

# COVID-19 TESTING SUMMARY



NATIONAL INSTITUTE FOR  
COMMUNICABLE DISEASES

Division of the National Health Laboratory Service

SOUTH AFRICA WEEK 13 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 3 April 2021 (Week 13 of 2021).

## HIGHLIGHTS

- In the period 1 March 2020 through 3 April 2021, 9,896,676 PCR and antigen tests for SARS-CoV-2 have been performed nationally.
- The number of tests performed in week 13 of 2021 (n=147,267) was similar to the previous few weeks.
- The testing rate in week 13 was 247 per 100,000 persons; highest in the Western Cape (353 per 100,000 persons) and lowest in Limpopo (54 per 100,000 persons).
- In week 13 the percentage testing positive was 4.5%, which was similar to the previous week.
- The percentage testing positive in week 13 was highest in the Northern Cape Province (11.4%). The percentage testing positive ranged from 7% to 9% in the Free State, North West and Mpumalanga, and was <5% in the Western Cape, Eastern Cape, KwaZulu-Natal, Gauteng and Limpopo.
- In week 13, compared to the previous week, the percentage testing positive increased in the Eastern Cape and Northern Cape provinces. The percentage testing positive decreased in the North West, and was unchanged in the Western Cape, Free State, KwaZulu-Natal, Gauteng, Mpumalanga and Limpopo.
- Mean laboratory turnaround time for PCR tests in week 13 was 1.2 days; 1.6 days in the public sector and 0.9 days in the private sector.

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## Methods

Testing for SARS-CoV-2 began on 28 January 2020 at the NICD and after the first case was confirmed on 5th March 2020, testing was expanded to a larger network of private and NHLS laboratories. Laboratory testing was conducted for people meeting the case definition for persons under investigation (PUI). This definition was updated several times over the reporting period but at different times included (i) symptomatic individuals seeking testing, (ii) hospitalised individuals for whom testing was done, (iii) individuals in high-risk occupations, (iv) individuals in outbreak settings, and (v) individuals identified through community screening and testing (CST) programmes which were implemented in April 2020 and was discontinued from the week beginning 17th May. CST was implemented differently in different provinces, and ranged from mass screening approaches (including asymptomatic individuals) to screening of individuals in contact with a confirmed case to targeted testing of clusters of cases. Respiratory specimens were submitted to testing laboratories. Testing was performed using reverse transcriptase real-time PCR, which detects SARS-CoV-2 viral genetic material. Laboratories used any one of several in-house and commercial PCR assays to test for the presence of SARS-CoV-2 RNA. Testing for SARS-CoV-2 using rapid antigen-based tests was implemented towards the end of October 2020. Results of reported rapid antigen-based tests are included in this report, however data are incomplete and efforts are ongoing to improve data completeness.

Test results were automatically fed into a data warehouse after result authorisation. We excluded specimens collected outside South Africa and duplicate entries of the same test for an individual. From week 48 of 2020 onwards, test data were reported from the Notifiable Medical Conditions Surveillance System (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.

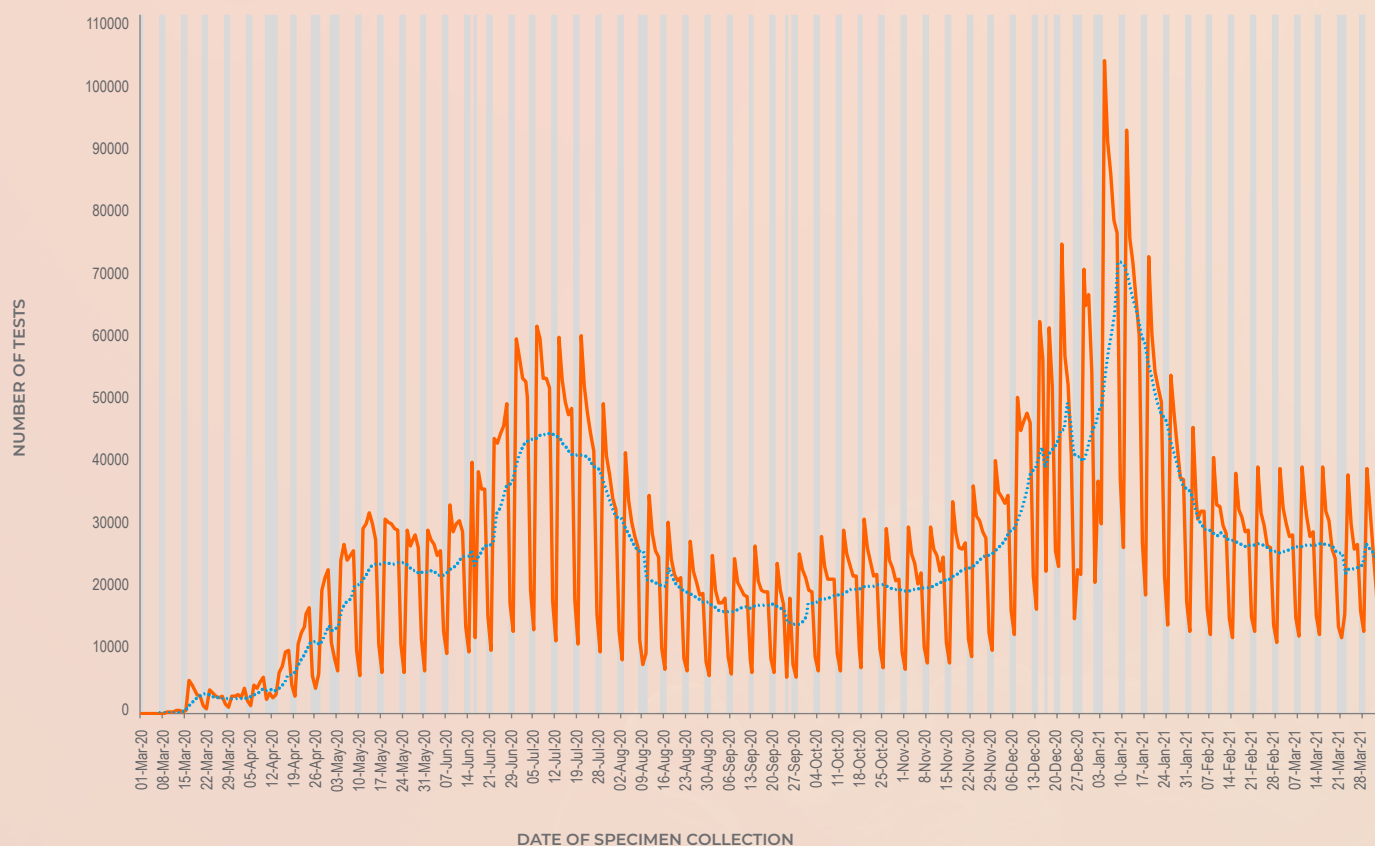
The report includes tests conducted between 1 March 2020 (week 10 of 2020), the week when the first case of COVID-19 was confirmed, and 3 April 2021 (week 13 of 2021).

## Testing volumes and proportion testing positive

From 1 March 2020 through 3 April 2021, 9,896,676 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=307,911), 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 performed in week 1 of 2021 (n=498,546). In week 13 of 2021, 147,267 tests were performed. 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).

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**Figure 1.** Number of SARS-CoV-2 tests conducted by date of specimen collection, South Africa, 1 March 2020 – 3 April 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 13 of 2021 was 16.5% (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 13 of 2021 was 4.5%, unchanged from the previous week (4.4%,  $P=0.404$ ) (Figure 2).

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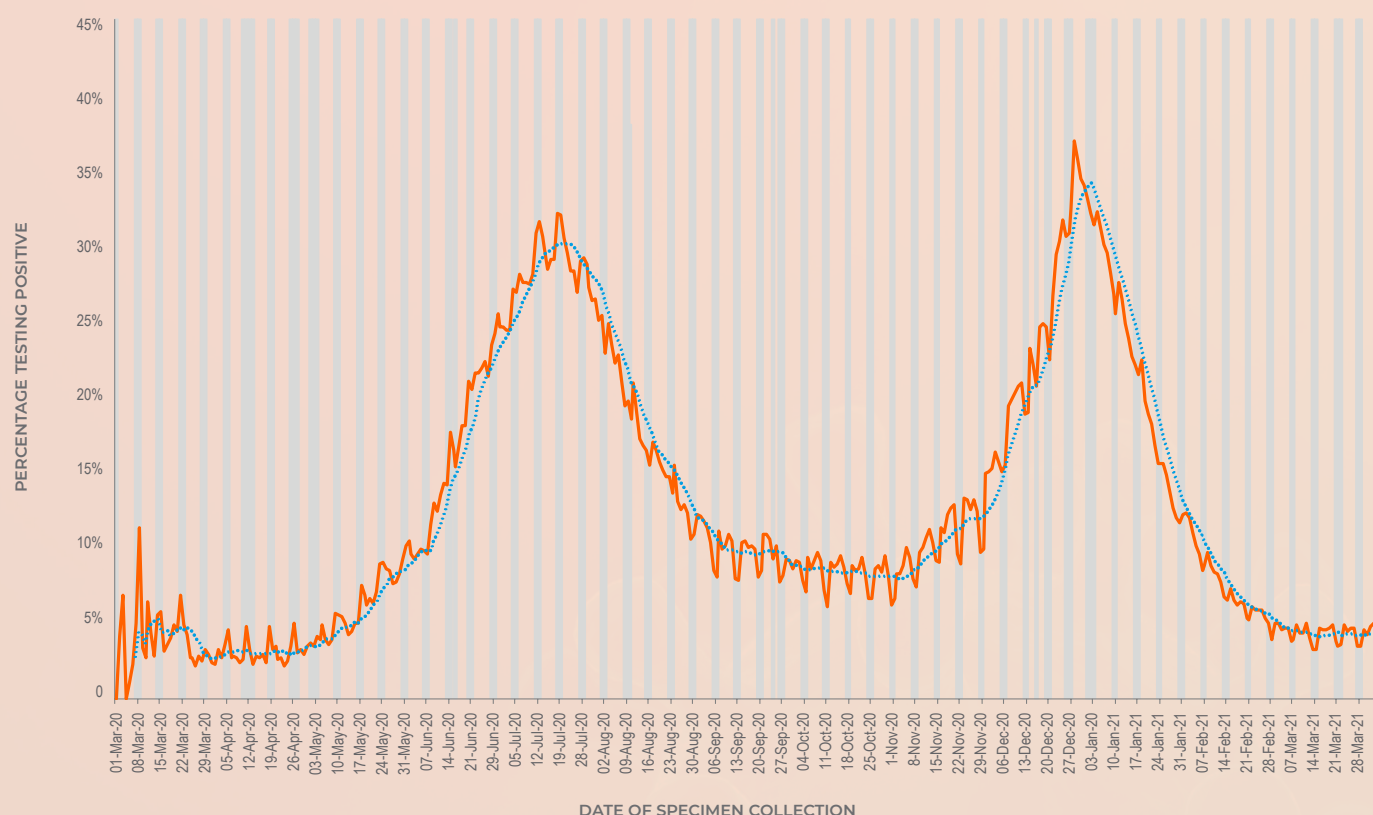
**Table 1.** Weekly number of SARS-CoV-2 tests conducted and positive tests, South Africa, 1 March 2020 – 3 April 2021

Week number	Week beginning	No. of tests n (%)	No. of positive tests	Percentage testing positive (%)
10	01-Mar-20	456 (0.0)	13	2.9
11	08-Mar-20	2380 (0.0)	103	4.3
12	15-Mar-20	21567 (0.2)	897	4.2
13	22-Mar-20	17544 (0.2)	544	3.1
14	29-Mar-20	18248 (0.2)	521	2.9
15	05-Apr-20	26298 (0.3)	796	3.0
16	12-Apr-20	43750 (0.4)	1295	3.0
17	19-Apr-20	79174 (0.8)	2177	2.7
18	26-Apr-20	93810 (0.9)	3205	3.4
19	03-May-20	142706 (1.4)	6018	4.2
20	10-May-20	165374 (1.7)	8092	4.9
21	17-May-20	166542 (1.7)	11379	6.8
22	24-May-20	156136 (1.6)	12967	8.3
23	31-May-20	153566 (1.6)	15079	9.8
24	07-Jun-20	173900 (1.8)	22360	12.9
25	14-Jun-20	186076 (1.9)	32649	17.5
26	21-Jun-20	252089 (2.5)	55047	21.8
27	28-Jun-20	302738 (3.1)	75308	24.9
28	05-Jul-20	307911 (3.1)	86037	27.9
29	12-Jul-20	285597 (2.9)	84926	29.7
30	19-Jul-20	270891 (2.7)	78634	29.0
31	26-Jul-20	216390 (2.2)	58393	27.0
32	02-Aug-20	179566 (1.8)	40994	22.8
33	09-Aug-20	141102 (1.4)	26265	18.6
34	16-Aug-20	135010 (1.4)	21377	15.8
35	23-Aug-20	123331 (1.2)	16330	13.2
36	30-Aug-20	112760 (1.1)	12790	11.3
37	06-Sep-20	116995 (1.2)	11953	10.2
38	13-Sep-20	120711 (1.2)	12011	10.0
39	20-Sep-20	98817 (1.0)	10098	10.2
40	27-Sep-20	123059 (1.2)	11008	8.9
41	04-Oct-20	131041 (1.3)	11778	9.0
42	11-Oct-20	137966 (1.4)	12077	8.8
43	18-Oct-20	142159 (1.4)	12066	8.5
44	25-Oct-20	135844 (1.4)	11478	8.4
45	01-Nov-20	138814 (1.4)	12134	8.7
46	08-Nov-20	146998 (1.5)	14844	10.1
47	15-Nov-20	160636 (1.6)	18761	11.7
48	22-Nov-20	175683 (1.8)	22051	12.6
49	29-Nov-20	203135 (2.1)	30766	15.1
50	06-Dec-20	267874 (2.7)	53310	19.9
51	13-Dec-20	294289 (3.0)	68565	23.3
52	20-Dec-20	284184 (2.9)	81941	28.8
53	27-Dec-20	333421 (3.4)	115668	34.7
1	03-Jan-21	498546 (5.0)	150671	30.2
2	10-Jan-21	416156 (4.2)	104614	25.1
3	17-Jan-21	326549 (3.3)	63203	19.4
4	24-Jan-21	248786 (2.5)	34604	13.9
5	31-Jan-21	202768 (2.0)	22313	11.0
6	07-Feb-21	191793 (1.9)	16434	8.6
7	14-Feb-21	185784 (1.9)	12109	6.5
8	21-Feb-21	179931 (1.8)	10341	5.7
9	28-Feb-21	183594 (1.9)	8644	4.7
10	07-Mar-21	186813 (1.9)	8272	4.4
11	14-Mar-21	178040 (1.8)	8075	4.5
12	21-Mar-21	164111 (1.7)	7237	4.4
13	28-Mar-21	147267 (1.5)	6585	4.5
<b>Total</b>		<b>9896676 (100.0)</b>	<b>1637807</b>	<b>16.5</b>



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**Figure 2.** Percentage of tests positive for SARS-CoV-2 by date of specimen collection, South Africa, 1 March 2020 – 3 April 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 3 April 2021, 4,327,740 tests were conducted in the public sector, with 17.2% testing positive. Over this same period, the private sector conducted 5,568,936 tests, with 16.1% testing positive (Table 2). Overall the public sector has conducted 43.7% 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 12 to week 13 of 2021, the percentage testing positive increased slightly in the public sector (4.7% in week 12 and 5.1% in week 13,  $P < 0.001$ ) and was unchanged

in the private sector (4.2% in week 12 and 4.0% in week 13,  $P = 0.086$ ). In week 13 of 2021 the percentage testing positive was higher in the public sector (5.1%) compared to the private sector (4.0%) ( $P < 0.001$ ).

The mean turnaround time for PCR tests performed in week 13 of 2021 was 1.2 days; 1.6 days in the public sector and 0.9 days in the private sector (Figure 3). Turnaround times for public sector PCR tests were  $> 2$  days in KwaZulu-Natal (2.1 days) and Mpumalanga (2.4 days) provinces in week 13 (Figure 4). Twenty-two of the 28 (78.6%) NHLS laboratories performing PCR testing for SARS-CoV-2 had turnaround times  $\leq 2$  days in week 13 (Figure 5).

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**Table 2.** Weekly number of tests conducted and positive tests, by healthcare sector, South Africa, 1 March 2020 – 3 April 2021

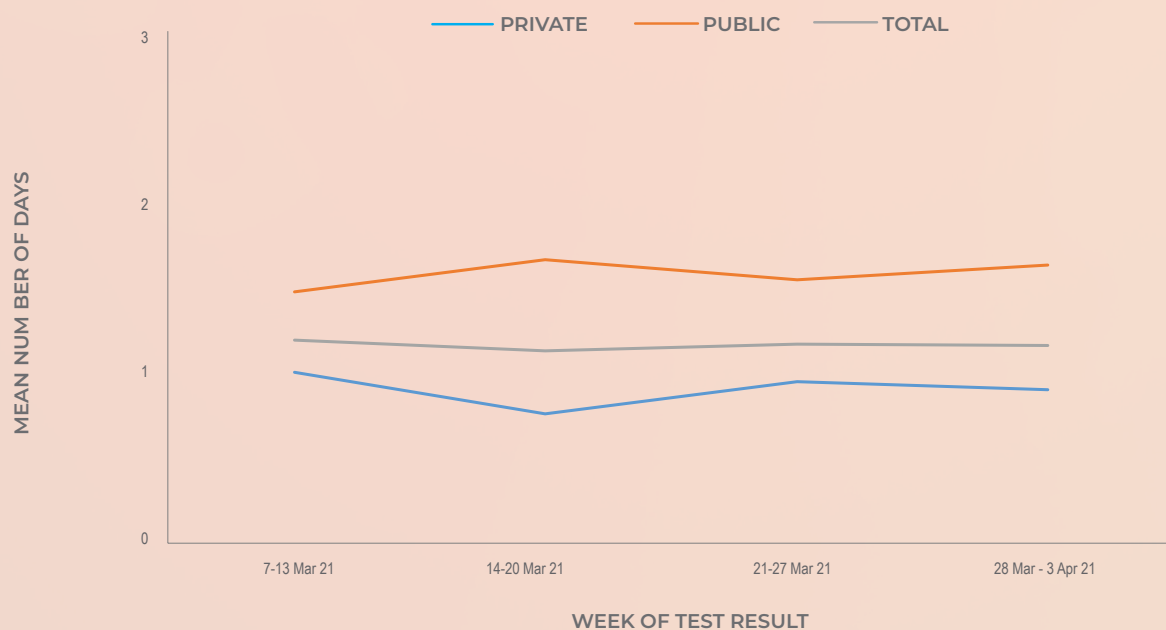
Week number	Week beginning	Public sector		Private sector		Public sector percentage of		Ratio of PTP <sup>a</sup>
		Tests	Cases n (%)	Tests	Positive tests n (%)	Tests (%)	Positive tests (%)	
10	01-Mar-20	294	10 (3.4)	162	3 (1.9)	64.5	76.9	1.837
11	08-Mar-20	401	27 (6.7)	1979	76 (3.8)	16.8	26.2	1.753
12	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)	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)	14563	379 (2.6)	44.6	52.4	1.365
16	12-Apr-20	24167	672 (2.8)	19583	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)	48368	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)	78539	6556 (8.3)	49.7	49.4	0.990
23	31-May-20	63944	6626 (10.4)	89622	8453 (9.4)	41.6	43.9	1.099
24	07-Jun-20	64655	8039 (12.4)	109245	14321 (13.1)	37.2	36.0	0.948
25	14-Jun-20	61149	11982 (19.6)	124927	20667 (16.5)	32.9	36.7	1.184
26	21-Jun-20	90454	20425 (22.6)	161635	34622 (21.4)	35.9	37.1	1.054
27	28-Jun-20	106370	27244 (25.6)	196368	48064 (24.5)	35.1	36.2	1.046
28	05-Jul-20	117727	32239 (27.4)	190184	53798 (28.3)	38.2	37.5	0.968
29	12-Jul-20	110664	31383 (28.4)	174933	53543 (30.6)	38.7	37.0	0.927
30	19-Jul-20	105215	30319 (28.8)	165676	48315 (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)	109000	23998 (22.0)	39.3	41.5	1.094
33	09-Aug-20	58661	11172 (19.0)	82441	15093 (18.3)	41.6	42.5	1.040
34	16-Aug-20	56138	9621 (17.1)	78872	11756 (14.9)	41.6	45.0	1.150
35	23-Aug-20	50319	7790 (15.5)	73012	8540 (11.7)	40.8	47.7	1.324
36	30-Aug-20	45421	6096 (13.4)	67339	6694 (9.9)	40.3	47.7	1.350
37	06-Sep-20	51055	6421 (12.6)	65940	5532 (8.4)	43.6	53.7	1.499
38	13-Sep-20	53705	6547 (12.2)	67006	5464 (8.2)	44.5	54.5	1.495
39	20-Sep-20	44841	5530 (12.3)	53976	4568 (8.5)	45.4	54.8	1.457
40	27-Sep-20	48628	5568 (11.5)	74431	5440 (7.3)	39.5	50.6	1.567
41	04-Oct-20	50434	5689 (11.3)	80607	6089 (7.6)	38.5	48.3	1.493
42	11-Oct-20	53451	5702 (10.7)	84515	6375 (7.5)	38.7	47.2	1.414
43	18-Oct-20	56121	6044 (10.8)	86038	6022 (7.0)	39.5	50.1	1.539
44	25-Oct-20	51284	5721 (11.2)	84560	5757 (6.8)	37.8	49.8	1.639
45	01-Nov-20	52995	6061 (11.4)	85819	6073 (7.1)	38.2	50.0	1.616
46	08-Nov-20	58910	8097 (13.7)	88088	6747 (7.7)	40.1	54.5	1.794
47	15-Nov-20	67580	10584 (15.7)	93056	8177 (8.8)	42.1	56.4	1.782
48	22-Nov-20	74572	12199 (16.4)	101111	9852 (9.7)	42.4	55.3	1.679
49	29-Nov-20	81261	15730 (19.4)	121874	15036 (12.3)	40.0	51.1	1.569
50	06-Dec-20	107879	24715 (22.9)	159995	28595 (17.9)	40.3	46.4	1.282
51	13-Dec-20	117055	29807 (25.5)	177234	38758 (21.9)	39.8	43.5	1.164
52	20-Dec-20	109683	34122 (31.1)	174501	47819 (27.4)	38.6	41.6	1.135
53	27-Dec-20	150725	52874 (35.1)	182696	62794 (34.4)	45.2	45.7	1.021
1	03-Jan-21	234515	70752 (30.2)	264031	79919 (30.3)	47.0	47.0	0.997
2	10-Jan-21	202362	52831 (26.1)	213794	51783 (24.2)	48.6	50.5	1.078
3	17-Jan-21	164797	34399 (20.9)	161752	28804 (17.8)	50.5	54.4	1.172
4	24-Jan-21	122443	18954 (15.5)	126343	15650 (12.4)	49.2	54.8	1.250
5	31-Jan-21	98800	12002 (12.1)	103968	10311 (9.9)	48.7	53.8	1.225
6	07-Feb-21	90308	8456 (9.4)	101485	7978 (7.9)	47.1	51.5	1.191
7	14-Feb-21	84075	6589 (7.8)	101709	5520 (5.4)	45.3	54.4	1.444
8	21-Feb-21	80320	5721 (7.1)	99611	4620 (4.6)	44.6	55.3	1.536
9	28-Feb-21	84676	4615 (5.5)	98918	4029 (4.1)	46.1	53.4	1.338
10	07-Mar-21	88922	4521 (5.1)	97891	3751 (3.8)	47.6	54.7	1.327

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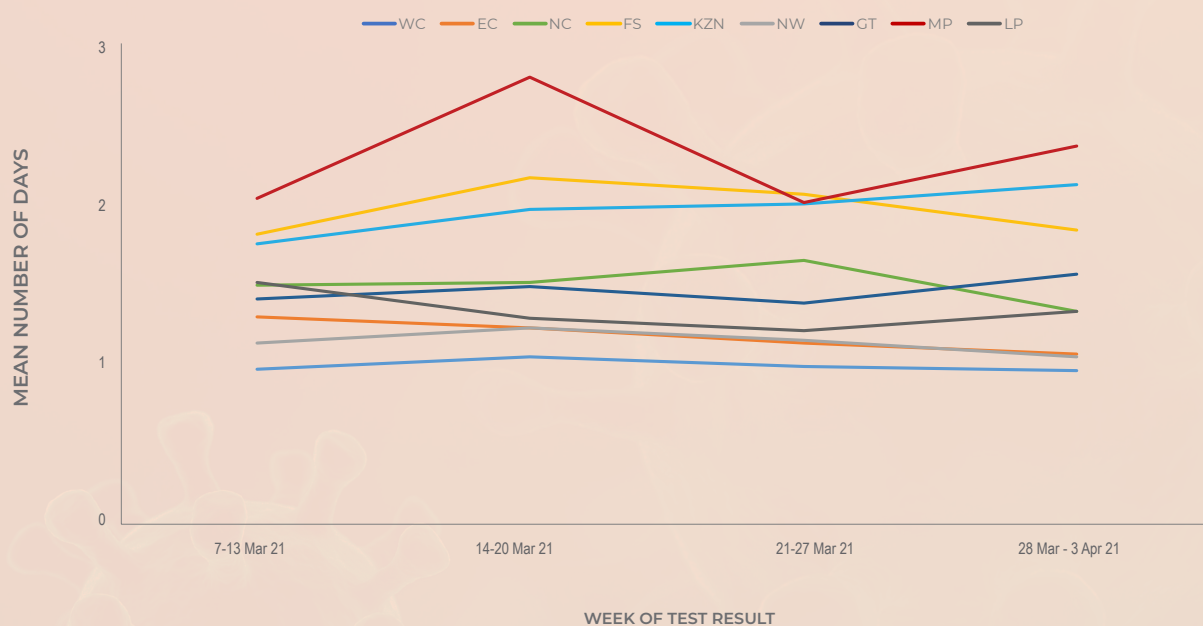
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11	14-Mar-21	85534	4359 (5.1)	92506	3716 (4.0)	48.0	54.0	1.269
12	21-Mar-21	71166	3341 (4.7)	92945	3896 (4.2)	43.4	46.2	1.120
13	28-Mar-21	58567	3009 (5.1)	88700	3576 (4.0)	39.8	45.7	1.274
<b>Total</b>		<b>4327740</b>	<b>742664 (17.2)</b>	<b>5568936</b>	<b>895143 (16.1)</b>	<b>43.7</b>	<b>45.3</b>	<b>1.068</b>

<sup>a</sup>Ratio 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, 7 March – 3 April 2021



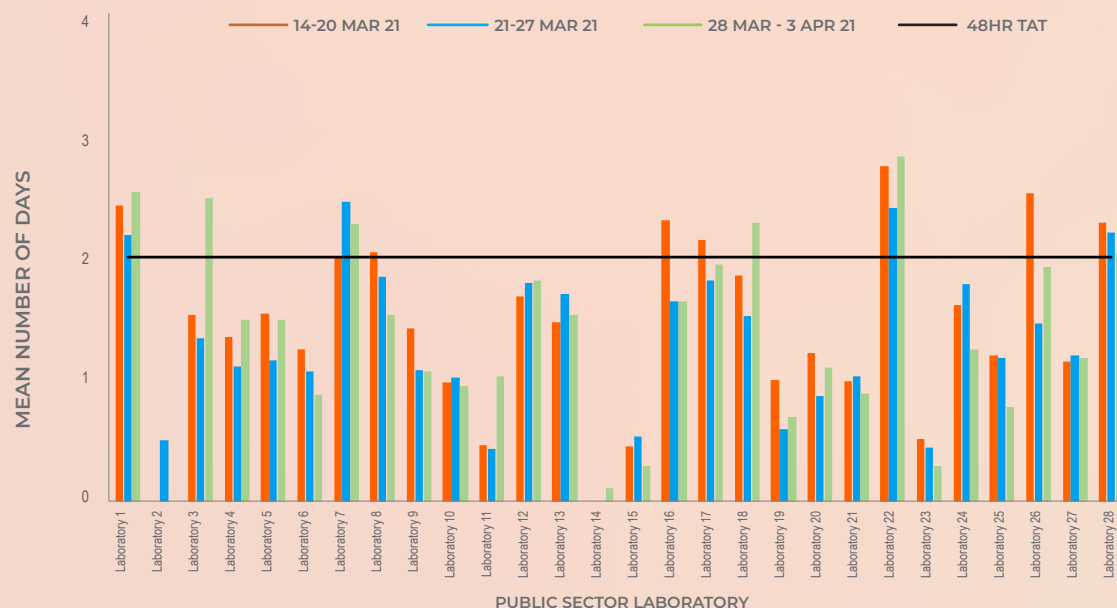
**Figure 4.** Mean number of days between date of specimen collection and date of test result for PCR tests, by week of test result and province, public sector, South Africa, 7 March – 3 April 2021. WC, Western Cape; EC, Eastern Cape; FS, Free State; KZN, KwaZulu-Natal; GT, Gauteng; NC, Northern Cape; NW, North West; MP, Mpumalanga; LP, Limpopo



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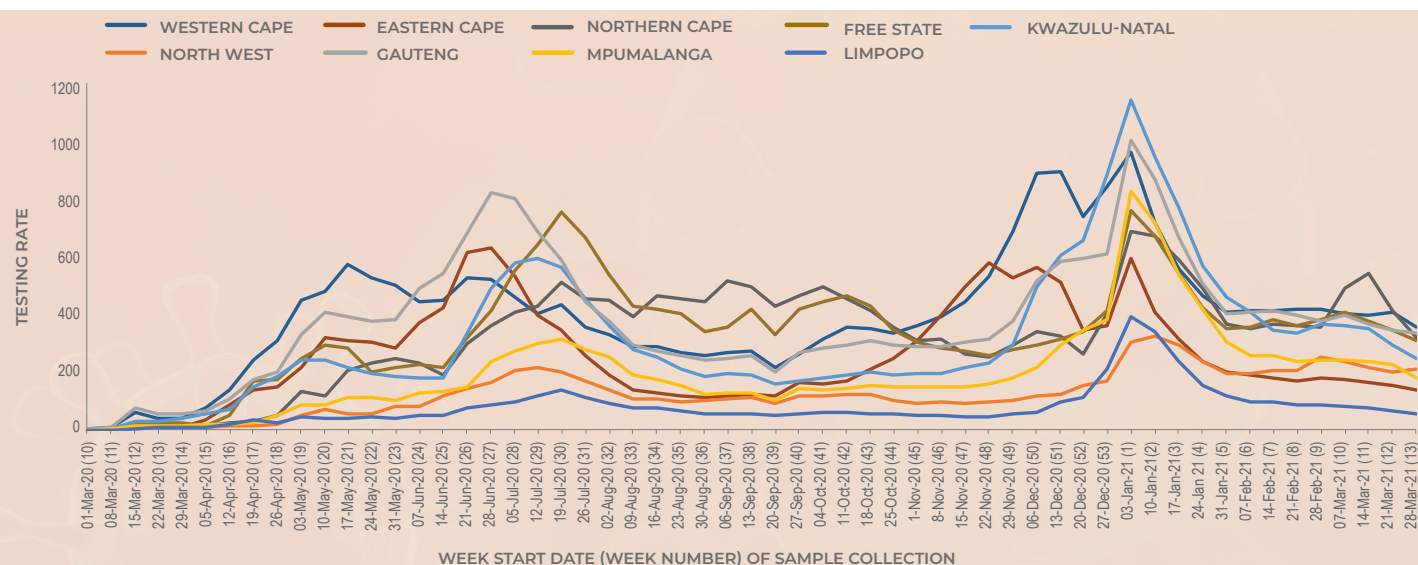
**Figure 5.** Mean number of days between date of specimen collection and date of test result for PCR tests, by public sector laboratory, 14 March - 3 April 2021. The horizontal black line indicates 48-hour turnaround time (TAT).

## Testing by province

The majority of tests were performed in Gauteng (34.8%), KwaZulu-Natal (19.3%) and Western Cape (16.8%) provinces in week 13 of 2021 (Table 3). The overall testing rate in week 13 was 247 per 100,000 persons; ranging from 353 per 100,000 persons in the Western Cape to 54 per 100,000 persons in Limpopo (Figure 6). Testing rates have remained relatively consistent since week 4 of 2021. The testing rate increased in the Northern Cape in weeks 10 and 11, but decreased from week 12.

The percentage testing positive in week 13 was highest in the Northern Cape (11.4%) province (Figure 7 and Table

3). The percentage testing positive ranged from 7% to 9% in the Free State, North West and Mpumalanga, and was <5% in the Western Cape, Eastern Cape, KwaZulu-Natal, Gauteng and Limpopo in week 13. Compared to the previous week, the percentage testing positive in week 13 increased in the Eastern Cape ( $P=0.002$ ) and Northern Cape ( $P=0.010$ ) provinces. The percentage testing positive decreased in the North West ( $P<0.001$ ), and was unchanged in the Western Cape ( $P=0.070$ ), Free State ( $P=0.733$ ), KwaZulu-Natal ( $P=0.169$ ), Gauteng ( $P=0.221$ ), Mpumalanga ( $P=0.122$ ) and Limpopo ( $P=0.156$ ). 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 – 3 April 2021



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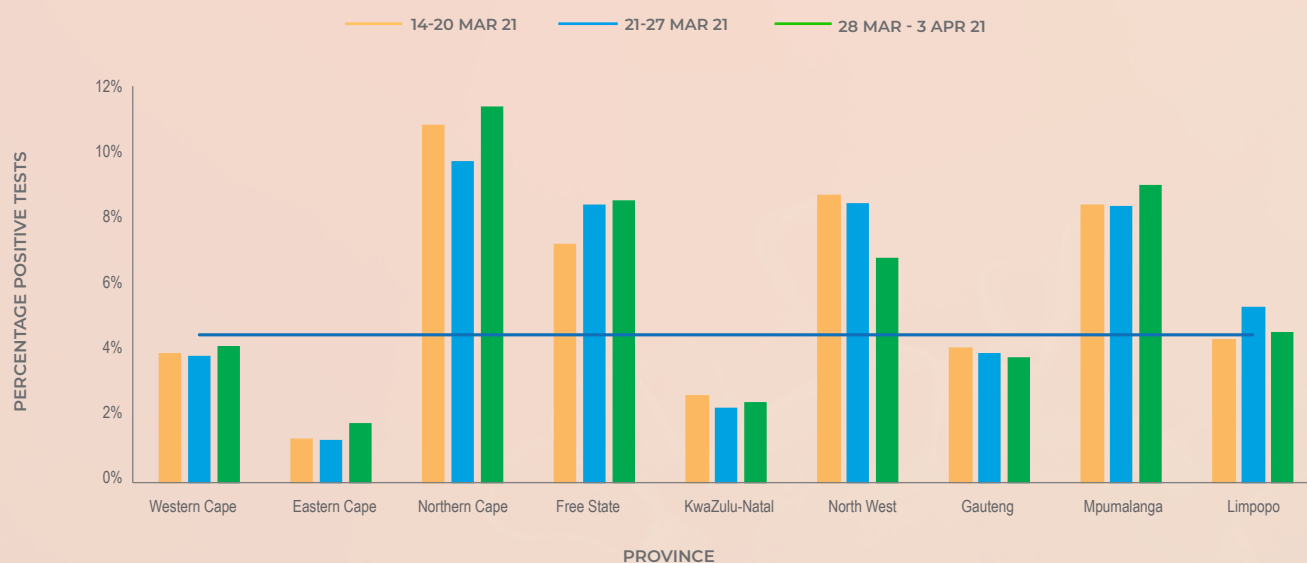
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**Table 3.** Weekly number of tests performed and positive tests, by province, South Africa, 14 March – 3 April 2021

Province	Population <sup>a</sup>	14 - 20 Mar 21		21 - 27 Mar 21		28 Mar – 3 Apr 21		Tests per 100,000 persons	Change in percentage positive <sup>b</sup>
		No. of tests	No. positive tests (%)	No. of tests	No. positive tests (%)	No. of tests	No. positive tests (%)		
Western Cape	7005741	27640	1089 (3.9)	28536	1098 (3.8)	24736	1028 (4.2)	353	0.3%
Eastern Cape	6734001	10861	146 (1.3)	10425	133 (1.3)	9106	166 (1.8)	135	0.5%
Northern Cape	1292786	6960	756 (10.9)	5322	518 (9.7)	4123	469 (11.4)	319	1.6%
Free State	2928903	10998	796 (7.2)	10082	850 (8.4)	9021	773 (8.6)	308	0.1%
KwaZulu-Natal	11531628	40502	1080 (2.7)	33494	757 (2.3)	28463	691 (2.4)	247	0.2%
North West	4108816	8876	773 (8.7)	8178	691 (8.4)	8664	592 (6.8)	211	-1.6%
Gauteng	15488137	56304	2299 (4.1)	53435	2100 (3.9)	51289	1941 (3.8)	331	-0.1%
Mpumalanga	4679786	11129	939 (8.4)	10511	883 (8.4)	8420	761 (9.0)	180	0.6%
Limpopo	5852553	4351	190 (4.4)	3843	204 (5.3)	3132	143 (4.6)	54	-0.7%
Unknown		419	7 (1.7)	285	3 (1.1)	313	21 (6.7)		
<b>Total</b>	<b>59622350</b>	<b>178040</b>	<b>8075 (4.5)</b>	<b>164111</b>	<b>7237 (4.4)</b>	<b>147267</b>	<b>6585 (4.5)</b>	<b>247</b>	<b>0.1%</b>

<sup>a</sup> 2020 Mid-year population Statistics SA

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



**Figure 7.** Weekly percentage testing positive, by province, South Africa, 14 March – 3 April 2021. The horizontal blue line shows the national mean for week 13, beginning 28 March 2021

## Testing in the public sector

In the public sector, the percentage testing positive increased in the past week (4.7% in week 12 to 5.1% in week 13,  $P < 0.001$ ) (Table 4). The percentage testing positive in week 13 of 2021 was highest in the Northern

Cape (12.3%) and Mpumalanga (11.1%) 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, Mpumalanga and Limpopo provinces (Figure 8).

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**Table 4.** Weekly number of tests conducted and positive tests in the public sector, by province, South Africa, 14 March – 3 April 2021

Province	14 - 20 Mar 2021		21 - 27 Mar 2021		28 Mar – 3 Apr 2021	
	No. of tests	No. positive tests (%)	No. of tests	No. positive tests (%)	No. of tests	No. positive tests (%)
Western Cape	9688	438 (4.5)	8696	342 (3.9)	7346	339 (4.6)
Eastern Cape	6774	70 (1.0)	6469	62 (1.0)	5235	90 (1.7)
Northern Cape	4981	586 (11.8)	3656	373 (10.2)	2520	309 (12.3)
Free State	5795	464 (8.0)	4991	414 (8.3)	3731	372 (10.0)
KwaZulu-Natal	28415	834 (2.9)	21703	483 (2.2)	18498	512 (2.8)
North West	3704	399 (10.8)	3024	301 (10.0)	2592	267 (10.3)
Gauteng	18931	1014 (5.4)	15874	805 (5.1)	14030	657 (4.7)
Mpumalanga	5504	474 (8.6)	5447	491 (9.0)	3736	415 (11.1)
Limpopo	1515	77 (5.1)	1178	68 (5.8)	757	42 (5.5)
Unknown	227	3 (1.3)	128	2 (1.6)	122	6 (4.9)
<b>Total</b>	<b>85534</b>	<b>4359 (5.1)</b>	<b>71166</b>	<b>3341 (4.7)</b>	<b>58567</b>	<b>3009 (5.1)</b>



**Figure 8.** Weekly percentage testing positive in the public sector, by province, South Africa, 14 March – 3 April 2021. The horizontal blue line shows the national mean for week 13 of 2021, beginning 28 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 28 March – 3 April 2021, with the highest proportion testing positive nationally. The distribution of public sector facilities with high PTP remains spatially diffuse. Eight of the 25 facilities showing the highest PTP are in the Free State, 5 in the Northern Cape, 4 in Mpumalanga and 3 in the North West.

# COVID-19 TESTING SUMMARY

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**Table 5.1** Public sector healthcare facilities with a high proportion testing positive, 28 March – 3 April 2021

Facility Name	Province	Tests	PTP (95% CI)
Facility 1	Northern Cape	29	0.448 (0.267;0.629)
Facility 2	Northern Cape	29	0.414 (0.235;0.593)
Facility 3	KwaZulu-Natal	29	0.345 (0.172;0.518)
Facility 4	North West	62	0.339 (0.221;0.457)
Facility 5	Western Cape	46	0.326 (0.191;0.462)
Facility 6	Free State	37	0.324 (0.173;0.475)
Facility 7	KwaZulu-Natal	54	0.315 (0.191;0.439)
Facility 8	Free State	40	0.300 (0.158;0.442)
Facility 9	Northern Cape	25	0.280 (0.104;0.456)
Facility 10	Mpumalanga	72	0.278 (0.174;0.381)
Facility 11	Northern Cape	30	0.267 (0.108;0.425)
Facility 12	Free State	64	0.266 (0.157;0.374)
Facility 13	Western Cape	34	0.265 (0.116;0.413)
Facility 14	Free State	38	0.263 (0.123;0.403)
Facility 15	North West	80	0.263 (0.166;0.359)
Facility 16	Free State	43	0.256 (0.125;0.386)
Facility 17	Mpumalanga	82	0.244 (0.151;0.337)
Facility 18	Free State	33	0.242 (0.096;0.389)
Facility 19	Mpumalanga	124	0.242 (0.167;0.317)
Facility 20	Free State	30	0.233 (0.082;0.385)
Facility 21	Gauteng	56	0.232 (0.122;0.343)
Facility 22	Mpumalanga	96	0.229 (0.145;0.313)
Facility 23	North West	48	0.229 (0.110;0.348)
Facility 24	Northern Cape	49	0.224 (0.108;0.341)
Facility 25	Free State	28	0.214 (0.062;0.366)

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 28 March – 3 April 2021, with the highest proportion testing positive nationally. Private-sector facilities with high proportions testing positive are concentrated in Gauteng (n=8), with six in the North West, and three in the Free State.



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**Table 5.2** Private sector healthcare facilities with a high proportion testing positive, 28 March – 3 April 2021

Facility Name	Province	Tests	PTP (95% CI)
Facility 1	Gauteng	29	0.207 (0.059;0.354)
Facility 2	North West	25	0.200 (0.043;0.357)
Facility 3	Mpumalanga	86	0.198 (0.114;0.282)
Facility 4	Limpopo	32	0.188 (0.052;0.323)
Facility 5	Free State	55	0.182 (0.080;0.284)
Facility 6	North West	96	0.177 (0.101;0.253)
Facility 7	Northern Cape	117	0.162 (0.096;0.229)
Facility 8	Western Cape	113	0.159 (0.092;0.227)
Facility 9	Gauteng	46	0.152 (0.048;0.256)
Facility 10	KwaZulu-Natal	33	0.152 (0.029;0.274)
Facility 11	North West	119	0.151 (0.087;0.216)
Facility 12	Western Cape	86	0.151 (0.075;0.227)
Facility 13	North West	88	0.148 (0.074;0.222)
Facility 14	Free State	652	0.143 (0.116;0.169)
Facility 15	Gauteng	155	0.142 (0.087;0.197)
Facility 16	Free State	37	0.135 (0.025;0.245)
Facility 17	Gauteng	197	0.132 (0.085;0.179)
Facility 18	Gauteng	48	0.125 (0.031;0.219)
Facility 19	North West	112	0.125 (0.064;0.186)
Facility 20	Gauteng	40	0.125 (0.023;0.227)
Facility 21	Gauteng	385	0.125 (0.092;0.158)
Facility 22	Mpumalanga	517	0.124 (0.095;0.152)
Facility 23	Northern Cape	351	0.123 (0.088;0.157)
Facility 24	Gauteng	67	0.119 (0.042;0.197)
Facility 25	North West	68	0.118 (0.041;0.194)

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 82% of private testing facilities) in the week from 28 March – 3 April 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 largely as in previous weeks: Northern Cape (n=8), Mpumalanga and Free State (n=5 each), and North West (n=4) account for 22 of the 25 districts. No district showed a PTP in the current week in excess of 30%. (Bergrivier's PTP was 29.96%). PTP exceeded 20% in 5 districts (3 in the previous week). Significant increases were observed in five districts (Nala, Setsoto, and Maluti a Phofung in the Free State, and Kai Garib and Sol Plaatjie in the Northern Cape).



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**Table 6.** Health sub-districts with the highest proportion testing positive based on public and private sector data for the week of 28 March – 3 April 2021

Health district or sub-district	Province	PTP (95% CI)	Previous week
Bergrivier	Western Cape	0.300 (0.203-0.396)	0.311 (0.193-0.429)
Lekwa	Mpumalanga	0.226 (0.168-0.283)	0.239 (0.180-0.298)
Nala	Free State	0.216 (0.117-0.314)	0.038 (0.000-0.081)
Maquassi Hills	NorthWest	0.210 (0.103-0.318)	0.185 (0.109-0.260)
Emakhazeni	Mpumalanga	0.209 (0.078-0.341)	0.033 (0.000-0.098)
Setsoto	Free State	0.197 (0.099-0.294)	0.044 (0.021-0.066)
Umjindi	Mpumalanga	0.178 (0.048-0.308)	0.222 (0.085-0.359)
Tsantsabane	Northern Cape	0.172 (0.047-0.298)	0.124 (0.030-0.218)
Ga-Segonyana	Northern Cape	0.164 (0.090-0.239)	0.163 (0.097-0.229)
Kamiesberg	Northern Cape	0.161 (0.102-0.220)	0.082 (0.030-0.134)
Naledi	NorthWest	0.159 (0.102-0.216)	...
Richtersveld	Northern Cape	0.156 (0.049-0.262)	0.229 (0.126-0.332)
Maluti a Phofung	Free State	0.156 (0.120-0.192)	0.088 (0.069-0.107)
Tokologo	Free State	0.153 (0.058-0.247)	...
Kai !Garib	Northern Cape	0.151 (0.082-0.220)	0.034 (0.001-0.067)
Matzikama	Western Cape	0.149 (0.077-0.222)	0.107 (0.057-0.158)
Umsobomvu	Northern Cape	0.148 (0.027-0.269)	0.086 (0.020-0.151)
Govan Mbeki	Mpumalanga	0.147 (0.122-0.172)	0.146 (0.121-0.171)
Ndwedwe	KwaZulu-Natal	0.147 (0.086-0.207)	0.062 (0.031-0.092)
Tlokwe City Council	NorthWest	0.145 (0.119-0.172)	0.141 (0.118-0.165)
Siyathemba	Northern Cape	0.143 (0.091-0.196)	0.091 (0.067-0.116)
Mamusa	NorthWest	0.138 (0.000-0.284)	0.080 (0.019-0.142)
Metsimaholo	Free State	0.134 (0.079-0.189)	0.096 (0.048-0.144)
Thembisile	Mpumalanga	0.121 (0.042-0.201)	0.069 (0.020-0.119)
Sol Plaatjie	Northern Cape	0.116 (0.102-0.131)	0.084 (0.071-0.096)

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.

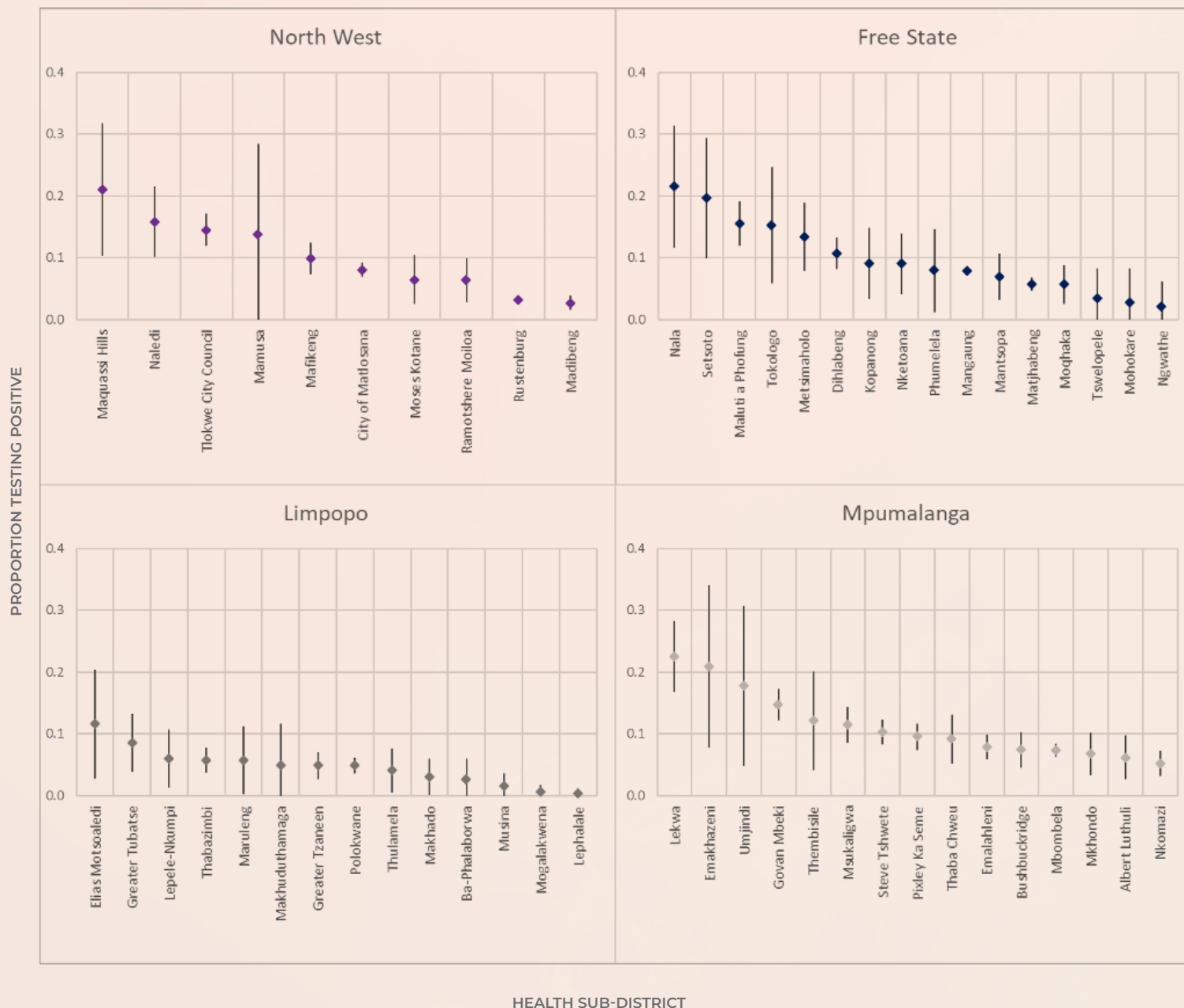
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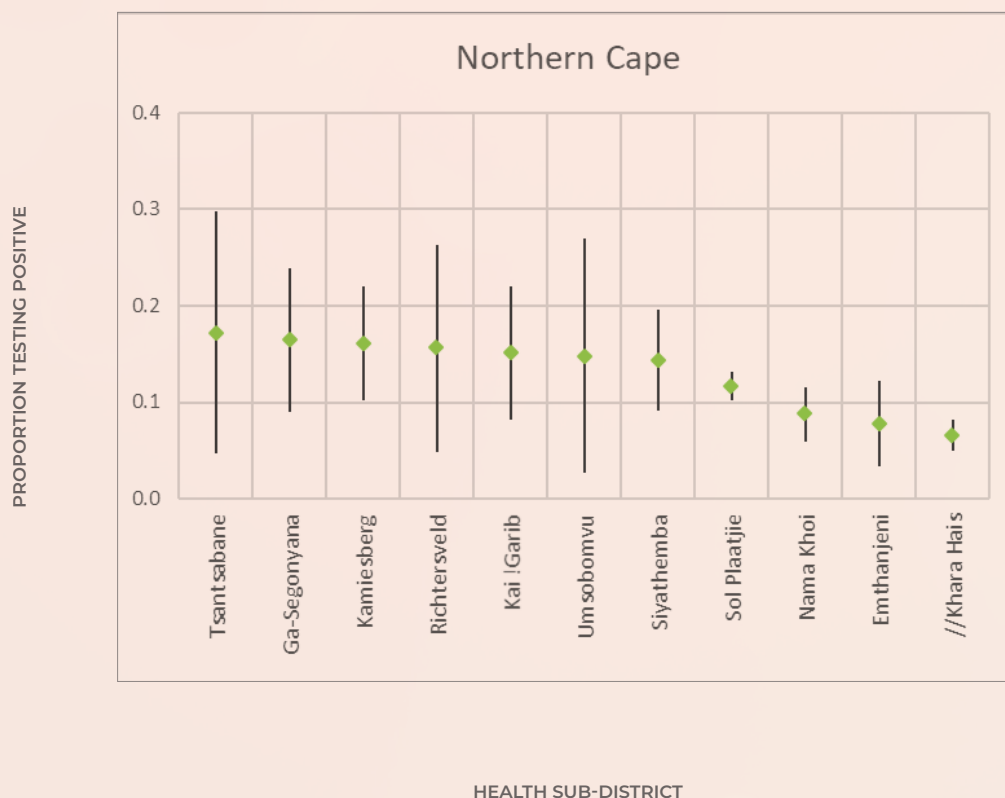


**Figure 9.2** Proportions testing positive by health sub-district in the North West, Free State, Limpopo and Mpumalanga provinces based on public and private sector data for the week of 28 March – 3 April 2021.



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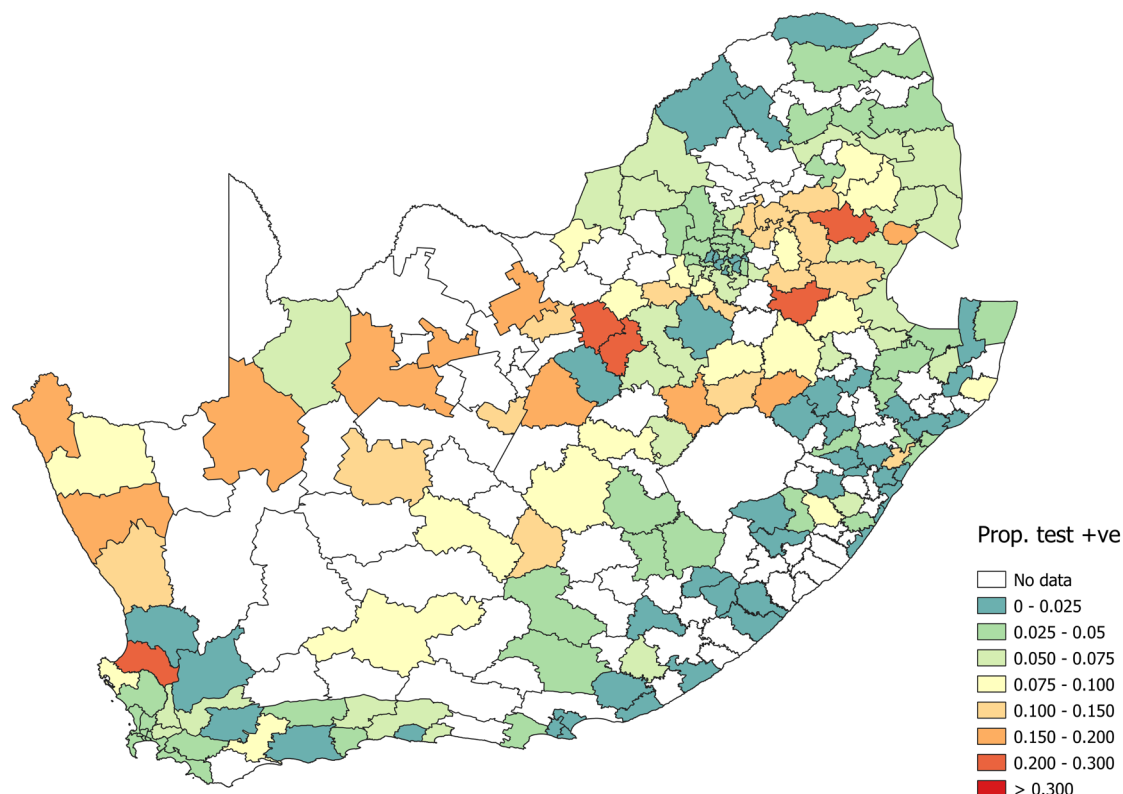
**Figure 9.3** Proportions testing positive by health sub-districts in the Northern Cape Province based on public and private sector data for the week of 28 March – 3 April 2021.

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).

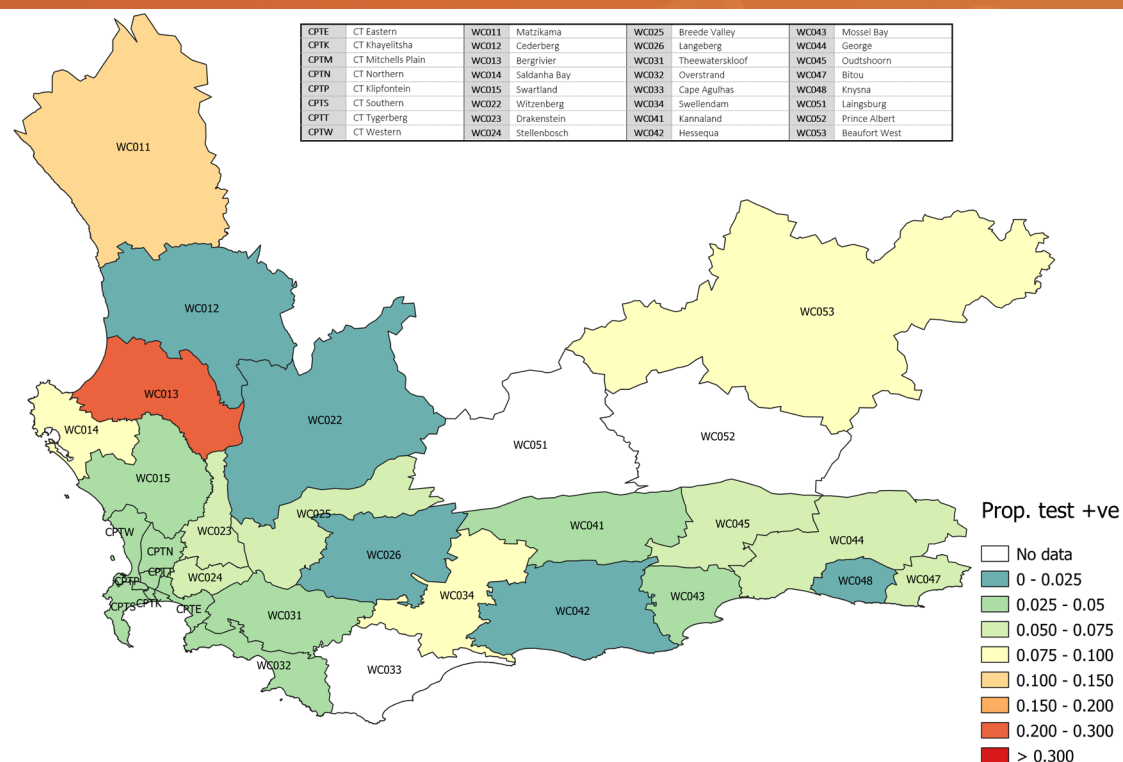


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**Figure 10.** Proportion testing positive by health sub-district in South Africa for the week of 28 March – 3 April 2021. Areas shaded white represent districts in which either (i) no tests were conducted, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.



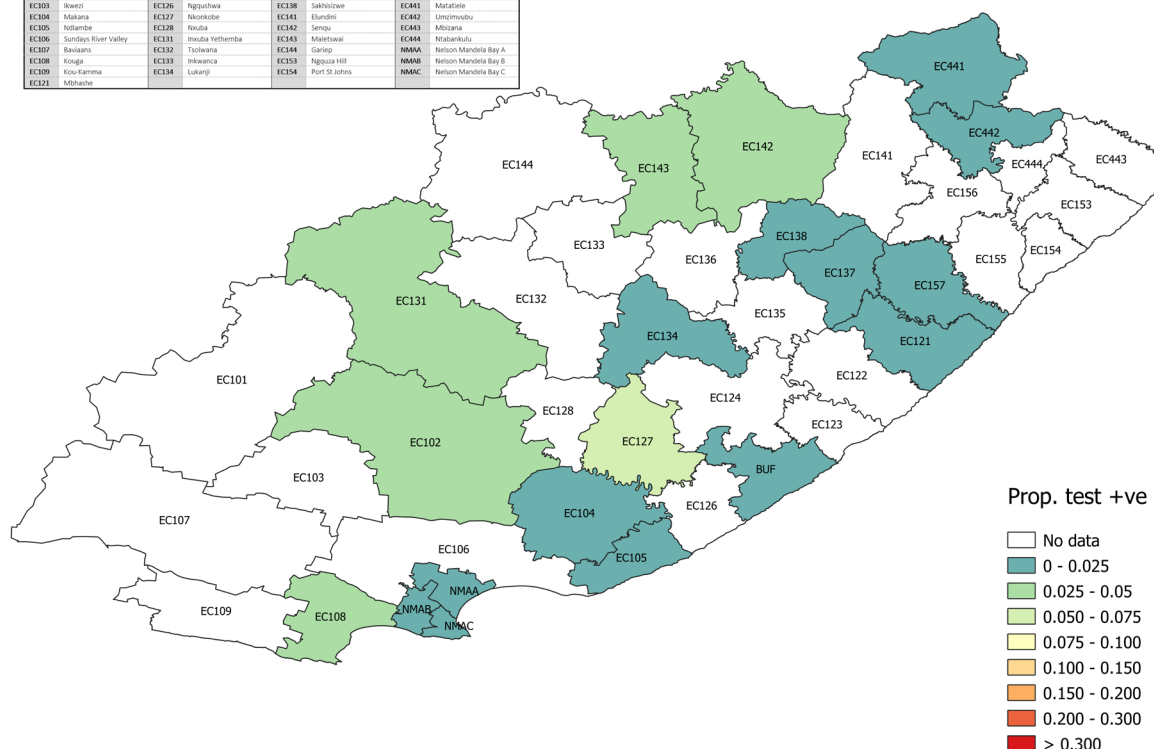
**Figure 11.** Proportion testing positive by health sub-district in the Western Cape province for the week of 28 March – 3 April 2021. Areas shaded white represent districts in which either (i) no tests were conducted, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

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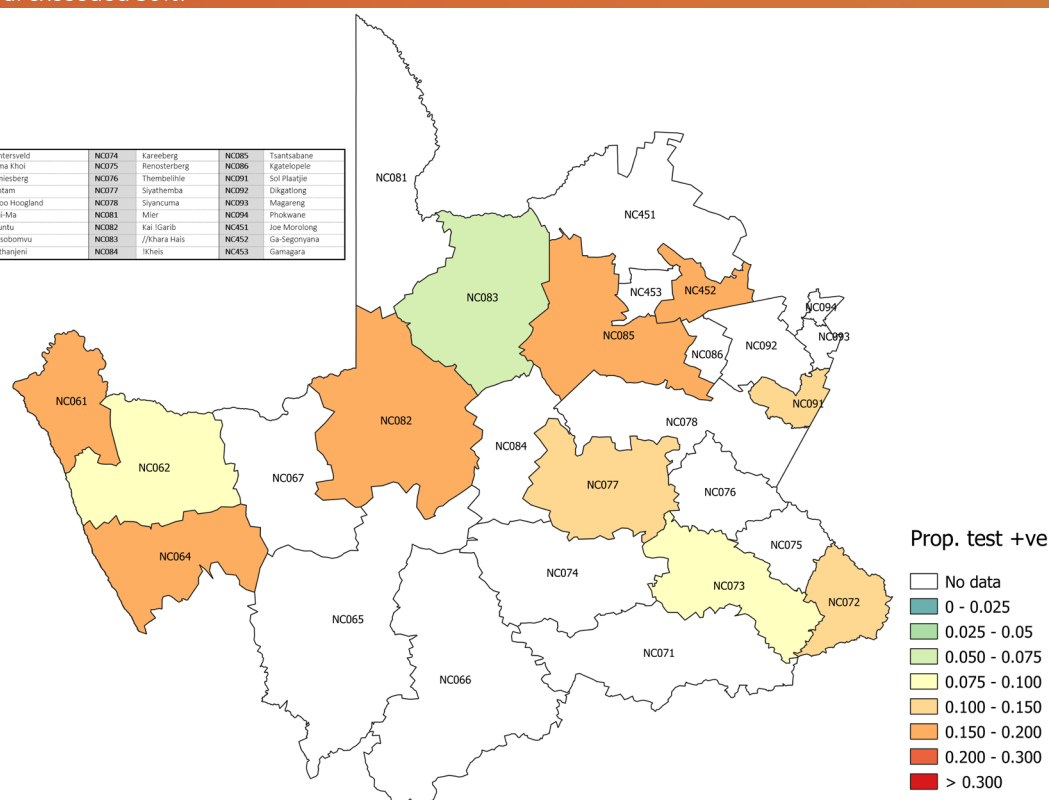
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BUF	Buffalo City	EC122	Mquma	EC129	Intolka Yethu	EC135	Nyandeni
EC101	Camdeboo	EC123	Great Kei	EC136	Emalaheni	EC136	Mhlonso
EC102	Blue Crane Route	EC124	Amahlahli	EC137	Engcobo	EC137	King Sabata Dalindyebo
EC103	Beaufort	EC125	Nquthu	EC138	Sahlolwe	EC141	Maratje
EC104	Matiana	EC127	Nkonkobe	EC141	Elundini	EC142	Umoimvubu
EC105	Indlamba	EC128	Nxuba	EC142	Semo	EC143	Mbizana
EC106	Sondiya River Valley	EC131	Nxuba Yethemba	EC143	Makelwadi	EC144	Mthabakulu
EC107	Baviaans	EC132	Tsoelwana	EC144	Gartop	NMAA	Nelson Mandela Bay A
EC108	Kouga	EC133	Inkwanca	EC153	Nqousa Hill	NMAB	Nelson Mandela Bay B
EC109	Kou-Kamma	EC134	Lukang	EC154	Port St Johns	NMAC	Nelson Mandela Bay C
EC121	Mbhashe						



**Figure 12.** Proportion testing positive by health sub-district in the Eastern Cape province for the week of 28 March – 3 April 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	Tsantubane
NC062	Nama Khol	NC075	Renosterberg	NC086	Kgatelopele
NC064	Kamiesberg	NC076	Thembelille	NC091	Sol Plaatje
NC065	Namdam	NC077	Syathemba	NC092	Digatlong
NC066	Karoo Hoogland	NC078	Syancoma	NC093	Magareng
NC067	Khali-Ma	NC081	Mier	NC094	Phokwane
NC071	Ubuntu	NC082	Kai Garib	NC451	Joe Morolong
NC072	Umoimvubu	NC083	//Khara Halls	NC452	Ga-Segonyana
NC073	Erethurgeni	NC084	Wheir	NC453	Gamagaga

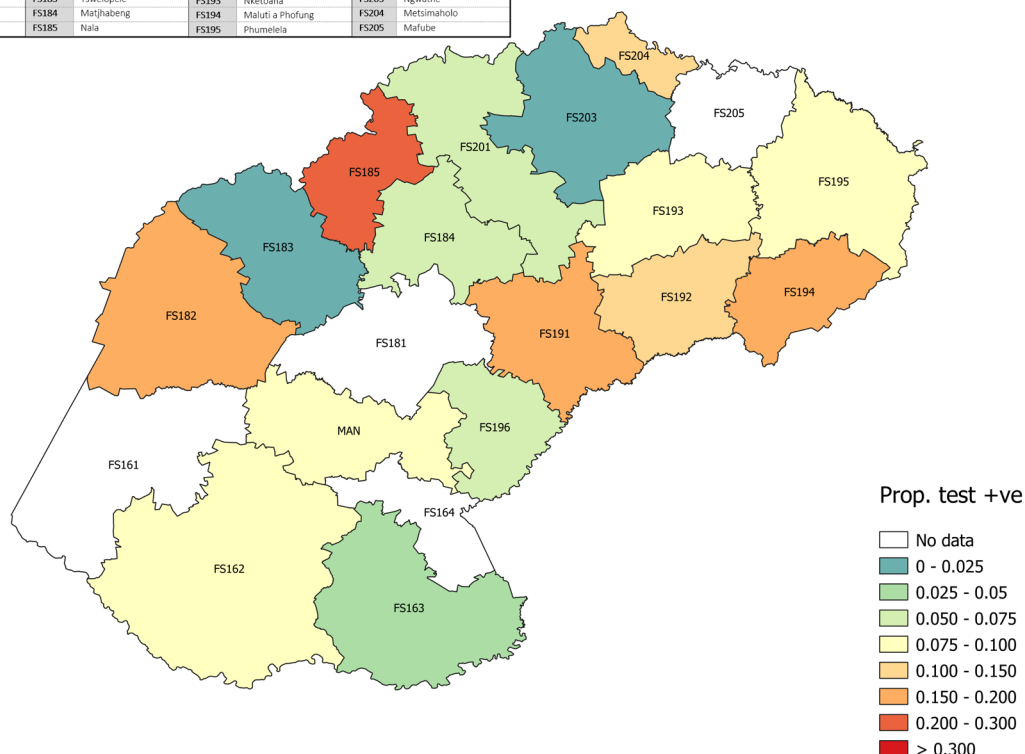


**Figure 13.** Proportion testing positive by health sub-district in Northern Cape Province for the week of 28 March – 3 April 2021. Areas shaded white represent districts in which either (i) no tests were conducted, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

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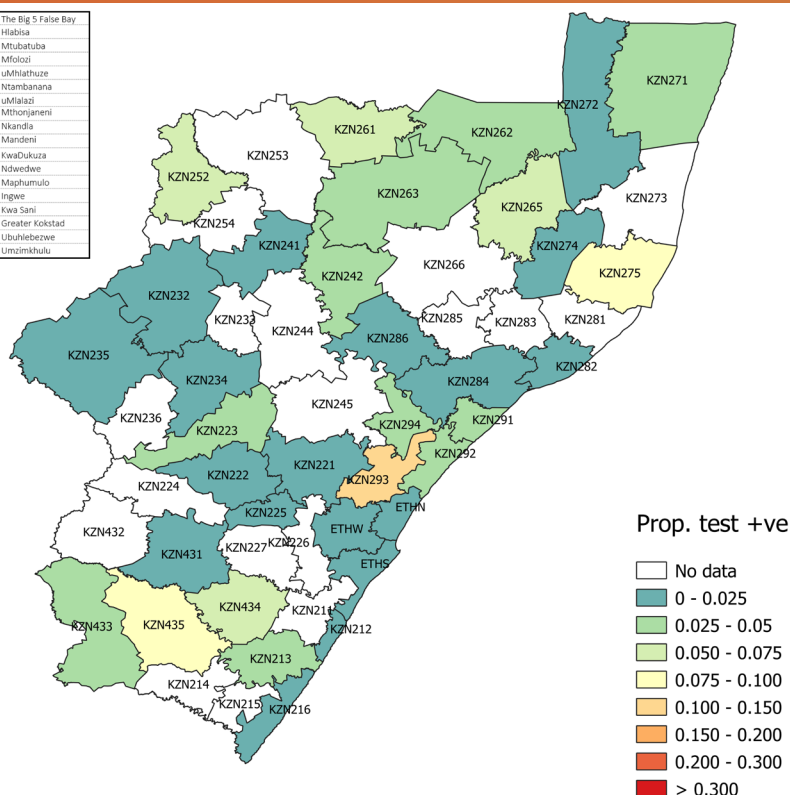
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MAN	Mangaung	FS181	Masilonyana	FS191	Setsotho	FS196	Mantsope
FS161	Letsemeng	FS182	Tokologo	FS192	Dihlabeng	FS201	Moqhaka
FS162	Kopanong	FS183	Tswelopele	FS193	Nketoana	FS203	Ngwathe
FS163	Mohokare	FS184	Matjhabeng	FS194	Maluti a Phofung	FS204	Metsimaholo
FS164	Naledi	FS185	Naia	FS195	Phumelela	FS205	Mafube



**Figure 14.** Proportion testing positive by health sub-district in Free State Province for the week of 28 March – 3 April 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	Hlabisa
ETHW	eThekweni West	KZN235	Okhahlamba	KZN275	Mtubatuba
KZN211	Vulamehlo	KZN236	Imbabazane	KZN281	Mfolosi
KZN212	Umdoni	KZN241	Endumeni	KZN282	uMkhathuzi
KZN213	Umszombe	KZN242	Nqutu	KZN283	Ntambanana
KZN214	uMuziwabantu	KZN244	Misinga	KZN284	uMalalazi
KZN215	Ezingolweni	KZN245	Umvoti	KZN285	Mthorjaneni
KZN216	Hibiscus Coast	KZN252	Newcastle	KZN286	Nkandla
KZN217	uMshwathi	KZN253	Emadlangeni	KZN291	Mandeni
KZN218	uMngeni	KZN254	Damshausen	KZN292	KwaDukuza
KZN219	Mgofana	KZN255	eDumbe	KZN293	Nosedwe
KZN220	Impendle	KZN262	uPhongolo	KZN294	Maphumulo
KZN221	The Msunduzi	KZN263	Abaqulusi	KZN431	Ingwe
KZN222	Mkhambathini	KZN265	Nongoma	KZN432	Kwa Sani
KZN223	Richmond	KZN266	Ulundi	KZN433	Greater Kokstad
KZN232	Ennambithi/Ladysmith	KZN271	Umkhambayalingana	KZN434	Ubuhlebezwe
		KZN272	Josi	KZN435	Umkhambayalingana

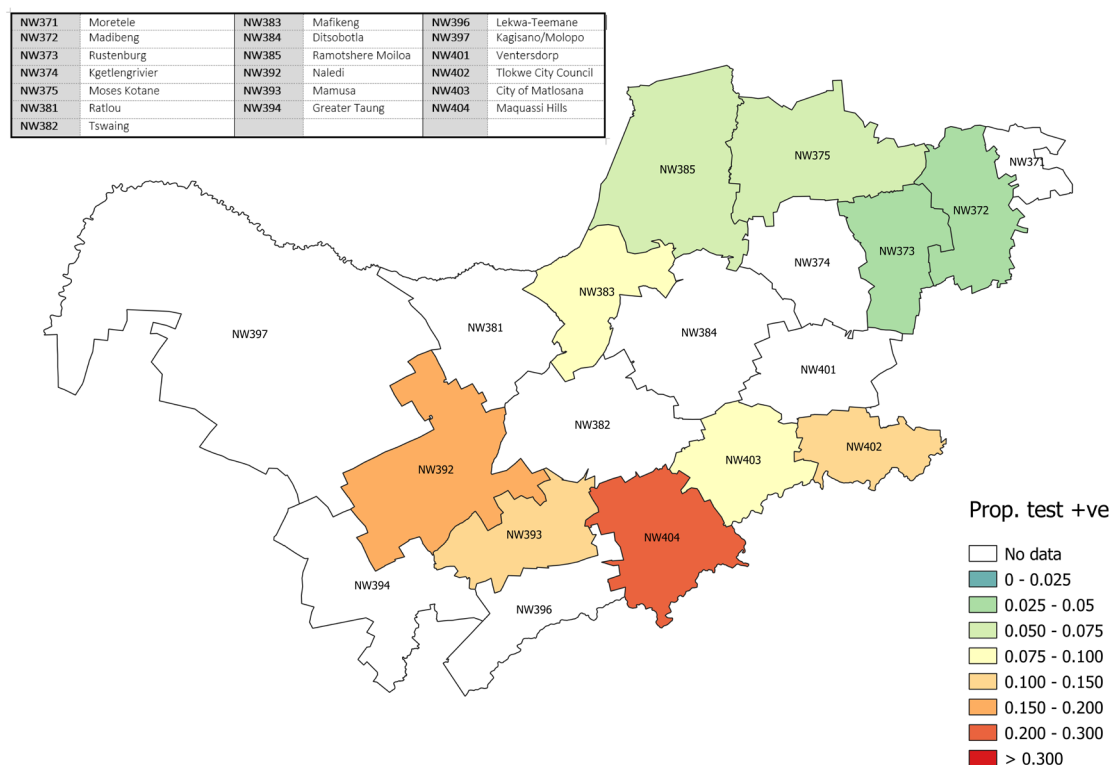


**Figure 15.** Proportion testing positive by health sub-district in KwaZulu-Natal Province for the week of 28 March – 3 April 2021. Areas shaded white represent districts in which either (i) no tests were conducted, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

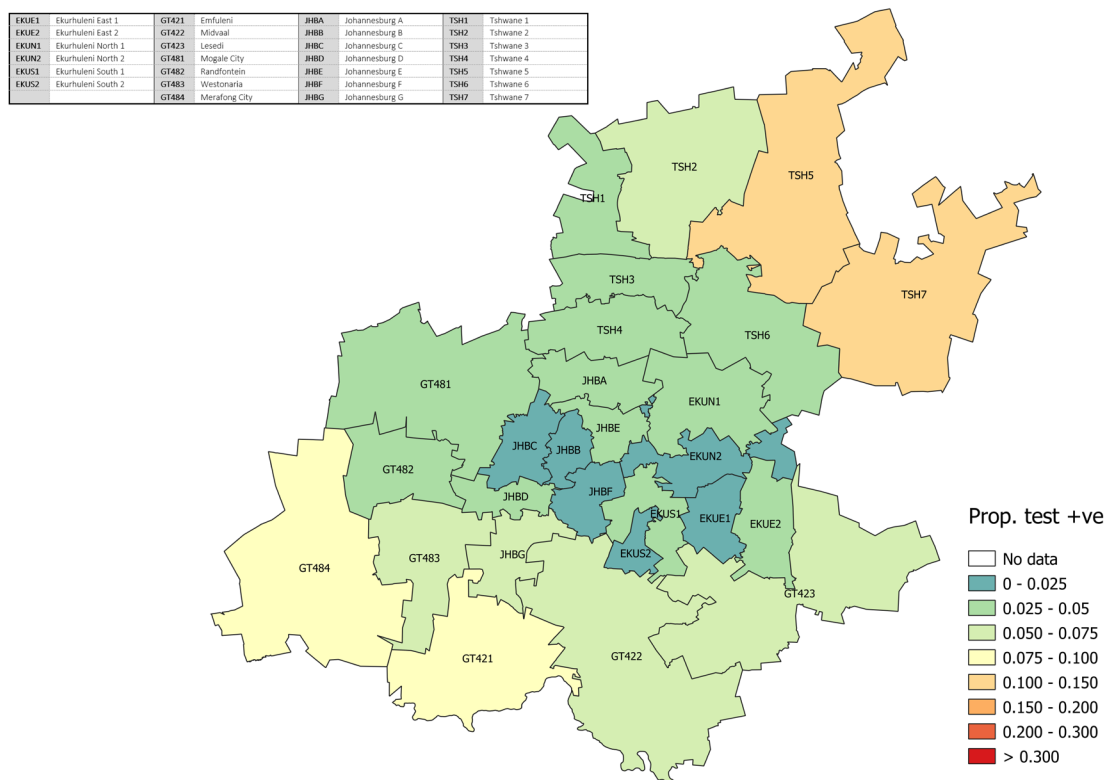


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**Figure 16.** Proportion testing positive by health sub-district in North West Province for the week of 28 March – 3 April 2021. Areas shaded white represent districts in which either (i) no tests were conducted, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

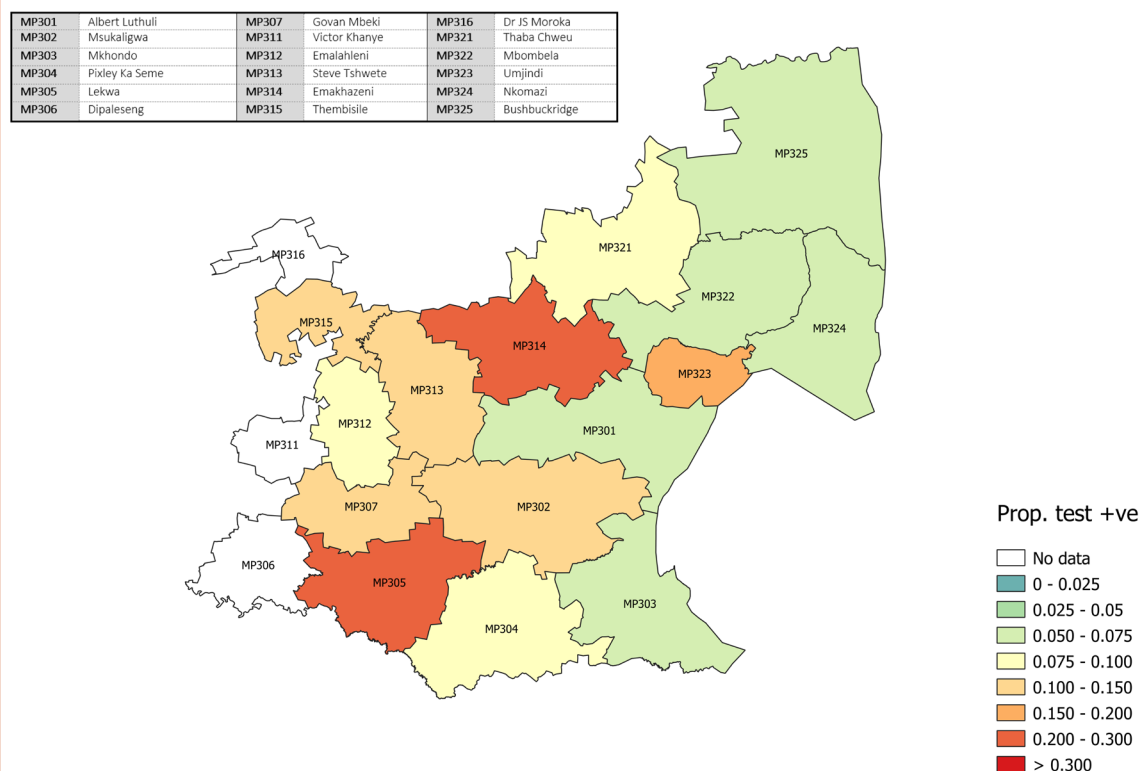


**Figure 17.** Proportion testing positive by health sub-district in Gauteng Province for the week of 28 March – 3 April 2021. Areas shaded white represent districts in which either (i) no tests were conducted, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

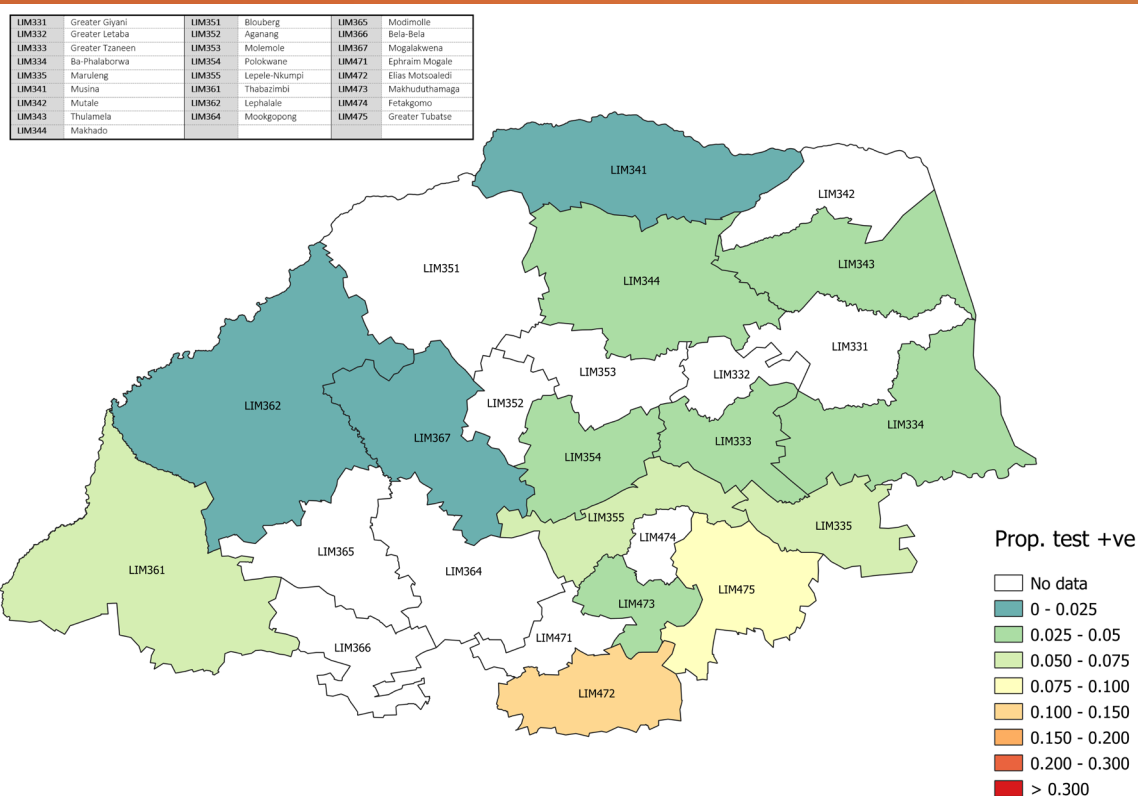


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**Figure 18.** Proportion testing positive by health sub-district in Mpumalanga Province for the week of 28 March – 3 April 2021. Areas shaded white represent districts in which either (i) no tests were conducted, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.



**Figure 19.** Proportion testing positive by health sub-district in Limpopo Province for the week of 28 March – 3 April 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%.

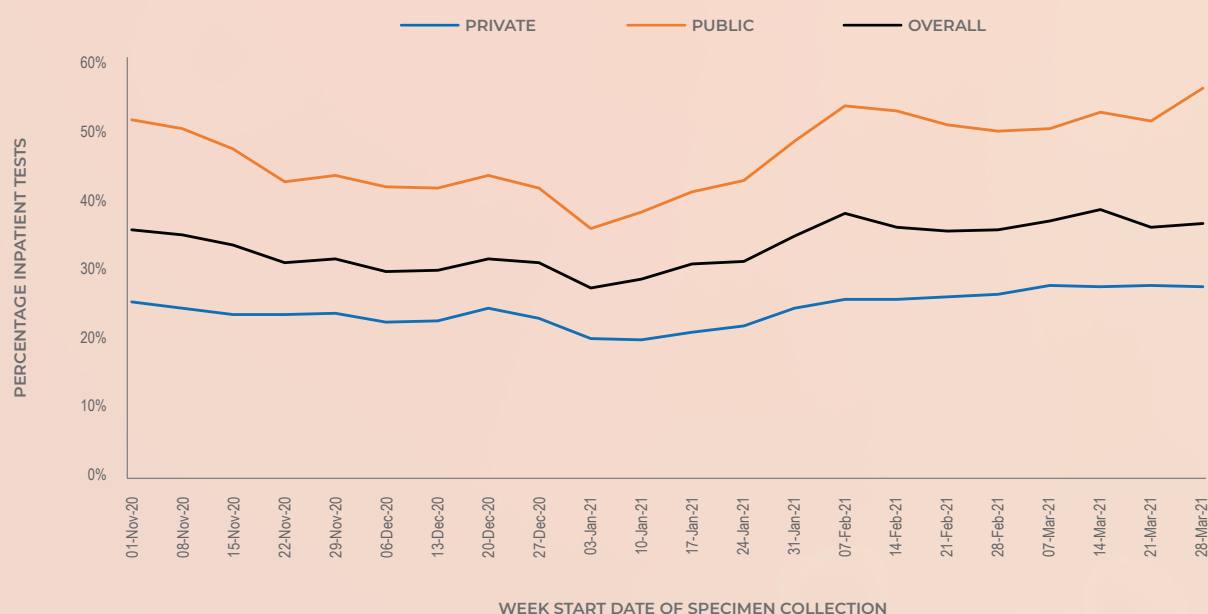
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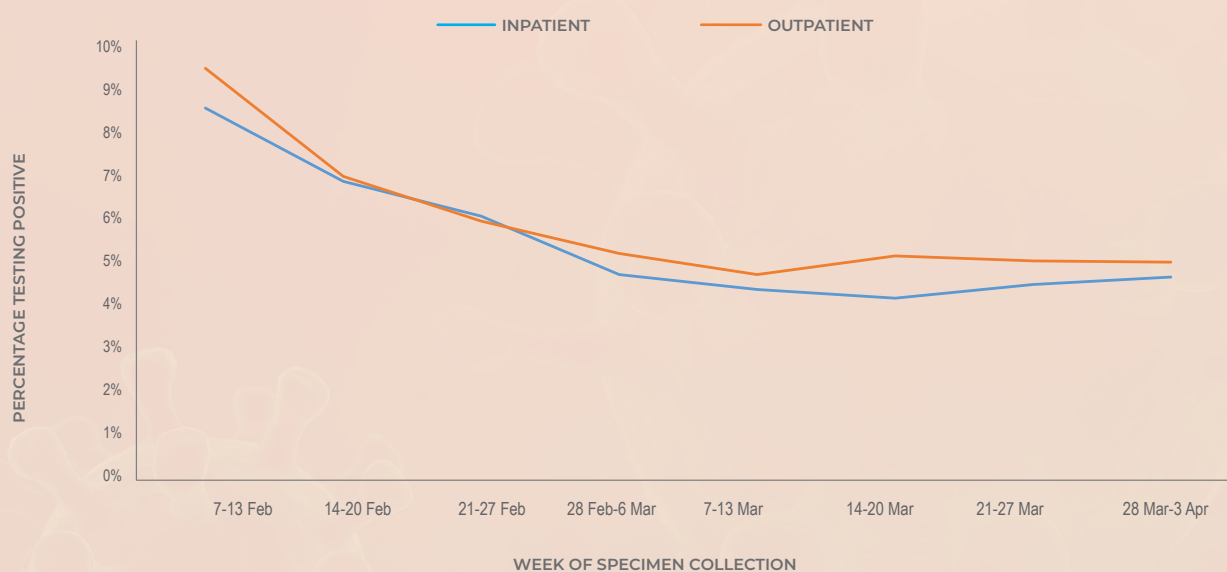
## Testing by patient admission status

In week 13 of 2021, 36.3% of tests were performed for hospitalised patients; 55.6% in the public sector and 27.2% in the private sector (Figure 20). The percentage testing positive in week 13 was slightly higher among

outpatients (5.0%) compared to inpatients (4.6%) (Figure 21). In week 13 the mean laboratory turnaround time for PCR tests in the public sector continued to be lower for inpatients (1.5 days) compared to outpatients (2.1 days) (Figure 22).



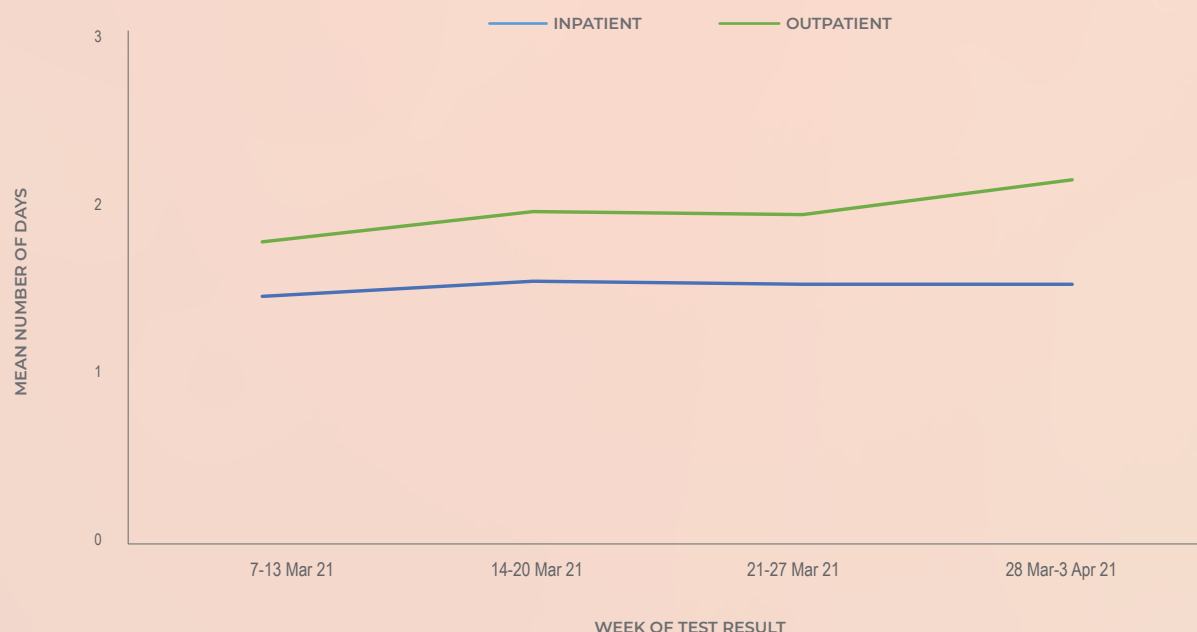
**Figure 20.** Percentage of inpatient tests performed by health sector, 1 November 2020 – 3 April 2021



**Figure 21.** Percentage testing positive by patient admission status in the public sector, 7 February – 3 April 2021

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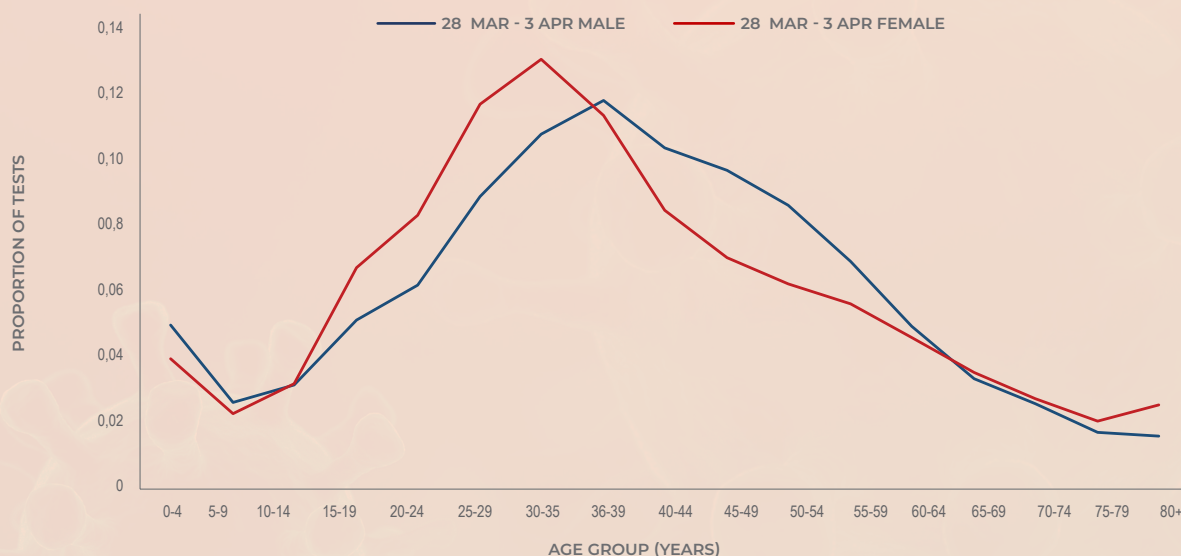


**Figure 22.** Mean number of days between date of specimen collection and date of test result for PCR tests in the public sector by patient admission status, 7 March – 3 April 2021

## Testing by age and sex

The mean age of individuals tested in week 13 of 2021 was 38.4 years, and was similar among males (38.9 years) and females (38.1 years). The majority of tests (56.9%) were performed in individuals in the 20-49 years' age groups although the distribution of tests remained slightly skewed towards younger age groups in females compared to males (Figure 23). In week 13, the testing rate was higher in males (246

per 100,000 persons) compared to females (237 per 100,000 persons) (Figure 24). The highest testing rates continued to be observed in individuals  $\geq 80$  years of age (501 per 100,000 persons) in week 13. The percentage testing positive was highest in individuals aged 15-19 years (6.8%); in males the highest percentage testing positive was in the 15-19 year age group (7.2%), and in females was in the 15-19 year (6.6%) and 60-64 (6.6%) year age groups (Figure 24).

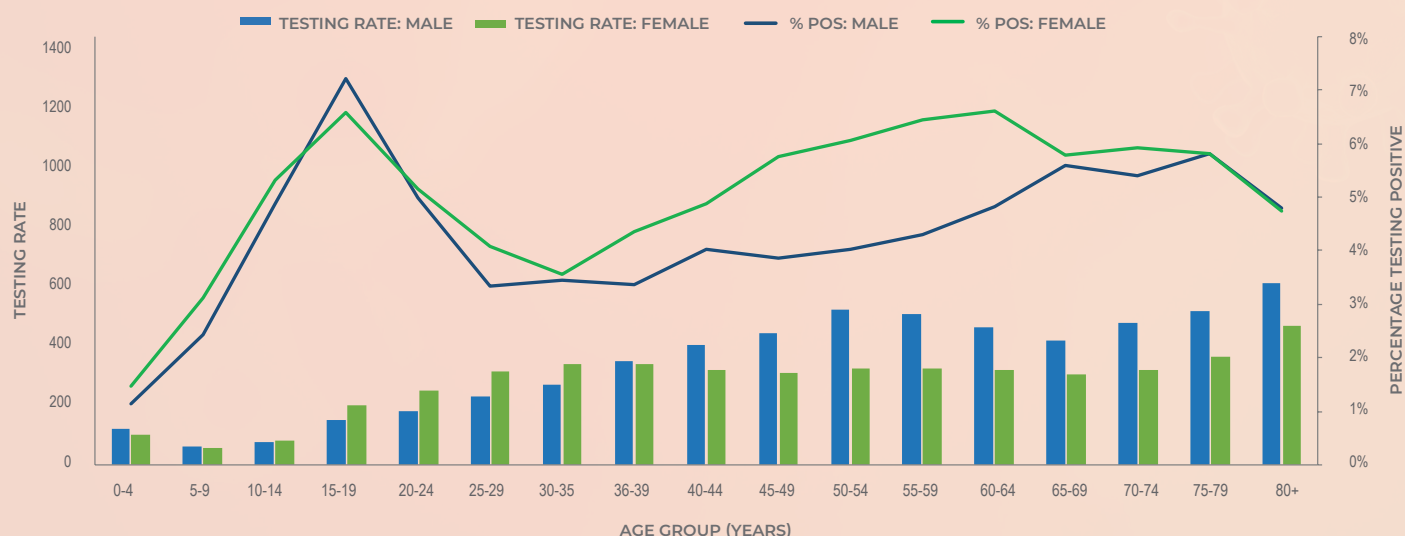


**Figure 23.** Proportion of tests by age group and sex, South Africa, week 13, 28 March – 3 April 2021



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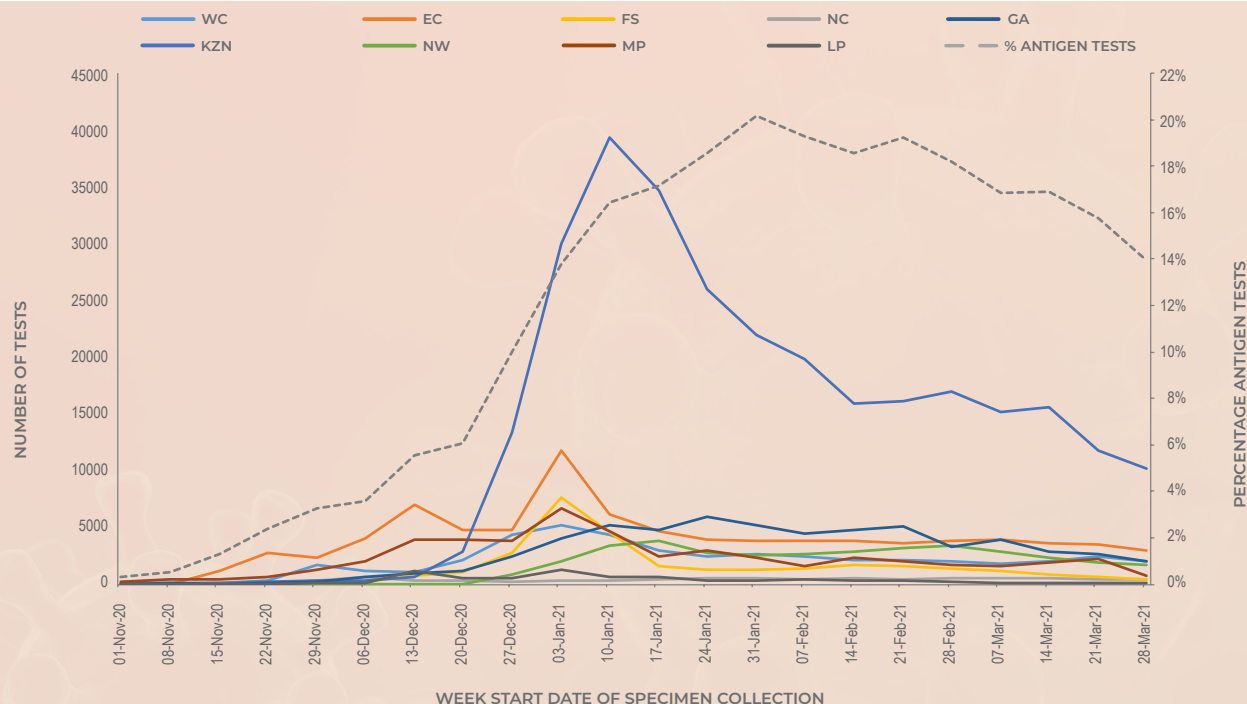


**Figure 24.** Testing rates per 100,000 persons and percentage testing positive by age group and sex, South Africa, week 13, 28 March – 3 April 2021

## Testing by test type

Up to the end of week 13 of 2021, 6.2% of all tests performed were antigen tests. The percentage of antigen tests was highest (20.1%) in week 5 and has subsequently declined to 13.9% of all tests in week 13 (Figure 25). In week 13, 20,574 antigen tests were performed, of which 81.0% were performed in the public sector. The majority of antigen tests have been

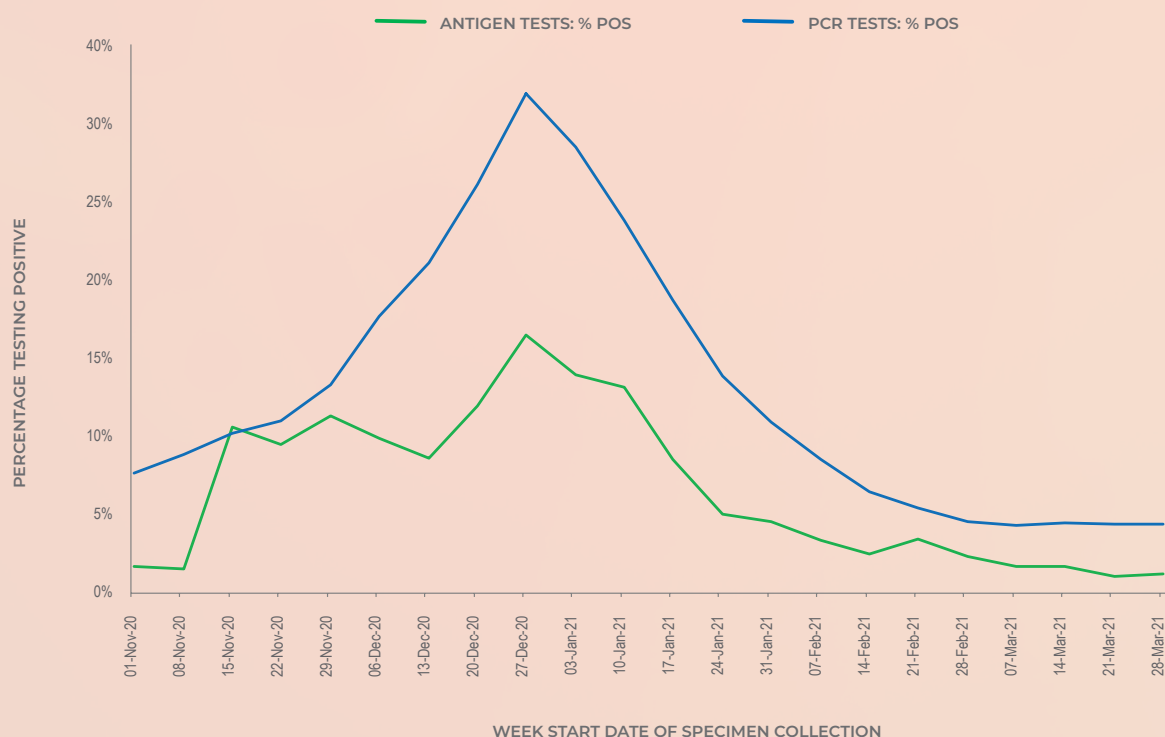
performed in KwaZulu-Natal (46.9%) and Eastern Cape (13.8%) provinces. The percentage testing positive was higher for PCR tests compared to antigen tests, although smaller differences have been observed as the overall percentage testing positive has decreased over recent weeks (Figure 26). The mean turnaround time for antigen tests performed in week 13 was 4.8 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.



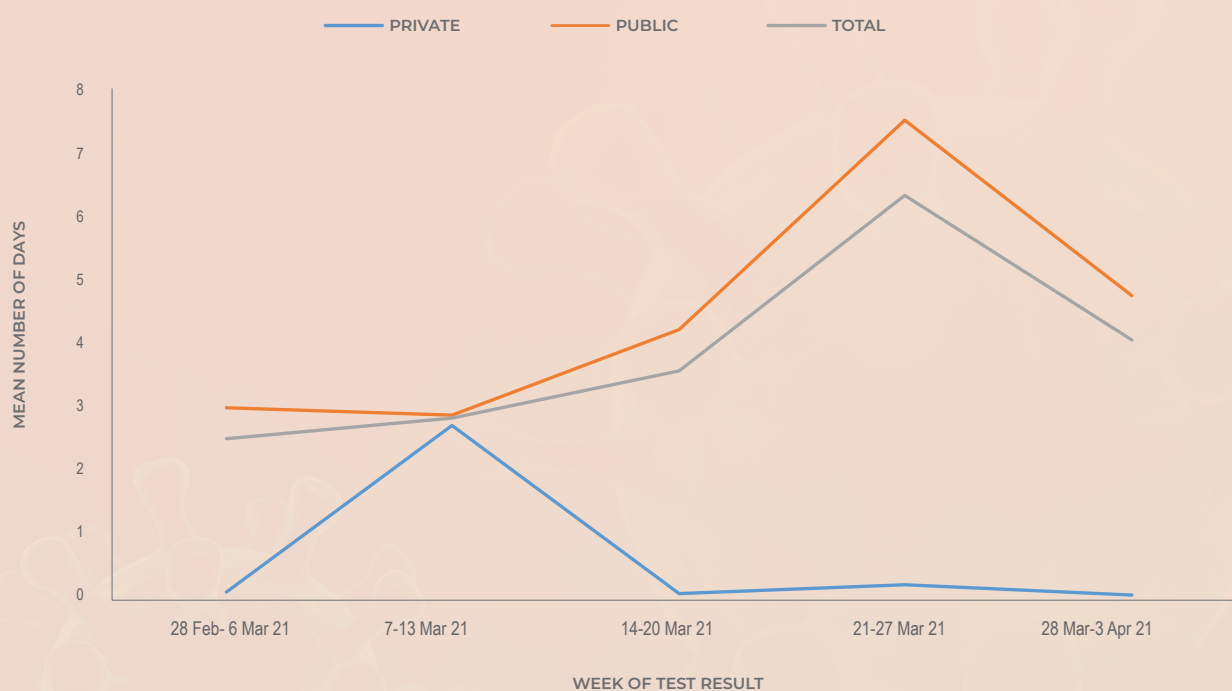
**Figure 25.** Number of antigen tests by province, and overall percentage antigen tests, South Africa, 1 November 2020 – 3 April 2021. WC, Western Cape; EC, Eastern Cape; FS, Free State; KZN, KwaZulu-Natal; GT, Gauteng; NC, Northern Cape; NW, North West; MP, Mpumalanga; LP, Limpopo

# COVID-19 TESTING SUMMARY

SOUTH AFRICA WEEK 13 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 – 3 April 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, 28 February – 3 April 2021

# COVID-19 TESTING SUMMARY

SOUTH AFRICA | WEEK 13 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=498,546), with the number of tests performed in week 13 (n=147,267) similar to the previous few weeks. Gauteng (34.8%), KwaZulu-Natal (19.3%) and Western Cape (16.8%) provinces performed the largest number of tests in week 13. The overall testing rate in week 13 was 247 per 100,000 persons; highest in the Western Cape (353 per 100,000 persons) and lowest in Limpopo (54 per 100,000 persons). Antigen tests accounted for 13.9% of all tests performed in week 13. The overall mean laboratory turnaround time for PCR tests was 1.2 days in week 13; 1.6 days in the public sector and 0.9 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 13 of 2021 the percentage testing positive was 4.5%, similar to the previous week. The percentage testing positive in week 13 was highest in the Northern Cape (11.4%) province. The percentage testing positive ranged from 7% to 9% in the Free State, North West and Mpumalanga, and was <5% in the Western Cape, Eastern Cape, KwaZulu-Natal, Gauteng and Limpopo in week 13. Compared to the previous week, the percentage testing positive in week 13 increased in the Eastern Cape and Northern Cape provinces. The percentage testing positive decreased in the North West, and was unchanged in the Western Cape, Free State, KwaZulu-Natal, Gauteng, Mpumalanga and Limpopo.