETHS	eThekweni South	KZN234	Umtshezi	KZN274	Hiabisa
ETHW	eThekweni West	KZN235	Oxhambamba	KZN275	Mtshatshatsha
KZN211	Vulamehlo	KZN241	Endumeni	KZN281	Mfotzi
KZN212	Umdoni	KZN242	Nqutu	KZN282	uMhlatuze
KZN213	Umdumbe	KZN244	Msinga	KZN283	Ntambanana
KZN214	uMuziwabantu	KZN245	Umvoti	KZN284	uMlalazi
KZN215	Ezingoleni	KZN252	Newcastle	KZN285	Mthonjaneni
KZN216	Hibiscus Coast	KZN253	Emadlangeni	KZN286	Nkandla
KZN221	uMshwathi	KZN254	Danihauser	KZN291	Mandeni
KZN222	uMngeni	KZN261	eDumbe	KZN292	KwaDukuza
KZN223	Mpofana	KZN262	uPhongolo	KZN293	Ndweni
KZN224	Impendle	KZN263	Abaqulusi	KZN294	Maphumulo
KZN225	The Msunduzi	KZN265	Nongoma	KZN431	Ingwe
KZN226	Mkhambathini	KZN266	Ulundi	KZN432	Kwa Sani
KZN227	Richmond	KZN271	Umhlabuyalingana	KZN433	Greater Kokstad
KZN232	Emnambithi/Ladysmith	KZN272	Jozini	KZN434	Ubuhlebezwe
				KZN435	Umtshakulu

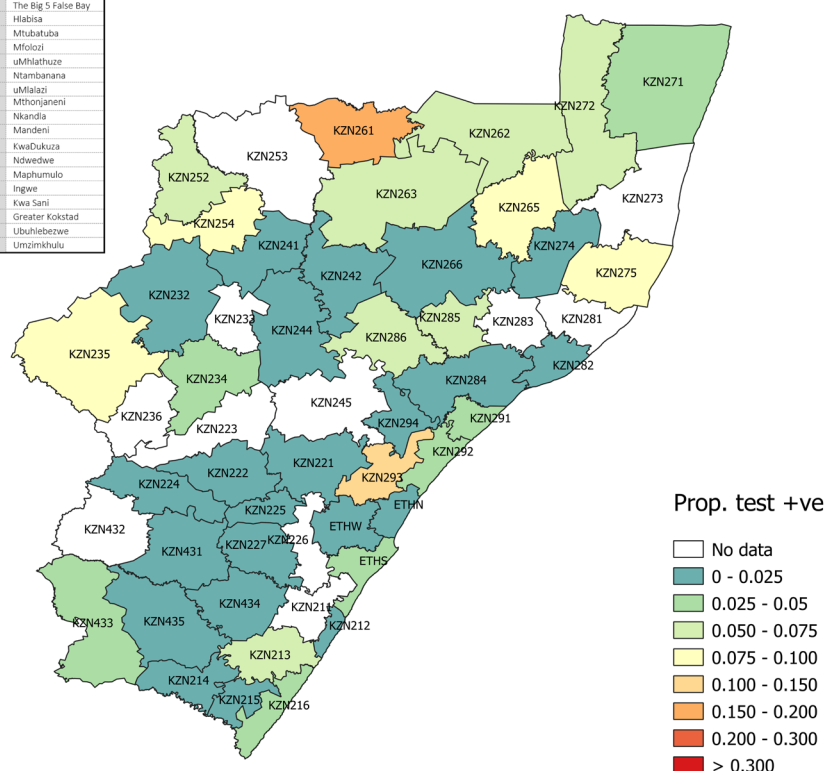


Figure 15. Proportion testing positive by health sub-district in KwaZulu-Natal Province for the week of 7 - 13 March 2021. Areas shaded white represent districts in which either (i) no tests were conducted, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

COVID-19 TESTING SUMMARY

SOUTH AFRICA WEEK 10 2021

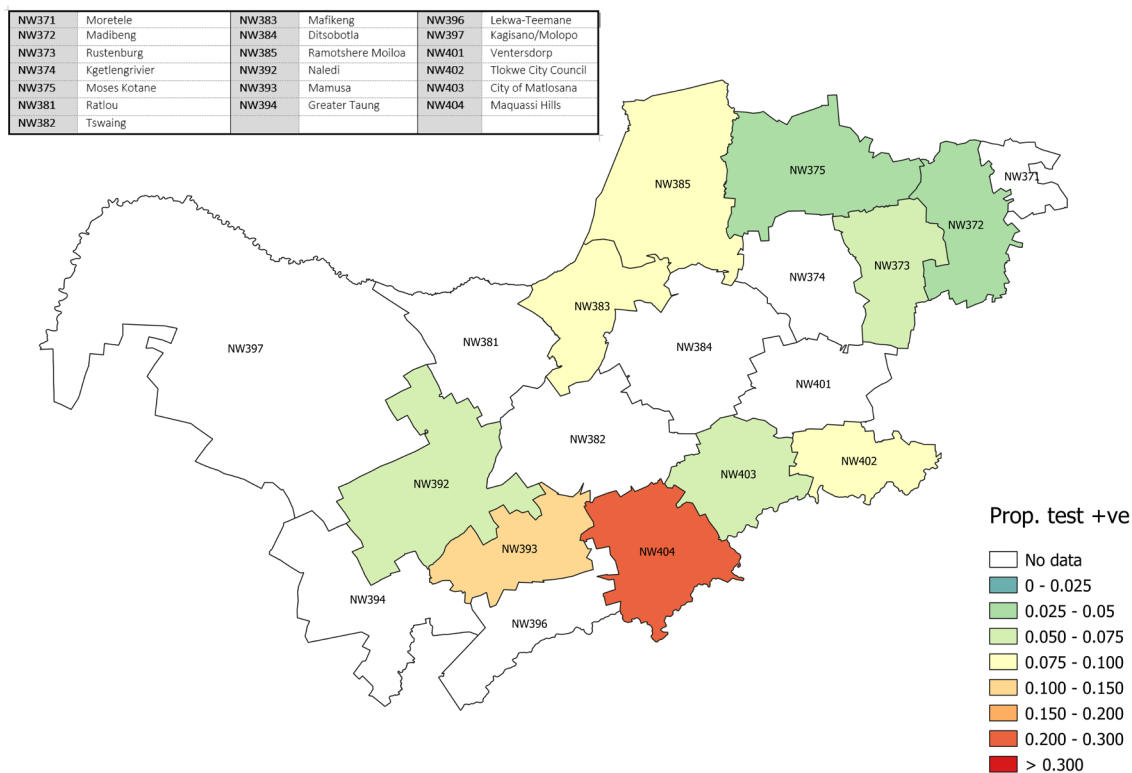


Figure 16. Proportion testing positive by health sub-district in North West Province for the week of 7 - 13 March 2021. Areas shaded white represent districts in which either (i) no tests were conducted, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

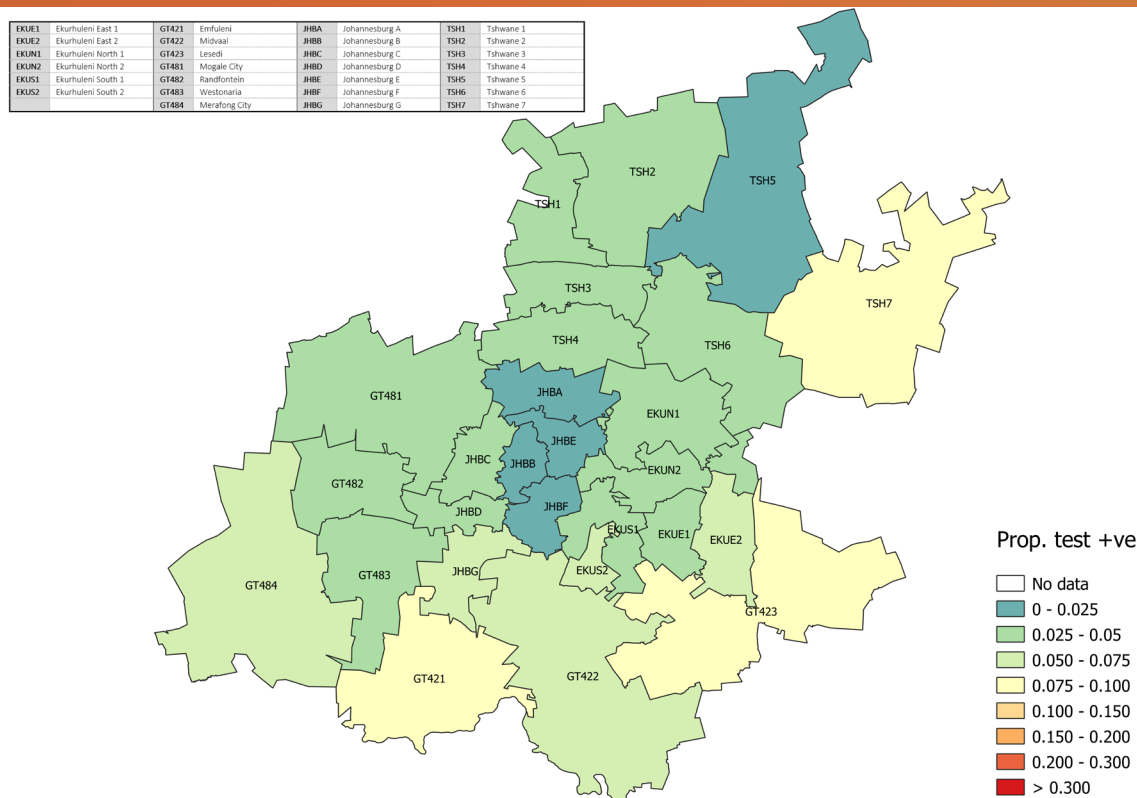


Figure 17. Proportion testing positive by health sub-district in Gauteng Province for the week of 7 - 13 March 2021. Areas shaded white represent districts in which either (i) no tests were conducted, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

COVID-19 TESTING SUMMARY

SOUTH AFRICA WEEK 10 2021

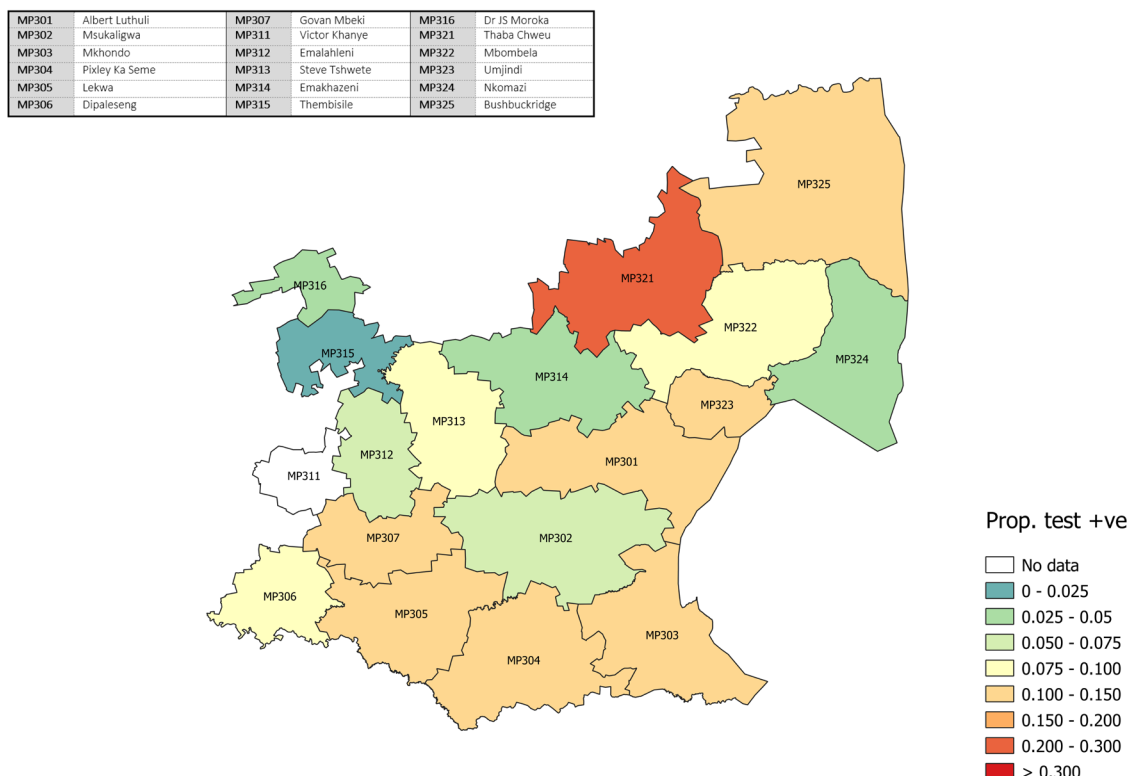


Figure 18. Proportion testing positive by health sub-district in Mpumalanga Province for the week of 7 - 13 March 2021. Areas shaded white represent districts in which either (i) no tests were conducted, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

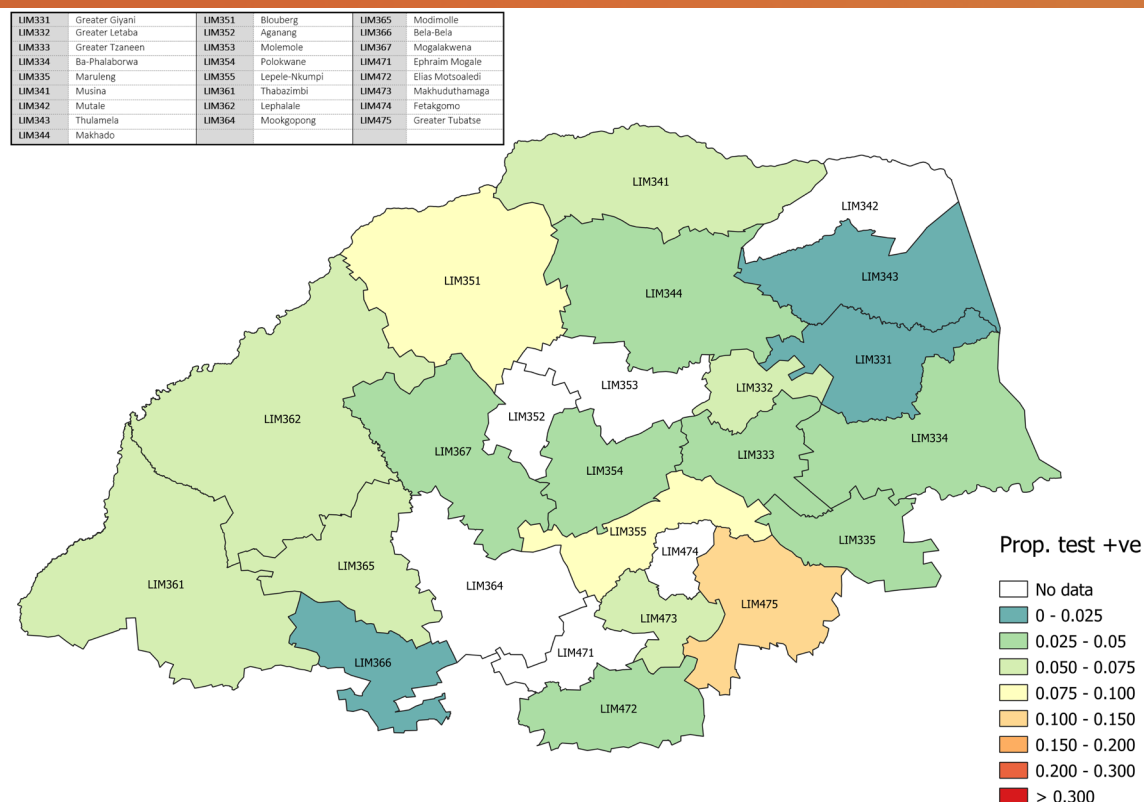


Figure 19. Proportion testing positive by health sub-district in Limpopo Province for the week of 7 - 13 March 2021. Areas shaded white represent districts in which either (i) no tests were conducted, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

COVID-19 TESTING SUMMARY

SOUTH AFRICA WEEK 10 2021

Testing by patient admission status

In week 10 of 2021, 36.5% of tests were performed for hospitalised patients; 51.6% in the public sector and 27.6% in the private sector (Figure 20). The percentage testing positive continued to decrease among both inpatients and outpatients in the past week, and

in week 10 was similar among outpatients (4.7%) and inpatients (4.3%) (Figure 21). In week 10 of 2021 the mean laboratory turnaround time in the public sector continued to be lower for inpatients (1.5 days) compared to outpatients (1.8 days) (Figure 22).

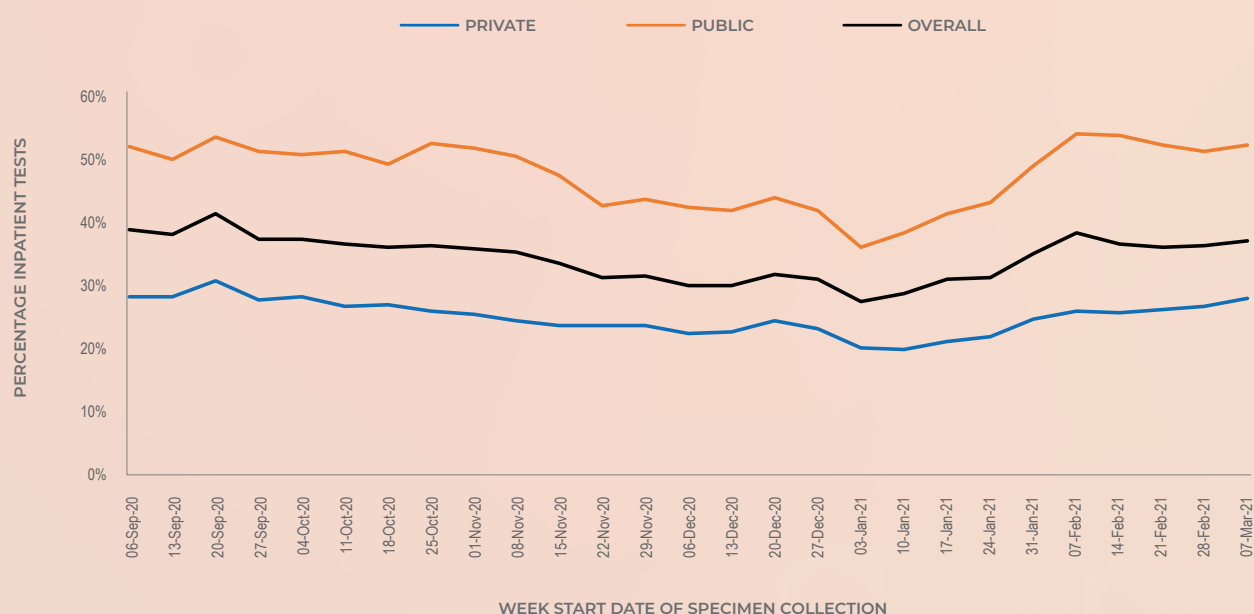


Figure 20. Percentage of inpatient tests performed by health sector, 6 September 2020 – 13 March 2021

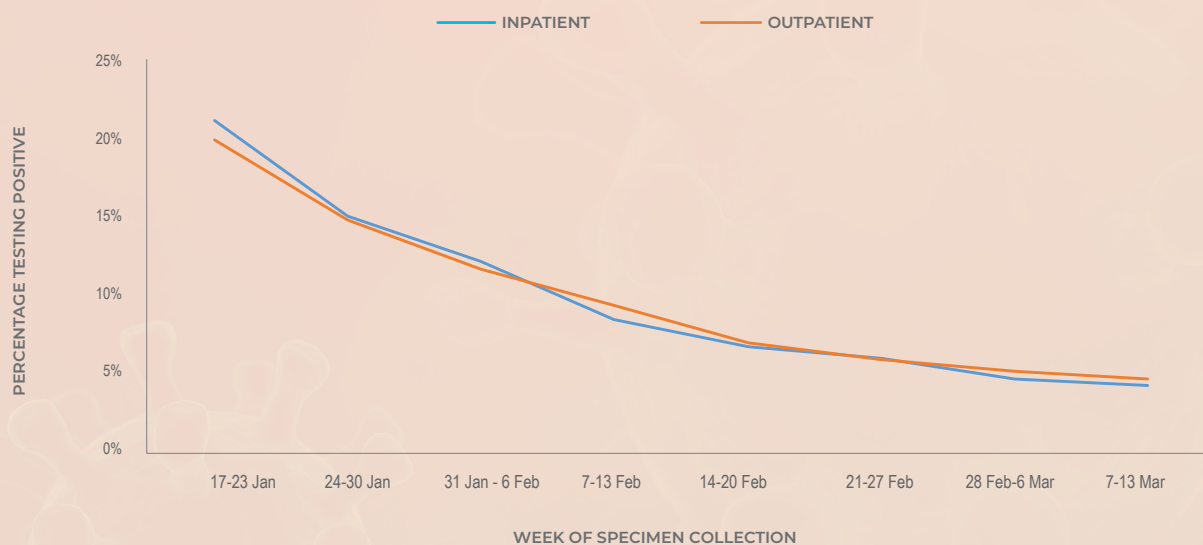


Figure 21. Percentage testing positive by patient admission status in the public sector, 17 January – 13 March 2021

COVID-19 TESTING SUMMARY

SOUTH AFRICA WEEK 10 2021

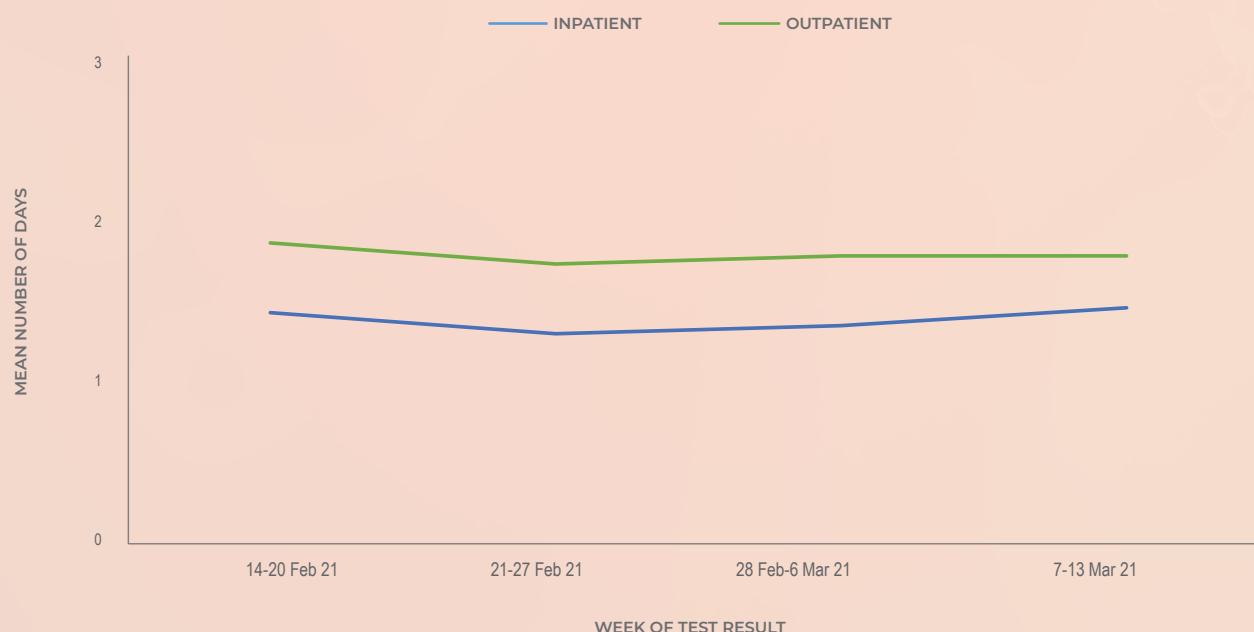


Figure 22. Mean number of days between date of specimen collection and date of test result in the public sector by patient admission status, 14 February – 13 March 2021

Testing by age and sex

The mean age of individuals tested in week 10 of 2021 was 38.4 years, and was similar among males (38.6 years) and females (38.3 years). As in the previous few weeks, the majority of tests (41.2%) were performed in individuals in the 25-44 years' age groups although the distribution of tests remained slightly skewed towards younger age groups in females compared to males (Figure 23). In week 10, the testing rate was slightly

higher in females (294 per 100,000 persons) compared to males (276 per 100,000 persons) (Figure 24). The highest testing rates were observed in individuals ≥ 80 years of age (618 per 100,000 persons) in week 10. The percentage testing positive was highest in individuals aged 15-19 years (5.9%) and 55-59 years (5.8%); in males the highest percentage testing positive was in the 15-19 year (5.5%) and 10-14 (5.4%) year age groups, and in females was in the 15-19 year (6.3%) and 55-59 year (6.3%) age groups (Figure 24).

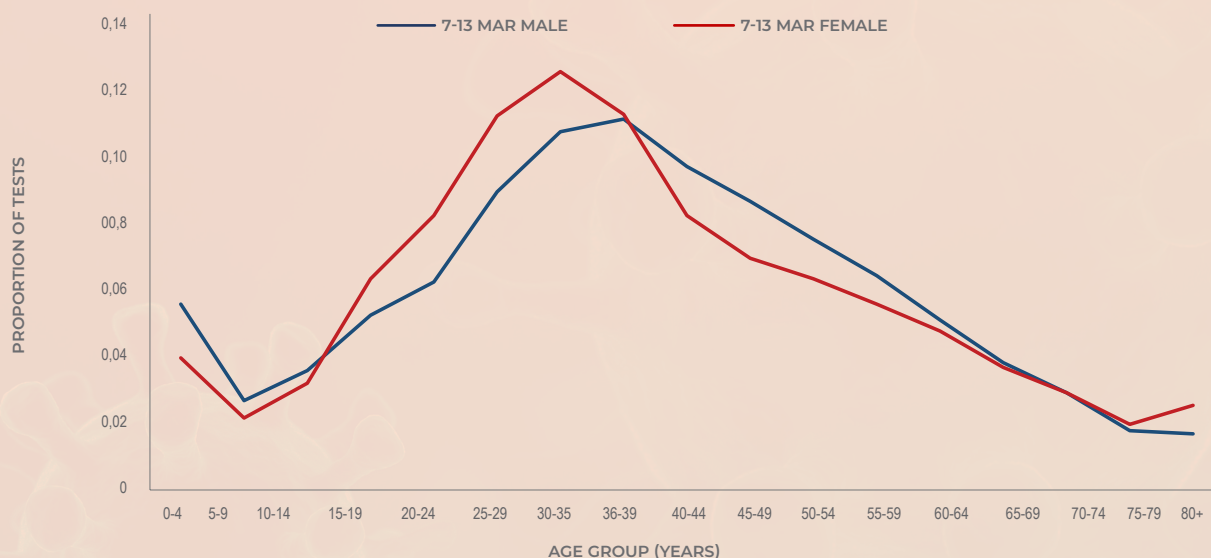


Figure 23. Proportion of tests by age group and sex, South Africa, week 10, 7 - 13 March 2021

COVID-19 TESTING SUMMARY

SOUTH AFRICA WEEK 10 2021

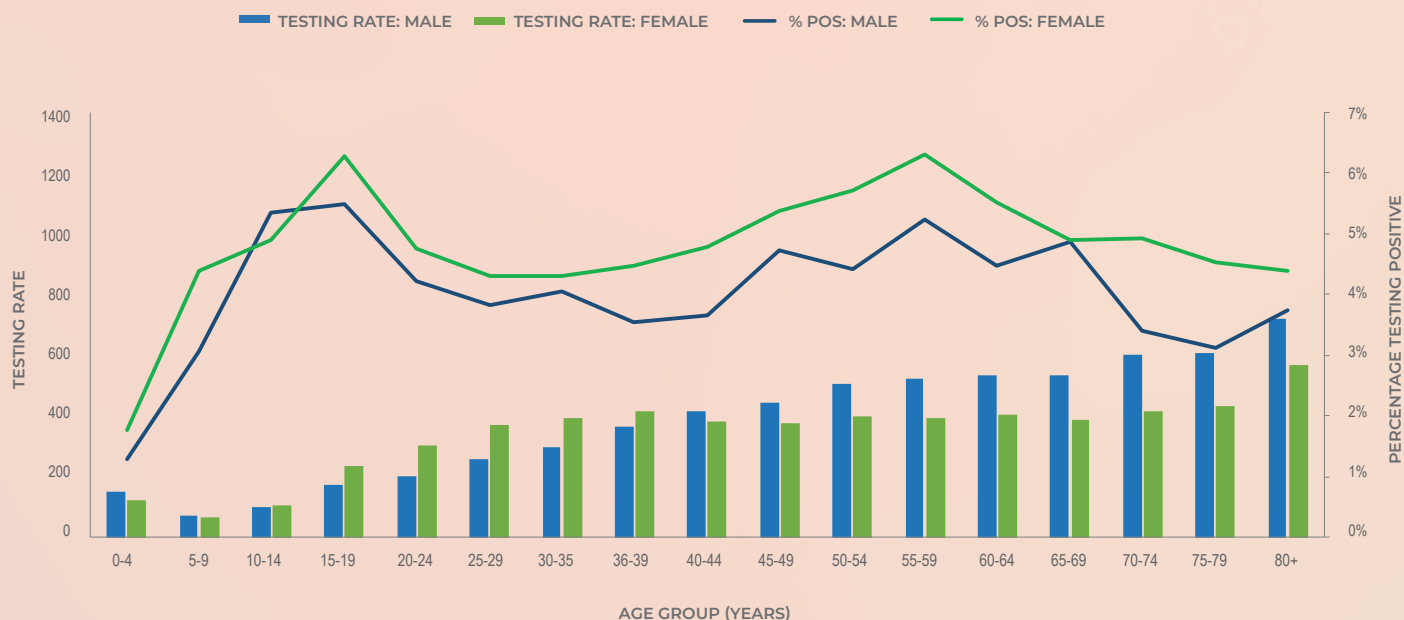


Figure 24. Testing rates per 100,000 persons and percentage testing positive by age group and sex, South Africa, week 10, 7 - 13 March 2021

Testing by test type

Up to the end of week 10 of 2021, 5.6% of all tests performed were antigen tests. The percentage of antigen tests was highest (20.1%) in week 5 and has subsequently declined to 15.0% of all tests in week 10 (Figure 25). In week 10, 26,189 antigen tests were performed, of which 81.3% were performed in the public sector. The majority of antigen tests have been performed in KwaZulu-Natal (47.3%) and

Eastern Cape (14.2%) provinces. The percentage testing positive was higher for PCR tests compared to antigen tests, although smaller differences have been observed as the overall percentage testing positive has decreased over recent weeks (Figure 26). Not all antigen tests are included in this report, efforts are ongoing to improve completeness.

COVID-19 TESTING SUMMARY

SOUTH AFRICA WEEK 10 2021

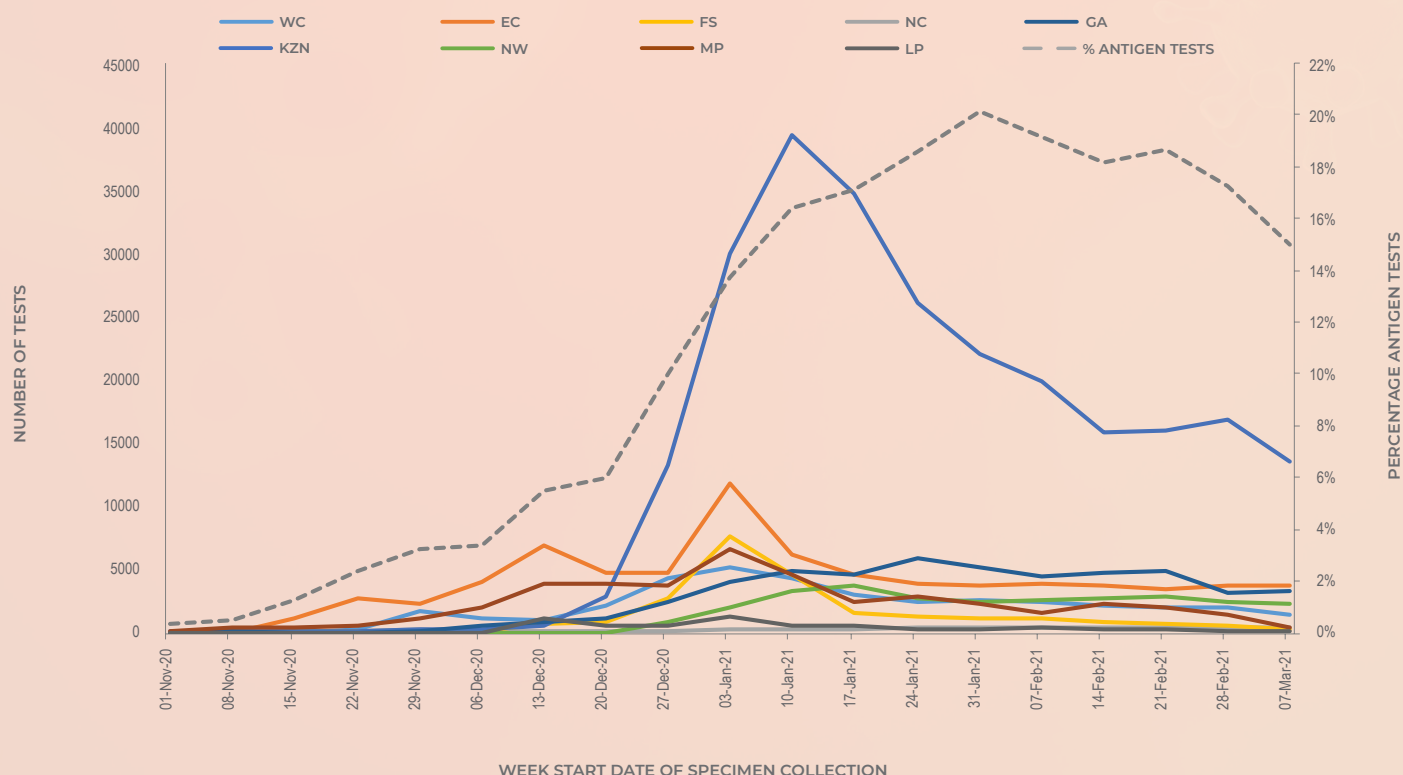


Figure 25. Number of antigen tests by province, and overall percentage antigen tests, South Africa, 1 November 2020 – 13 March 2021. WC, Western Cape; EC, Eastern Cape; FS, Free State; KZN, KwaZulu-Natal; GT, Gauteng; NC, Northern Cape; NW, North West; MP, Mpumalanga; LP, Limpopo

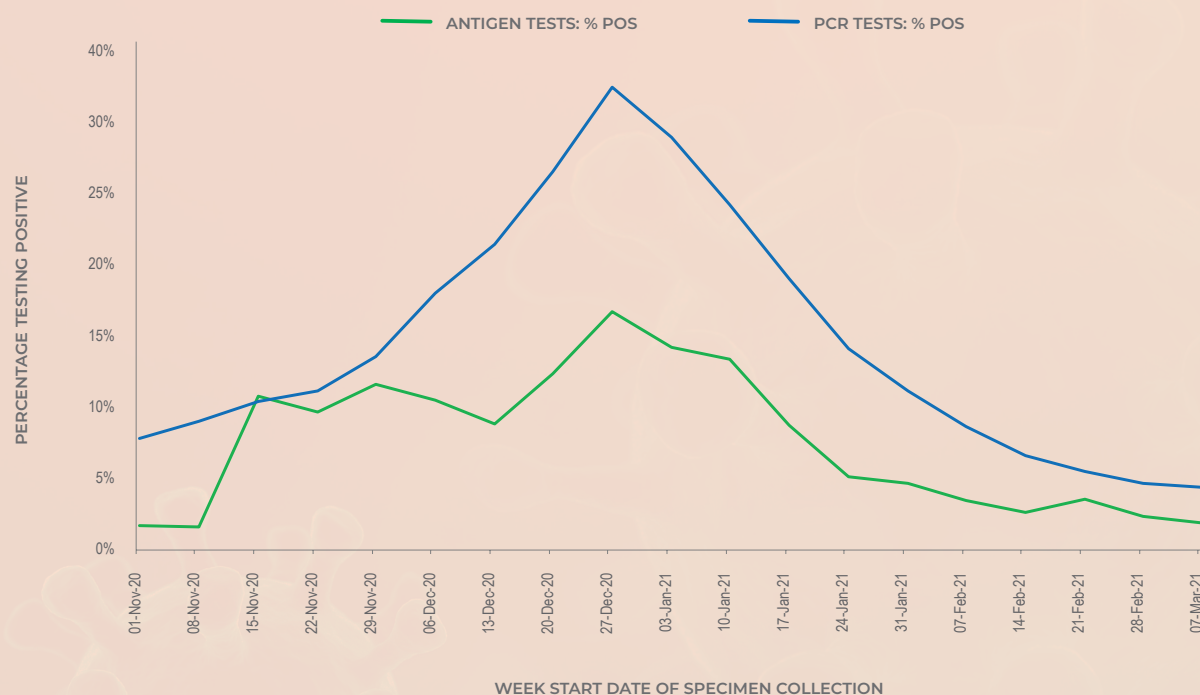


Figure 26. Percentage of laboratory tests positive for SARS-CoV-2 by test type and date of specimen collection, South Africa, 1 November 2020 – 13 March 2021

COVID-19 TESTING SUMMARY

SOUTH AFRICA | WEEK 10 2021

Limitations

- A backlog in testing of samples by laboratories affects the reported numbers of tests performed. 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 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

Weekly testing volumes have decreased since week 1 of 2021 (n=498,354), with the number of tests performed in week 10 of 2021 (n=174,377) similar to the previous few weeks. Gauteng (33.7%), KwaZulu-Natal (22.1%) and Western Cape (15.6%) provinces performed the largest number of tests in week 10. The overall testing rate in week 10 was 292 per 100,000 persons; highest in the Northern Cape (468 per 100,000 persons) and lowest in Limpopo (77 per 100,000 persons). Antigen tests accounted for 15.0% of all tests performed in week 10. The overall mean laboratory turnaround time for PCR tests was 1.3 days in week 10; 1.5 days in the public sector and 1.2 days in the private sector.

In the second wave of infections the percentage testing positive peaked at 34.7% in week 53 of 2020, and has subsequently decreased. In week 10 of 2021 the percentage testing positive decreased to 4.5%, the lowest observed since May 2020. The percentage testing positive in week 10 was highest in the Northern Cape (9.4%) and Mpumalanga (9.1%) provinces. The percentage testing positive was 5-8% in the Free State, North West and Limpopo, and was <5% in the Western Cape, Eastern Cape, KwaZulu-Natal and Gauteng in week 10. Compared to the previous week, the percentage testing positive in week 10 increased in the Free State, decreased in the Western Cape, Eastern Cape, KwaZulu-Natal and Gauteng, and remained unchanged in the Northern Cape, North West, Mpumalanga and Limpopo.