

COVID-19 TESTING SUMMARY



NATIONAL INSTITUTE FOR
COMMUNICABLE DISEASES

Division of the National Health Laboratory Service

SOUTH AFRICA WEEK 7 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 20 February 2021 (Week 7 of 2021).

HIGHLIGHTS

- In the period 1 March 2020 through 20 February 2021, 8,834,089 PCR and antigen tests for SARS-CoV-2 have been performed nationally.
- The number of tests performed in week 7 of 2021 (n=175,820) was lower than performed in the previous few weeks.
- Testing rates have decreased in all provinces in recent weeks, with the highest testing rates in week 7 in the Western Cape (405 per 100,000 persons) and Gauteng (390 per 100,000 persons) provinces.
- In week 7 of 2021 the percentage testing positive was 6.5%, which had decreased from a peak of 34.7% in week 53 of 2020 and was lower than observed since May 2020.
- Percentage testing positive in week 7 was highest in the Northern Cape (11.2%), Mpumalanga (10.8%) and Limpopo (10.3%) provinces. The percentage testing positive was 5-9% in the Western Cape, Free State, KwaZulu-Natal, North West and Gauteng, and was <5% in Eastern Cape.
- In week 7 of 2021, compared to the previous week, the percentage testing positive decreased in all provinces, except for the Northern Cape province where the percentage testing positive remained unchanged.
- Mean laboratory turnaround time in week 7 was 1.3 days; 1.5 days in the public sector and 1.1 days in the private sector.

COVID-19 TESTING SUMMARY

SOUTH AFRICA WEEK 7 2021

Methods

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

Test results were automatically fed into a data warehouse after result authorisation. We excluded specimens collected outside South Africa and duplicate entries of the same test for an individual. From week 48 of 2020 onwards, test data were reported from the Notifiable Medical Conditions Surveillance System (NMCSS). Date of specimen receipt in the laboratory was used when date of specimen collection was missing. Proportion testing positive (PTP) was calculated as the number of positive tests/total number of tests and presented as percentage by multiplying with 100. We used 2020 mid-year population estimates from Statistics South Africa to calculate the testing rate, expressed as

tests per 100,000 persons. Patient admission status for public and private sector tests was determined based on the reported patient facility. Laboratory turnaround times were calculated 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 20 February 2021 (week 7 of 2021).

Testing volumes and proportion testing positive

From 1 March 2020 through 20 February 2021, 8,834,089 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=497,822). In week 7 of 2021, 175,820 tests were performed, lower than the number of weekly tests performed since week 48 (beginning 22 November 2020). 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 7 2021

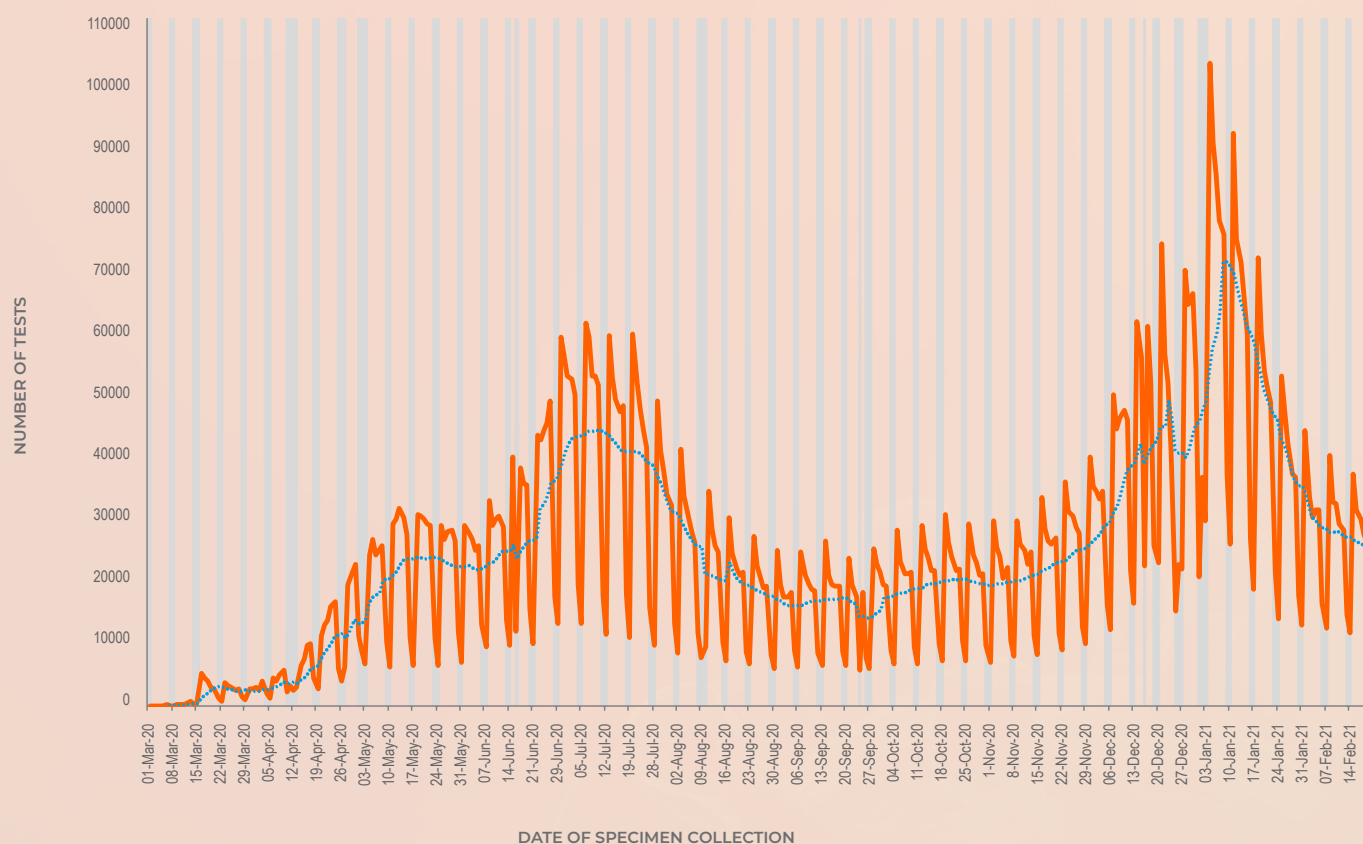


Figure 1. Number of laboratory tests conducted by date of specimen collection, South Africa, 1 March 2020 – 20 February 2021. Blue dotted line shows the 7-day moving average of the number of tests conducted. Grey bars highlight weekend days and public holidays.

The overall percentage testing positive from week 10 of 2020 through week 7 of 2021 was 18.0% (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 7 of 2021 was 6.5%, 2.1% lower than observed in week 6 and the lowest percentage testing positive since the start of the first wave (May 2020) (Figure 2).

COVID-19 TESTING SUMMARY

SOUTH AFRICA | WEEK 7 2021

Table 1. Weekly number of tests conducted and positive tests, South Africa, 1 March 2020 – 20 February 2021

Week number	Week beginning	No. of tests n (%)	No. of positive tests	Percentage testing positive (%)
10	01-Mar-20	454 (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	17541 (0.2)	543	3.1
14	29-Mar-20	18245 (0.2)	520	2.9
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 (0.9)	2177	2.7
18	26-Apr-20	93810 (1.1)	3205	3.4
19	03-May-20	142701 (1.6)	6017	4.2
20	10-May-20	165368 (1.9)	8090	4.9
21	17-May-20	166535 (1.9)	11379	6.8
22	24-May-20	156134 (1.8)	12967	8.3
23	31-May-20	153562 (1.7)	15079	9.8
24	07-Jun-20	173890 (2.0)	22358	12.9
25	14-Jun-20	186073 (2.1)	32648	17.5
26	21-Jun-20	252082 (2.9)	55044	21.8
27	28-Jun-20	302695 (3.4)	75307	24.9
28	05-Jul-20	307902 (3.5)	86032	27.9
29	12-Jul-20	285587 (3.2)	84924	29.7
30	19-Jul-20	270881 (3.1)	78634	29.0
31	26-Jul-20	216375 (2.4)	58392	27.0
32	02-Aug-20	179561 (2.0)	40992	22.8
33	09-Aug-20	141100 (1.6)	26265	18.6
34	16-Aug-20	135005 (1.5)	21375	15.8
35	23-Aug-20	123327 (1.4)	16330	13.2
36	30-Aug-20	112757 (1.3)	12790	11.3
37	06-Sep-20	116992 (1.3)	11952	10.2
38	13-Sep-20	120709 (1.4)	12011	10.0
39	20-Sep-20	98815 (1.1)	10098	10.2
40	27-Sep-20	123056 (1.4)	11008	8.9
41	04-Oct-20	131037 (1.5)	11777	9.0
42	11-Oct-20	137957 (1.6)	12076	8.8
43	18-Oct-20	142152 (1.6)	12066	8.5
44	25-Oct-20	135835 (1.5)	11478	8.4
45	01-Nov-20	138801 (1.6)	12133	8.7
46	08-Nov-20	146978 (1.7)	14840	10.1
47	15-Nov-20	160617 (1.8)	18761	11.7
48	22-Nov-20	175664 (2.0)	22048	12.6
49	29-Nov-20	202972 (2.3)	30764	15.2
50	06-Dec-20	267331 (3.0)	53299	19.9
51	13-Dec-20	293725 (3.3)	68549	23.3
52	20-Dec-20	283703 (3.2)	81913	28.9
53	27-Dec-20	332865 (3.8)	115618	34.7
1	03-Jan-21	497822 (5.6)	150590	30.2
2	10-Jan-21	415001 (4.7)	104473	25.2
3	17-Jan-21	324755 (3.7)	63054	19.4
4	24-Jan-21	247331 (2.8)	34472	13.9
5	31-Jan-21	199840 (2.3)	22182	11.1
6	07-Feb-21	189558 (2.1)	16321	8.6
7	14-Feb-21	175820 (2.0)	11471	6.5
Total		8834089 (100.0)	1587126	18.0

COVID-19 TESTING SUMMARY

SOUTH AFRICA WEEK 7 2021

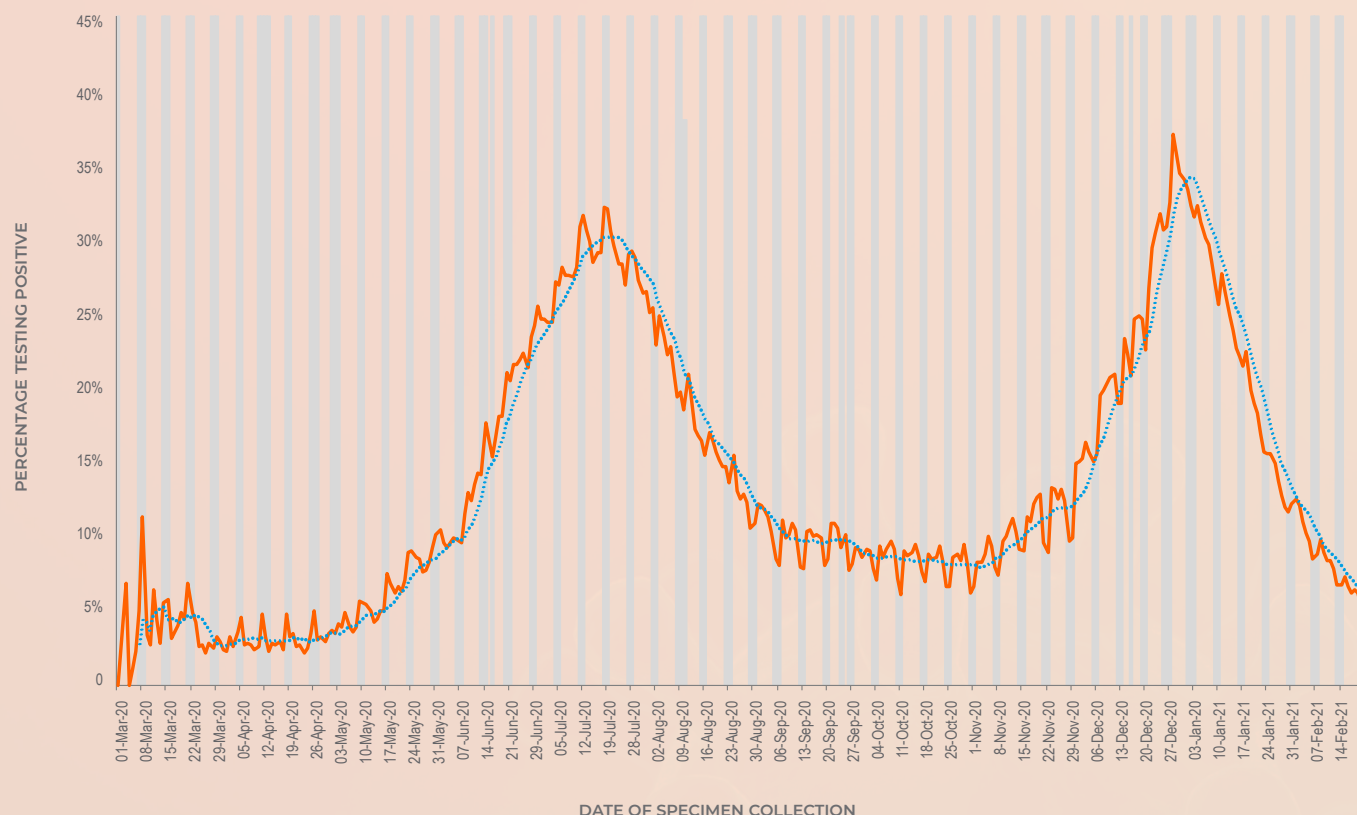


Figure 2. Percentage of laboratory tests positive for SARS-CoV-2 by date of specimen collection, South Africa, 1 March 2020 – 20 February 2021. Blue dotted line shows the 7-day moving average of the percentage testing positive. Grey bars highlight weekend days and public holidays.

Testing in private and public sectors

From 1 March 2020 through 20 February 2021, 3,845,680 laboratory tests were conducted in public sector laboratories, with 18.6% testing positive. Over this same period, private sector laboratories conducted 4,988,409 tests, with 17.5% testing positive (Table 2). Overall the public sector has conducted 43.5% of tests and accounted for 45.1% 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 (35.2%) and private sector (34.4%). From week 6 to week 7 of 2021, the percentage testing positive decreased by 1.5% in the public sector (9.4% to

7.9%, $P < 0.001$), and decreased by 2.4% (7.9% to 5.5%, $P < 0.001$) in the private sector. In week 7 of 2021 the percentage testing positive was higher in the public sector (7.9%) compared to the private sector (5.5%) ($P < 0.001$).

The mean turnaround time for PCR tests performed in week 7 of 2021 was 1.3 days; 1.5 days in the public sector and 1.1 days in the private sector (Figure 3). Turnaround times for public sector tests have decreased in all provinces in recent weeks, but were > 2 days in the North West (2.6 days) and Mpumalanga (2.3 days) provinces in week 7 (Figure 4). Twenty-five of the 28 (89.3%) NHLS laboratories performing PCR testing for SARS-CoV-2 had turnaround times ≤ 2 days in week 7 (Figure 5).

COVID-19 TESTING SUMMARY

SOUTH AFRICA | WEEK 7 2021

Table 2. Weekly number of tests conducted and positive tests, by healthcare sector, South Africa, 1 March 2020 – 20 February 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	293	10 (3.4)	161	3 (1.9)	64.5	76.9	1.832
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	3477	149 (4.3)	14064	394 (2.8)	19.8	27.4	1.530
14	29-Mar-20	5868	194 (3.3)	12377	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	94336	4506 (4.8)	48365	1511 (3.1)	66.1	74.9	1.529
20	10-May-20	107997	5443 (5.0)	57371	2647 (4.6)	65.3	67.3	1.092
21	17-May-20	98647	7031 (7.1)	67888	4348 (6.4)	59.2	61.8	1.113
22	24-May-20	77596	6411 (8.3)	78538	6556 (8.3)	49.7	49.4	0.990
23	31-May-20	63943	6626 (10.4)	89619	8453 (9.4)	41.6	43.9	1.099
24	07-Jun-20	64653	8038 (12.4)	109237	14320 (13.1)	37.2	36.0	0.948
25	14-Jun-20	61147	11982 (19.6)	124926	20666 (16.5)	32.9	36.7	1.185
26	21-Jun-20	90452	20425 (22.6)	161630	34619 (21.4)	35.9	37.1	1.054
27	28-Jun-20	106366	27244 (25.6)	196329	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	110658	31383 (28.4)	174929	53541 (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)	135141	35610 (26.4)	37.5	39.0	1.064
32	02-Aug-20	70566	16996 (24.1)	108995	23996 (22.0)	39.3	41.5	1.094
33	09-Aug-20	58660	11172 (19.0)	82440	15093 (18.3)	41.6	42.5	1.040
34	16-Aug-20	56136	9621 (17.1)	78869	11754 (14.9)	41.6	45.0	1.150
35	23-Aug-20	50317	7790 (15.5)	73010	8540 (11.7)	40.8	47.7	1.324
36	30-Aug-20	45419	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)	67004	5464 (8.2)	44.5	54.5	1.495
39	20-Sep-20	44840	5530 (12.3)	53975	4568 (8.5)	45.4	54.8	1.457
40	27-Sep-20	48627	5568 (11.5)	74429	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	53445	5702 (10.7)	84512	6374 (7.5)	38.7	47.2	1.415
43	18-Oct-20	56120	6044 (10.8)	86032	6022 (7.0)	39.5	50.1	1.539
44	25-Oct-20	51281	5721 (11.2)	84554	5757 (6.8)	37.8	49.8	1.639
45	01-Nov-20	52988	6061 (11.4)	85813	6072 (7.1)	38.2	50.0	1.617
46	08-Nov-20	58907	8097 (13.7)	88071	6743 (7.7)	40.1	54.6	1.795
47	15-Nov-20	67572	10584 (15.7)	93045	8177 (8.8)	42.1	56.4	1.782
48	22-Nov-20	74568	12199 (16.4)	101096	9849 (9.7)	42.4	55.3	1.679
49	29-Nov-20	81142	15730 (19.4)	121830	15034 (12.3)	40.0	51.1	1.571
50	06-Dec-20	107374	24709 (23.0)	159957	28590 (17.9)	40.2	46.4	1.287
51	13-Dec-20	116547	29801 (25.6)	177178	38748 (21.9)	39.7	43.5	1.169
52	20-Dec-20	109271	34117 (31.2)	174432	47796 (27.4)	38.5	41.7	1.139
53	27-Dec-20	150267	52867 (35.2)	182598	62751 (34.4)	45.1	45.7	1.024
1	03-Jan-21	234094	70735 (30.2)	263728	79855 (30.3)	47.0	47.0	0.998
2	10-Jan-21	201895	52819 (26.2)	213106	51654 (24.2)	48.6	50.6	1.079
3	17-Jan-21	164294	34388 (20.9)	160461	28666 (17.9)	50.6	54.5	1.172
4	24-Jan-21	122128	18935 (15.5)	125203	15537 (12.4)	49.4	54.9	1.249
5	31-Jan-21	97631	11957 (12.2)	102209	10225 (10.0)	48.9	53.9	1.224
6	07-Feb-21	88948	8405 (9.4)	100610	7916 (7.9)	46.9	51.5	1.201
7	14-Feb-21	77534	6089 (7.9)	98286	5382 (5.5)	44.1	53.1	1.434
Total		3845680	716415 (18.6)	4988409	870711 (17.5)	43.5	45.1	1.067

^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 7 2021

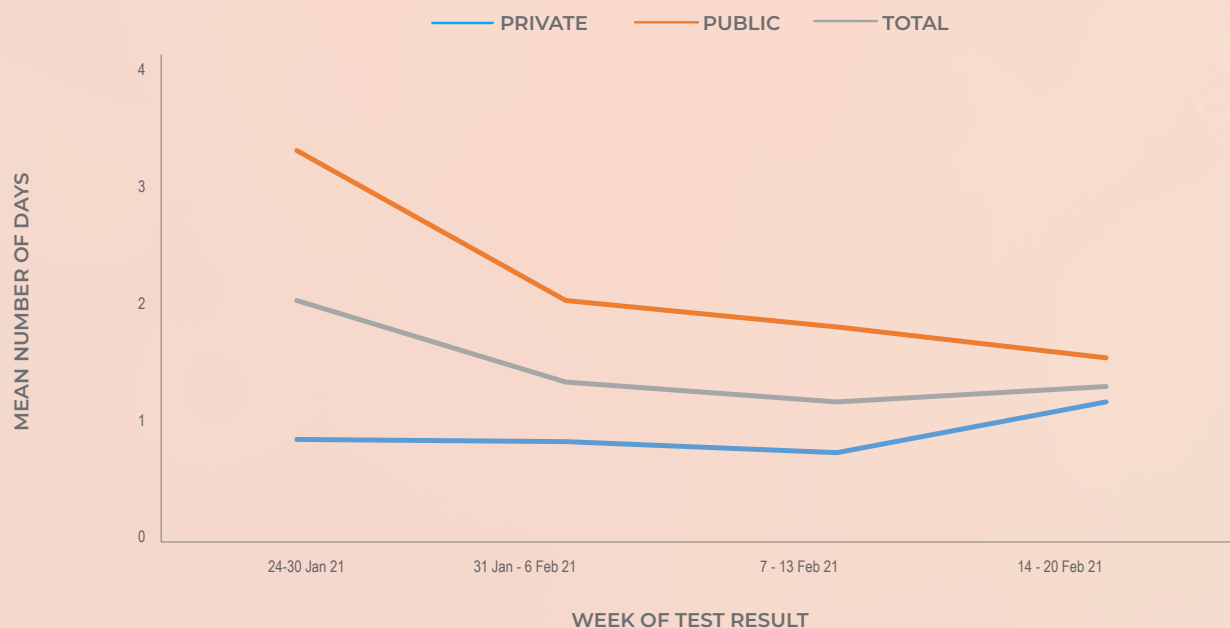


Figure 3. Mean number of days between date of specimen collection and date of test result, by week of test result, South Africa, 24 January – 20 February 2021

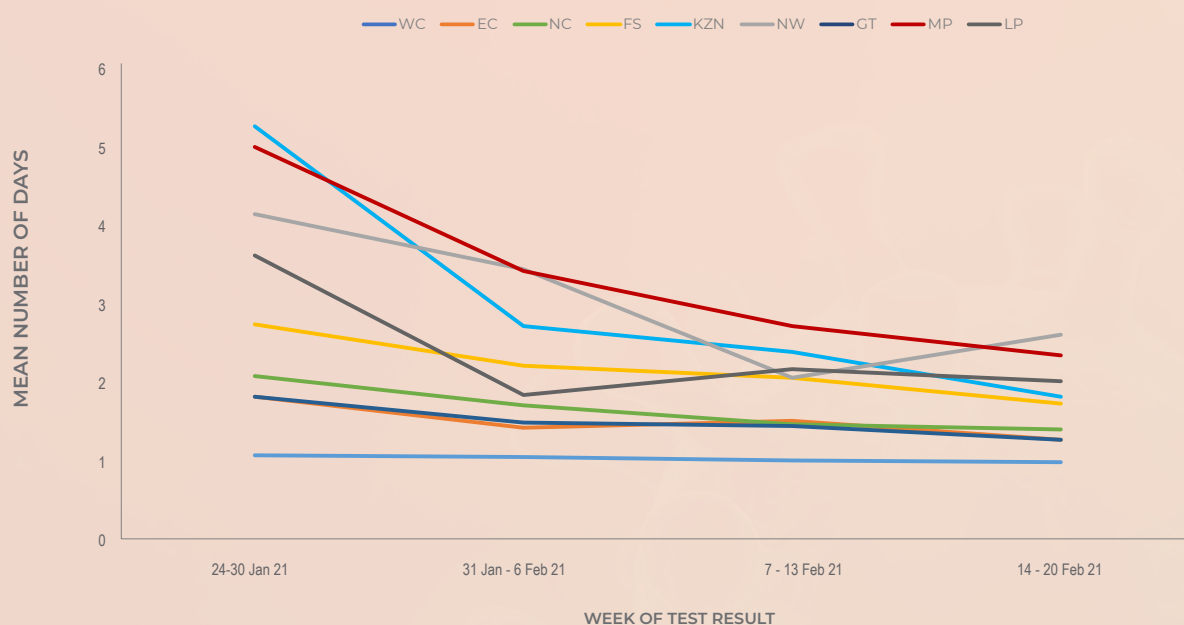


Figure 4. Mean number of days between date of specimen collection and date of test result, by week of test result and province, public sector, South Africa, 24 January – 20 February 2021. WC, Western Cape; EC, Eastern Cape; FS, Free State; KZN, KwaZulu-Natal; GT, Gauteng; NC, Northern Cape; NW, North West; MP, Mpumalanga; LP, Limpopo

COVID-19 TESTING SUMMARY

SOUTH AFRICA

WEEK 7 2021

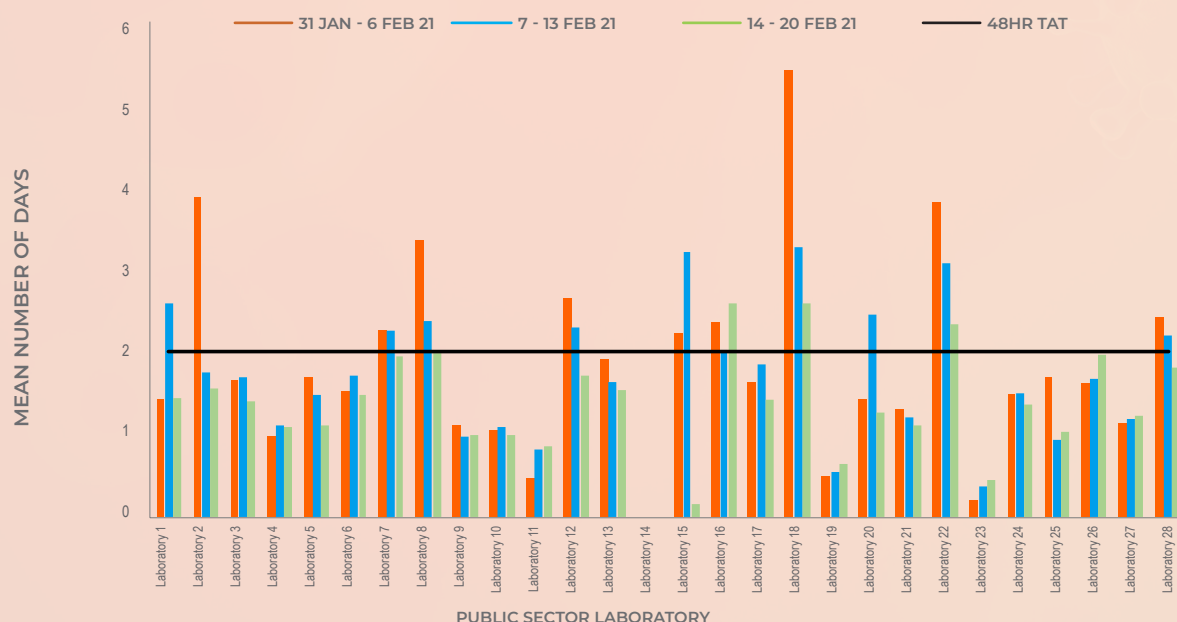


Figure 5. Mean number of days between date of specimen collection and date of test result, by public sector laboratory, 31 January – 20 February 2021. The horizontal black line indicates 48-hour turnaround time (TAT).

Testing by province

The majority of tests continued to be performed in Gauteng (34.3%), KwaZulu-Natal (21.5%) and Western Cape (16.1%) provinces in week 7 of 2021 (Table 3). The overall testing rate in week 7 was 295 per 100,000 persons, with the Western Cape (405 per 100,000 persons) and Gauteng (390 per 100,000 persons) provinces having the highest testing rates (Figure 6). Testing rates have decreased in all provinces in recent weeks.

The percentage testing positive in week 7 of 2021 was

highest in the Northern Cape (11.2%), Mpumalanga (10.8%) and Limpopo (10.3%) provinces (Figure 7 and Table 3). The percentage testing positive was 5–9% in the Western Cape, Free State, KwaZulu-Natal, North West and Gauteng, and was <5% in Eastern Cape in week 7. Compared to the previous week, the percentage testing positive decreased in week 7 in all provinces ($P \leq 0.001$), except for the Northern Cape province where the percentage testing positive remained unchanged ($P = 0.217$). 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).

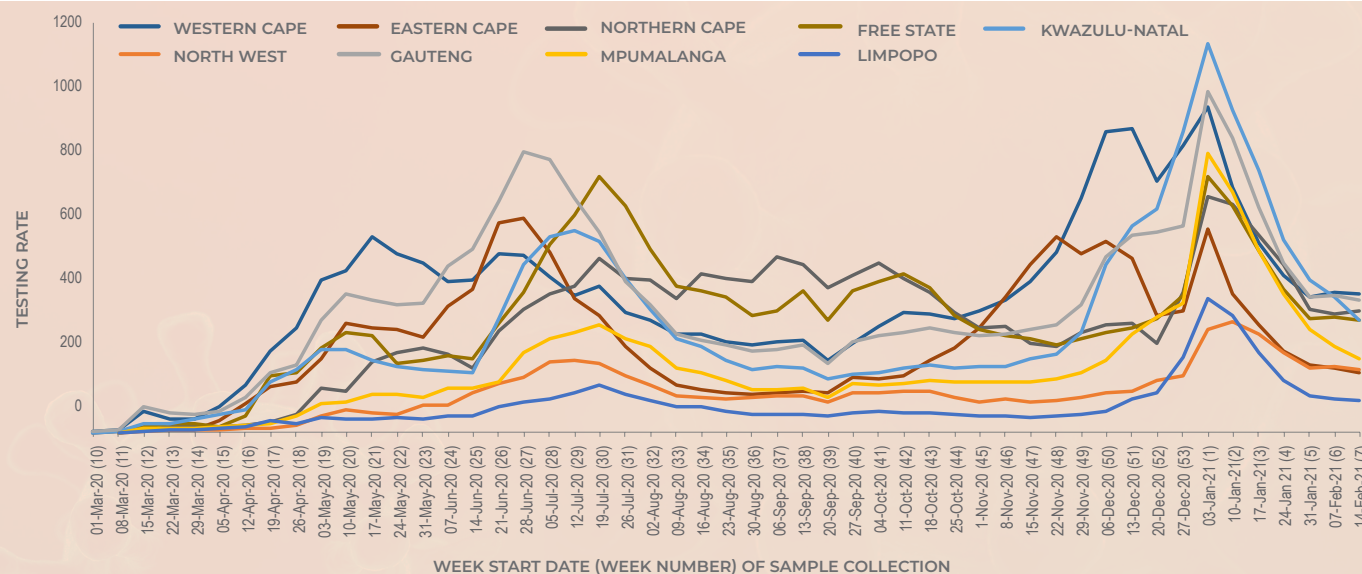


Figure 6. Testing rate per 100,000 persons by province and week of specimen collection, South Africa, 1 March 2020 – 20 February 2021

COVID-19 TESTING SUMMARY

SOUTH AFRICA WEEK 7 2021

Table 3. Weekly number of tests performed and positive tests, by province, South Africa, 31 January – 20 February 2021

Province	Population ^a	31 Jan – 6 Feb 21		7 - 13 Feb 21		14 - 20 Feb 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	27890	2819 (10.1)	28784	2285 (7.9)	28380	1840 (6.5)	405	-1.5%
Eastern Cape	6734001	13408	747 (5.6)	12800	559 (4.4)	11916	326 (2.7)	177	-1.6%
Northern Cape	1292786	4693	717 (15.3)	4480	539 (12.0)	4589	514 (11.2)	355	-0.8%
Free State	2928903	9779	1150 (11.8)	9926	958 (9.7)	9587	743 (7.8)	327	-1.9%
KwaZulu-Natal	11531628	51546	5662 (11.0)	46034	3523 (7.7)	37759	2091 (5.5)	327	-2.1%
North West	4108816	7679	1065 (13.9)	7909	928 (11.7)	7557	681 (9.0)	184	-2.7%
Gauteng	15488137	61237	6269 (10.2)	62156	5035 (8.1)	60343	3632 (6.0)	390	-2.1%
Mpumalanga	4679786	14061	2373 (16.9)	11775	1694 (14.4)	10031	1080 (10.8)	214	-3.6%
Limpopo	5852553	6169	1111 (18.0)	5647	799 (14.1)	5470	562 (10.3)	93	-3.9%
Unknown		3378	269 (8.0)	47	1 (2.1)	188	2 (1.1)		
Total	59622350	199840	22182 (11.1)	189558	16321 (8.6)	175820	11471 (6.5)	295	-2.1%

^a 2020 Mid-year population Statistics SA

^b Current week compared to previous week

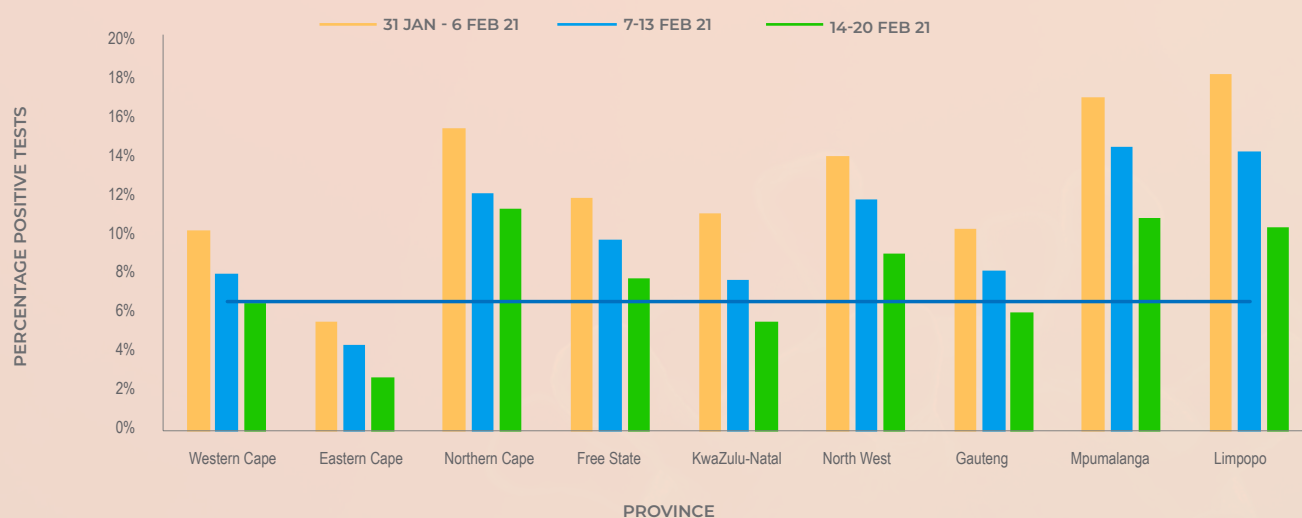


Figure 7. Weekly percentage testing positive, by province, South Africa, 31 January – 20 February 2021. The horizontal blue line shows the national mean for week 7, beginning 14 February 2021

Testing in the public sector

In the public sector, the percentage testing positive decreased in the past week (9.4% in week 6 to 7.9% in week 7 of 2021, $P < 0.001$) (Table 4). The percentage testing positive in week 7 of 2021 remained highest in

Limpopo (14.6%), Mpumalanga (13.0%) and Northern Cape (12.7%) 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, Gauteng, Mpumalanga and Limpopo provinces (Figure 8).

COVID-19 TESTING SUMMARY

SOUTH AFRICA WEEK 7 2021

Table 4. Weekly number of tests conducted and positive tests in the public sector, by province, South Africa, 31 January – 20 February 2021

Province	31 Jan - 6 Feb 2021		7 - 13 Feb 2021		14 - 20 Feb 2021	
	No. of tests	No. positive tests (%)	No. of tests	No. positive tests (%)	No. of tests	No. positive tests (%)
Western Cape	9975	1219 (12.2)	10383	1032 (9.9)	9515	892 (9.4)
Eastern Cape	9121	500 (5.5)	8481	296 (3.5)	7436	187 (2.5)
Northern Cape	3013	478 (15.9)	2690	371 (13.8)	2846	361 (12.7)
Free State	5170	684 (13.2)	5000	524 (10.5)	4081	394 (9.7)
KwaZulu-Natal	35901	4019 (11.2)	31889	2423 (7.6)	24548	1477 (6.0)
North West	3470	550 (15.9)	3618	496 (13.7)	3173	322 (10.1)
Gauteng	19748	2628 (13.3)	19761	2004 (10.1)	19707	1637 (8.3)
Mpumalanga	6437	1113 (17.3)	5154	899 (17.4)	4371	569 (13.0)
Limpopo	2498	567 (22.7)	1952	360 (18.4)	1707	249 (14.6)
Unknown	2298	199 (8.7)	20	0 (0.0)	150	1 (0.7)
Total	97631	11957 (12.2)	88948	8405 (9.4)	77534	6089 (7.9)

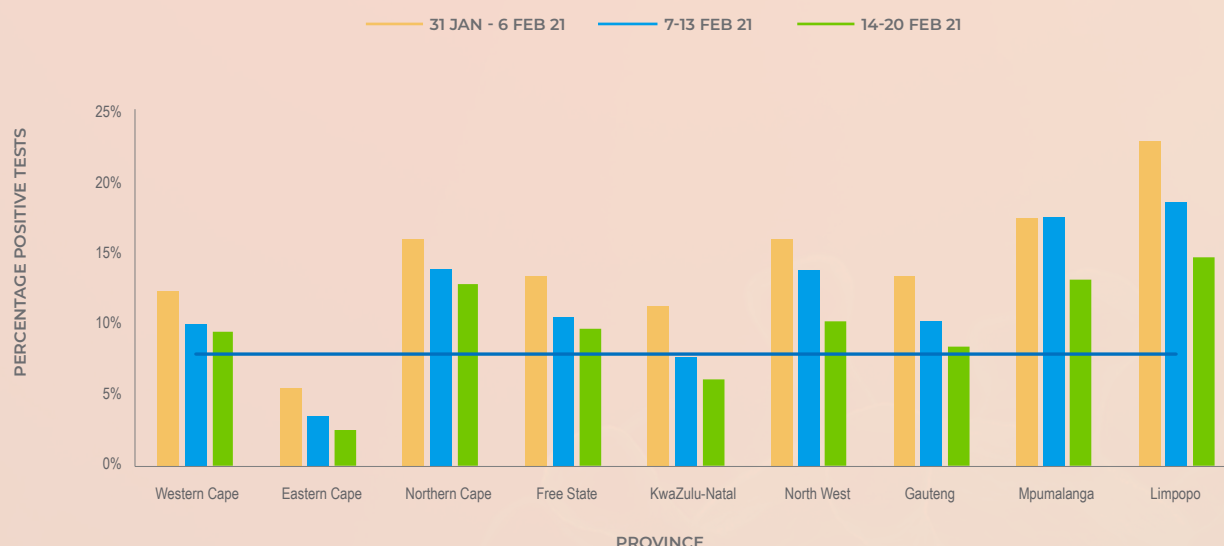


Figure 8. Weekly percentage testing positive in the public sector, by province, South Africa, 31 January – 20 February 2021. The horizontal blue line shows the national mean for week 7 of 2021, beginning 14 February 2021.

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 14 - 20 February 2021, with the highest proportion testing positive nationally. The distribution of public sector facilities in the table below is spatially diffuse with at least one facility in the table in each of the nine provinces. Five facilities are in each of Mpumalanga and the Western Cape; four each in the Northern Cape and KwaZulu-Natal; and three in Gauteng.

COVID-19 TESTING SUMMARY

SOUTH AFRICA | WEEK 7 2021

Table 5.1 Public sector healthcare facilities with a high proportion testing positive, 14 - 20 February 2021

Facility Name	Province	Tests	PTP (95% CI)
Facility 1	KwaZulu-Natal	31	0.452 (0.276;0.627)
Facility 2	Mpumalanga	30	0.400 (0.225;0.575)
Facility 3	Northern Cape	26	0.385 (0.198;0.572)
Facility 4	Gauteng	32	0.344 (0.179;0.508)
Facility 5	Mpumalanga	47	0.340 (0.205;0.476)
Facility 6	Mpumalanga	34	0.324 (0.166;0.481)
Facility 7	Northern Cape	59	0.305 (0.188;0.423)
Facility 8	Northern Cape	40	0.300 (0.158;0.442)
Facility 9	Western Cape	47	0.298 (0.167;0.429)
Facility 10	Western Cape	101	0.297 (0.208;0.386)
Facility 11	Western Cape	31	0.290 (0.131;0.450)
Facility 12	Gauteng	31	0.290 (0.131;0.450)
Facility 13	Northern Cape	38	0.289 (0.145;0.434)
Facility 14	North West	36	0.278 (0.131;0.424)
Facility 15	Mpumalanga	36	0.278 (0.131;0.424)
Facility 16	KwaZulu-Natal	29	0.276 (0.113;0.439)
Facility 17	Gauteng	26	0.269 (0.099;0.440)
Facility 18	Eastern Cape	26	0.269 (0.099;0.440)
Facility 19	Limpopo	71	0.268 (0.165;0.371)
Facility 20	Western Cape	34	0.265 (0.116;0.413)
Facility 21	Mpumalanga	27	0.259 (0.094;0.425)
Facility 22	Free State	27	0.259 (0.094;0.425)
Facility 23	KwaZulu-Natal	39	0.256 (0.119;0.393)
Facility 24	KwaZulu-Natal	40	0.250 (0.116;0.384)
Facility 25	Western Cape	36	0.250 (0.109;0.391)

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 14 - 20 February 2021, with the highest proportion testing positive nationally. Private-sector facilities with high proportions testing positive are concentrated in Gauteng (6), Limpopo (4), and Western Cape, Mpumalanga, North West and KwaZulu-Natal (3 each).

COVID-19 TESTING SUMMARY

SOUTH AFRICA | WEEK 7 2021

Table 5.2 Private sector healthcare facilities with a high proportion testing positive, 14 - 20 February 2021

Facility Name	Province	Tests	PTP (95% CI)
Facility 1	North West	33	0.394 (0.227;0.561)
Facility 2	Limpopo	30	0.367 (0.194;0.539)
Facility 3	Gauteng	25	0.240 (0.073;0.407)
Facility 4	Gauteng	180	0.200 (0.142;0.258)
Facility 5	Western Cape	66	0.197 (0.101;0.293)
Facility 6	KwaZulu-Natal	28	0.179 (0.037;0.320)
Facility 7	Limpopo	197	0.173 (0.120;0.225)
Facility 8	Gauteng	94	0.170 (0.094;0.246)
Facility 9	Gauteng	75	0.160 (0.077;0.243)
Facility 10	Free State	95	0.158 (0.085;0.231)
Facility 11	Mpumalanga	146	0.158 (0.098;0.217)
Facility 12	Mpumalanga	32	0.156 (0.030;0.282)
Facility 13	North West	59	0.153 (0.061;0.244)
Facility 14	Gauteng	54	0.148 (0.053;0.243)
Facility 15	Western Cape	82	0.146 (0.070;0.223)
Facility 16	North West	55	0.145 (0.052;0.239)
Facility 17	Limpopo	182	0.143 (0.092;0.194)
Facility 18	Mpumalanga	574	0.139 (0.111;0.168)
Facility 19	Northern Cape	80	0.138 (0.062;0.213)
Facility 20	KwaZulu-Natal	66	0.136 (0.054;0.219)
Facility 21	Gauteng	91	0.132 (0.062;0.201)
Facility 22	Western Cape	360	0.131 (0.096;0.165)
Facility 23	Free State	115	0.130 (0.069;0.192)
Facility 24	KwaZulu-Natal	133	0.128 (0.071;0.185)
Facility 25	Limpopo	110	0.127 (0.065;0.190)

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 83% of private testing facilities) in the week from 14 - 20 February 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 are increasingly spatially diffuse. Mpumalanga (7), KwaZulu-Natal (5), Northern Cape (4), and Free State (3) account for 19 of the 25 districts.

No district showed an adjusted proportion testing positive greater than 30%.

COVID-19 TESTING SUMMARY

SOUTH AFRICA | WEEK 7 2021

Table 6. Health sub-districts with the highest proportion testing positive based on public and private sector data for the week of 14 - 20 February 2021

Health district or sub-district	Province	PTP (95% CI)	Previous week
Makhuduthamaga	Limpopo	0.297 (0.204-0.390)	0.401 (0.311-0.492)
Kheis	Northern Cape	0.282 (0.152-0.413)	...
Mafube	Free State	0.274 (0.150-0.398)	0.254 (0.165-0.342)
Emadlangeni	KwaZulu-Natal	0.253 (0.117-0.389)	...
Bergrivier	Western Cape	0.249 (0.179-0.318)	0.188 (0.122-0.253)
Mtubatuba	KwaZulu-Natal	0.247 (0.166-0.328)	0.159 (0.101-0.216)
Richtersveld	Northern Cape	0.217 (0.102-0.332)	0.327 (0.191-0.463)
Kamiesberg	Northern Cape	0.215 (0.123-0.306)	0.083 (0.019-0.146)
Ga-Segonyana	Northern Cape	0.211 (0.151-0.271)	0.247 (0.183-0.312)
Nketoana	Free State	0.205 (0.112-0.297)	0.132 (0.079-0.185)
Greater Tubatse	Limpopo	0.194 (0.149-0.240)	0.170 (0.129-0.211)
Albert Luthuli	Mpumalanga	0.185 (0.129-0.242)	0.245 (0.190-0.299)
Emakhazeni	Mpumalanga	0.184 (0.080-0.287)	0.352 (0.237-0.466)
Umjindi	Mpumalanga	0.175 (0.085-0.265)	0.181 (0.100-0.262)
Maquassi Hills	North West	0.174 (0.104-0.243)	0.270 (0.195-0.345)
Bushbuckridge	Mpumalanga	0.172 (0.141-0.203)	0.220 (0.188-0.252)
Mthonjaneni	KwaZulu-Natal	0.170 (0.068-0.272)	0.068 (0.015-0.121)
Elias Motsoaledi	Limpopo	0.169 (0.099-0.238)	0.141 (0.084-0.199)
Thembisile	Mpumalanga	0.163 (0.103-0.223)	0.108 (0.062-0.154)
Richmond	KwaZulu-Natal	0.162 (0.077-0.246)	0.029 (0.000-0.086)
Beaufort West	Western Cape	0.162 (0.089-0.235)	0.070 (0.023-0.117)
Maluti a Phofung	Free State	0.161 (0.127-0.196)	0.183 (0.154-0.212)
Thaba Chweu	Mpumalanga	0.161 (0.119-0.202)	0.212 (0.170-0.255)
Ubuhlebezwe	KwaZulu-Natal	0.160 (0.097-0.223)	0.188 (0.131-0.244)
Dr JS Moroka	Mpumalanga	0.159 (0.098-0.220)	0.180 (0.116-0.245)

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 7 2021



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

COVID-19 TESTING SUMMARY

SOUTH AFRICA WEEK 7 2021

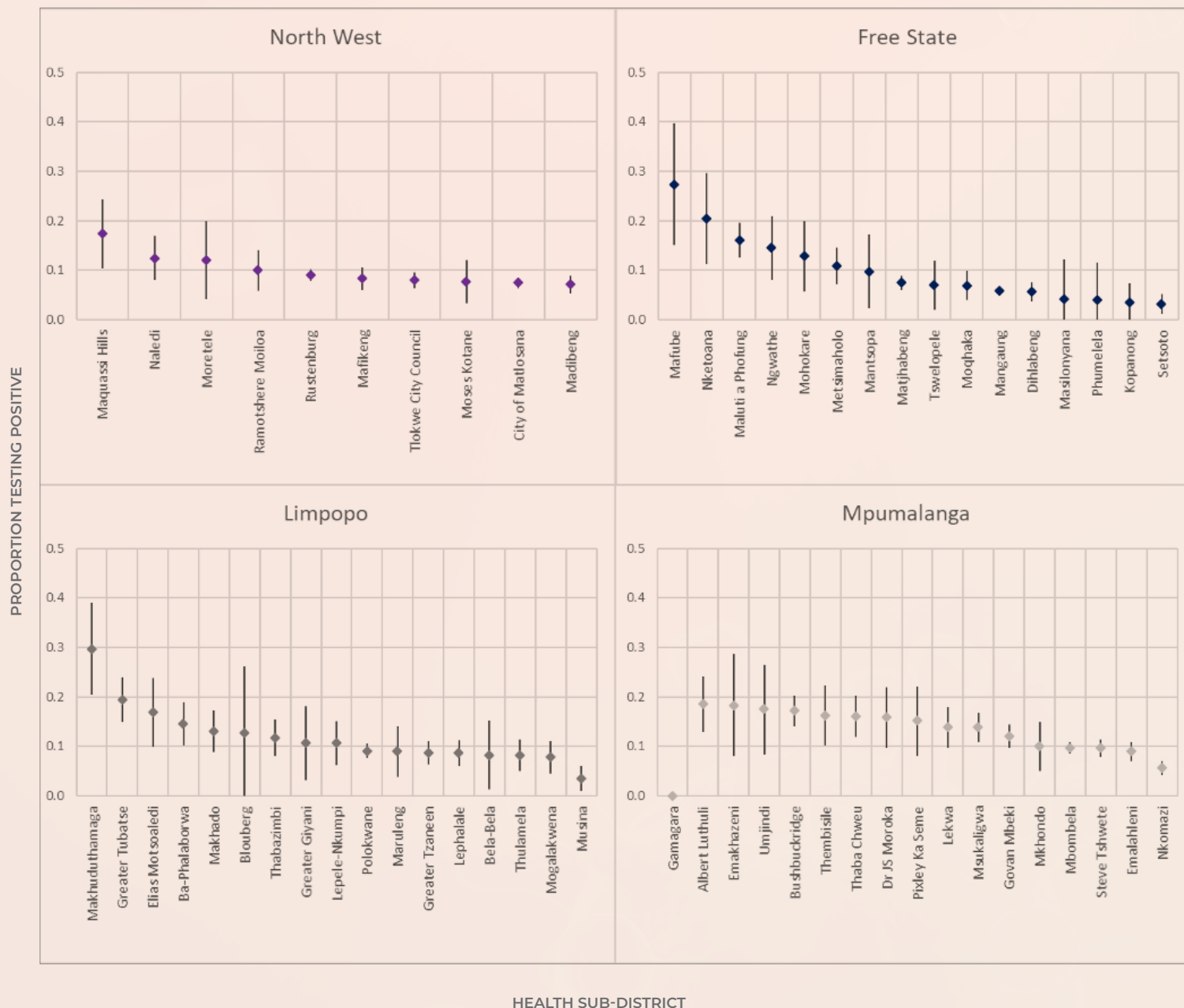


Figure 9.2 Proportions testing positive by health sub-district in the North West, Free State, Limpopo and Mpumalanga provinces based on public and private sector data for the week of 14 - 20 February 2021.

COVID-19 TESTING SUMMARY

SOUTH AFRICA WEEK 7 2021

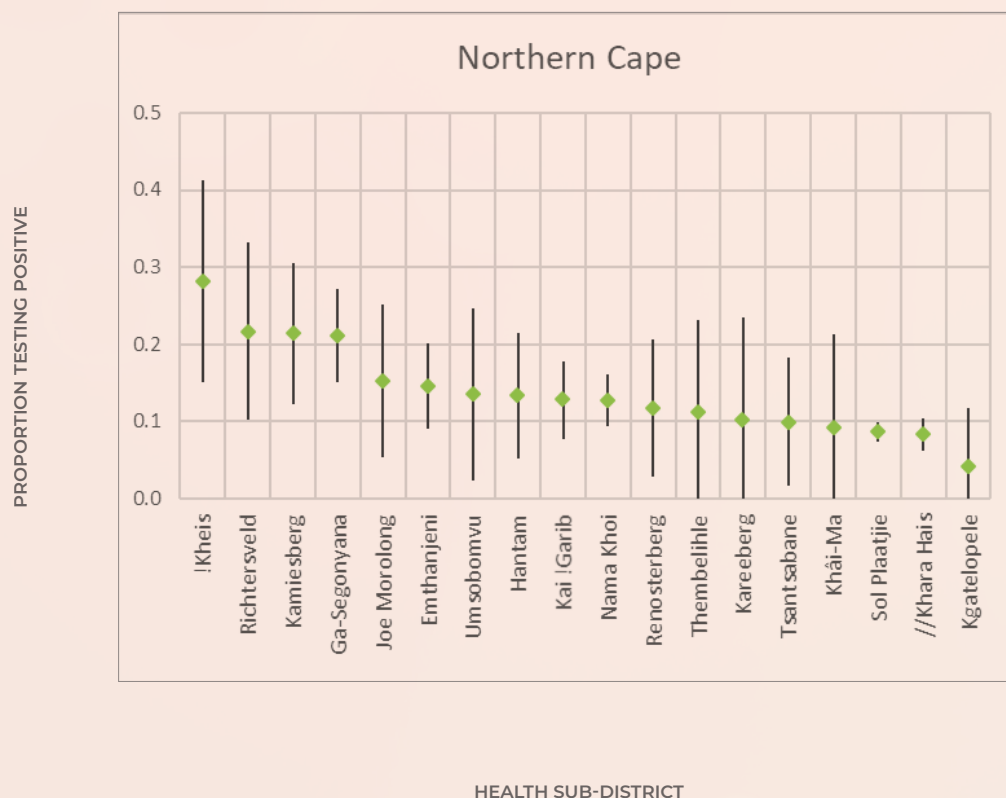


Figure 9.3 Proportions testing positive by health sub-districts in the Northern Cape Province based on public and private sector data for the week of 14 - 20 February 2021.

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 7 2021

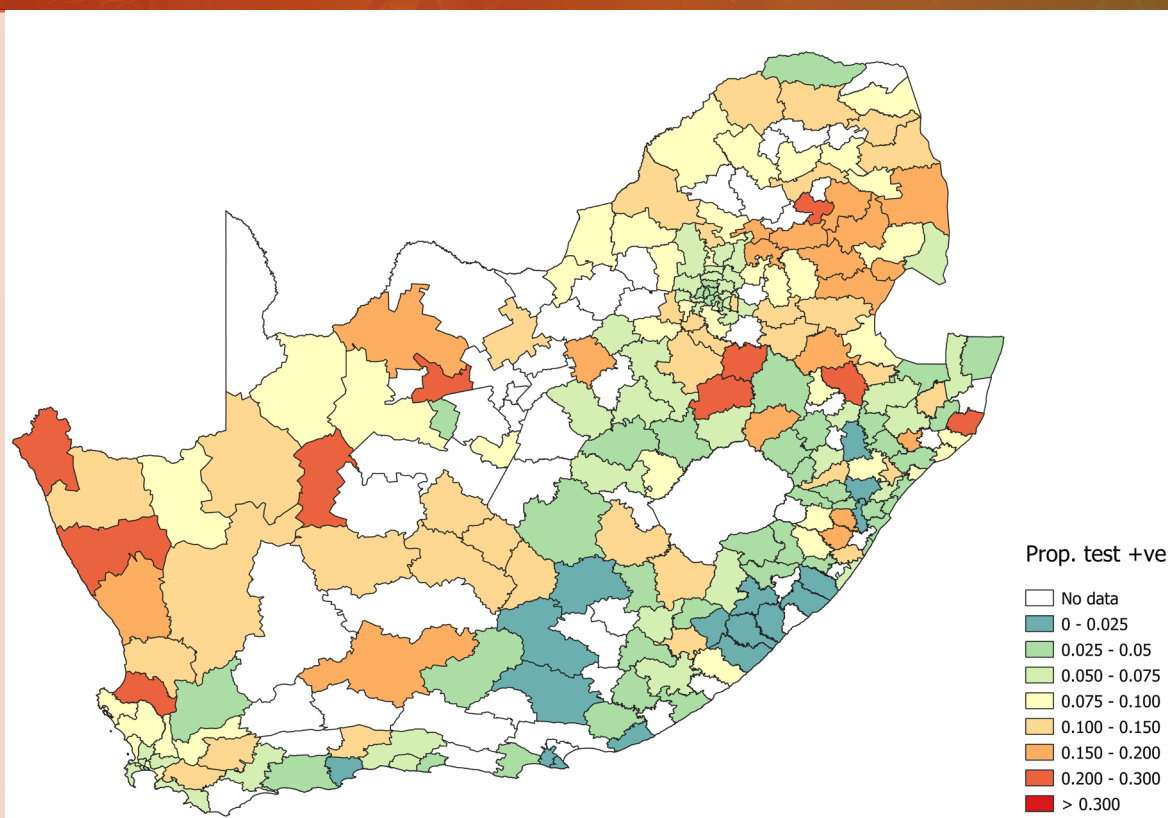


Figure 10. Proportion testing positive by health sub-district in South Africa for the week of 14 - 20 February 2021. Areas shaded white represent districts in which either (i) no tests were conducted, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

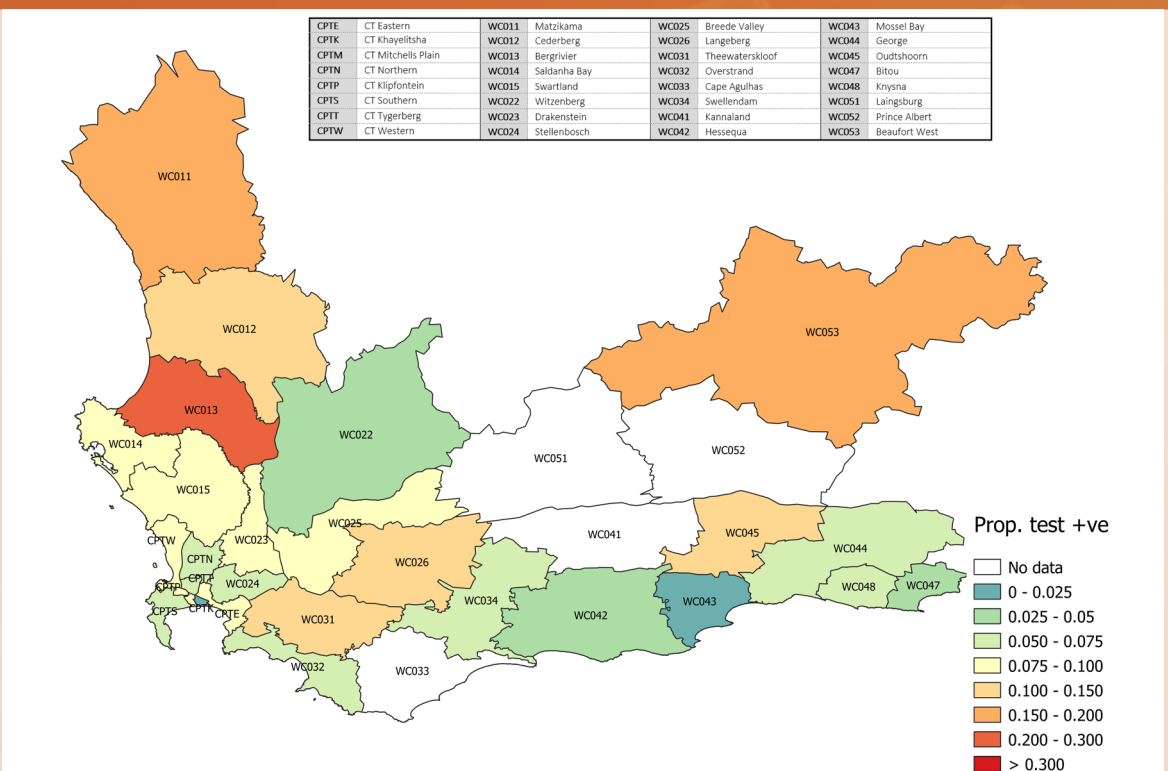


Figure 11. Proportion testing positive by health sub-district in the Western Cape province for the week of 14 - 20 February 2021. Areas shaded white represent districts in which either (i) no tests were conducted, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

COVID-19 TESTING SUMMARY

SOUTH AFRICA

WEEK 7 2021

BUF	Buffalo City	EC122	Mquma	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	Ilwazi	EC126	Ngqushwa	EC138	Sakhisizwe	EC441	Mataiele
EC104	Makana	EC127	Nkonkobe	EC141	Elundini	EC442	Umtzimvubu
EC105	Ndlambe	EC128	Ndaba	EC142	Sinqu	EC443	Mbitana
EC106	Sundays River Valley	EC131	Inuuba Yethemba	EC143	Maletswai	EC444	Ntbankulu
EC107	Baviaans	EC132	Tsolwana	EC144	Gariep	NMAA	Nelson Mandela Bay A
EC108	Kouga	EC133	Inkwanca	EC153	Ngqiza Hill	NMAB	Nelson Mandela Bay B
EC109	Kou-Kamma	EC134	Lukarji	EC154	Port St Johns	NMAC	Nelson Mandela Bay C
EC121	Mbhashe						

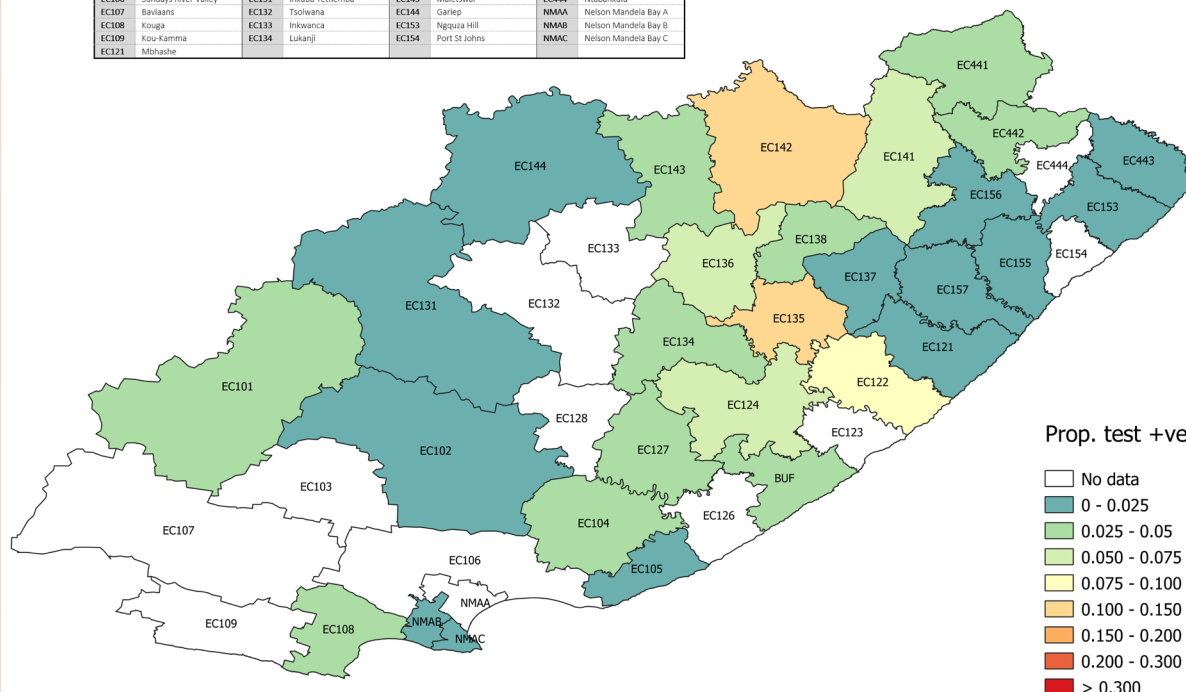


Figure 12. Proportion testing positive by health sub-district in the Eastern Cape province for the week of 14 - 20 February 2021. Areas shaded white represent districts in which either (i) no tests were conducted, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

NC063	Richtersveld	NC074	Kareeberg	NC085	Tsantabane
NC062	Naama Khoi	NC075	Renosterberg	NC086	Kgatelopele
NC064	Kareeberg	NC076	Thembelohle	NC091	Sol Plaatje
NC065	Hartam	NC077	Siyathemba	NC092	Gqapong
NC066	Karoo Hoogland	NC078	Siyancuma	NC093	Magareng
NC067	Khala-Ma	NC081	Mier	NC094	Phokwane
NC071	Ubovuto	NC082	Kai Garib	NC451	Joe Morolong
NC072	Umsobomvu	NC083	//ikara Halls	NC452	Ga-Segonyana
NC073	Emthangeni	NC084	Kheis	NC453	Gamagara

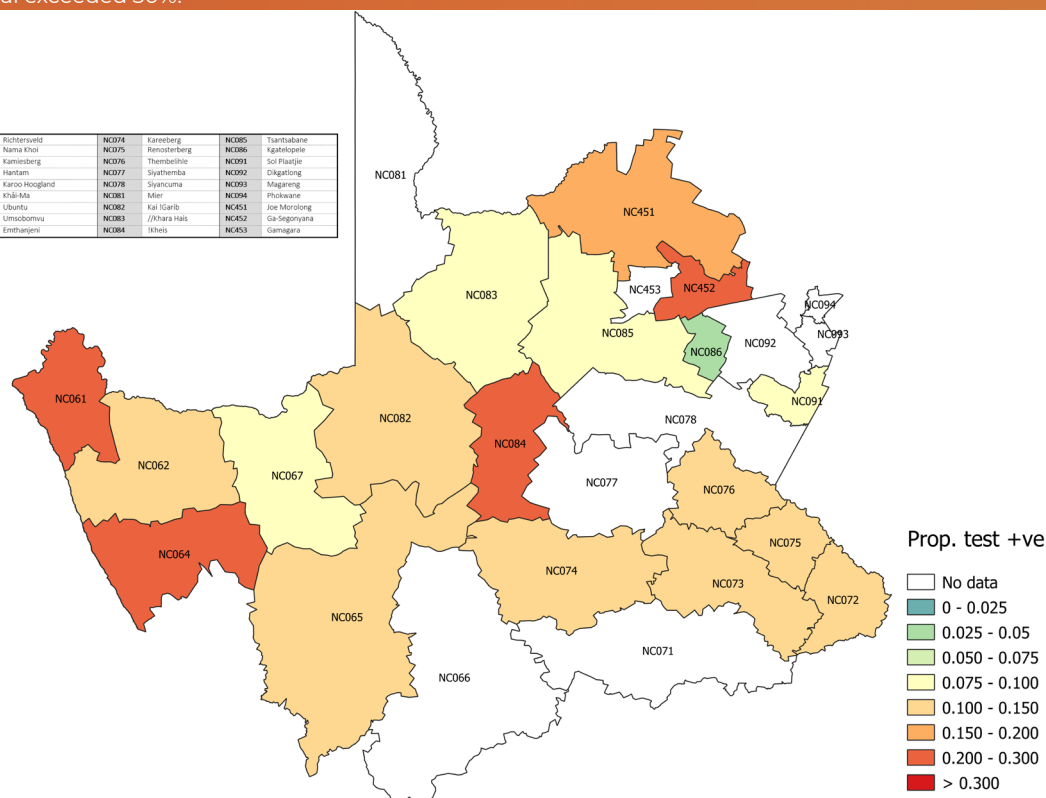


Figure 13. Proportion testing positive by health sub-district in Northern Cape Province for the week of 14 - 20 February 2021. Areas shaded white represent districts in which either (i) no tests were conducted, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

COVID-19 TESTING SUMMARY

SOUTH AFRICA

WEEK 7 2021

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

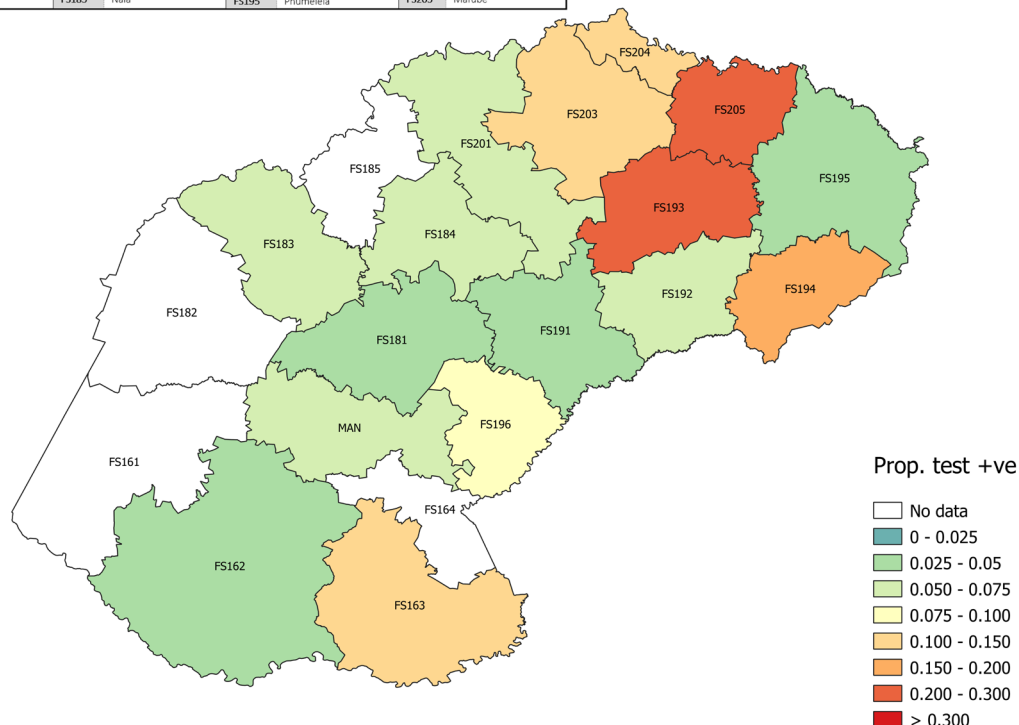


Figure 14. Proportion testing positive by health sub-district in Free State Province for the week of 14 - 20 February 2021. Areas shaded white represent districts in which either (i) no tests were conducted, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

ETHN	eThekweni North	KZN233	Indaka	KZN273	The Big 5 False Bay
ETHS	eThekweni South	KZN234	Umtshezi	KZN274	Hlabisa
ETHS	eThekweni South	KZN235	Okhahlamba	KZN275	Mtubatuba
ETHW	eThekweni West	KZN236	Imbabazane	KZN281	Mfolozi
KZN211	Vulamehlo	KZN241	Endumeni	KZN282	uMhlathuze
KZN212	Umdoni	KZN242	Nqutu	KZN283	Ntambanana
KZN213	Umtuzi	KZN244	Msinga	KZN284	uMlalazi
KZN214	uMuziwalabantu	KZN245	Umvoti	KZN285	Nthorjani
KZN215	Ezingolweni	KZN252	Newcastle	KZN286	Nkandla
KZN216	Hibiscus Coast	KZN253	Emadlangeni	KZN291	Mandeni
KZN221	uMshwathi	KZN254	Dannhauser	KZN292	KwaDukuza
KZN222	uMngeni	KZN261	eDumbe	KZN293	Ndwedwe
KZN223	Mpofana	KZN262	uPhongolo	KZN294	Maphumulo
KZN224	Impendle	KZN263	Abaqulusi	KZN431	Inqwe
KZN225	The Msunduzi	KZN265	Nongoma	KZN432	Kwa Sani
KZN226	Mkhambathini	KZN266	Ulundi	KZN433	Greater Kokstad
KZN227	Richmond	KZN271	Umhlabuyalingana	KZN434	Ubuhlebezwe
KZN232	Eminambithi/Ladysmith	KZN272	Jozini	KZN435	Umtinkhulu

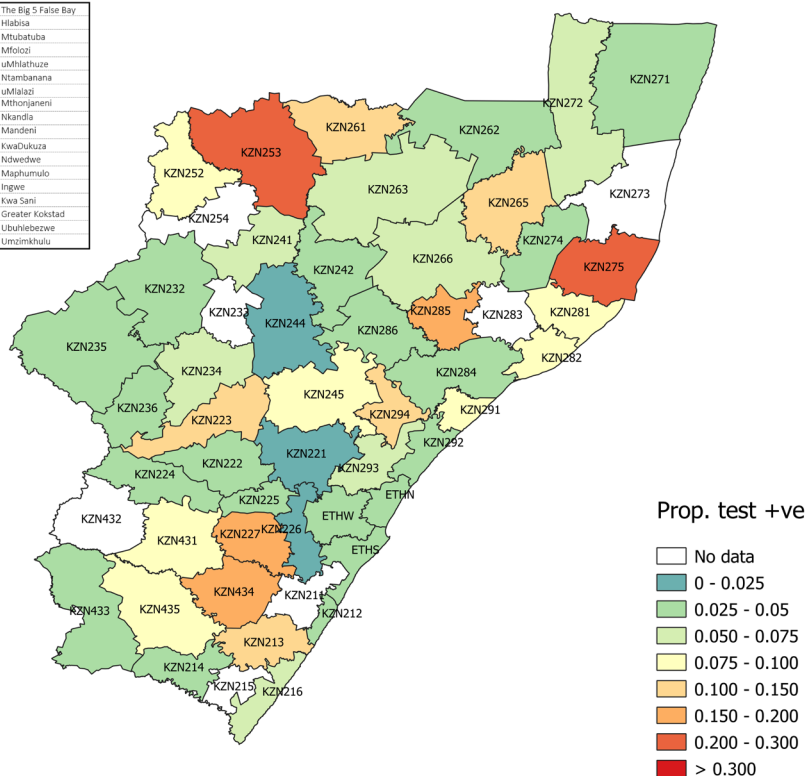


Figure 15. Proportion testing positive by health sub-district in KwaZulu-Natal Province for the week of 14 - 20 February 2021. Areas shaded white represent districts in which either (i) no tests were conducted, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

COVID-19 TESTING SUMMARY

SOUTH AFRICA

WEEK 7 2021

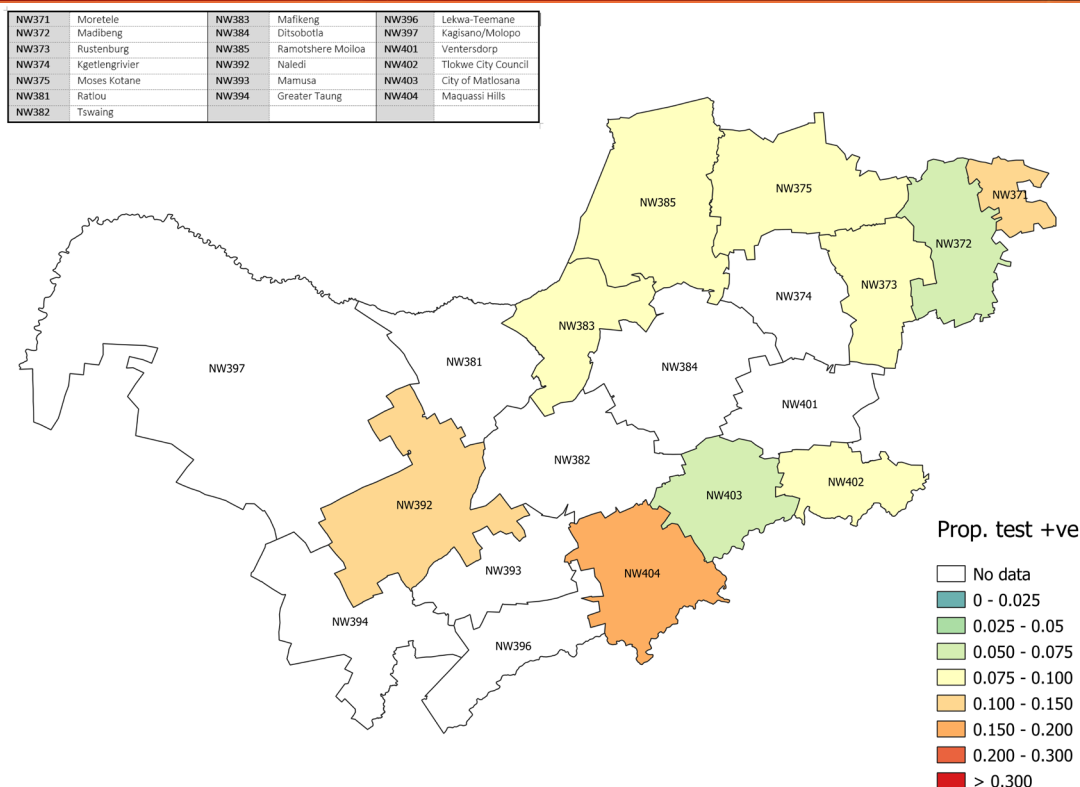


Figure 16. Proportion testing positive by health sub-district in North West Province for the week of 14 - 20 February 2021. Areas shaded white represent districts in which either (i) no tests were conducted, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

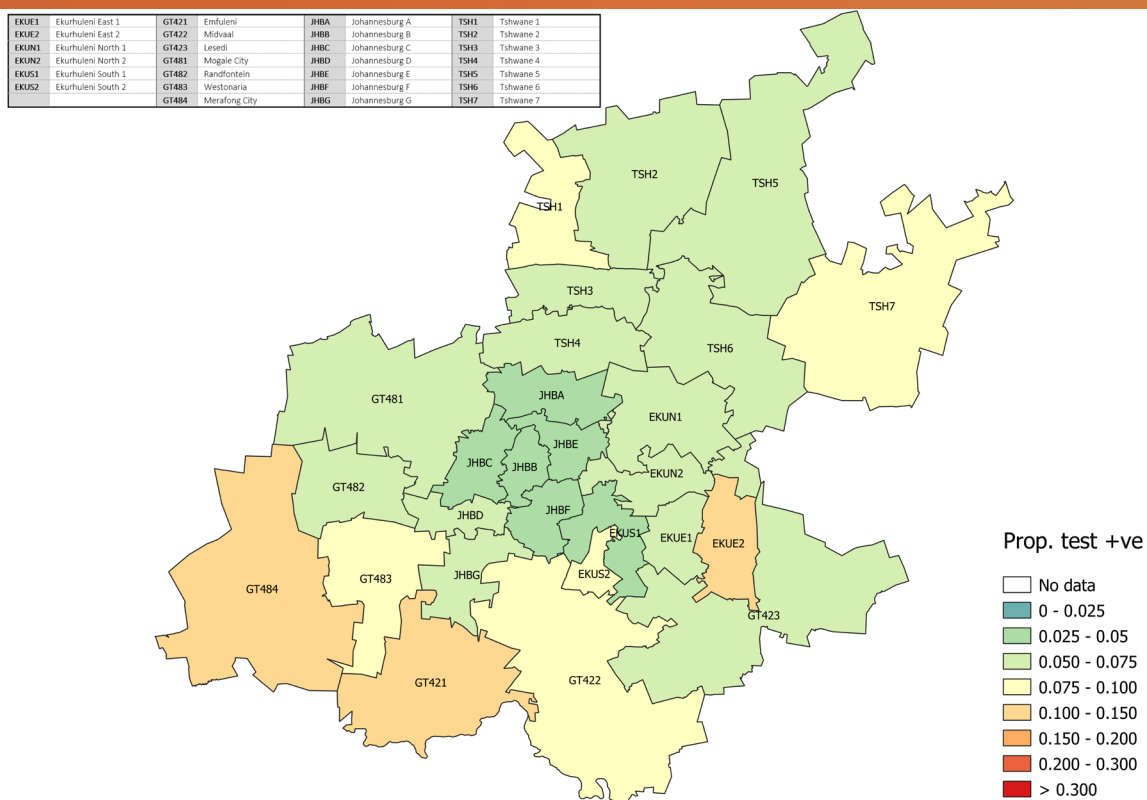


Figure 17. Proportion testing positive by health sub-district in Gauteng Province for the week of 14 - 20 February 2021. Areas shaded white represent districts in which either (i) no tests were conducted, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

COVID-19 TESTING SUMMARY

SOUTH AFRICA WEEK 7 2021

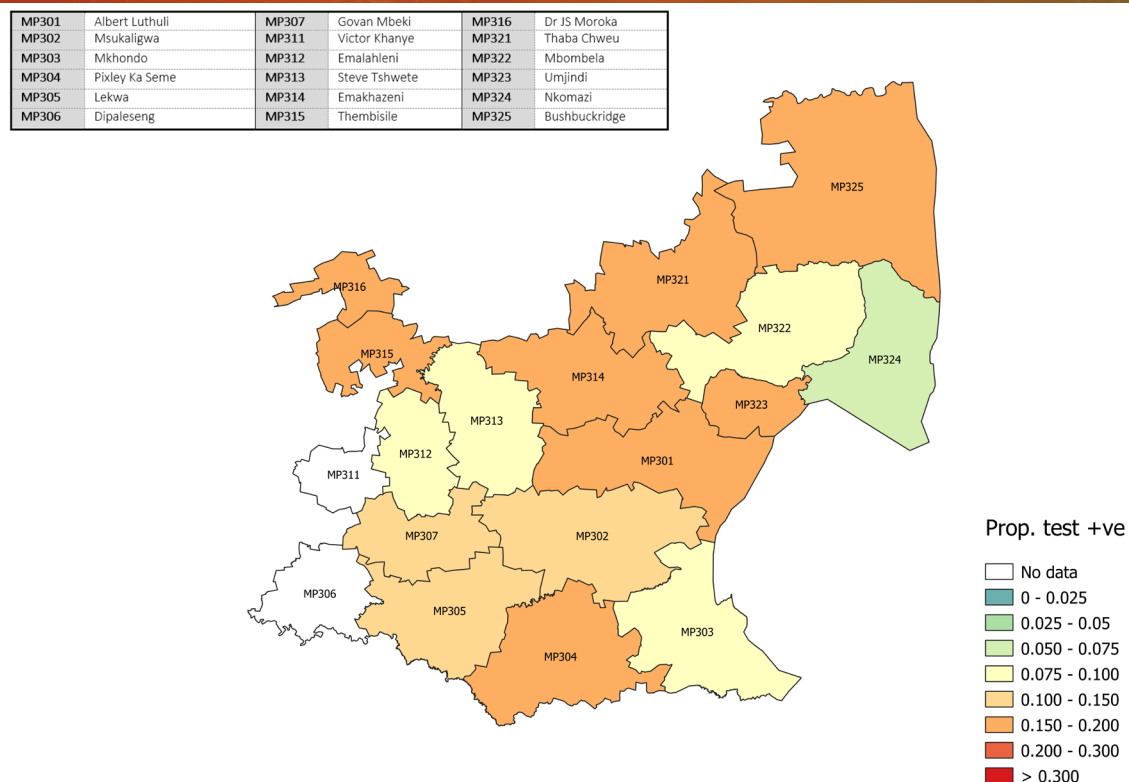


Figure 18. Proportion testing positive by health sub-district in Mpumalanga Province for the week of 14 - 20 February 2021. Areas shaded white represent districts in which either (i) no tests were conducted, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

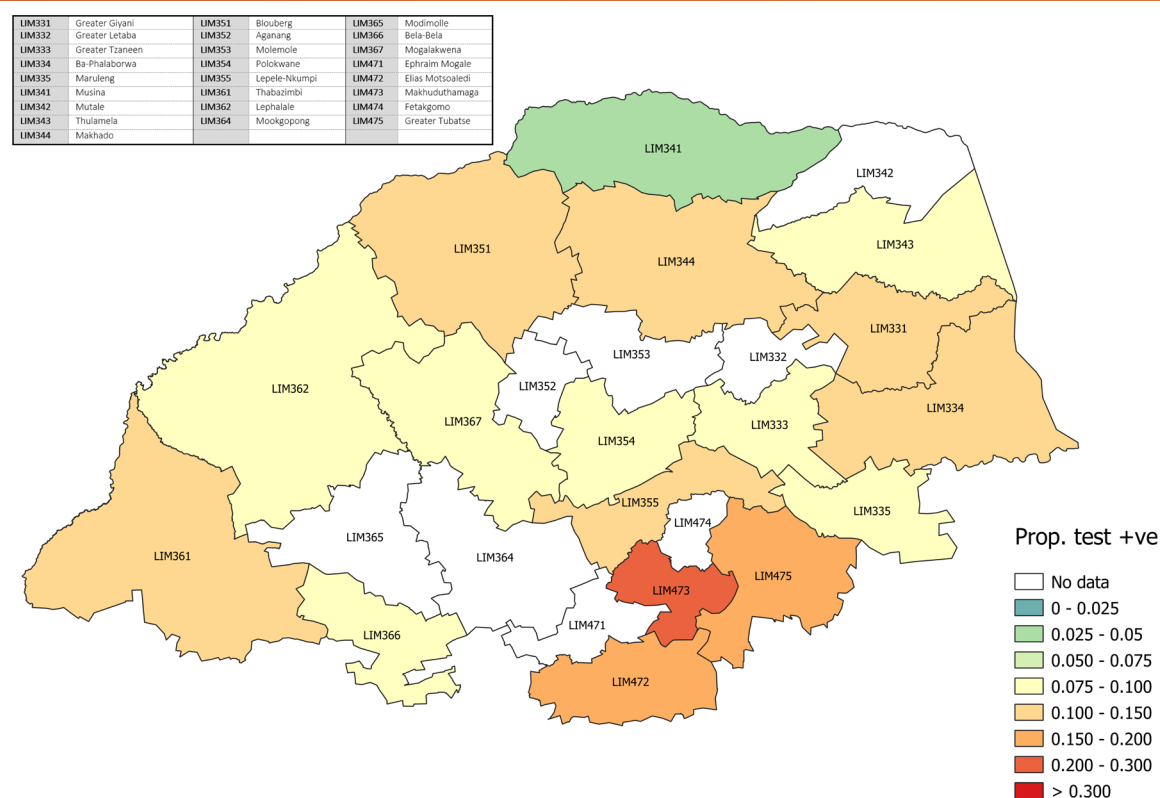


Figure 19. Proportion testing positive by health sub-district in Limpopo Province for the week of 14 - 20 February 2021. Areas shaded white represent districts in which either (i) no tests were conducted, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

COVID-19 TESTING SUMMARY

SOUTH AFRICA WEEK 7 2021

Testing by patient admission status

In week 7 of 2021, 36.1% of tests were performed for hospitalised patients; 52.0% in the public sector and 27.1% 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 7 was similar among outpatients (7.0%) and inpatients (6.7%) (Figure 21). In week 7 of 2021 the mean laboratory turnaround time in the public sector continued to be lower for inpatients (1.5 days) compared to outpatients (1.9 days) with decreases observed in both groups in the past few weeks (Figure 22).

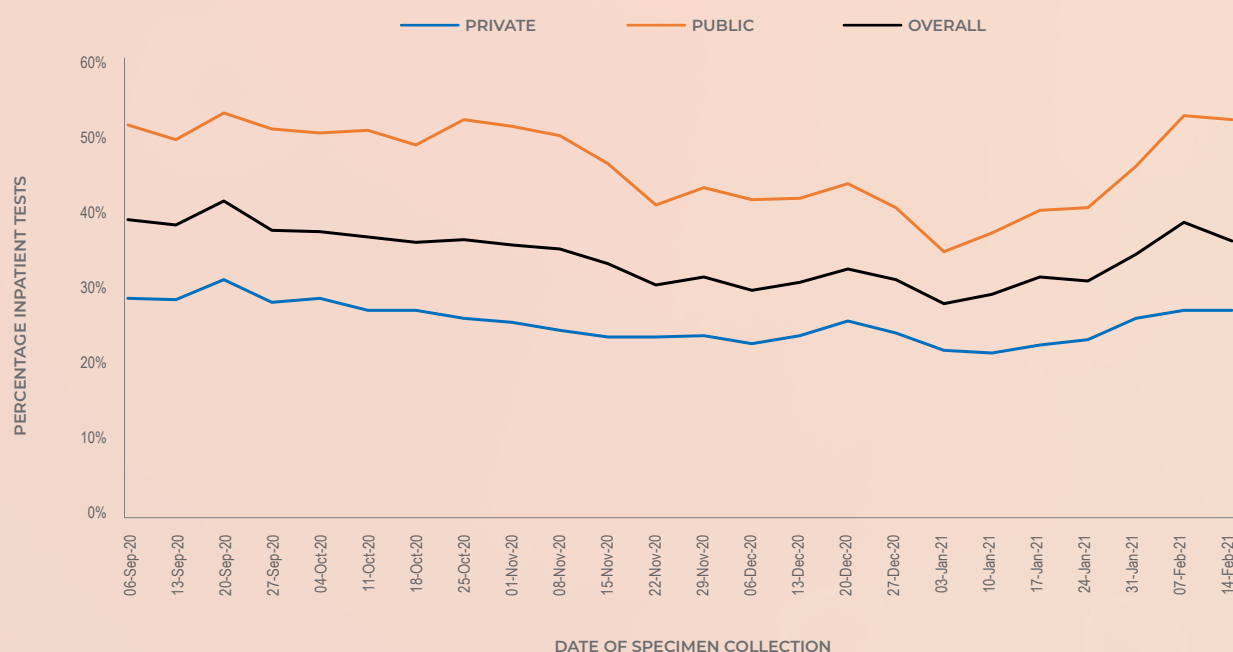


Figure 20. Percentage of inpatient tests performed by health sector, 6 September 2020 – 20 February 2021

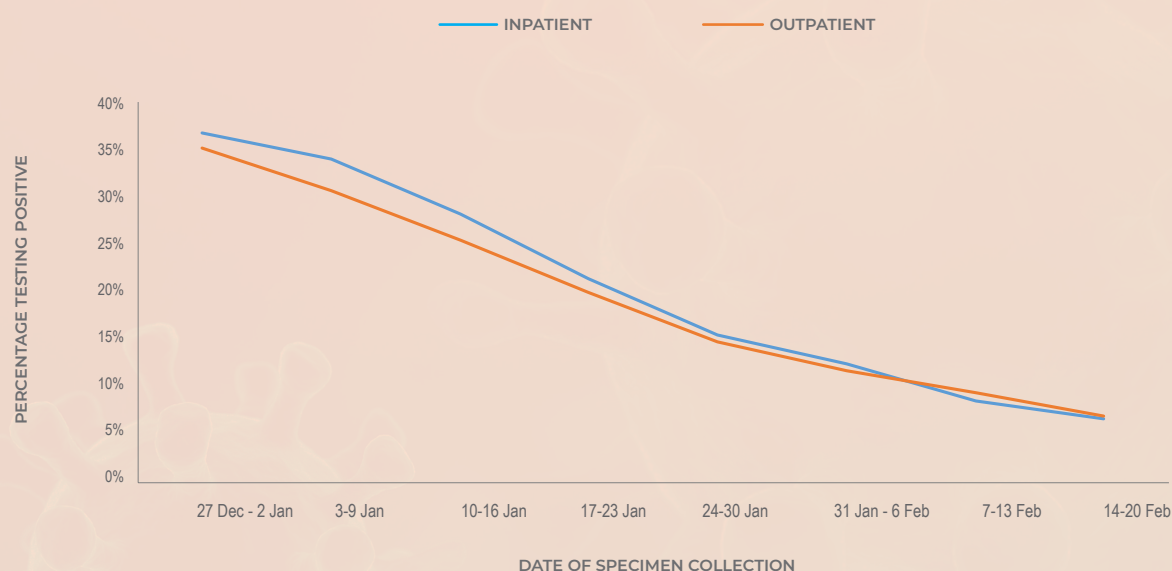


Figure 21. Percentage testing positive by patient admission status in the public sector, 27 December 2020 – 20 February 2021

COVID-19 TESTING SUMMARY

SOUTH AFRICA WEEK 7 2021

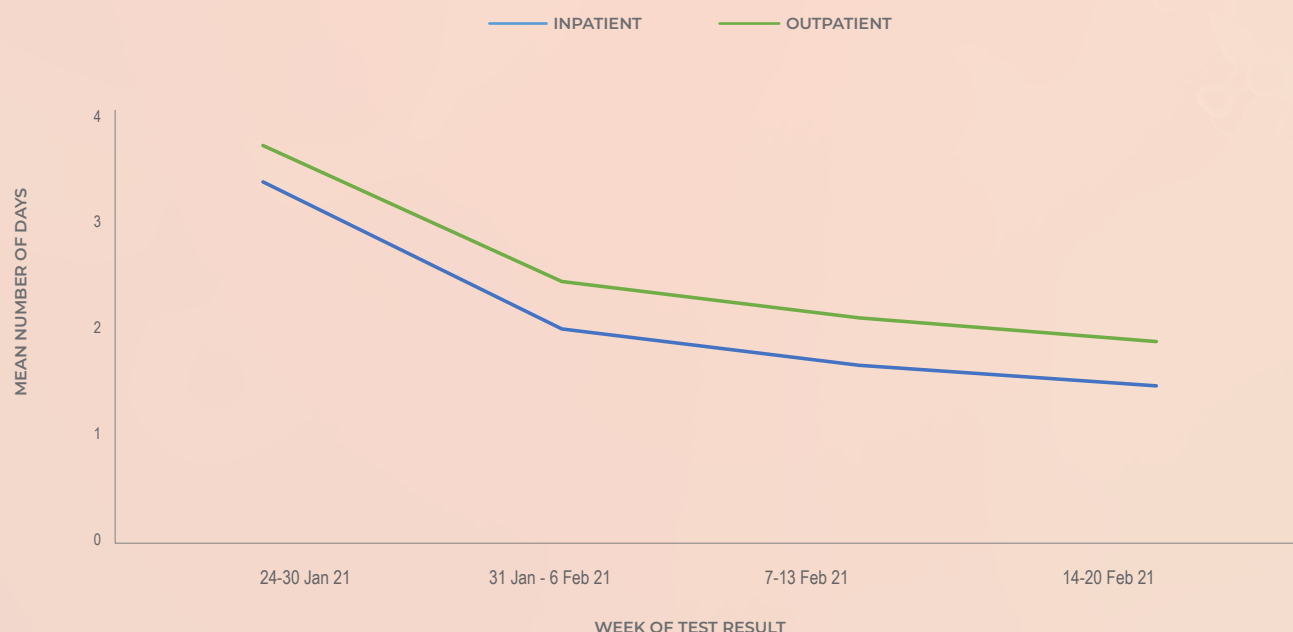


Figure 22. Mean number of days between date of specimen collection and date of test result in the public sector by patient admission status, 24 January – 20 February 2021

Testing by age and sex

Similar to the previous few weeks, the mean age of individuals tested in week 7 of 2021 was 39.5 years, and was similar among males (39.7 years) and females (39.4 years). As in the previous few weeks, the majority of tests (43.2%) were performed in individuals in the 25-44 years' age groups although the distribution of tests was slightly skewed towards younger age groups in females compared to males (Figure 23). In week 7,

the testing rate was slightly higher in females (294 per 100,000 persons) compared to males (282 per 100,000 persons) (Figure 24). The highest testing rates were observed in individuals ≥ 80 years of age (641 per 100,000 persons), followed by individuals aged 75-79 years (521 per 100,000 persons) in week 7. The percentage testing positive was highest in individuals aged 55-59 years (8.3%); in males the highest percentage testing positive was in the 10-14 years' age group (7.6%) and in females was in the 55-59 years' age group (9.3%) (Figure 24).

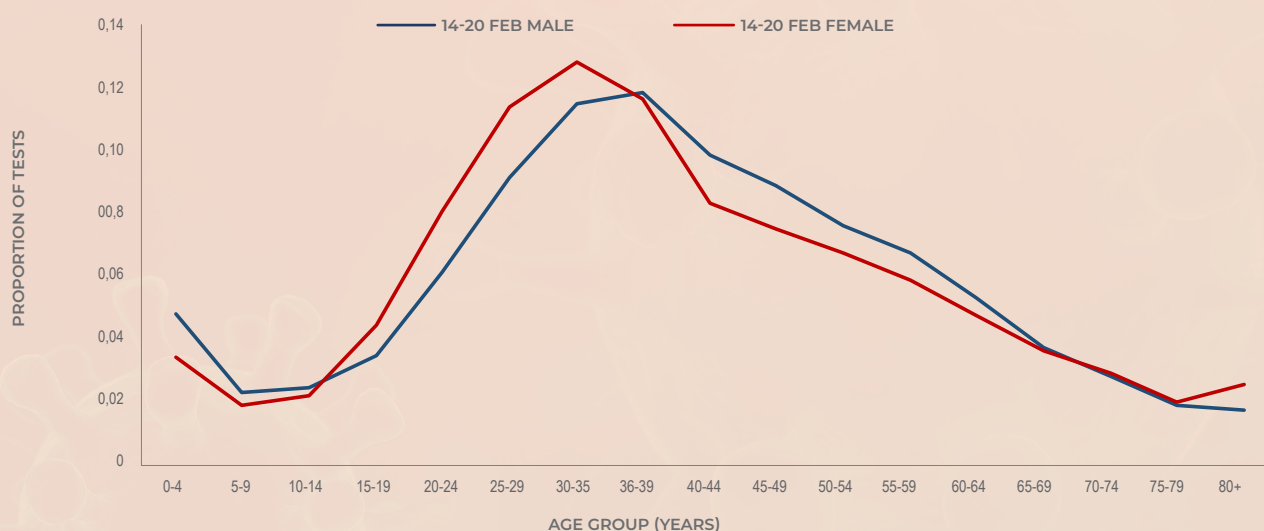


Figure 23. Proportion of tests by age group and sex, South Africa, week 7, 14 - 20 February 2021

COVID-19 TESTING SUMMARY

SOUTH AFRICA WEEK 7 2021

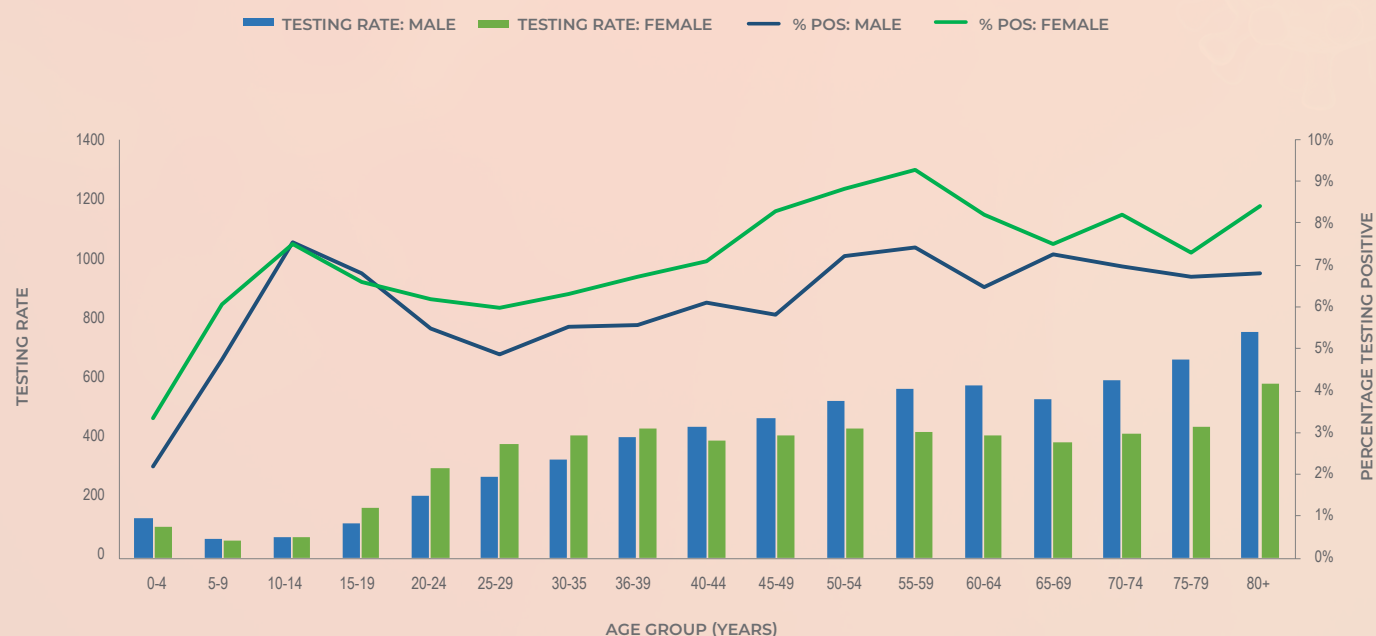


Figure 24. Testing rates per 100,000 persons and percentage testing positive by age group and sex, South Africa, week 7, 14 - 20 February 2021

Testing by test type

Up to the end of week 7 of 2021, 4.9% of all tests performed were antigen tests. The percentage of antigen tests was highest (19.9%) in week 5 and has subsequently declined to 16.6% of all tests in week 7 (Figure 25). In week 7, 29,360 antigen tests were performed, of which 79.2% were performed in the public sector. The majority of antigen tests have been performed in KwaZulu-Natal (46,9%)

and Eastern Cape (15.1%) provinces. The percentage testing positive was higher for PCR tests compared to antigen tests, although decreases were observed for both types of tests in 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 7 2021

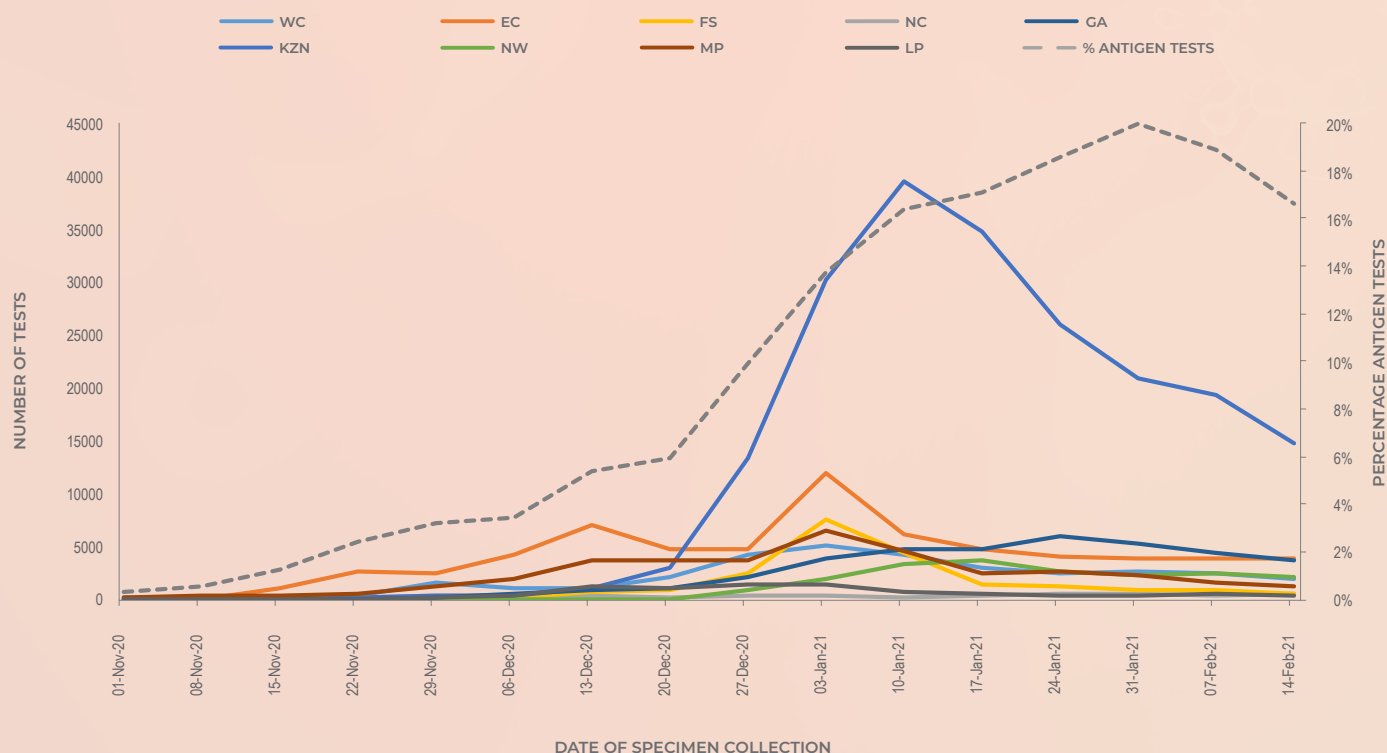


Figure 25. Number of antigen tests by province, and overall percentage antigen tests, South Africa, 1 November 2020 – 20 February 2021. WC, Western Cape; EC, Eastern Cape; FS, Free State; KZN, KwaZulu-Natal; GT, Gauteng; NC, Northern Cape; NW, North West; MP, Mpumalanga; LP, Limpopo

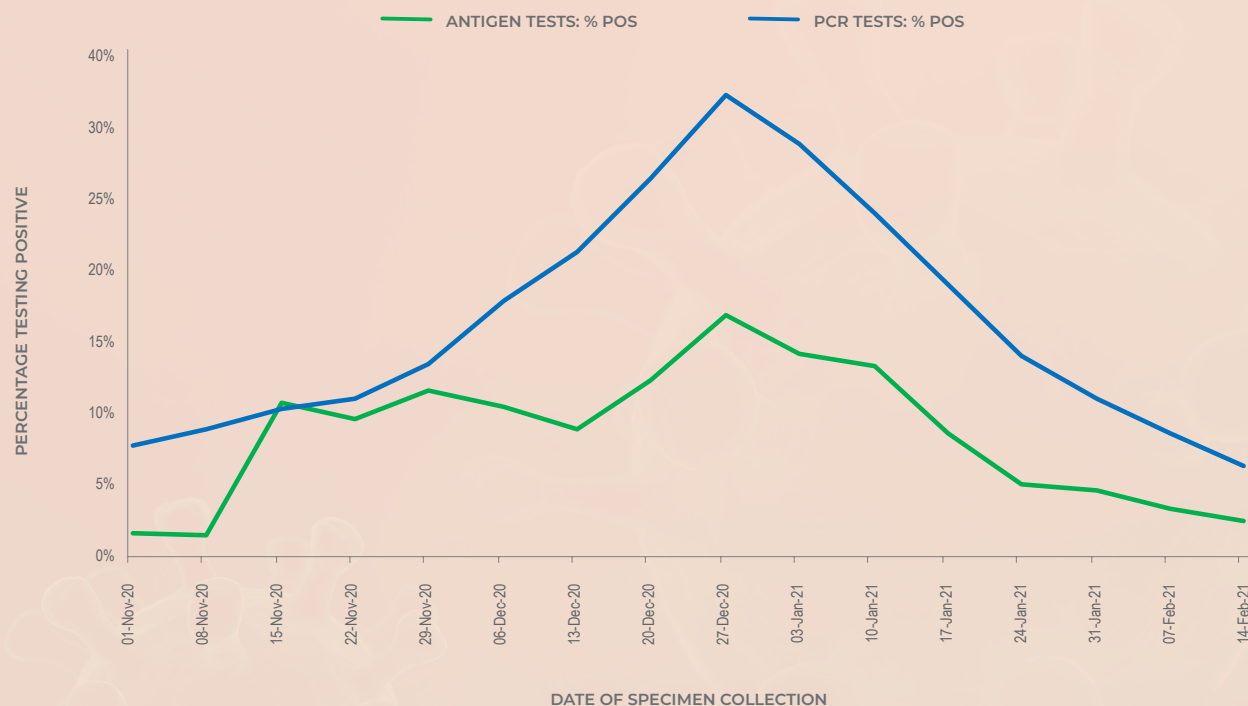


Figure 26. Percentage of laboratory tests positive for SARS-CoV-2 by test type and date of specimen collection, South Africa, 1 November 2020 – 20 February 2021

COVID-19 TESTING SUMMARY

SOUTH AFRICA WEEK 7 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=497,822), with the number of tests performed in week 7 of 2021 (n=175,820) continuing to decrease compared to the previous few weeks. Gauteng (34.3%), KwaZulu-Natal (21.5%) and Western Cape (16.1%) provinces performed the largest number of tests in week 7. Testing rates have decreased in all provinces in recent weeks, and were highest in week 7 in the Western Cape (405 per 100,000 persons) and Gauteng (390 per 100,000 persons) provinces. Antigen tests accounted for 16.6% of all tests performed in week 7. The overall laboratory turnaround time for PCR tests was 1.3 days in week 7; 1.5 days in the public sector and 1.1 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 7 of 2021 the percentage testing positive decreased to 6.5%, the lowest observed since May 2020. The percentage testing positive in week 7 was highest in the Northern Cape (11.2%), Mpumalanga (10.8%) and Limpopo (10.3%) provinces. The percentage testing positive was 5-9% in the Western Cape, Free State, KwaZulu-Natal, North West and Gauteng, and was <5% in Eastern Cape. Compared to the previous week, the percentage testing positive decreased in week 7 in all provinces, except for the Northern Cape province where the percentage testing positive remained unchanged.