# COVID-19 TESTING SUMMARY

NATIONAL INSTITUTE FOR COMMUNICABLE DISEASES
Division of the National Health Laboratory Service

SOUTH AFRICA | WEEK 53 2020

## 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 2 January 2021 (Week 53 of 2020).**

## HIGHLIGHTS

- In the period 1 March 2020 through 2 January 2021, 5,601,992 laboratory tests for SARS-CoV-2 have been conducted nationally.
- The number of tests performed in week 53 were higher than the weekly number of tests performed since week 30 (beginning 19 July)
- Western Cape (614 per 100,000 persons), KwaZulu-Natal (537 per 100,000 persons), Gauteng (423 per 100,000 persons) and Northern Cape (320 per 100,000 persons) provinces had the highest testing rates in week 53.
- Percentage testing positive decreased from a peak of 30.3% in week 29 to 9.4% in week 43. In week 53 the percentage testing positive was 38.9%, the highest observed since testing began.
- Percentage testing positive remained highest in the Limpopo (50.7%), Western Cape (44.9%), KwaZulu-Natal (42.2%) and North West (38.7%) Provinces. Percentages testing positive were between 25.2%-36.1% in Eastern Cape, Northern Cape, Free State, Gauteng and Mpumalanga.
- In week 53, compared to the previous week, the percentage testing positive increased in all provinces except Eastern Cape, where it decreased.
- Mean laboratory turnaround time in week 53 was 1.8 days; 2.8 days in the public sector and <1 day in the private sector.

## 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 during November 2020. Results of reported rapid antigen-based tests are included in this report.

Test results were automatically fed into a data warehouse after result authorisation. We excluded specimens collected outside South Africa and duplicate test results for an individual. From week 48 of 2020 onwards, test data was 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 was determined for public sector tests 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), the week when the first case of COVID-19 was confirmed, and 2 January 2021 (week 53).

## Testing volumes and proportion testing positive

From 1 March through 2 January 2021, 5,601,992 laboratory tests for SARS-CoV-2 were performed. The number of tests performed increased from week 10 to week 20 of 2020, however decreased in weeks 21 to 23 of 2020 due to a limited supply of extraction and testing kits. Increased volumes of tests were observed week on week from week 24 to week 28 of 2020, with the highest number of tests performed in week 28 of 2020 (n=268,371), and subsequently decreased, increasing again from week 41 (beginning 4 October 2020). In week 53 of 2020, 222,334 tests were performed, higher than the weekly number of tests performed between weeks 31 and 50 of 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).

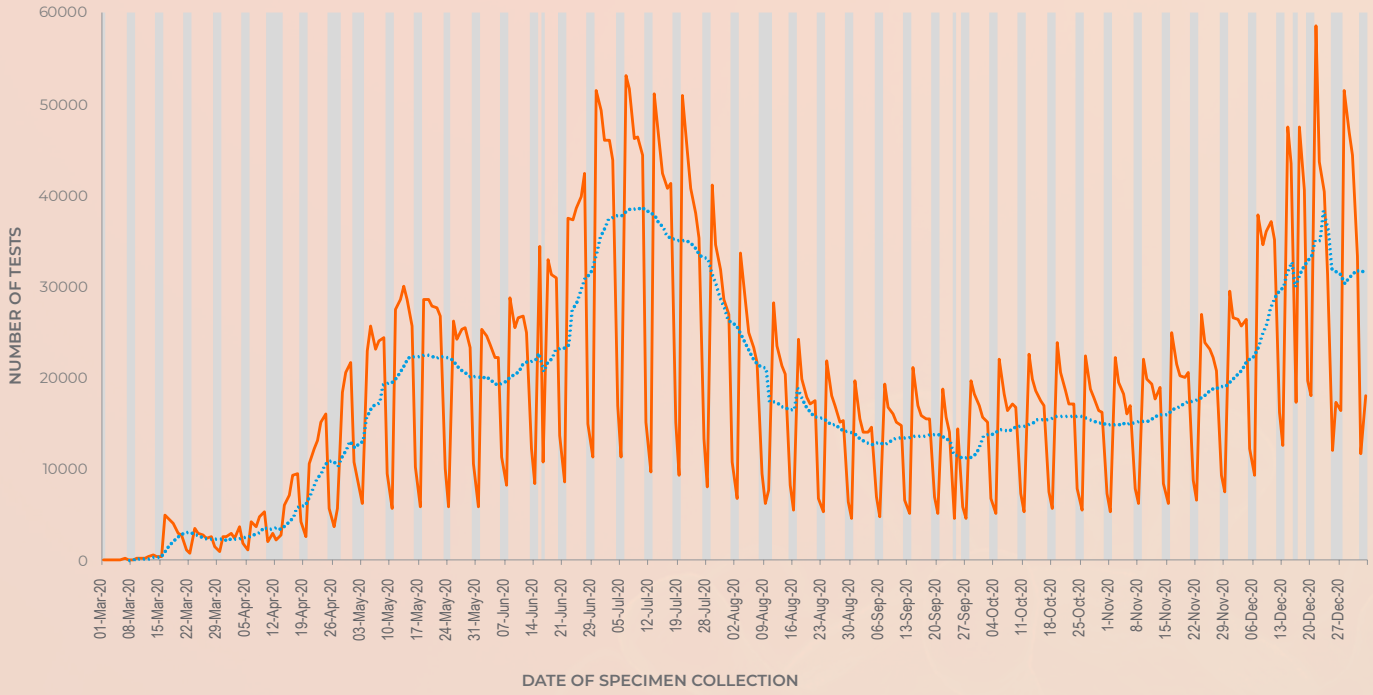


**Figure 1.** Number of laboratory tests conducted by date of specimen collection, South Africa, 1 March 2020 – 2 January 2021. Blue dotted line shows the 7-day moving average of the number of tests conducted. Grey bars highlight weekend days and public holidays.

The overall percentage testing positive from week 10 through 53 of 2020 was 18.1% (Table 1). The percentage testing positive increased week on week from week 18 to a peak of 30.3% in week 29 of 2020, and subsequently decreased to 9.4% in week 43 of 2020. The percentage testing positive in week 53 of 2020 was 38.9%, the highest observed since testing began (Figure 2).

**Table 1.** Weekly number of tests conducted and positive tests, South Africa, 1 March 2020 – 2 January 2021

| Week number | Week beginning | No. of tests n (%) | No. of positive tests | Percentage testing positive (%) |
|---|---|---|---|---|
| 10 | 01-Mar-20 | 408 (0.0) | 8 | 2.0 |
| 11 | 08-Mar-20 | 2276 (0.0) | 72 | 3.2 |
| 12 | 15-Mar-20 | 20889 (0.4) | 649 | 3.1 |
| 13 | 22-Mar-20 | 16802 (0.3) | 406 | 2.4 |
| 14 | 29-Mar-20 | 17184 (0.3) | 375 | 2.2 |
| 15 | 05-Apr-20 | 24463 (0.4) | 520 | 2.1 |
| 16 | 12-Apr-20 | 41576 (0.7) | 978 | 2.4 |
| 17 | 19-Apr-20 | 75528 (1.3) | 1844 | 2.4 |
| 18 | 26-Apr-20 | 89171 (1.6) | 2769 | 3.1 |
| 19 | 03-May-20 | 136255 (2.4) | 5269 | 3.9 |
| 20 | 10-May-20 | 156496 (2.8) | 7091 | 4.5 |
| 21 | 17-May-20 | 155700 (2.8) | 9999 | 6.4 |
| 22 | 24-May-20 | 140974 (2.5) | 10974 | 7.8 |
| 23 | 31-May-20 | 135269 (2.4) | 12663 | 9.4 |
| 24 | 07-Jun-20 | 152996 (2.7) | 18682 | 12.2 |
| 25 | 14-Jun-20 | 162407 (2.9) | 27817 | 17.1 |
| 26 | 21-Jun-20 | 219069 (3.9) | 47830 | 21.8 |
| 27 | 28-Jun-20 | 264890 (4.7) | 66056 | 24.9 |
| 28 | 05-Jul-20 | 268371 (4.8) | 76100 | 28.4 |
| 29 | 12-Jul-20 | 246065 (4.4) | 74666 | 30.3 |
| 30 | 19-Jul-20 | 232393 (4.1) | 69247 | 29.8 |
| 31 | 26-Jul-20 | 182027 (3.2) | 51084 | 28.1 |
| 32 | 02-Aug-20 | 148346 (2.6) | 35164 | 23.7 |
| 33 | 09-Aug-20 | 115675 (2.1) | 22265 | 19.2 |
| 34 | 16-Aug-20 | 109220 (1.9) | 18177 | 16.6 |
| 35 | 23-Aug-20 | 99051 (1.8) | 13979 | 14.1 |
| 36 | 30-Aug-20 | 89577 (1.6) | 10817 | 12.1 |
| 37 | 06-Sep-20 | 93356 (1.7) | 10319 | 11.1 |
| 38 | 13-Sep-20 | 96872 (1.7) | 10463 | 10.8 |
| 39 | 20-Sep-20 | 78570 (1.4) | 8748 | 11.1 |
| 40 | 27-Sep-20 | 97033 (1.7) | 9542 | 9.8 |
| 41 | 04-Oct-20 | 102972 (1.8) | 10253 | 10.0 |
| 42 | 11-Oct-20 | 108288 (1.9) | 10424 | 9.6 |
| 43 | 18-Oct-20 | 110761 (2.0) | 10461 | 9.4 |
| 44 | 25-Oct-20 | 104358 (1.9) | 9931 | 9.5 |
| 45 | 01-Nov-20 | 105976 (1.9) | 10479 | 9.9 |
| 46 | 08-Nov-20 | 112223 (2.0) | 12911 | 11.5 |
| 47 | 15-Nov-20 | 122244 (2.2) | 16497 | 13.5 |
| 48 | 22-Nov-20 | 132938 (2.4) | 19152 | 14.4 |
| 49 | 29-Nov-20 | 154325 (2.8) | 26604 | 17.2 |
| 50 | 06-Dec-20 | 206270 (3.7) | 46253 | 22.4 |
| 51 | 13-Dec-20 | 228909 (4.1) | 59307 | 25.9 |
| 52 | 20-Dec-20 | 221485 (4.0) | 71117 | 32.1 |
| 53 | 27-Dec-20 | 222334 (4.0) | 86395 | 38.9 |
| **Total** | | **5601992 (100.0)** | **1014357** | **18.1** |

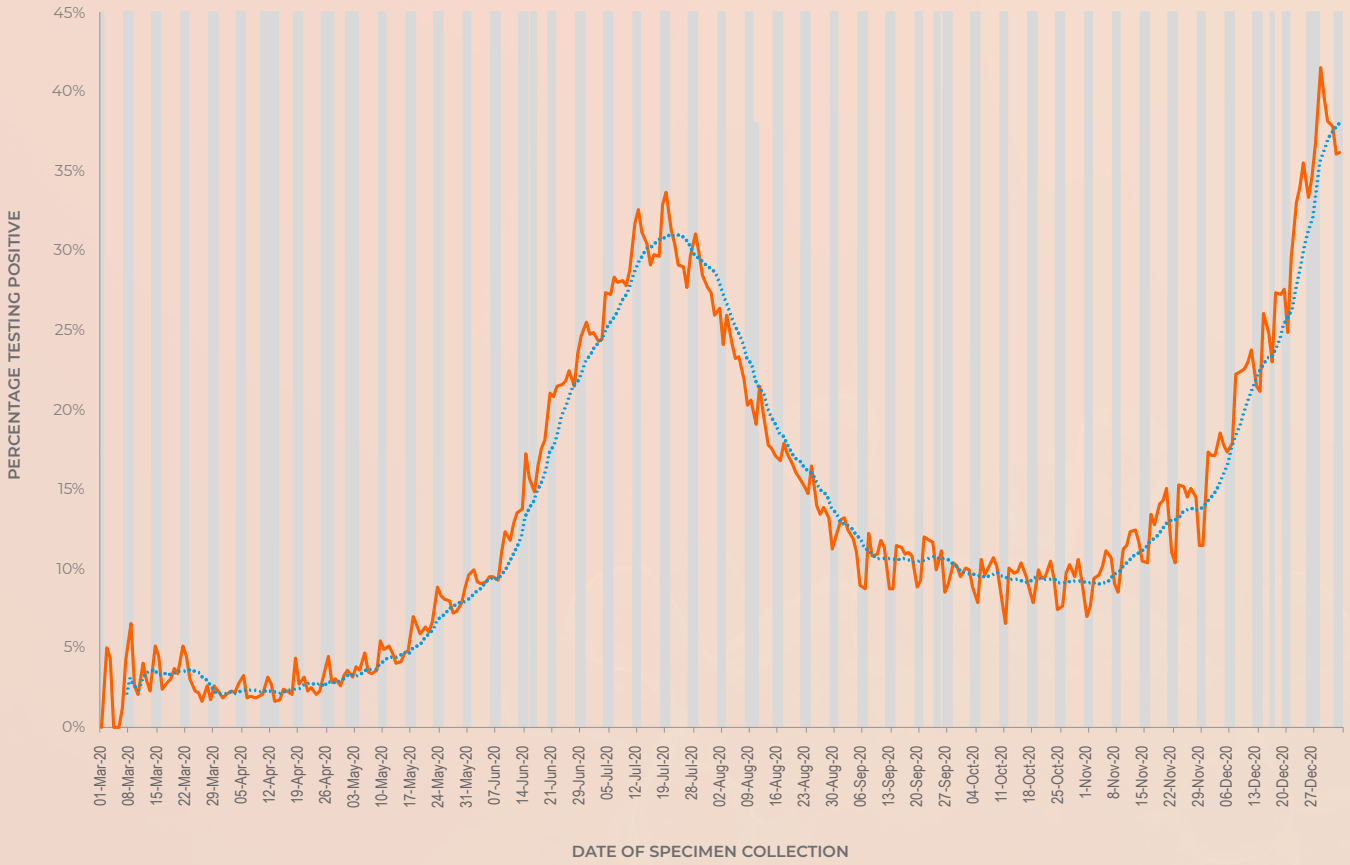


**Figure 2.** Percentage of laboratory tests positive for SARS-CoV-2 by date of specimen collection, South Africa, 1 March 2020 – 2 January 2021. Blue dotted line shows the 7-day moving average of the percentage testing positive. Grey bars highlight weekend days and public holidays.

## Testing in private and public sectors

From 1 March 2020 through 2 January 2021, 2,579,218 laboratory tests were conducted in public sector laboratories, with 17.9% testing positive. Over this same period, private sector laboratories conducted 3,022,774 tests, with 18.3% testing positive (Table 2). Overall the public sector has conducted 46.0% of tests and accounted for 45.5% of positive tests. The peak percentage testing positive in the first wave of infections was observed in week 30 of 2020 in the public sector (29.5%), and in week 29 of 2020 in the private sector (31.3%). From week 52 to week 53 of 2020, the percentage testing positive increased by 4.3% in the public sector (33.1% to 37.4%, P<0.001), and increased by 8.7% (31.4% to 40.1%, P<0.001) in the private sector. In week 53 of 2020 the percentage testing positive was higher in the private sector (40.1%) compared to the public sector (37.4%) (P<0.001).

The mean turnaround time for tests conducted in week 53 of 2020 was 1.8 days. Mean turnaround time stayed the same in the public (2.8 days) and the private sector (0.8 days) (Figure 3). Turnaround times for public sector tests were >2 days in Mpumalanga (6.6 days), Limpopo (3.9 days), Free State (3.0 days), KwaZulu-Natal (2.9 days), Northern Cape (2.5 days), Eastern Cape (2.4 days), Gauteng (2.1 days) and Western Cape (2.1 days) (Figure 4). Turnaround times in the past week increased in Free State, North West, Gauteng, Mpumalanga and Limpopo. Twelve of the 28 (42.9%) NHLS laboratories performing testing for SARS-CoV-2 had turnaround times ≤2 days (Figure 5).

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

| | | Public sector | | Private sector | | Public sector percentage of | | Ratio of PTP[a] |
|---|---|---|---|---|---|---|---|---|
| Week number | Week beginning | Tests | Cases n (%) | Tests | Positive tests n (%) | Tests (%) | Positive tests (%) | |
| 10 | 01-Mar-20 | 251 | 5 (2.0) | 157 | 3 (1.9) | 61.5 | 62.5 | 1.042 |
| 11 | 08-Mar-20 | 354 | 13 (3.7) | 1922 | 59 (3.1) | 15.6 | 18.1 | 1.196 |
| 12 | 15-Mar-20 | 1344 | 51 (3.8) | 19545 | 598 (3.1) | 6.4 | 7.9 | 1.240 |
| 13 | 22-Mar-20 | 3356 | 127 (3.8) | 13446 | 279 (2.1) | 20.0 | 31.3 | 1.824 |
| 14 | 29-Mar-20 | 5623 | 174 (3.1) | 11561 | 201 (1.7) | 32.7 | 46.4 | 1.780 |
| 15 | 05-Apr-20 | 11328 | 330 (2.9) | 13135 | 190 (1.4) | 46.3 | 63.5 | 2.014 |
| 16 | 12-Apr-20 | 23725 | 610 (2.6) | 17851 | 368 (2.1) | 57.1 | 62.4 | 1.247 |
| 17 | 19-Apr-20 | 54082 | 1471 (2.7) | 21446 | 373 (1.7) | 71.6 | 79.8 | 1.564 |
| 18 | 26-Apr-20 | 66183 | 2281 (3.4) | 22988 | 488 (2.1) | 74.2 | 82.4 | 1.624 |
| 19 | 03-May-20 | 92210 | 4205 (4.6) | 44045 | 1064 (2.4) | 67.7 | 79.8 | 1.888 |
| 20 | 10-May-20 | 104850 | 5045 (4.8) | 51646 | 2046 (4.0) | 67.0 | 71.1 | 1.215 |
| 21 | 17-May-20 | 95319 | 6556 (6.9) | 60381 | 3443 (5.7) | 61.2 | 65.6 | 1.206 |
| 22 | 24-May-20 | 74138 | 5898 (8.0) | 66836 | 5076 (7.6) | 52.6 | 53.7 | 1.047 |
| 23 | 31-May-20 | 60107 | 6026 (10.0) | 75162 | 6637 (8.8) | 44.4 | 47.6 | 1.135 |
| 24 | 07-Jun-20 | 59836 | 7259 (12.1) | 93160 | 11423 (12.3) | 39.1 | 38.9 | 0.989 |
| 25 | 14-Jun-20 | 55803 | 10937 (19.6) | 106604 | 16880 (15.8) | 34.4 | 39.3 | 1.238 |
| 26 | 21-Jun-20 | 82307 | 18632 (22.6) | 136762 | 29198 (21.3) | 37.6 | 39.0 | 1.060 |
| 27 | 28-Jun-20 | 97103 | 24959 (25.7) | 167787 | 41097 (24.5) | 36.7 | 37.8 | 1.049 |
| 28 | 05-Jul-20 | 107756 | 30073 (27.9) | 160615 | 46027 (28.7) | 40.2 | 39.5 | 0.974 |
| 29 | 12-Jul-20 | 101107 | 29229 (28.9) | 144958 | 45437 (31.3) | 41.1 | 39.1 | 0.922 |
| 30 | 19-Jul-20 | 96016 | 28315 (29.5) | 136377 | 40932 (30.0) | 41.3 | 40.9 | 0.983 |
| 31 | 26-Jul-20 | 73807 | 21335 (28.9) | 108220 | 29749 (27.5) | 40.5 | 41.8 | 1.052 |
| 32 | 02-Aug-20 | 64038 | 15737 (24.6) | 84308 | 19427 (23.0) | 43.2 | 44.8 | 1.066 |
| 33 | 09-Aug-20 | 53611 | 10388 (19.4) | 62064 | 11877 (19.1) | 46.3 | 46.7 | 1.013 |
| 34 | 16-Aug-20 | 50846 | 8915 (17.5) | 58374 | 9262 (15.9) | 46.6 | 49.0 | 1.105 |
| 35 | 23-Aug-20 | 45448 | 7226 (15.9) | 53603 | 6753 (12.6) | 45.9 | 51.7 | 1.262 |
| 36 | 30-Aug-20 | 41016 | 5606 (13.7) | 48561 | 5211 (10.7) | 45.8 | 51.8 | 1.274 |
| 37 | 06-Sep-20 | 46346 | 5981 (12.9) | 47010 | 4338 (9.2) | 49.6 | 58.0 | 1.398 |
| 38 | 13-Sep-20 | 49053 | 6109 (12.5) | 47819 | 4354 (9.1) | 50.6 | 58.4 | 1.368 |
| 39 | 20-Sep-20 | 40879 | 5115 (12.5) | 37691 | 3633 (9.6) | 52.0 | 58.5 | 1.298 |
| 40 | 27-Sep-20 | 44169 | 5189 (11.7) | 52864 | 4353 (8.2) | 45.5 | 54.4 | 1.427 |
| 41 | 04-Oct-20 | 45553 | 5269 (11.6) | 57419 | 4984 (8.7) | 44.2 | 51.4 | 1.333 |
| 42 | 11-Oct-20 | 48211 | 5296 (11.0) | 60077 | 5128 (8.5) | 44.5 | 50.8 | 1.287 |
| 43 | 18-Oct-20 | 50199 | 5604 (11.2) | 60562 | 4857 (8.0) | 45.3 | 53.6 | 1.392 |
| 44 | 25-Oct-20 | 45582 | 5308 (11.6) | 58776 | 4623 (7.9) | 43.7 | 53.4 | 1.481 |
| 45 | 01-Nov-20 | 47101 | 5572 (11.8) | 58875 | 4907 (8.3) | 44.4 | 53.2 | 1.419 |
| 46 | 08-Nov-20 | 52633 | 7462 (14.2) | 59590 | 5449 (9.1) | 46.9 | 57.8 | 1.550 |
| 47 | 15-Nov-20 | 59911 | 9757 (16.3) | 62333 | 6740 (10.8) | 49.0 | 59.1 | 1.506 |
| 48 | 22-Nov-20 | 65723 | 11145 (17.0) | 67215 | 8007 (11.9) | 49.4 | 58.2 | 1.424 |
| 49 | 29-Nov-20 | 71571 | 14281 (20.0) | 82754 | 12323 (14.9) | 46.4 | 53.7 | 1.340 |
| 50 | 06-Dec-20 | 94357 | 22515 (23.9) | 111913 | 23738 (21.2) | 45.7 | 48.7 | 1.125 |
| 51 | 13-Dec-20 | 102419 | 27278 (26.6) | 126490 | 32029 (25.3) | 44.7 | 46.0 | 1.052 |
| 52 | 20-Dec-20 | 94175 | 31169 (33.1) | 127310 | 39948 (31.4) | 42.5 | 43.8 | 1.055 |
| 53 | 27-Dec-20 | 99772 | 37280 (37.4) | 122562 | 49115 (40.1) | 44.9 | 43.2 | 0.932 |
| | **Total** | **2579218** | **461733 (17.9)** | **3022774** | **552624 (18.3)** | **46.0** | **45.5** | **0.979** |

[a]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)

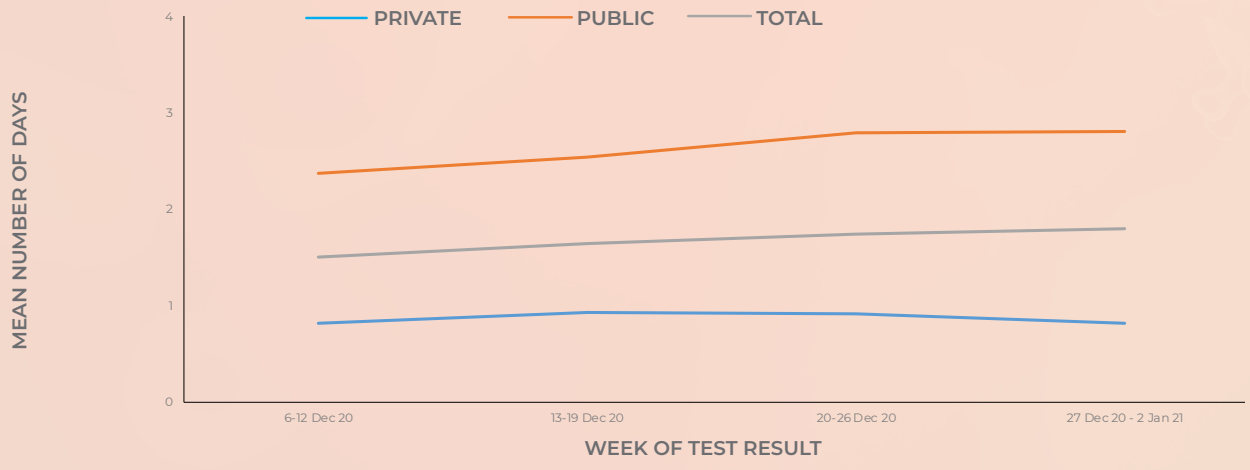


**Figure 3.** Mean number of days between date of specimen collection and date of test result, by week of test result, South Africa, 6 December 2020 – 2 January 2021

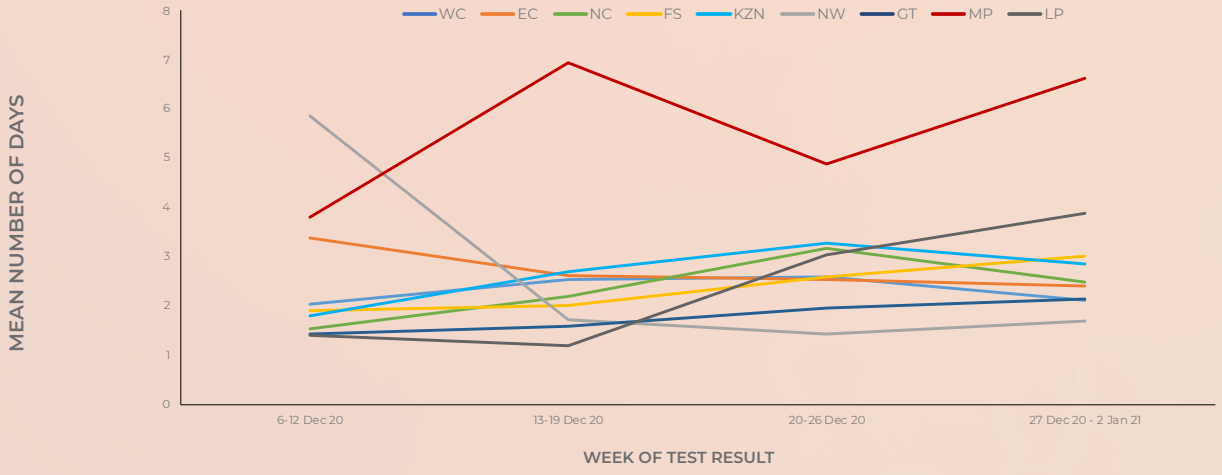


**Figure 4.** Mean number of days between date of specimen collection and date of test result, by week of test result and province, public sector, South Africa, 6 December 2020 – 2 January 2021. WC, Western Cape; EC, Eastern Cape; FS, Free State; KZN, KwaZulu-Natal; GT, Gauteng; NC, Northern Cape; NW, North West; MP, Mpumalanga; LP, Limpopo

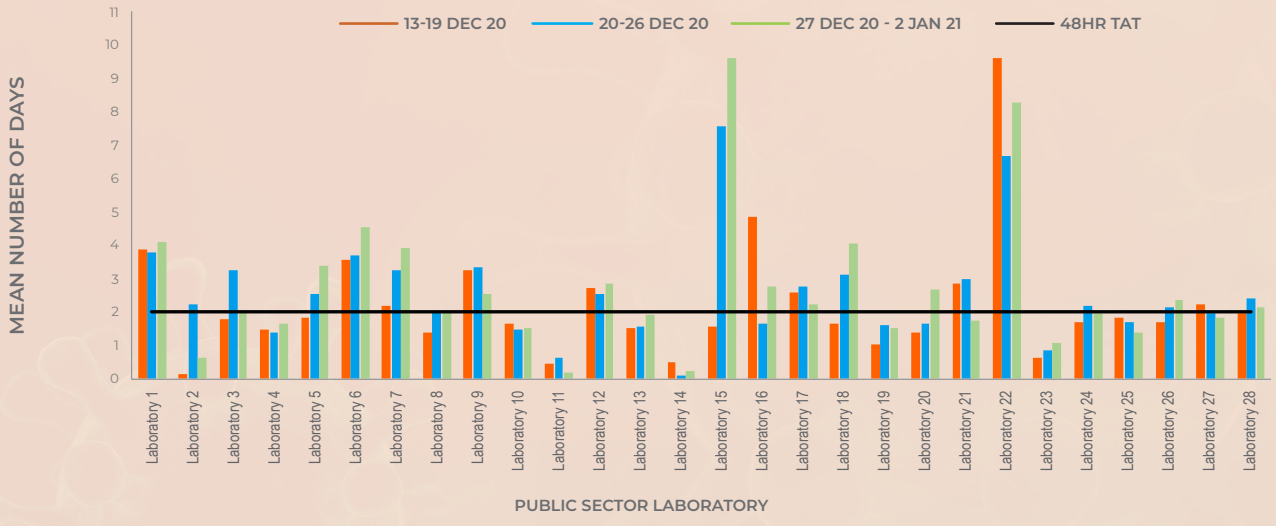


**Figure 5.** Mean number of days between date of specimen collection and date of test result, by public sector laboratory, 13 December 2020 – 2 January 2021. The horizontal black line indicates 48-hour turnaround time (TAT).

## Testing by province

Gauteng (29.4%) performed the largest number of tests in week 53 of 2020, followed by KwaZulu-Natal (27.9%), Western Cape (19.4%) and Eastern Cape (7.7%) provinces (Table 3). Western Cape (614 per 100,000 persons), KwaZulu-Natal (537 per 100,000 persons), Gauteng (423 per 100,000 persons) and Northern Cape (320 per 100,000 persons) provinces had the highest testing rates in week 53 of 2020 (Figure 6). Over recent weeks, testing rates have increased in the Western Cape, KwaZulu-Natal, Northern Cape, Gauteng, and decreased in the Eastern Cape.

The percentage testing positive in week 53 of 2020 was highest in Limpopo (50.7%), Western Cape (44.9%), KwaZulu-Natal (42.2%) and North West (38.7%). Percentages testing positive were between 25.2%-36.1% in Eastern Cape, Northern Cape, Free State, Gauteng and Mpumalanga in week 53 of 2020 (Figure 7). Compared to the previous week, the percentage testing positive in week 53 of 2020 increased in eight provinces: 1.0% in the Western Cape (43.8% to 44.9%, P=0.003), 6.3% in Northern Cape (19.9% to 26.2%, P<0.001), 9.7% in Free State (15.5% to 25.2%, P<0.001), 3.6% in KwaZulu-Natal (38.6% to 42.2%, P<0.001), 15.6% in North West (23.1% to 38.7%, P<0.001), 10.1% in Gauteng (24.6% to 34.7%, P<0.001), 18.9% in Mpumalanga (17.2% to 36.1%, P<0.001) and 13.5% in Limpopo (32.7% to 50.7%, P<0.001). The percentage testing positive decreased by 1.1% in Eastern Cape (32.5% to 31.5%, P=0.046), The percentage testing positive was higher than the national average, not weighted for population size, in the Western Cape, KwaZulu-Natal and Limpopo provinces (Figure 7).

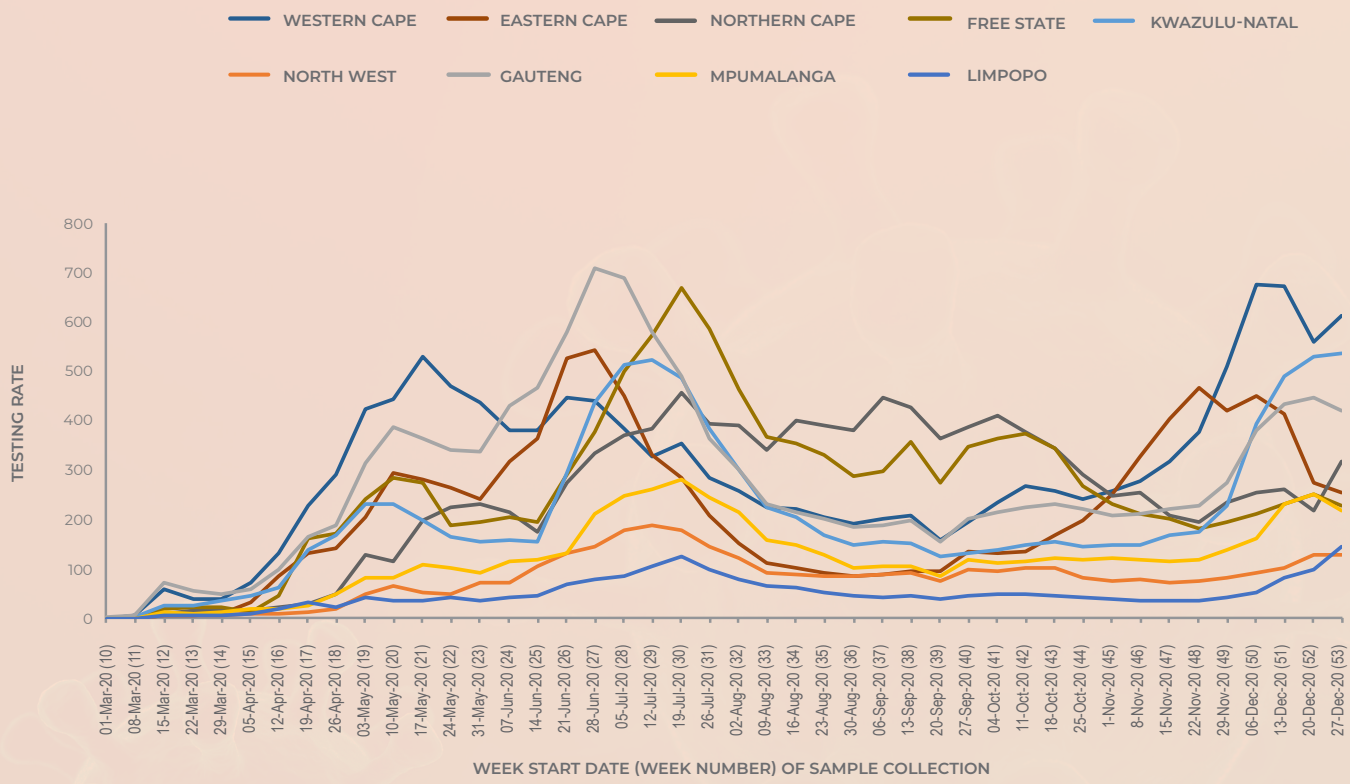


**Figure 6.** Testing rate per 100,000 persons by province and week of specimen collection, South Africa, 1 March – 2 January 2021

**Table 3.** Weekly number of tests performed and positive tests, by province, South Africa, 13 December 2020 – 2 January 2021

| | | 13-19 Dec 20 | | 20-26 Dec 20 | | 27 Dec 20 – 2 Jan 21 | | | |
|---|---|---|---|---|---|---|---|---|---|
| **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 | 7005741 | 47091 | 17931 (38.1) | 39307 | 17221 (43.8) | 43043 | 19307 (44.9) | 614 | 1.0% |
| Eastern Cape | 6734001 | 27937 | 8492 (30.4) | 18489 | 6008 (32.5) | 17091 | 5385 (31.5) | 254 | -1.0% |
| Northern Cape | 1292786 | 3386 | 375 (11.1) | 2807 | 559 (19.9) | 4132 | 1084 (26.2) | 320 | 6.3% |
| Free State | 2928903 | 6771 | 671 (9.9) | 7364 | 1140 (15.5) | 6649 | 1675 (25.2) | 227 | 9.7% |
| KwaZulu-Natal | 11531628 | 56694 | 18028 (31.8) | 61294 | 23688 (38.6) | 61935 | 26147 (42.2) | 537 | 3.6% |
| North West | 4108816 | 4159 | 699 (16.8) | 5358 | 1239 (23.1) | 5291 | 2049 (38.7) | 129 | 15.6% |
| Gauteng | 15488137 | 67193 | 11256 (16.8) | 69230 | 17064 (24.6) | 65453 | 22735 (34.7) | 423 | 10.1% |
| Mpumalanga | 4679786 | 10800 | 1040 (9.6) | 11806 | 2030 (17.2) | 10185 | 3676 (36.1) | 218 | 18.9% |
| Limpopo | 5852553 | 4869 | 815 (16.7) | 5822 | 2166 (37.2) | 8545 | 4334 (50.7) | 146 | 13.5% |
| Unknown | | 9 | 0 (0.0) | 8 | 2 (25.0) | 10 | 3 (30.0) | | 5.0% |
| **Total** | **59622350** | **228909** | **59307 (25.9)** | **221485** | **71117 (32.1)** | **222334** | **86395 (38.9)** | **373** | **6.7%** |

[a] 2020 Mid-year population Statistics SA

[b] Current week compared to previous week

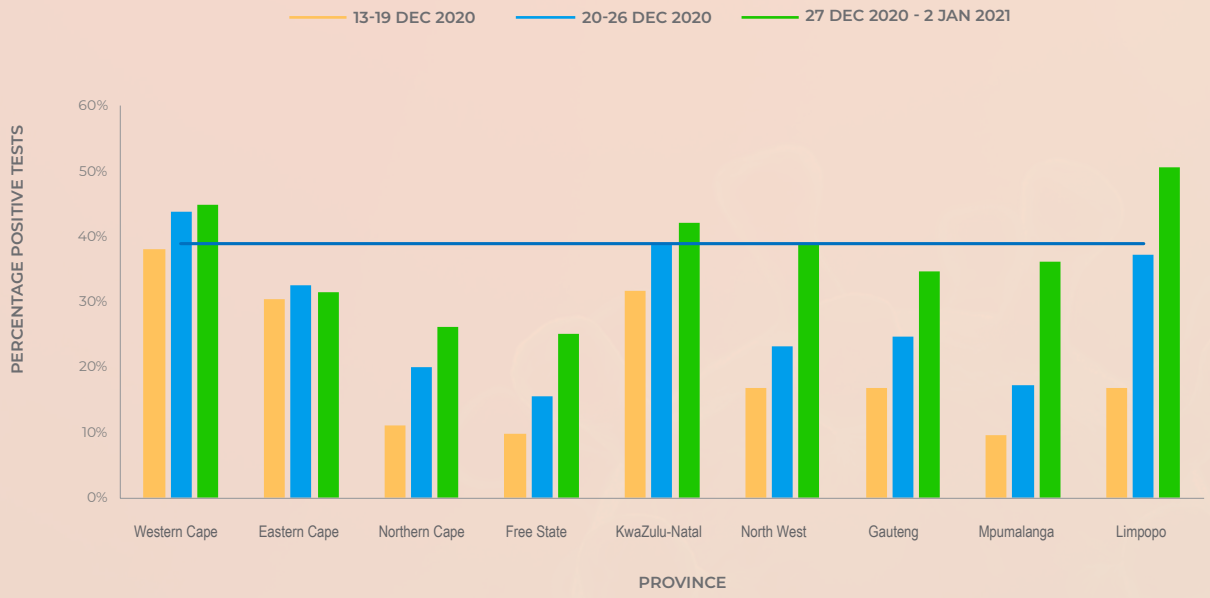


**Figure 7.** Weekly percentage testing positive, by province, South Africa, 13 December 2020 – 2 January 2021. The horizontal blue line shows the national mean for week 53, beginning 27 December 2020.

## Testing in the public sector

In the public sector, the percentage testing positive increased in the past week (33.1% in week 52 to 37.4% in week 53 of 2020, P<0.001) (Table 4). The percentage testing positive in week 53 was highest in the Western Cape (49.3%), Limpopo (43.1%) and KwaZulu-Natal (39.8%). The percentage testing positive in the public sector remains higher than the national average, not weighted for population size, in the Western Cape, KwaZulu-Natal, North West and Limpopo provinces (Figure 8).

**Table 4.** Weekly number of tests conducted and positive tests in the public sector, by province, South Africa, 13 December 2020 – 2 January 2021

| | 13-19 Dec 2020 | | 20-26 Dec 2020 | | 27 Dec 2020 - 2 Jan 2021 | |
|---|---|---|---|---|---|---|
| **Province** | **No. of tests** | **No. positive tests (%)** | **No. of tests** | **No. positive tests (%)** | **No. of tests** | **No. positive tests (%)** |
| Western Cape | 18676 | 8313 (44.5) | 15143 | 7437 (49.1) | 17263 | 8508 (49.3) |
| Eastern Cape | 21239 | 5896 (27.8) | 13735 | 4072 (29.6) | 12358 | 3474 (28.1) |
| Northern Cape | 2023 | 184 (9.1) | 1896 | 332 (17.5) | 2842 | 695 (24.5) |
| Free State | 3786 | 364 (9.6) | 3491 | 496 (14.2) | 3910 | 888 (22.7) |
| KwaZulu-Natal | 28852 | 8317 (28.8) | 31491 | 11604 (36.8) | 31853 | 12663 (39.8) |
| North West | 1674 | 356 (21.3) | 1878 | 560 (29.8) | 2802 | 1068 (38.1) |
| Gauteng | 18716 | 3188 (17.0) | 19055 | 5029 (26.4) | 21395 | 7307 (34.2) |
| Mpumalanga | 5291 | 401 (7.6) | 5019 | 890 (17.7) | 4175 | 1309 (31.4) |
| Limpopo | 2162 | 259 (12.0) | 2467 | 749 (30.4) | 3174 | 1368 (43.1) |
| Unknown | 0 | 0 (0.0) | 0 | 0 (0.0) | 0 | 0 (0.0) |
| **Total** | **102419** | **27278 (26.6)** | **94175** | **31169 (33.1)** | **99772** | **37280 (37.4)** |

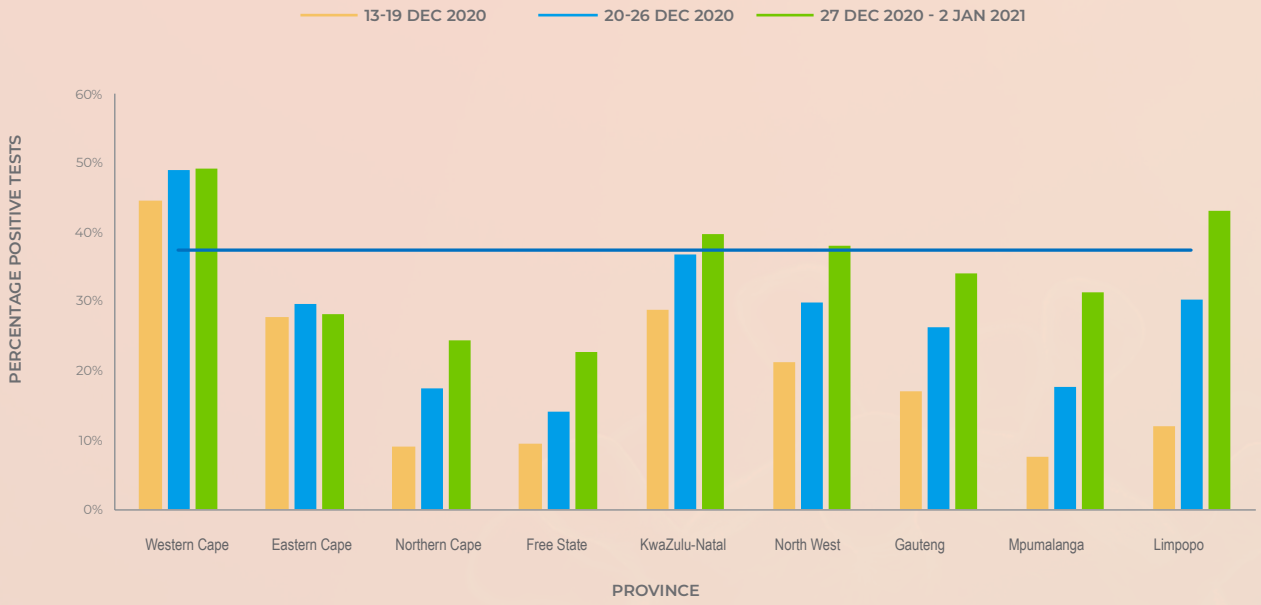


**Figure 8.** Weekly percentage testing positive in the public sector, by province, South Africa, 13 December 2020 – 2 January 2021. The horizontal blue line shows the national mean for week 52, beginning 27 December 2020.

## 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 27 December 2020 – 2 January 2021, with the highest proportion testing positive nationally. This week's list is again dominated by facilities in the Western Cape (12), while 6 are in KwaZulu-Natal, 4 in Limpopo and three in Gauteng.

**Table 5.1** Public sector healthcare facilities with a high proportion testing positive, 27 December 2020 – 2 January 2021

| Facility Name | Province | Tests | PTP (95% CI) |
|---|---|---|---|
| Facility 1 | Gauteng | 33 | 0.909 (0.811;1.007) |
| Facility 2 | Western Cape | 42 | 0.833 (0.721;0.946) |
| Facility 3 | KwaZulu-Natal | 31 | 0.806 (0.667;0.946) |
| Facility 4 | Limpopo | 43 | 0.791 (0.669;0.912) |
| Facility 5 | Western Cape | 69 | 0.783 (0.685;0.880) |
| Facility 6 | Western Cape | 35 | 0.771 (0.632;0.911) |
| Facility 7 | Western Cape | 30 | 0.767 (0.615;0.918) |
| Facility 8 | Limpopo | 40 | 0.750 (0.616;0.884) |
| Facility 9 | Gauteng | 31 | 0.742 (0.588;0.896) |
| Facility 10 | Limpopo | 33 | 0.727 (0.575;0.879) |
| Facility 11 | Western Cape | 40 | 0.725 (0.587;0.863) |
| Facility 12 | Western Cape | 32 | 0.719 (0.563;0.875) |
| Facility 13 | KwaZulu-Natal | 28 | 0.714 (0.547;0.882) |
| Facility 14 | Western Cape | 49 | 0.714 (0.588;0.841) |
| Facility 15 | Western Cape | 96 | 0.708 (0.617;0.799) |
| Facility 16 | Gauteng | 27 | 0.704 (0.531;0.876) |
| Facility 17 | Western Cape | 143 | 0.699 (0.624;0.774) |
| Facility 18 | Limpopo | 56 | 0.696 (0.576;0.817) |
| Facility 19 | KwaZulu-Natal | 69 | 0.696 (0.587;0.804) |
| Facility 20 | Western Cape | 36 | 0.694 (0.544;0.845) |
| Facility 21 | Western Cape | 75 | 0.693 (0.589;0.798) |
| Facility 22 | KwaZulu-Natal | 26 | 0.692 (0.515;0.870) |
| Facility 23 | KwaZulu-Natal | 58 | 0.690 (0.571;0.809) |
| Facility 24 | Western Cape | 35 | 0.686 (0.532;0.840) |
| Facility 25 | KwaZulu-Natal | 38 | 0.684 (0.536;0.832) |

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 27 December 2020 – 2 January 2021, with the highest proportion testing positive nationally. Private-sector facilities with high proportions testing positive are concentrated in KwaZulu-Natal (8), Gauteng (6) and Western Cape and Limpopo (5 each).

**Table 5.2** Private sector healthcare facilities with a high proportion testing positive, 27 December 2020 – 2 January 2021

| Facility Name | Province | Tests | PTP (95% CI) |
|---|---|---|---|
| Facility 1 | Western Cape | 88 | 0.773 (0.685;0.860) |
| Facility 2 | Limpopo | 60 | 0.750 (0.640;0.860) |
| Facility 3 | KwaZulu-Natal | 44 | 0.727 (0.596;0.859) |
| Facility 4 | Gauteng | 34 | 0.706 (0.553;0.859) |
| Facility 5 | Limpopo | 27 | 0.704 (0.531;0.876) |
| Facility 6 | KwaZulu-Natal | 52 | 0.692 (0.567;0.818) |
| Facility 7 | Western Cape | 102 | 0.676 (0.586;0.767) |
| Facility 8 | Limpopo | 138 | 0.667 (0.588;0.745) |
| Facility 9 | KwaZulu-Natal | 114 | 0.667 (0.580;0.753) |
| Facility 10 | Eastern Cape | 33 | 0.667 (0.506;0.828) |
| Facility 11 | KwaZulu-Natal | 90 | 0.667 (0.569;0.764) |
| Facility 12 | Gauteng | 44 | 0.659 (0.519;0.799) |
| Facility 13 | Gauteng | 82 | 0.659 (0.556;0.761) |
| Facility 14 | Gauteng | 35 | 0.657 (0.500;0.814) |
| Facility 15 | Gauteng | 61 | 0.656 (0.537;0.775) |
| Facility 16 | Gauteng | 72 | 0.653 (0.543;0.763) |
| Facility 17 | KwaZulu-Natal | 28 | 0.643 (0.465;0.820) |
| Facility 18 | KwaZulu-Natal | 272 | 0.640 (0.583;0.697) |
| Facility 19 | Limpopo | 224 | 0.634 (0.571;0.697) |
| Facility 20 | Limpopo | 172 | 0.634 (0.562;0.706) |
| Facility 21 | KwaZulu-Natal | 56 | 0.625 (0.498;0.752) |
| Facility 22 | Western Cape | 173 | 0.624 (0.552;0.696) |
| Facility 23 | Western Cape | 111 | 0.622 (0.531;0.712) |
| Facility 24 | KwaZulu-Natal | 95 | 0.621 (0.523;0.719) |
| Facility 25 | Western Cape | 378 | 0.614 (0.565;0.663) |

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

## Health district-level results

The data from geolocatable public testing (almost every public sector facility in the country) and private testing (approximately 77% of private testing facilities) in the week from 27 December 2020 – 2 January 2021 have been located within the spatial framework of the health districts and health sub-districts (in the metros). Estimates of overall prevalence were derived using regression techniques. These estimates were then adjusted to produce district-specific positive test prevalence 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 results for the 25 municipalities and metropolitan health sub-districts showing the greatest proportions testing positive in the week of 27 December 2020 - 2 January 2021 are shown in Table 6. Districts showing the greatest proportions testing positive are concentrated in the Western Cape and Limpopo (9 districts each), with the remaining 7 in KwaZulu-Natal.

All 25 districts with the highest proportion testing positive in the week from 27 December 2020 – 2 January 2021 showed a proportion testing positive greater than 50%. In eight districts, the proportion testing positive was greater than 60%. A significant increase over the previous week was observed in 8 of the 25 districts; a significant decrease was observed in Witzenberg (Western Cape).

**Table 6.** Health sub-districts with the highest proportion testing positive based on public and private sector data for the week of 27 December 2020 – 2 January 2021

| Health district or sub-district | Province | PTP (95% CI) | Previous week |
|---|---|---|---|
| Greater Letaba | Limpopo | 0.796 (0.649-0.943) | ... |
| Swellendam | Western Cape | 0.647 (0.599-0.694) | 0.620 (0.558-0.682) |
| Cederberg | Western Cape | 0.646 (0.513-0.779) | ... |
| Mkhambathini | KwaZulu-Natal | 0.637 (0.525-0.749) | ... |
| Umzumbe | KwaZulu-Natal | 0.628 (0.571-0.685) | 0.624 (0.575-0.673) |
| Blouberg | Limpopo | 0.603 (0.458-0.748) | ... |
| Greater Giyani | Limpopo | 0.602 (0.541-0.663) | 0.362 (0.259-0.464) |
| The Big 5 False Bay | KwaZulu-Natal | 0.602 (0.476-0.728) | ... |
| Theewaterskloof | Western Cape | 0.590 (0.546-0.634) | 0.546 (0.496-0.595) |
| Mtubatuba | KwaZulu-Natal | 0.586 (0.537-0.634) | 0.306 (0.245-0.366) |
| Langeberg | Western Cape | 0.584 (0.530-0.639) | 0.616 (0.566-0.665) |
| Polokwane | Limpopo | 0.573 (0.556-0.590) | 0.463 (0.442-0.485) |
| Greater Kokstad | KwaZulu-Natal | 0.570 (0.521-0.618) | 0.591 (0.542-0.640) |
| Cape Agulhas | Western Cape | 0.569 (0.490-0.647) | 0.611 (0.521-0.701) |
| Makhado | Limpopo | 0.566 (0.523-0.609) | 0.432 (0.377-0.487) |
| Breede Valley | Western Cape | 0.564 (0.538-0.591) | 0.573 (0.545-0.602) |
| Drakenstein | Western Cape | 0.563 (0.540-0.586) | 0.501 (0.475-0.528) |
| Lepele-Nkumpi | Limpopo | 0.562 (0.508-0.617) | 0.503 (0.432-0.574) |
| Bela-Bela | Limpopo | 0.559 (0.451-0.667) | ... |
| Witzenberg | Western Cape | 0.551 (0.509-0.593) | 0.692 (0.650-0.734) |
| Thulamela | Limpopo | 0.550 (0.516-0.585) | 0.457 (0.411-0.503) |
| Ezingoleni | KwaZulu-Natal | 0.549 (0.426-0.672) | 0.585 (0.453-0.716) |
| Mfolozi | KwaZulu-Natal | 0.548 (0.442-0.655) | 0.270 (0.184-0.356) |
| Makhuduthamaga | Limpopo | 0.548 (0.460-0.636) | 0.440 (0.314-0.566) |
| Saldanha Bay | Western Cape | 0.543 (0.503-0.582) | 0.451 (0.412-0.491) |

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.

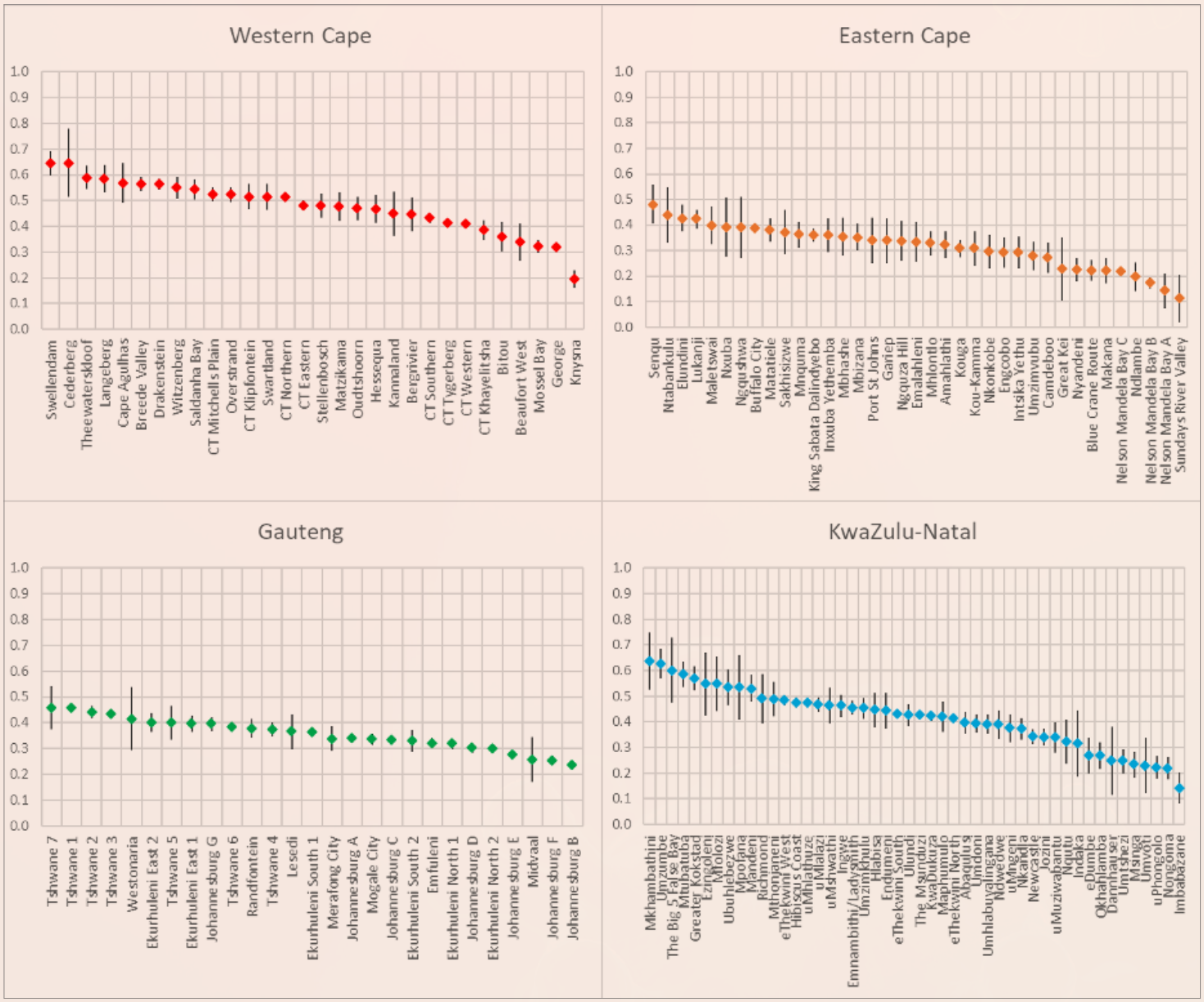


**Figure 9.1** Proportions testing positive by health sub-district in the Western Cape, Eastern Cape, Gauteng and KwaZulu-Natal provinces based on public and private sector data for the week of 27 December 2020 – 2 January 2021.

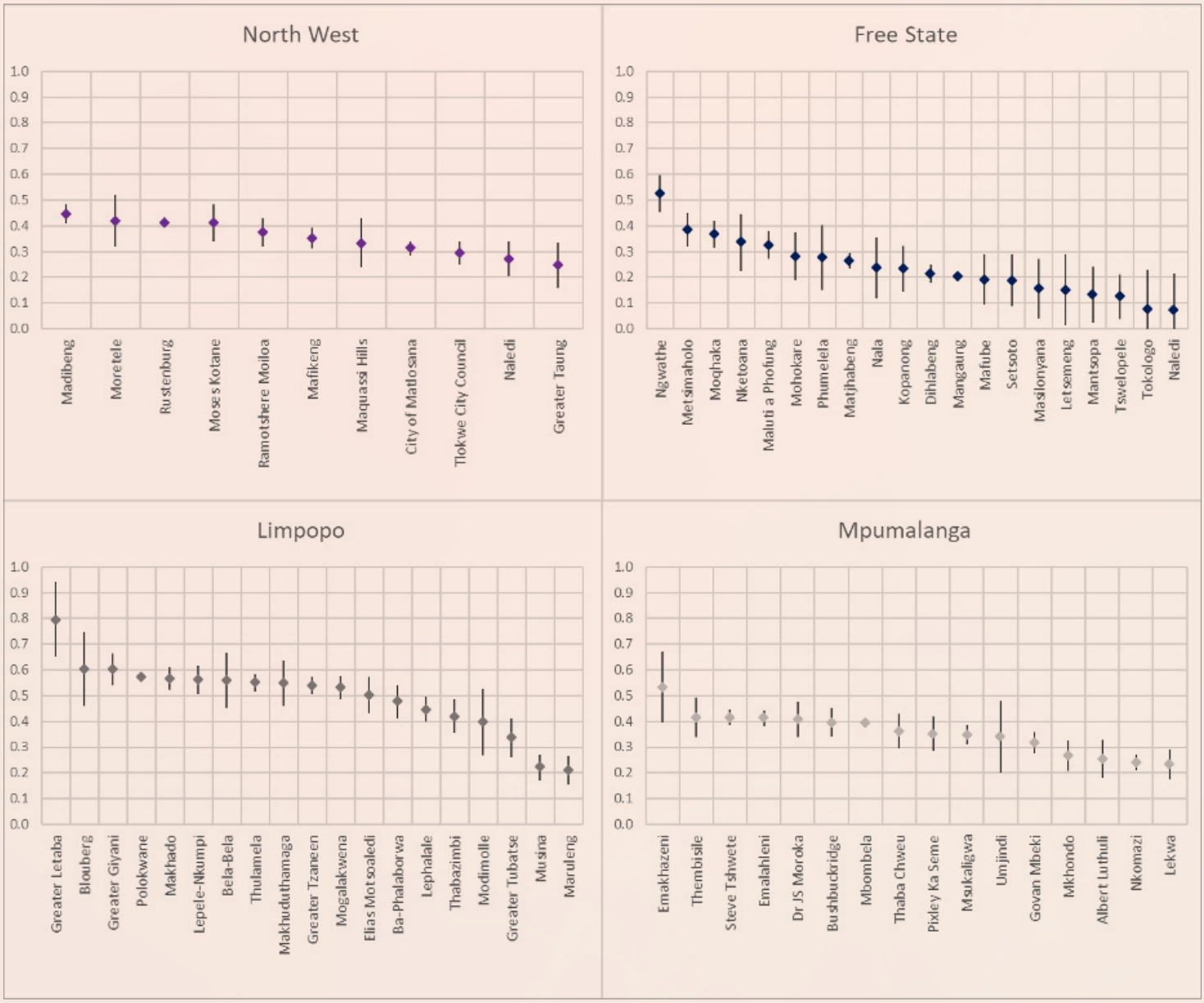


**Figure 9.2** Proportions testing positive by health sub-district in the North West, Free State, Limpopo and Mpumalanga provinces based on public and private sector data for the week of 27 December 2020 – 2 January 2021.

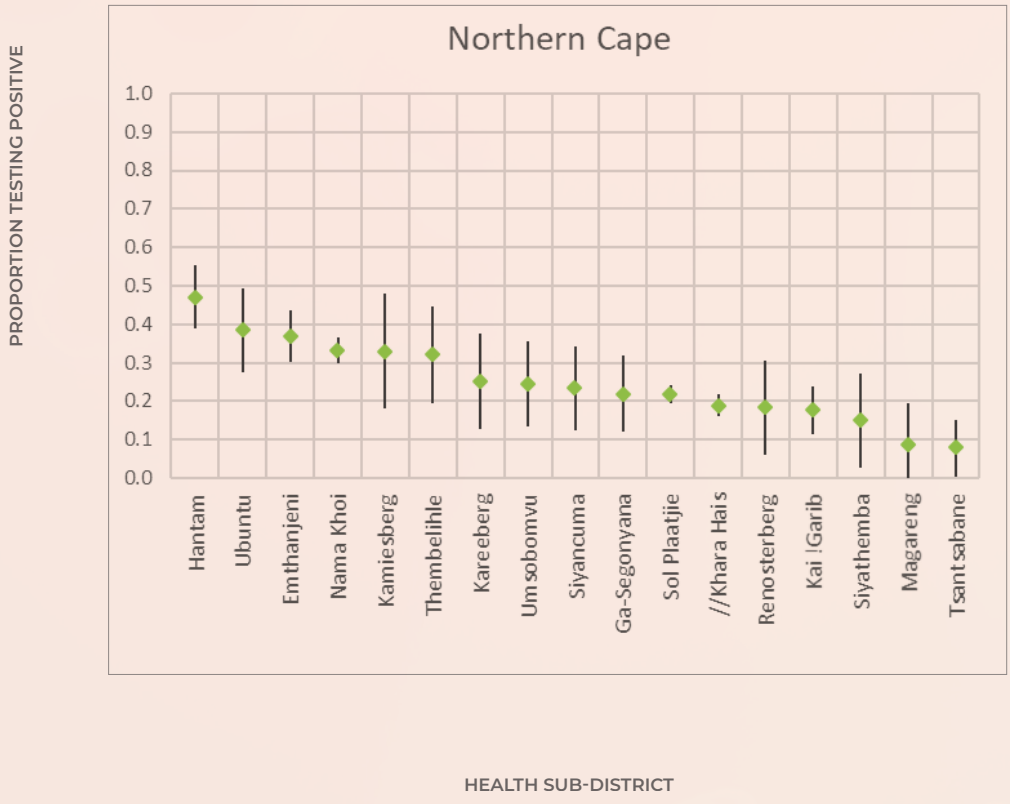


**Figure 9.3** Proportions testing positive by health sub-districts in the Northern Cape Province based on public and private sector data for the week of 27 December 2020 – 2 January 2021.

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).

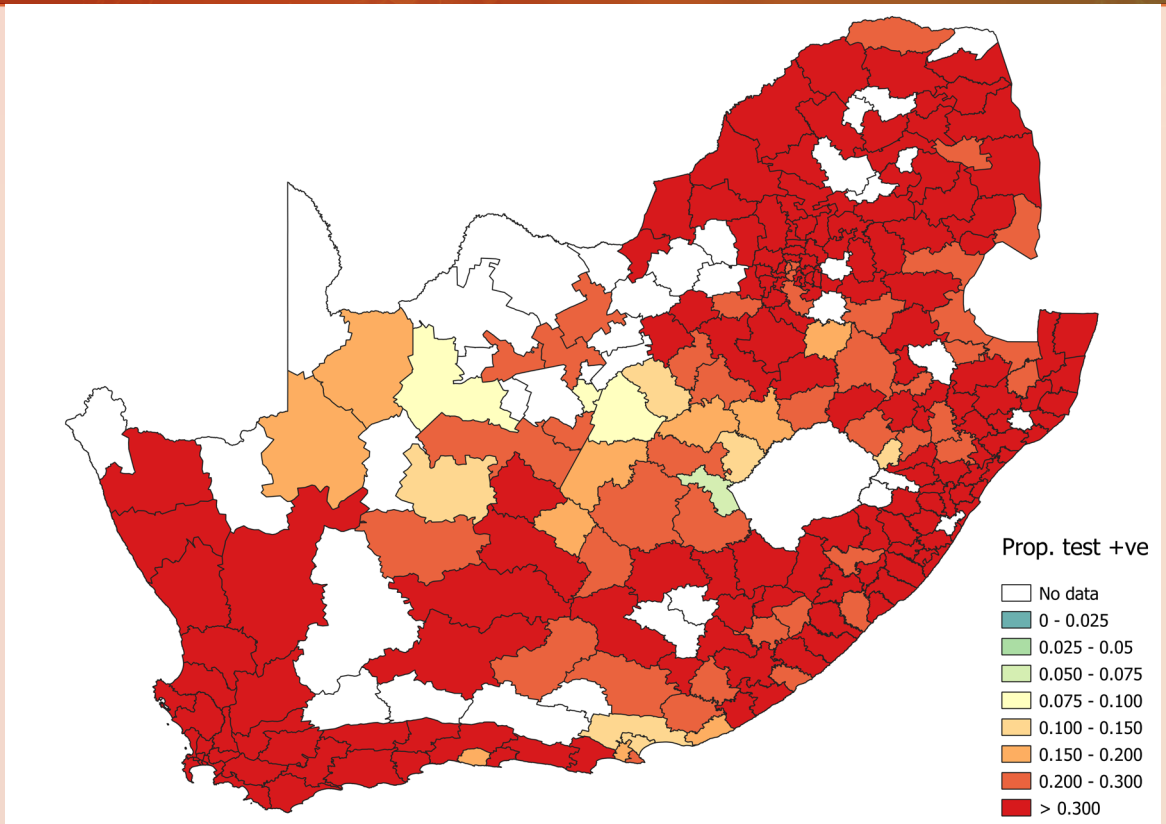


**Figure 10.** Proportion testing positive by health sub-district in South Africa for the week of 27 December 2020 – 2 January 2021. Areas shaded white represent districts in which either (i) no tests were conducted, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CPTE | CT Eastern | WC011 | Matzikama | WC025 | Breede Valley | WC043 | Mossel Bay |
| CPTK | CT Khayelitsha | WC012 | Cederberg | WC026 | Langeberg | WC044 | George |
| CPTM | CT Mitchells Plain | WC013 | Bergrivier | WC031 | Theewaterskloof | WC045 | Oudtshoorn |
| CPTN | CT Northern | WC014 | Saldanha Bay | WC032 | Overstrand | WC047 | Bitou |
| CPTP | CT Klipfontein | WC015 | Swartland | WC033 | Cape Agulhas | WC048 | Knysna |
| CPTS | CT Southern | WC022 | Witzenberg | WC034 | Swellendam | WC051 | Laingsburg |
| CPTT | CT Tygerberg | WC023 | Drakenstein | WC041 | Kannaland | WC052 | Prince Albert |
| CPTW | CT Western | WC024 | Stellenbosch | WC042 | Hessequa | WC053 | Beaufort West |

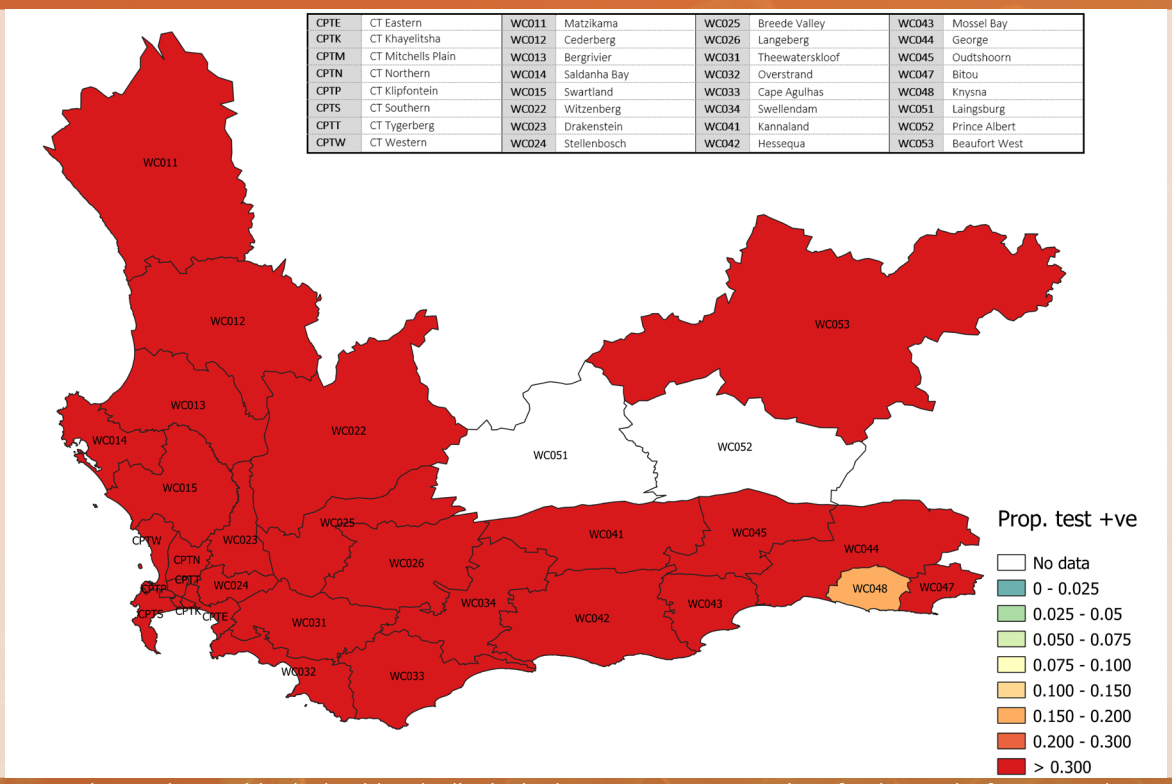


**Figure 11.** Proportion testing positive by health sub-district in the Western Cape province for the week of 27 December 2020 – 2 January 2021. Areas shaded white represent districts in which either (i) no tests were conducted, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%

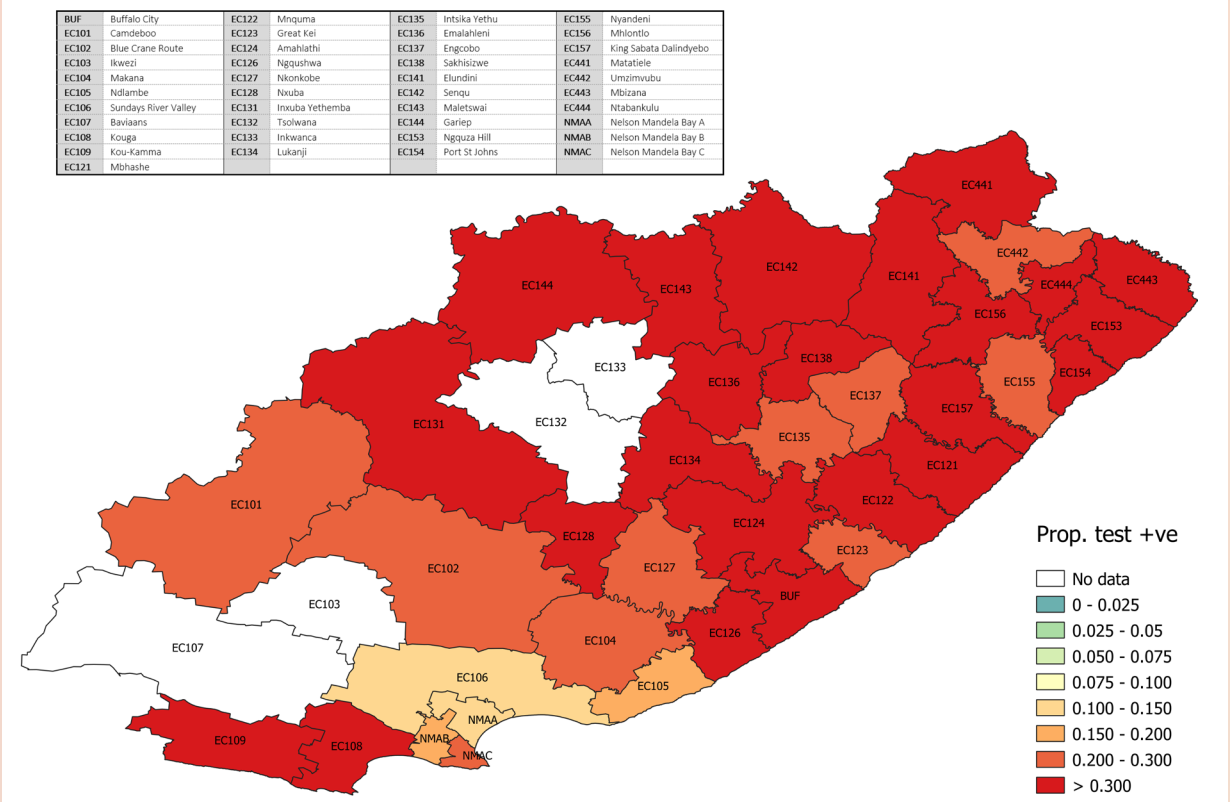


**Figure 12.** Proportion testing positive by health sub-district in the Eastern Cape province for the week of 27 December 2020 – 2 January 2021. Areas shaded white represent districts in which either (i) no tests were conducted, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

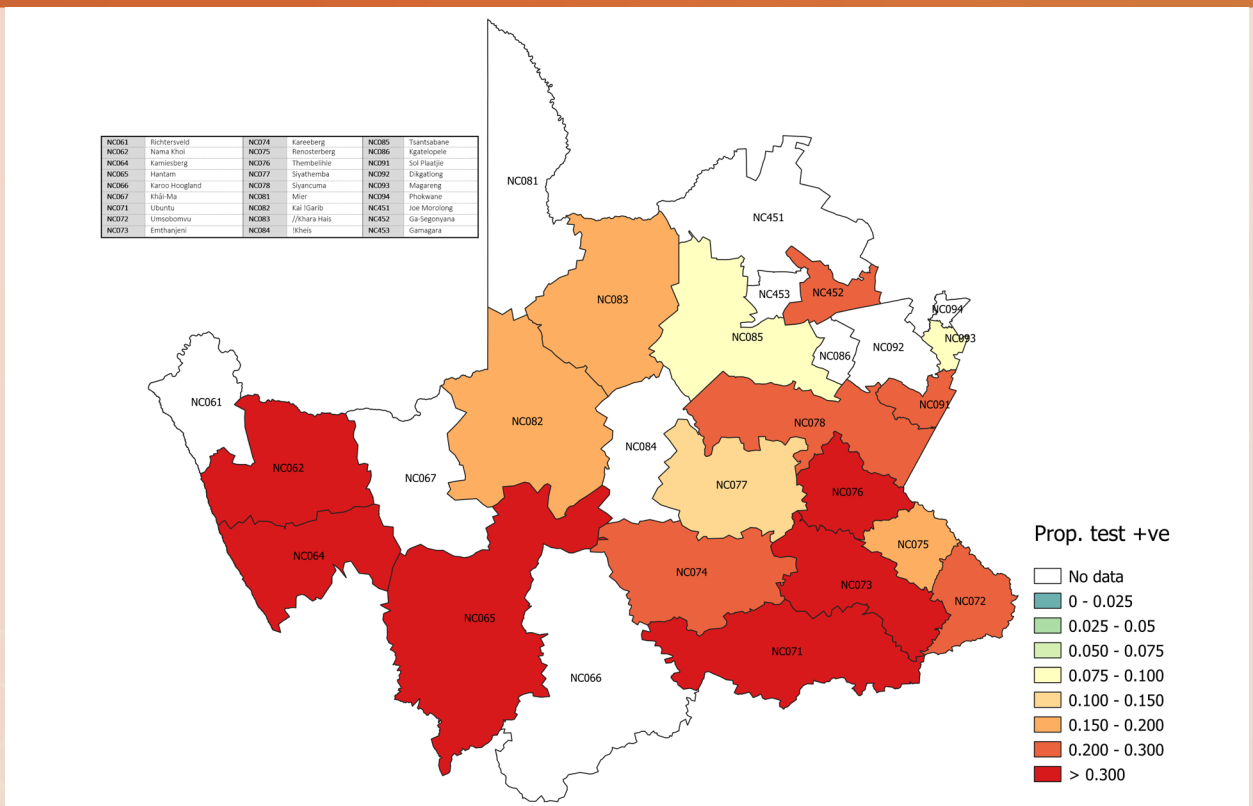


**Figure 13.** Proportion testing positive by health sub-district in Northern Cape Province for the week of 27 December 2020 – 2 January 2021. Areas shaded white represent districts in which either (i) no tests were conducted, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| MAN | Mangaung | FS181 | Masilonyana | FS191 | Setsoto | FS196 | Mantsopa |
| 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 | Nala | FS195 | Phumelela | FS205 | Mafube |

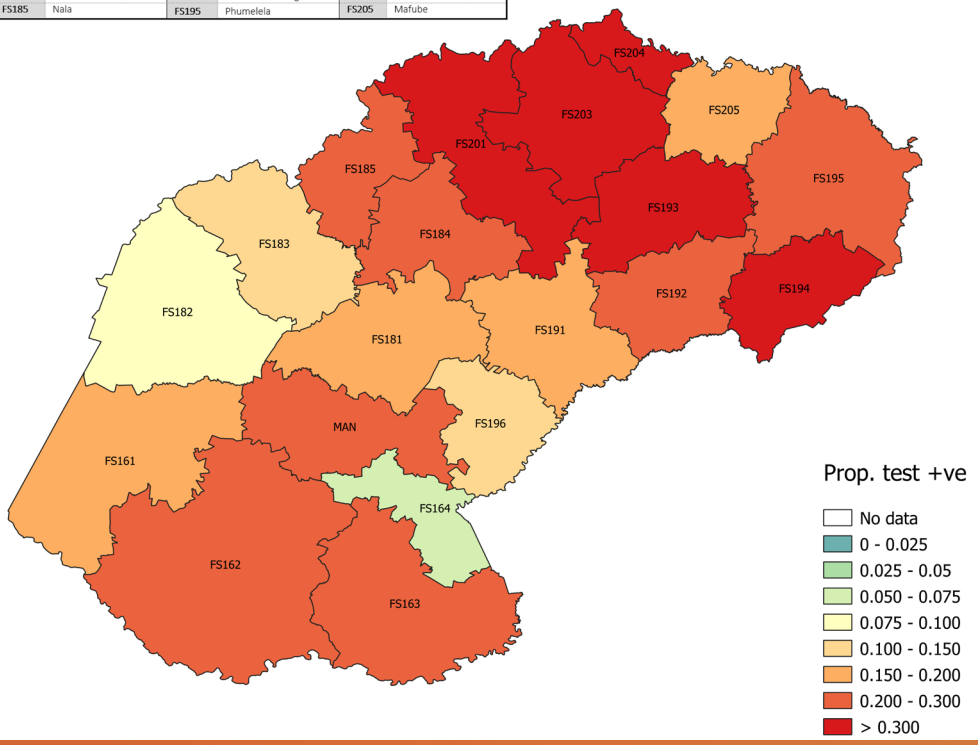


**Figure 14.** Proportion testing positive by health sub-district in Free State Province for the week of 27 December 2020 – 2 January 2021. Areas shaded white represent districts in which either (i) no tests were conducted, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

| | | | | | |
|---|---|---|---|---|---|
| ETHN | eThekwini North | KZN233 | Indaka | KZN273 | The Big 5 False Bay |
| ETHS | eThekwini South | KZN234 | Umtshezi | KZN274 | Hlabisa |
| ETHS | eThekwini South | KZN235 | Okhahlamba | KZN275 | Mtubatuba |
| ETHW | eThekwini West | KZN236 | Imbabazane | KZN281 | Mfolozi |
| KZN211 | Vulamehlo | KZN241 | Endumeni | KZN282 | uMhlathuze |
| KZN212 | Umdoni | KZN242 | Nqutu | KZN283 | Ntambanana |
| KZN213 | Umzumbe | KZN244 | Msinga | KZN284 | uMlalazi |
| KZN214 | uMuziwabantu | KZN245 | Umvoti | KZN285 | Mthonjaneni |
| KZN215 | Ezingoleni | 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 | Ingwe |
| KZN225 | The Msunduzi | KZN265 | Nongoma | KZN432 | Kwa Sani |
| KZN226 | Mkhambathini | KZN266 | Ulundi | KZN433 | Greater Kokstad |
| KZN227 | Richmond | KZN271 | Umhlabuyalingana | KZN434 | Ubuhlebezwe |
| KZN232 | Emnambithi/Ladysmith | KZN272 | Jozini | KZN435 | Umzimkhulu |

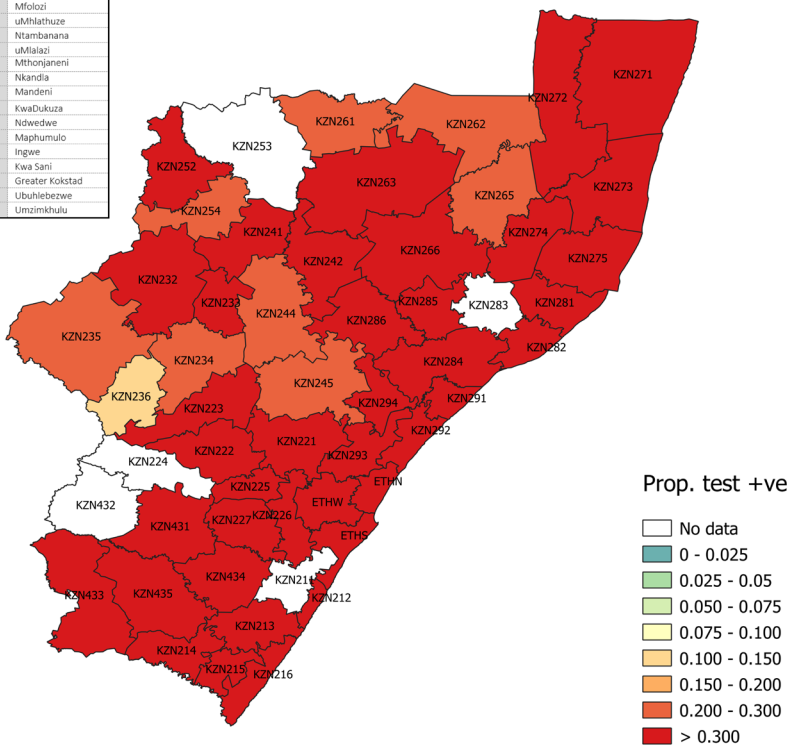


**Figure 15.** Proportion testing positive by health sub-district in KwaZulu-Natal Province for the week of 27 December 2020 – 2 January 2021. Areas shaded white represent districts in which either (i) no tests were conducted, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

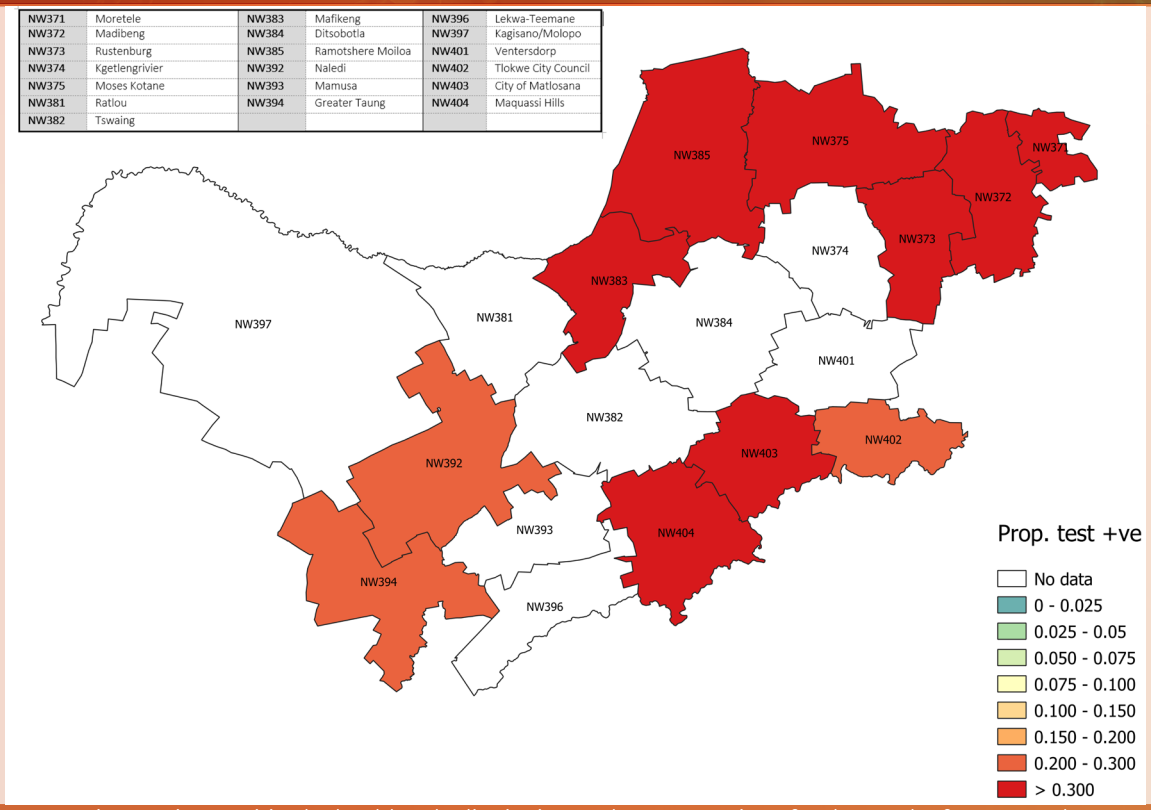


**Figure 16.** Proportion testing positive by health sub-district in North West Province for the week of 27 December 2020 – 2 January 2021. Areas shaded white represent districts in which either (i) no tests were conducted, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

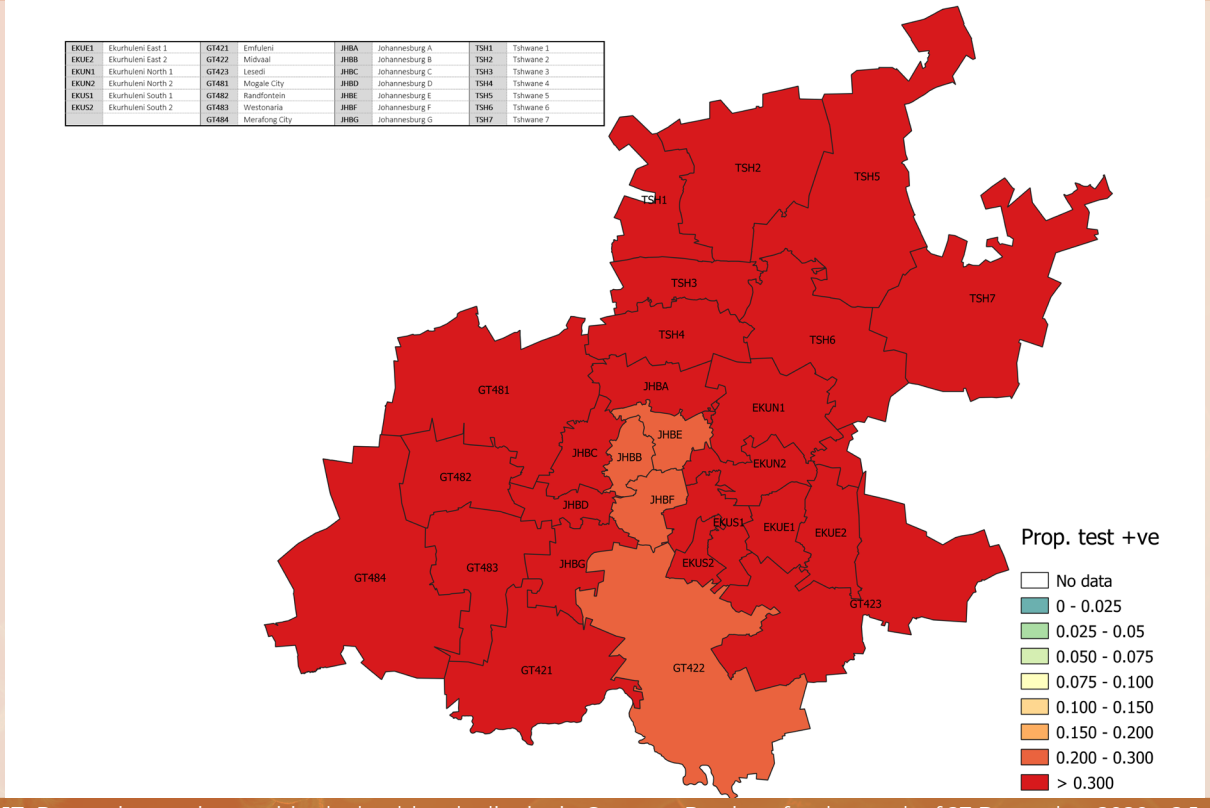


**Figure 17.** Proportion testing positive by health sub-district in Gauteng Province for the week of 27 December 2020 – 2 January 2021. Areas shaded white represent districts in which either (i) no tests were conducted, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

| | | | | | |
|---|---|---|---|---|---|
| MP301 | Albert Luthuli | MP307 | Govan Mbeki | MP316 | Dr JS Moroka |
| MP302 | Msukaligwa | MP311 | Victor Khanye | MP321 | Thaba Chweu |
| MP303 | Mkhondo | MP312 | Emalahleni | MP322 | Mbombela |
| MP304 | Pixley Ka Seme | MP313 | Steve Tshwete | MP323 | Umjindi |
| MP305 | Lekwa | MP314 | Emakhazeni | MP324 | Nkomazi |
| MP306 | Dipaleseng | MP315 | Thembisile | MP325 | Bushbuckridge |

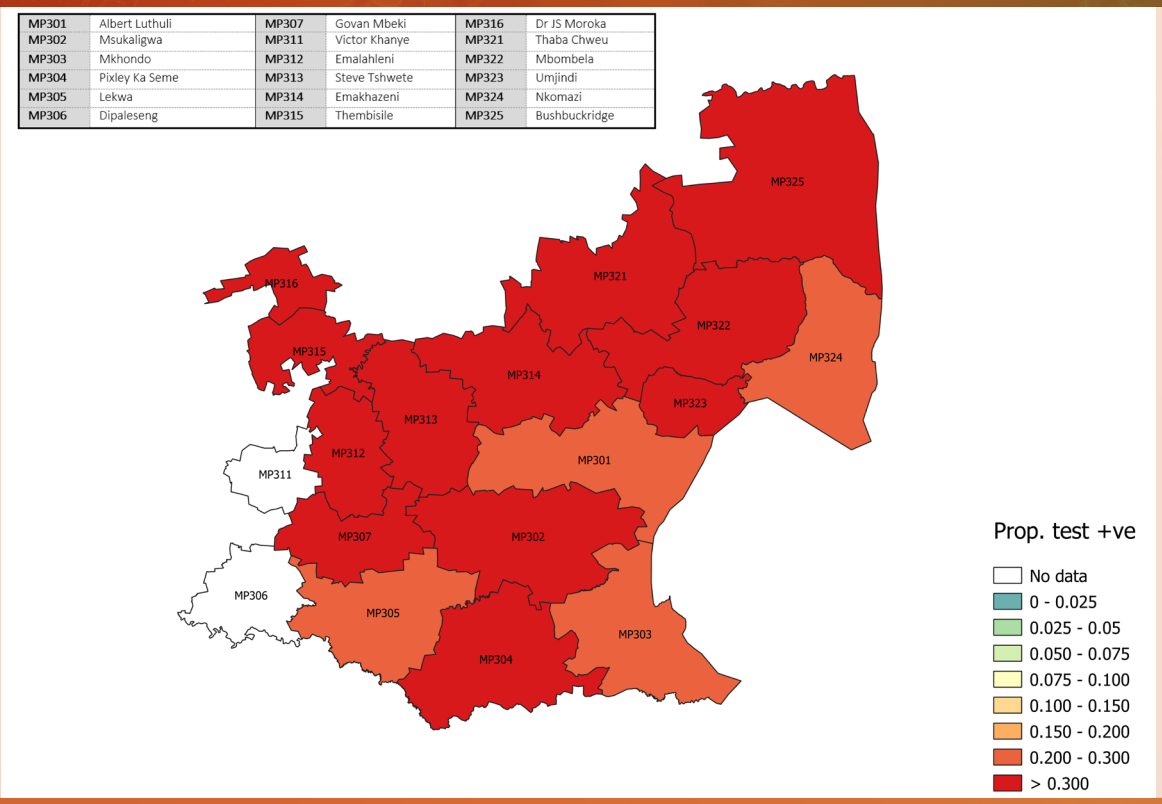


**Figure 18.** Proportion testing positive by health sub-district in Mpumalanga Province for the week of 27 December 2020 – 2 January 2021. Areas shaded white represent districts in which either (i) no tests were conducted, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

| | | | | | |
|---|---|---|---|---|---|
| LIM331 | Greater Giyani | LIM351 | Blouberg | LIM365 | Modimolle |
| LIM332 | Greater Letaba | LIM352 | Aganang | LIM366 | Bela-Bela |
| LIM333 | Greater Tzaneen | LIM353 | Molemole | LIM367 | Mogalakwena |
| LIM334 | Ba-Phalaborwa | LIM354 | Polokwane | LIM471 | Ephraim Mogale |
| LIM335 | Maruleng | LIM355 | Lepele-Nkumpi | LIM472 | Elias Motsoaledi |
| LIM341 | Musina | LIM361 | Thabazimbi | LIM473 | Makhuduthamaga |
| LIM342 | Mutale | LIM362 | Lephalale | LIM474 | Fetakgomo |
| LIM343 | Thulamela | LIM364 | Mookgopong | LIM475 | Greater Tubatse |
| LIM344 | Makhado | | | | |

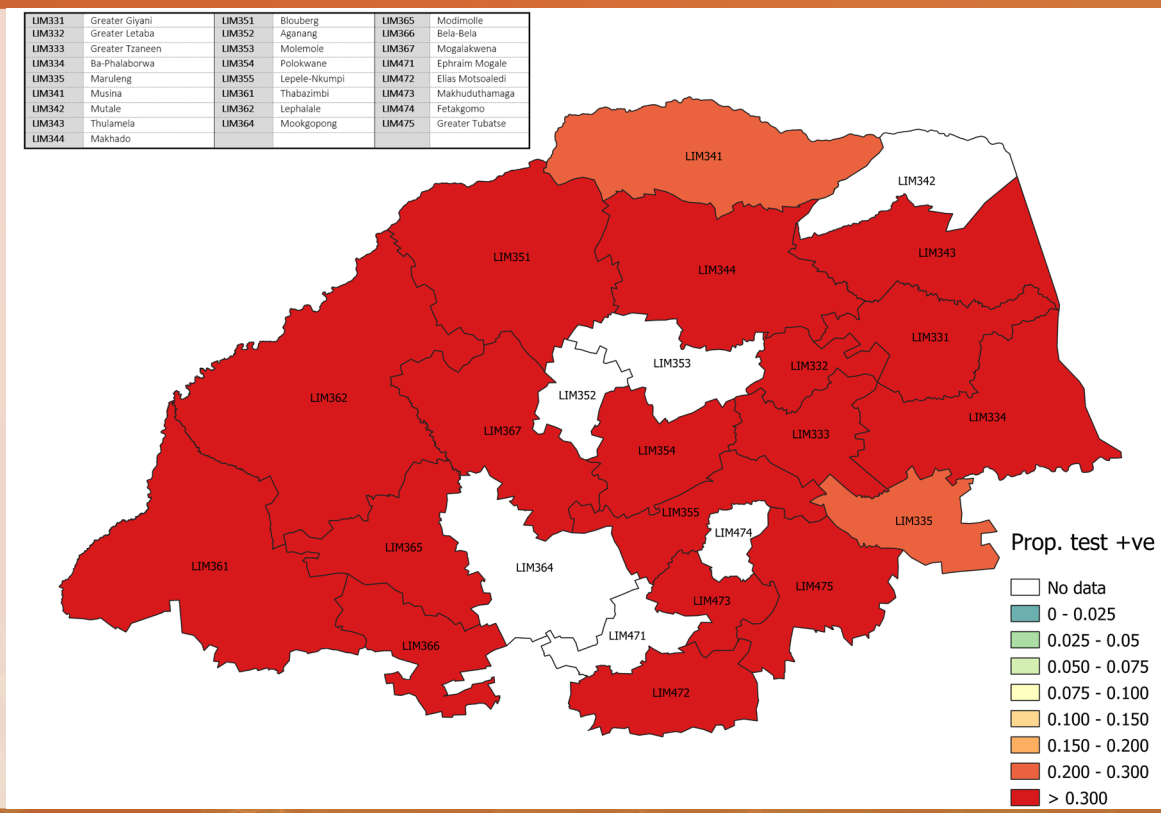


**Figure 19.** Proportion testing positive by health sub-district in Limpopo Province for the week of 27 December 2020 – 2 January 2021. Areas shaded white represent districts in which either (i) no tests were conducted, (ii) all tests were negative, or (iii) the confidence interval exceeded 30%.

## Testing by patient admission status

In week 53 of 2020, 42.8% of tests in the public sector were performed for hospitalised patients (Figure 20). The proportion of inpatient tests was highest in North West (70.1%), Limpopo (57.7%) and KwaZulu-Natal (51.5%) provinces. Comparing week 53 to the previous week, the proportion of inpatient tests increased in four provinces: Eastern Cape, North West, Mpumalanga and Limpopo. The percentage testing positive in week 53 remained lower among inpatients (38.8%) compared to outpatients (41.3%), and increased among both inpatients (34.3 to 38.8%) and outpatients (34.9% to 41.3%) (Figure 21). In the public sector in week 53 of 2020 the mean laboratory turnaround time continued to be lower for inpatients (2.5 days) compared to outpatients (3.8 days) (Figure 22).

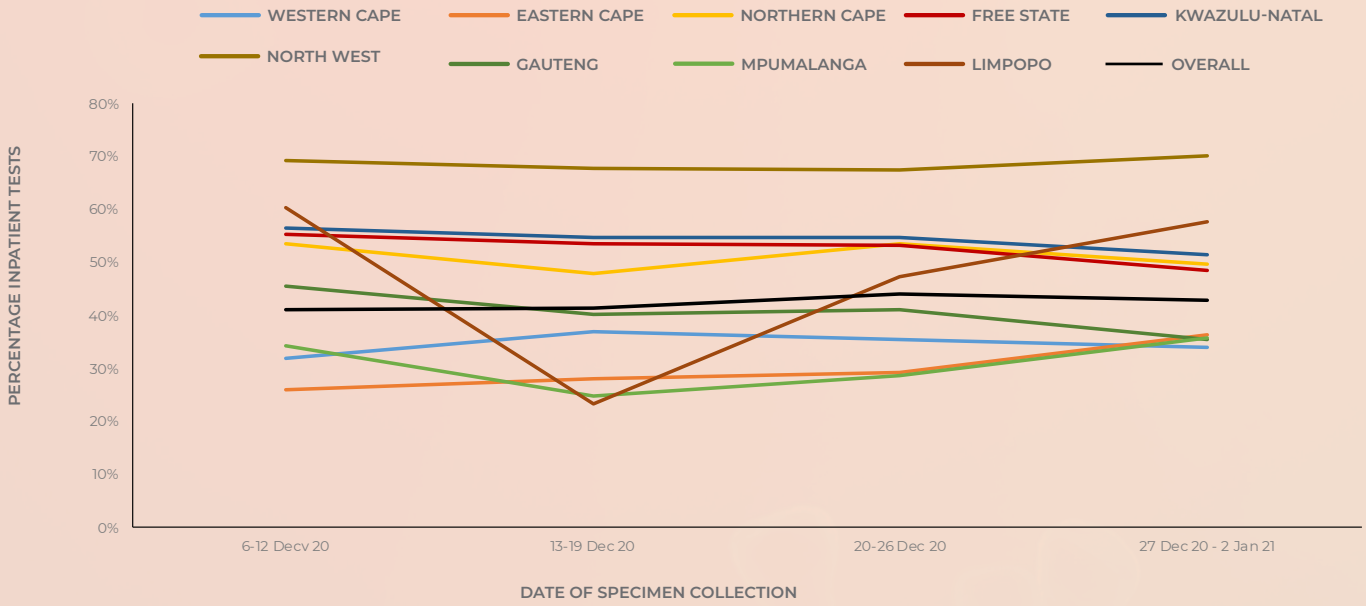


**Figure 20.** Percentage of inpatient tests performed in the public sector by province, 6 December 2020 – 2 January 2021

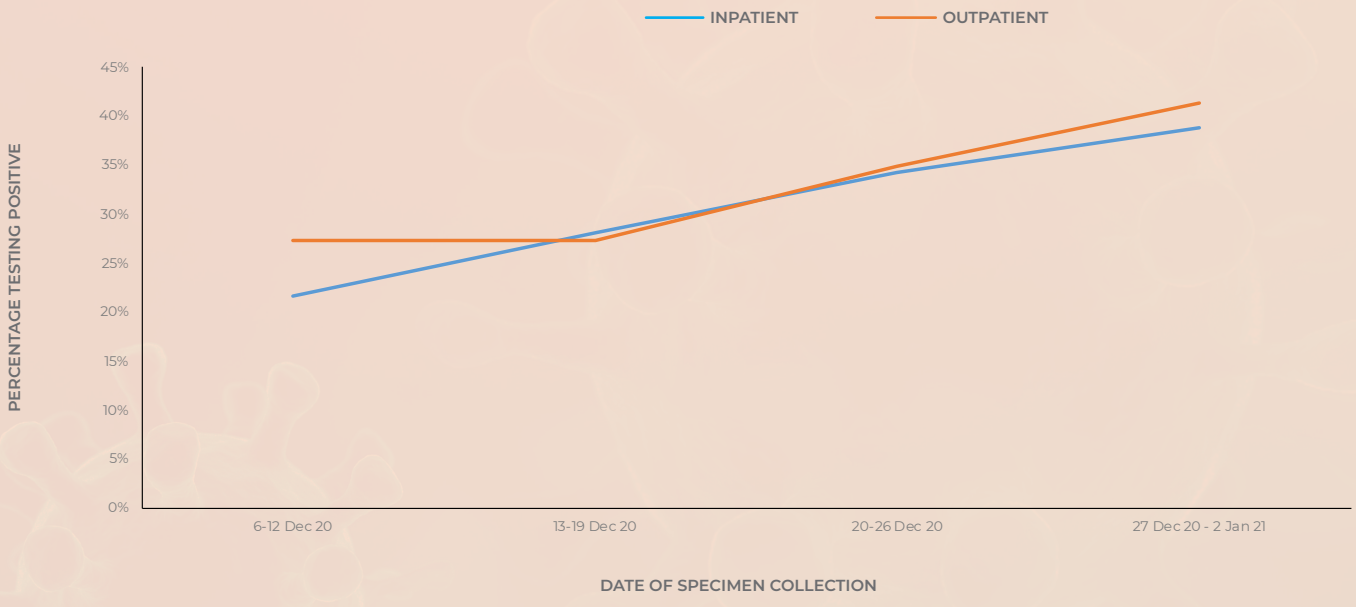


**Figure 21.** Percentage testing positive by patient admission status in the public sector, 6 December 2020 – 2 January 2021

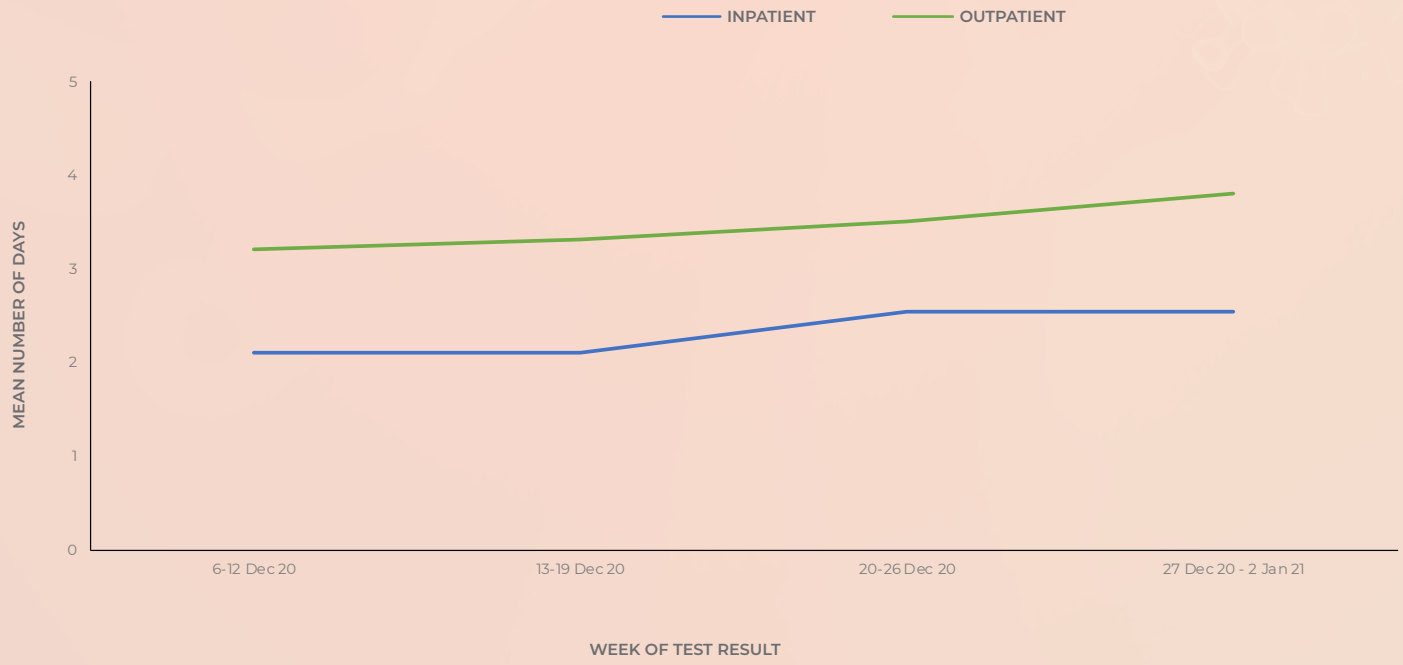


**Figure 22.** Mean number of days between date of specimen collection and date of test result, by patient admission status and date of test result in the public sector, South Africa, 6 December 2020 – 2 January 2021

## Testing by age and sex

The mean age of individuals tested in week 53 of 2020 was 39.1 years, similar to the previous week's (39.2 years). The mean age of individuals with a positive test in week 52 of 2020 was 42.3 years, slightly lower than the previous week's (41.8 years). The mean age of individuals with a positive test in week 53 of 2020 was similar in females (42.4 years) compared to males (42.3 years, P=0.5809) (Table 7). The sex ratio (the number of males per 100 females) of individuals with a positive test in week 53 of 2020 was 74.7. In both sexes the proportion testing positive in week 53 of 2020 was higher than or similar to the previous week in all age groups (Figure 23).

**Table 7.** Mean age and sex ratio of individuals tested, South Africa, 6 December 2020 – 2 January 2021

| | | Mean age of tested (years) | | Mean age of positive tests (years) | | Sex ratios (males / 100 females) | |
|---|---|---|---|---|---|---|---|
| Week number | Week beginning | Males | Females | Males | Females | Tested | Positive tests |
| 50 | 6 December | 37.6 | 38.5 | 39.7 | 40.5 | 86.6 | 75.7 |
| 51 | 13 December | 37.9 | 38.9 | 41.4 | 42.3 | 91.8 | 76.4 |
| 52 | 20 December | 39.2 | 39.2 | 42.4 | 42.8 | 97.4 | 79.6 |
| 53 | 27 December | 38.8 | 39.5 | 42.3 | 42.4 | 81.7 | 74.7 |


**Figure 23.** Weekly proportion testing positive by age group and sex, South Africa, 13 December 2020 – 2 January 2021

From week 50 to week 53 of 2020, the percentage testing positive increased by 16.2% in males (from 20.9% to 37.1%) and increased by 16.6% in females (from 24.0% to 40.6%) (Table 8). In week 53 of 2020, the percentage testing positive was higher in females compared to males in the 0-19 years (P<0.001), 20-39 years (P<0.001), 40-59 years (P<0.001) and 60-69 years (P=0.002) age groups, and did not differ in individuals aged ≥70 years (P=0.099).

**Table 8.** Percentage testing positive by sex and week, South Africa, 6 December 2020 – 2 January 2021

| Age (years) | 6-12 Dec 20 | | 13-19 Dec 20 | | 20-26 Dec 20 | | 27 Dec 20 - 2 Jan 21 | |
|---|---|---|---|---|---|---|---|---|
| | Male | Female | Male | Female | Male | Female | Male | Female |
| 0-19 | 16.8% | 19.1% | 15.3% | 17.4% | 19.2% | 22.0% | 23.3% | 25.8% |
| 20-39 | 20.6% | 22.7% | 22.8% | 26.5% | 28.0% | 32.7% | 34.6% | 38.5% |
| 40-59 | 22.1% | 26.9% | 25.3% | 32.6% | 29.7% | 40.8% | 41.8% | 45.8% |
| 60-69 | 24.6% | 27.8% | 32.6% | 35.9% | 40.3% | 45.3% | 46.3% | 48.6% |
| 70+ | 24.4% | 23.7% | 31.9% | 33.3% | 42.6% | 42.5% | 48.3% | 46.8% |
| **Total** | **20.9%** | **24.0%** | **23.6%** | **28.4%** | **29.0%** | **35.5%** | **37.1%** | **40.6%** |

### 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) 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.

## CONCLUSIONS

Weekly testing volumes peaked in week 28 (beginning 5 July), decreased weekly to week 39 (beginning 20 September) and have subsequently increased. The number of tests performed in week 53 of 2020 was higher than the number of weekly tests performed in weeks 31 to 50. Gauteng (29.4%), KwaZulu-Natal (27.9%), Western Cape (19.4%), and Eastern Cape (7.7%) provinces performed the majority of tests in the past week. Western Cape (614 per 100,000 persons), KwaZulu-Natal (537 per 100,000 persons), Gauteng (423 per 100,000 persons) and Northern Cape (320 per 100,000 persons) provinces had the highest testing rates in week 53 of 2020. The overall laboratory turnaround time in week 53 of 2020 was 1.8 days; 2.8 days in the public sector and 0.8 days in the private sector.

The percentage testing positive decreased from a peak of 30.3% in week 29 to 9.4% in week 43 of 2020, then subsequently increasing again. In week 53 of 2020 the percentage testing positive was 38.9%, the highest observed since testing began. The percentage testing positive was highest in Limpopo (50.7%), Western Cape (44.9%), KwaZulu-Natal (42.2%) and North West (38.7%). Percentages testing positive were between 25.2% -36.1% in Eastern Cape, Northern Cape, Free State, Gauteng and Mpumalanga. In week 53 of 2020, compared to the previous week, the percentage testing positive increased in all provinces except Eastern Cape. Of the 25 districts with the highest proportions testing positive in week 53 of 2020, 9 were in Western Cape, 9 in Limpopo and 7 in KwaZulu-Natal.