

SOUTH AFRICA WEEK 14 2022

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 9 April 2022 (Week 14 of 2022).

HIGHLIGHTS

- The number of tests reported in week 14 of 2022 (127,855: 92,290 PCR and 35,565 antigen tests) was lower than the number of tests reported in the previous week.
- In week 14, the testing rate was highest in Gauteng (326 per 100,000 persons) and lowest in Limpopo (38 per 100,000 persons).
- In week 14, the percentage testing positive was 7.9%, which was 1.1% higher than the previous week.
- In week 14, compared to the previous week the percentage testing positive increased in the Eastern Cape, KwaZulu-Natal, Gauteng and Limpopo and was unchanged in all other provinces.
- The percentage testing positive in week 14 was highest in the Western Cape (12.3%) and was <10% in all other provinces.
- In week 14, the percentage testing positive increased in the 5-9 and 10-14 year age groups and was highest in the 10-14 years age group (14.4%).

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Executive Summary:

- In the period 1 March 2020 through 9 April 2022, 23,827,314 tests for SARS-CoV-2 have been reported nationally: 19,722,985 PCR and 4,104,329 antigen tests.
- The number of tests reported in week 14 of 2022 (n=127,855: 92,290 PCR and 35,565 antigen tests) was lower than the number of tests reported in the previous week.
- Gauteng reported the largest proportion of tests (40.3%), followed by KwaZulu-Natal (20.3%) and Western Cape (14.3%).
- The overall testing rate decreased from the previous week (248 per 100,000 persons in week 13 to 213 per 100,000 persons in week 14).
- In week 14, a decrease in testing rate was observed in all provinces. The testing rate was highest in Gauteng (326 per 100,000 persons) and lowest in Limpopo (38 per 100,000 persons).
- The testing rate in week 14 was highest in the ≥80 years age group (401 per 100,000 persons).
- In week 14, the percentage testing positive was 7.9%, which was 1.1% higher than the previous week (6.8% in week 13 to 7.9% in week 14, P<0.001).
- In the past week, the percentage testing positive increased by 0.5% in the public sector (5.0% in week 13 to 5.5% in week 14, P<0.001) and by 1.2% in the private sector (8.1% in week 13 to 9.3% in week 14, P<0.001).
- In week 14, compared to the previous week, the percentage testing positive increased in the Eastern Cape, KwaZulu-Natal,

- Gauteng and Limpopo. The percentage testing positive was unchanged in all other provinces.
- The percentage testing positive in week 14 was highest in the Western Cape (12.3%) and was <10% in all other provinces.
- Health sub-districts showing the highest percentage testing positive were concentrated in the Western Cape (n=17).
- In week 14, the percentage testing positive increased in the 5-9 and 10-14 year age groups and was highest in the 10-14 years age group (14.4%).
- Antigen tests accounted for 27.8% (35,565/127,855) of tests reported in week 14, however the number of antigen tests is likely underestimated due to under-reporting and delayed reporting of antigen tests.
- In week 14 the public sector accounted for 49.1% (17,465/35,565) of antigen tests reported. A decrease in the number of antigen tests reported was observed across all provinces in the past week.
- The mean turnaround time for PCR tests reported in week 14 was 0.7 days; 1.1 day in the public sector and 0.6 days in the private sector. Turnaround times for public sector PCR tests increased in Limpopo and Mpumalanga, and were <2 days in all provinces except in Mpumalanga (2.4 days).
- The mean turnaround time for antigen tests reported in week 13 was 16.7 days in the public sector and 0.2 days in the private sector.

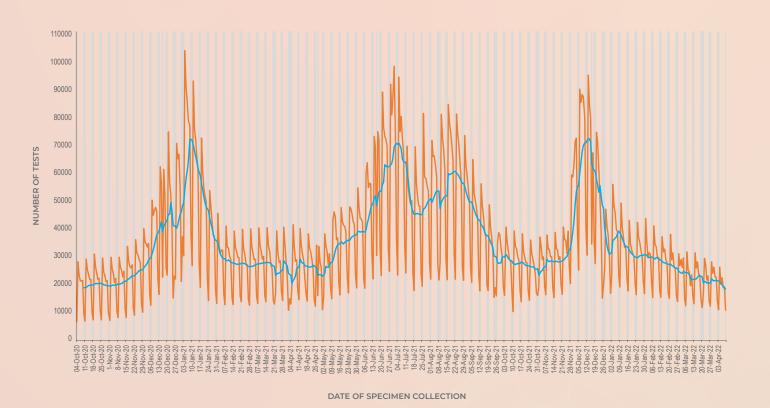


Figure 1. Number of SARS-CoV-2 tests reported by date of specimen collection, South Africa, 4 October 2020 – 9 April 2022. Blue line shows the 7-day moving average of the number of tests reported. Grey bars highlight weekend days and public holidays

Table 1. Weekly number of SARS-CoV-2 tests and positive tests reported, South Africa, 3 January 2021 – 9 April 2022

Week number	Week beginning	No. of tests n (%)	No. of positive tests	Percentage testing positive (%)
	03-Jan-21	501385 (2.1)	151074	30.1
2	10-Jan-21	418299 (1.8)	104825	25.1
3	17-Jan-21	327532 (1.4)	63282	19.3
4	24-Jan-21	249623 (1.0)	34652	13.9
5	31-Jan-21	203797 (0.9)	22380	11.0
6	07-Feb-21	193340 (0.8)	16476	8.5
7	14-Feb-21	190712 (0.8)	12192	6.4
8	21-Feb-21	184729 (0.8)	10390	5.6
9	28-Feb-21	189730 (0.8)	8695	4.6
10	07-Mar-21	193454 (0.8)	8341	4.3
11	14-Mar-21	185526 (0.8)	8156	4.4
12	21-Mar-21	173275 (0.7)	7356	4.2
13	28-Mar-21	163975 (0.7)	7063	4.3
14	04-Apr-21	180874 (0.8)	7292	4.0
15	11-Apr-21	185349 (0.8)	8847	4.8
16	18-Apr-21	184920 (0.8)	9471	5.1
17	25-Apr-21	160025 (0.7)	9183	5.7
18	02-May-21	193973 (0.8)	13463	6.9
19	09-May-21	240325 (1.0)	19939	8.3
20	16-May-21	248488 (1.0)	24212	9.7
<u></u>	23-May-21	262637 (1.1)	29778	11.3
22	30-May-21	270305 (1.1)	36106	13.4
23	06-Jun-21	337913 (1.4)	59453	17.6
24	13-Jun-21	370988 (1.6)	88086	23.7
25	20-Jun-21	432588 (1.8)	118653	27.4
<u></u>	27-Jun-21	490246 (2.1)	146637	29.9
27	04-Jul-21	443857 (1.9)	141461	31.9
28	11-Jul-21	320770 (1.3)	100955	31.5
29	18-Jul-21	313098 (1.3)	88444	28.2
30	25-Jul-21	350532 (1.5)	88356	25.2
31	01-Aug-21	372230 (1.6)	88127	23.7
32	08-Aug-21	359548 (1.5)	83380	23.2
33	15-Aug-21	420878 (1.8)	95389	22.7
34	22-Aug-21	391504 (1.6)	78190	20.0
35	29-Aug-21	345241 (1.4)	55095	16.0
36	05-Sep-21	300465 (1.3)	38855	12.9
37	12-Sep-21	260666 (1.1)	24018	9.2
38	19-Sep-21	209033 (0.9)	14011	6.7
39	26-Sep-21	207757 (0.9)	9491	4.6
40	03-Oct-21	197825 (0.8)	6450	3.3
41	10-Oct-21	191658 (0.8)	5043	2.6
42	17-Oct-21	185546 (0.8)	3412	1.8
43	24-Oct-21	177125 (0.7)	2566	1.4
44	31-Oct-21	182835 (0.8)	2105	1.2
45	07-Nov-21	196629 (0.8)	2321	1.2
46	14-Nov-21	196674 (0.8)	4810	2.4
47	21-Nov-21	224578 (0.9)	18974	8.4
48	28-Nov-21	381895 (1.6)	98388	25.8
49	05-Dec-21	492654 (2.1)	175022	35.5
50	12-Dec-21	424178 (1.8)	154791	36.5
51	19-Dec-21	336965 (1.4)	117607	34.9
52	20-Dec-21	216483 (0.9)	66057	30.5
1	02-Jan-22	272318 (1.1)	61043	22.4
2	09-Jan-22	233197 (1.0)	35097	15.1
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3	16-Jan-22	208094 (0.9)	24006	11.5	
4	23-Jan-22	212186 (0.9)	25771	12.1	
5	24-Jan-22	207624 (0.9)	22918	11.0	
6	06-Feb-22	200383 (0.8)	20375	10.2	
7	13-Feb-22	189288 (0.8)	19049	10.1	
8	14-Feb-22	179975 (0.8)	16261	9.0	
9	27-Feb-22	170106 (0.7)	13101	7.7	
10	06-Mar-22	151819 (0.6)	10622	7.0	
11	13-Mar-22	159405 (0.7)	9830	6.2	
12	20-Mar-22	142277 (0.6)	9411	6.6	
13	27-Mar-22	149096 (0.6)	10134	6.8	
14	03-Apr-22	127855 (0.5)	10080	7.9	
	Total	23.827.314 (100.0)	4.061.960		

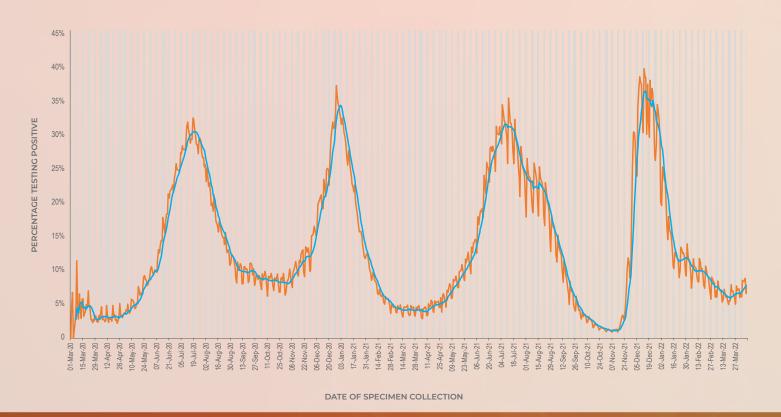


Figure 2. Percentage of tests positive for SARS-CoV-2 by date of specimen collection, South Africa, 1 March 2020 – 9 April 2022. Blue line shows the 7-day moving average of the percentage testing positive. Grey bars highlight weekend days and public holidays.

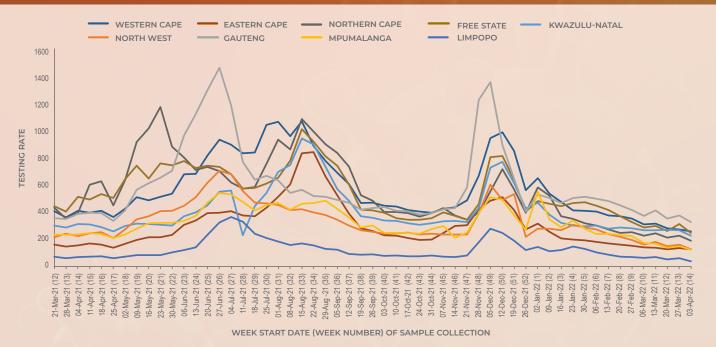


Figure 3. Testing rate per 100,000 persons by province and week of specimen collection, South Africa, 21 March 2021 – 9 April 2022

Table 2. Weekly number of tests and positive tests reported by province, South Africa, 20 March – 9 April 2022

		20-26	Mar 2022	27 Mar	- 2 Apr 2022	3-9	Apr 2022		
Province	Population ^a	No. of tests	No. positive tests (%)	No. of tests	No. positive tests (%)	No. of tests	No. positive tests (%)	Tests per 100,000 persons	Change in percentage positive ^b
Western Cape	7113776	19894	2482 (12.5)	19332	2292 (11.9)	18276	2251 (12.3)	257	0.5%
Eastern Cape	6676590	8374	411 (4.9)	9019	516 (5.7)	8400	545 (6.5)	126	0.8%
Northern Cape	1303047	2773	126 (4.5)	2956	127 (4.3)	2445	92 (3.8)	188	-0.5%
Free State	2932441	7653	289 (3.8)	9139	320 (3.5)	7178	228 (3.2)	245	-0.3%
KwaZulu-Natal	11513575	30819	1806 (5.9)	30644	2118 (6.9)	25935	2005 (7.7)	225	0.8%
North West	4122854	6154	346 (5.6)	6668	252 (3.8)	5191	212 (4.1)	126	0.3%
Gauteng	15810388	55625	3492 (6.3)	59232	4036 (6.8)	51483	4307 (8.4)	326	1.6%
Mpumalanga	4743584	6551	269 (4.1)	7069	291 (4.1)	5784	273 (4.7)	122	0.6%
Limpopo	5926724	3090	126 (4.1)	3560	92 (2.6)	2276	95 (4.2)	38	1.6%
Unknown		1344	64 (4.8)	1477	90 (6.1)	887	72 (8.1)		
Total	60142978	142277	9411 (6.6)	149096	10134 (6.8)	127855	10080 (7.9)	213	1.1%



Figure 4. Weekly percentage testing positive by province, South Africa, 20 March – 9 April 2022. The horizontal blue line shows

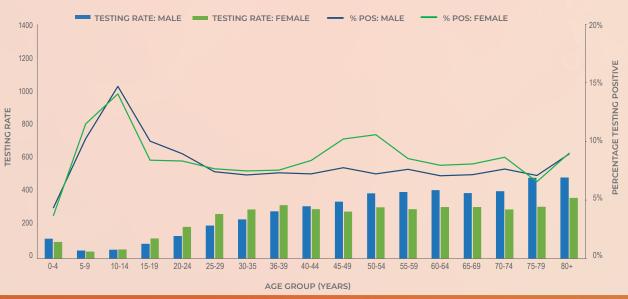


Figure 5. Testing rates per 100,000 persons and percentage testing positive by age group and sex, South Africa, week 14, 3-9 April 2022

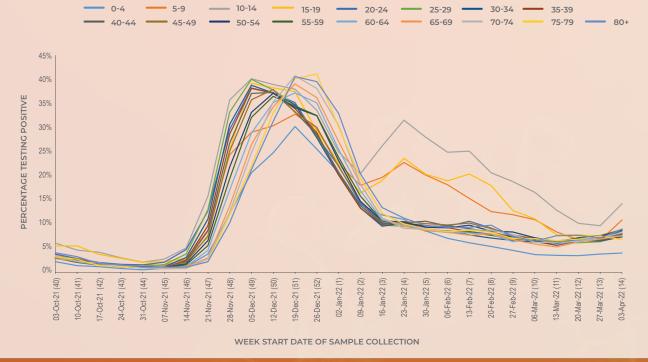


Figure 6. Percentage testing positive by age group and week of specimen collection, South Africa, 3 October 2021 – 9 April 2022

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Table 3. Health sub-districts with the highest proportion testing positive based on public and private sector data for the week of 3-9 April 2022

Health district or sub-district	Province	PTP (95% CI)	Previous week
Witzenberg	Western Cape	0.383 (0.253-0.512)	0.099 (0.033-0.165)
Randfontein	Gauteng	0.381 (0.340-0.422)	0.371 (0.333-0.410)
Swartland	Western Cape	0.283 (0.169-0.397)	0.221 (0.076-0.366)
Swellendam	Western Cape	0.270 (0.166-0.374)	0.252 (0.156-0.348)
Bitou	Western Cape	0.256 (0.169-0.343)	0.186 (0.117-0.255)
Kouga	Eastern Cape	0.195 (0.132-0.258)	0.102 (0.055-0.150)
Saldanha Bay	Western Cape	0.188 (0.141-0.235)	0.196 (0.146-0.245)
Overstrand	Western Cape	0.186 (0.141-0.231)	0.155 (0.116-0.195)
Matzikama	Western Cape	0.186 (0.110-0.261)	0.131 (0.064-0.197)
CT Northern	Western Cape	0.183 (0.161-0.205)	0.189 (0.168-0.210)
Tshwane 5	Gauteng	0.181 (0.088-0.274)	0.201 (0.089-0.312)
Langeberg	Western Cape	0.169 (0.061-0.276)	0.173 (0.064-0.282)
Mossel Bay	Western Cape	0.158 (0.121-0.196)	0.127 (0.095-0.158)
Knysna	Western Cape	0.158 (0.100-0.216)	0.123 (0.073-0.172)
Kgetlengrivier	North West	0.155 (0.049-0.261)	0.019 (0.000-0.056)
Lephalale	Limpopo	0.154 (0.099-0.208)	0.084 (0.042-0.127)
CT Eastern	Western Cape	0.153 (0.131-0.175)	0.148 (0.126-0.171)
Tshwane 7	Gauteng	0.152 (0.085-0.218)	0.080 (0.032-0.127)
CT Western	Western Cape	0.148 (0.135-0.160)	0.142 (0.131-0.153)
eThekwini North	KwaZulu-Natal	0.144 (0.130-0.157)	0.131 (0.119-0.144)
Tshwane 4	Gauteng	0.140 (0.119-0.162)	0.108 (0.090-0.126)
CT Tygerberg	Western Cape	0.137 (0.123-0.151)	0.153 (0.137-0.168)
CT Southern	Western Cape	0.137 (0.118-0.155)	0.111 (0.095-0.127)
Drakenstein	Western Cape	0.133 (0.105-0.162)	0.151 (0.121-0.181)
CT Mitchells Plain	Western Cape	0.132 (0.093-0.170)	0.105 (0.073-0.136)

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 have current week proportions testing positive that are

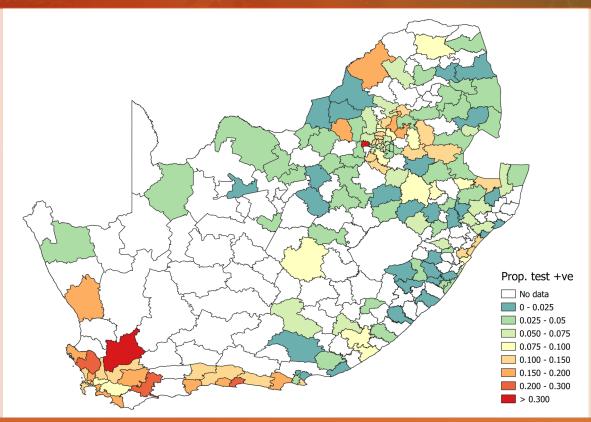


Figure 7. Proportion testing positive by health sub-district in South Africa for the week of 3-9 April 2022. Areas shaded white represent districts in which either (i) no tests were reported (ii) all tests were negative or (iii) the confidence interval exceeded 30%.

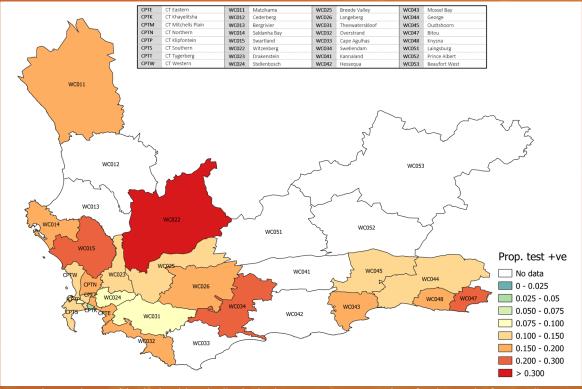


Figure 8. Proportion testing positive by health sub-district in the Western Cape Province for the week of 3-9 April 2022. Areas shaded white represent districts in which either (i) no tests were reported (ii) all tests were negative or (iii) the confidence interval exceeded 30%

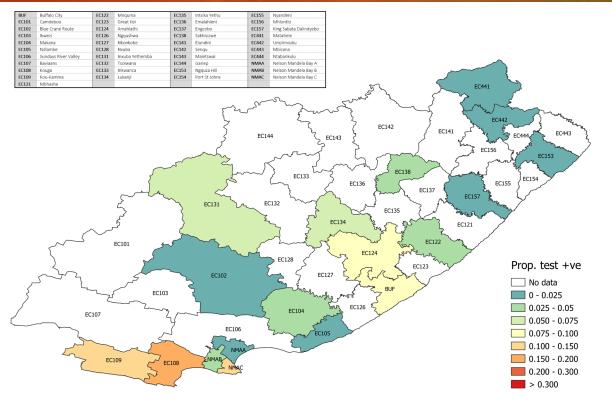


Figure 9. Proportion testing positive by health sub-district in the Eastern Cape Province for the week of 3-9 April 2022. Areas shaded white represent districts in which either (i) no tests were reported (ii) all tests were negative or (iii) the confidence interval exceeded 30%.

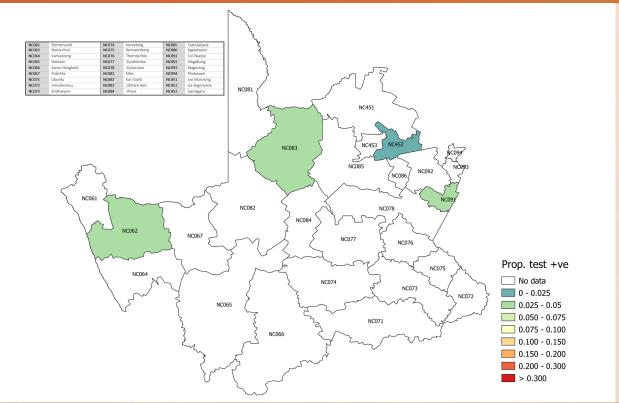


Figure 10. Proportion testing positive by health sub-district in Northern Cape Province for the week of 3-9 April 2022. Areas shaded white represent districts in which either (i) no tests were reported (ii) all tests were negative or (iii) the confidence interval exceeded 30%.

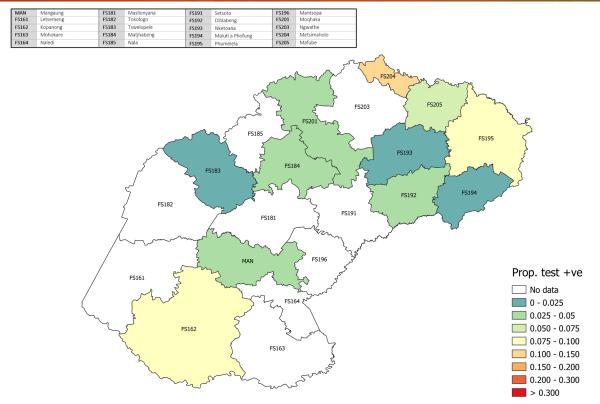


Figure 11. Proportion testing positive by health sub-district in Free State Province for the week of 3-9 April 2022. Areas shaded white represent districts in which either (i) no tests were reported (ii) all tests were negative or (iii) the confidence interval exceeded 30%.

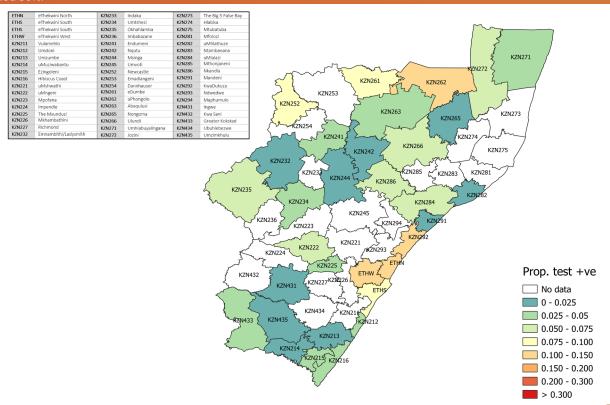


Figure 12. Proportion testing positive by health sub-district in KwaZulu-Natal Province for the week of 3-9 April 2022. Areas shaded white represent districts in which either (i) no tests were reported (ii) all tests were negative or (iii) the confidence interval exceeded 30%.

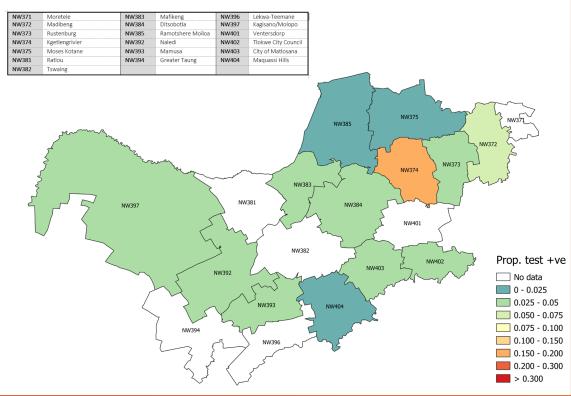


Figure 13. Proportion testing positive by health sub-district in North West Province for the week of 3-9 April 2022. Areas shaded white represent districts in which either (i) no tests were reported (ii) all tests were negative or (iii) the confidence interval

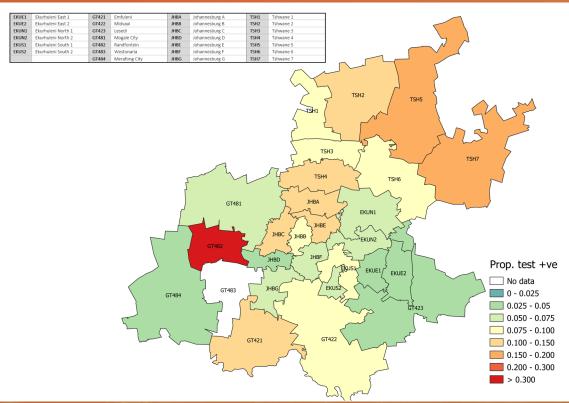


Figure 14. Proportion testing positive by health sub-district in Gauteng Province for the week of 3-9 April 2022. Areas shaded white represent districts in which either (i) no tests were reported (ii) all tests were negative or (iii) the confidence interval exceeded 30%.

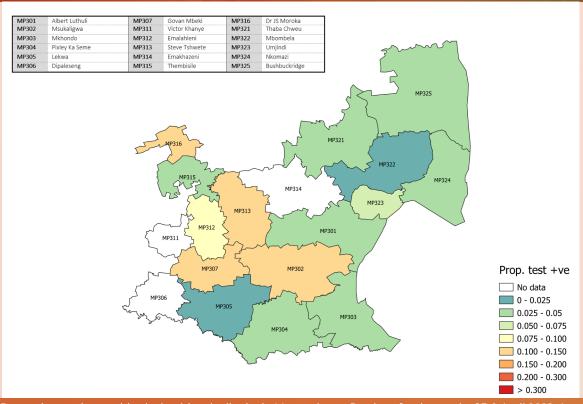


Figure 15. Proportion testing positive by health sub-district in Mpumalanga Province for the week of 3-9 April 2022. Areas shaded white represent districts in which either (i) no tests were reported (ii) all tests were negative or (iii) the confidence interval exceeded 30%.

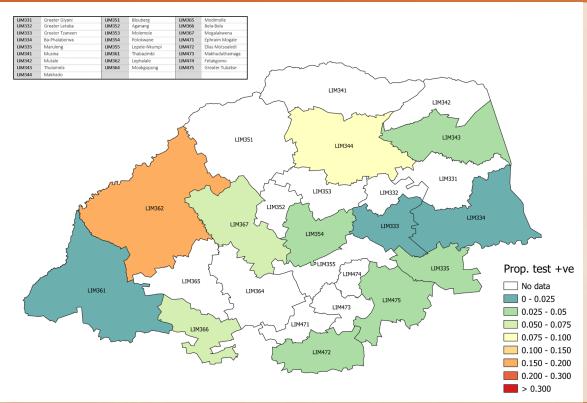


Figure 16. Proportion testing positive by health sub-district in Limpopo Province for the week of 3-9 April 2022. Areas shaded white represent districts in which either (i) no tests were reported (ii) all tests were negative or (iii) the confidence interval exceeded 30%.

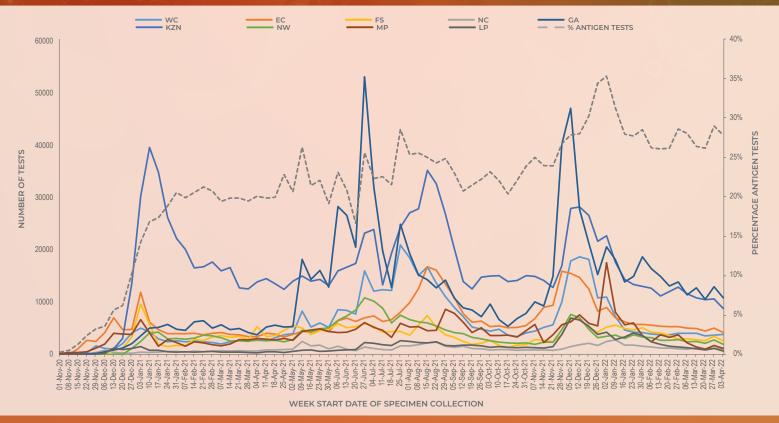


Figure 17. Number of antigen tests by province and overall percentage antigen tests, South Africa, 1 November 2020 – 9 April 2022. WC Western Cape; EC Eastern Cape; FS Free State; KZN KwaZulu-Natal; GA Gauteng; NC Northern Cape; NW North West; MP Mpumalanga; LP Limpopo



Figure 18. Mean number of days between date of specimen collection and date of test result for PCR tests by week of test result, South Africa, 13 March – 9 April 2022.

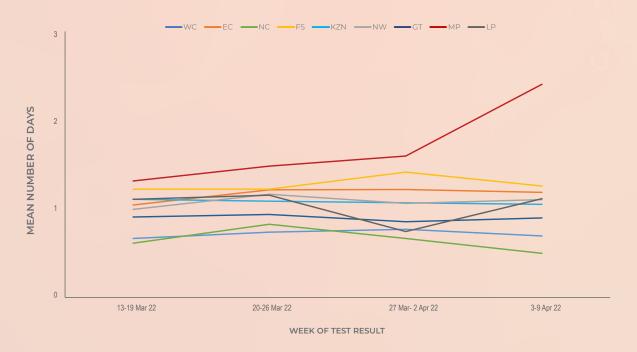


Figure 19. Mean number of days between date of specimen collection and date of test result for PCR tests in the public sector by week of test result and province, South Africa, 13 March – 9 April 2022. WC Western Cape; EC Eastern Cape; FS Free State; KZN KwaZulu-Natal; GT Gauteng; NC Northern Cape; NW North West; MP Mpumalanga; LP Limpopo

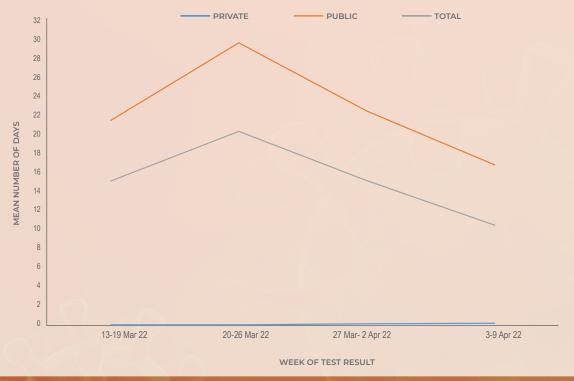


Figure 20. Mean number of days between date of specimen collection and date of test result for antigen tests by week of test result, South Africa, 13 March – 9 April 2022.

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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 49 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. Testing rates were calculated using mid-year population estimates from Statistics South Africa and expressed as tests per 100,000 (2019 estimates were used from week 10 - 40 of 2020, 2020 estimates were used from week 41 2021

to week 1 of 2022 and 2021 estimates were used from week 2 of 2022 and onwards). 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, 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 (approximately 99% of public sector facilities in the country) and private (approximately 73% of private testing facilities) 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. Districts with fewer than 20 tests reported during the week have been excluded from the analysis.

Limitations

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