COVID-19 Weekly Testing Summary

Week 35 of 2022

This report summarises national laboratory PCR testing for SARS-CoV-2, the virus causing COVID-19, in South Africa. This report is based on data for specimens reported up to 3 September 2022 (Week 35 of 2022).

NOTE: From week 28 onwards, only PCR tests are included in the report (i.e. excluding antigen tests).

Highlights:

- In the period 1 March 2020 through 3 September 2022, 21,093,593 PCR tests for SARS-CoV-2 have been reported nationally. The number of PCR tests reported in week 35 of 2022 (n=27,077) was 5.9% lower than the number of PCR tests reported in the previous week (n= 28,761 in week 34).
- In week 35 the PCR testing rate was 45 per 100,000 persons. The overall PCR testing rate decreased from the previous week (47 per 100,000 persons in week 34).
- The PCR testing rate in week 35 was highest in Gauteng (71 per 100,000 persons) and lowest in Limpopo (8 per 100,000 persons).
- In week 35, the percentage testing positive was 4.1%, which did not significantly change from the previous week (4.1% in week 34, p=0.8).
- The percentage testing positive in week 35 was highest in Limpopo (9.6%), followed by North West (6.1%). The percentage testing positive was <5.0% in all other provinces.
- In week 35, compared to the previous week, the percentage testing positive increased in North West (p=0.005) and Mpumalanga (p=0.012) but decreased in Kwa-Zulu-Natal (p=0.012). The percentage testing positive did not change in all other provinces (p≥0.05).
- The percentage testing positive has increased in the elderly age groups in the past few weeks, and in week 35 was highest in the ≥80 years age group (10.0%), followed by 75-79 years (8.0%).





Date of specimen collection

Figure 1. Number of SARS-CoV-2 PCR tests reported by date of specimen collection, South Africa, 4 October 2020 – 3 September 2022. Blue line shows the 7-day moving average of the number of PCR tests reported. Grey bars highlight weekend days and public holidays.

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

Week number	Week	No. of PCR tests	No. of positive	Percentage testing
	beginning	n (%)	PCR tests	positive (%)
1	02-Jan-22	176313 (0.8)	45450	25.8
2	09-Jan-22	160317 (0.8)	27665	17.3
3	16-Jan-22	150039 (0.7)	19105	12.7
4	23-Jan-22	153461 (0.7)	20128	13.1
5	24-Jan-22	148520 (0.7)	17693	11.9
6	06-Feb-22	147887 (0.7)	16071	10.9
7	13-Feb-22	140050 (0.7)	14760	10.5
8	14-Feb-22	132986 (0.6)	13025	9.8
9	27-Feb-22	121525 (0.6)	10269	8.5
10	06-Mar-22	109453 (0.5)	8171	7.5
11	13-Mar-22	117605 (0.6)	7722	6.6
12	20-Mar-22	105316 (0.5)	7261	6.9
13	27-Mar-22	106351 (0.5)	7986	7.5
14	03-Apr-22	93774 (0.4)	7863	8.4
15	10-Apr-22	80638 (0.4)	8849	11.0
16	17-Apr-22	92537 (0.4)	17227	18.6
17	24-Apr-22	97816 (0.5)	23648	24.2
18	01-May-22	116954 (0.6)	32989	28.2
19	08-May-22	126869 (0.6)	34320	27.1
20	15-May-22	115216 (0.5)	26648	23.1
21	22-May-22	99441 (0.5)	17368	17.5
22	29-May-22	84433 (0.4)	10582	12.5
23	05-Jun-22	77853 (0.4)	7474	9.6
24	12-Jun-22	63241 (0.3)	4464	7.1
25	19-Jun-22	61517 (0.3)	3337	5.4
26	26-Jun-22	47938 (0.2)	2135	4.5
27	03-Jul-22	43115 (0.2)	1991	4.6
28	10-Jul-22	38497 (0.2)	1865	4.8
29	17-Jul-22	36436 (0.2)	1657	4.5
30	24-Jul-22	34775 (0.2)	1561	4.5
31	31-Jul-22	34342 (0.2)	1359	4.0
32	07-Aug-22	28590 (0.1)	1170	4.1
33	14-Aug-22	30840 (0.1)	1248	4.0
34	21-Aug-22	28761 (0.1)	1189	4.1
35	28-Aug-22	27077 (0.1)	1109	4.1





Week start date (week number) of sample collection

Figure 2. PCR testing rate per 100,000 persons by province and week of specimen collection, South Africa, 21 March 2021 – 3 September 2022





Date of specimen collection

Figure 3. Percentage of PCR tests positive for SARS-CoV-2 by date of specimen collection, South Africa, 1 March 2020 – 3 September 2022. Blue line shows the 7-day moving average of the percentage testing positive. Grey bars highlight weekend days and public holidays.

5

Table 2. Weekly number of PCR tests and positive tests reported by province, South Africa, 14 August – 3 September 2022

		14-20 Aug 2022		21-27 Aug 2022		28 Aug-3 Sep 2022		Change in percentage positive	
Province	Population ^a	No. of tests	No. positive tests (%)	No. of tests	No. positive tests (%)	No. of tests	No. positive tests (%)	Testing rate per 100,000	from previous week ^b
Western Cape	7113776	3413	173 (5.1)	3315	153 (4.6)	3395	135 (4.0)	48	-0.6%
Eastern Cape	6676590	1314	71 (5.4)	1201	49 (4.1)	1149	46 (4.0)	17	-0.1%
Northern Cape	1303047	392	7 (1.8)	381	10 (2.6)	262	4 (1.5)	20	-1.1%
Free State	2932441	1563	41 (2.6)	1535	49 (3.2)	1383	56 (4.0)	47	0.9%
KwaZulu-Natal	11513575	7462	198 (2.7)	7323	248 (3.4)	6375	169 (2.7)	55	-0.7%
North West	4122854	1106	51 (4.6)	1073	37 (3.4)	933	57 (6.1)	23	2.7%
Gauteng	15810388	12966	574 (4.4)	11488	538 (4.7)	11197	512 (4.6)	71	-0.1%
Mpumalanga	4743584	2100	79 (3.8)	1939	56 (2.9)	1902	84 (4.4)	40	1.5%
Limpopo	5926724	507	53 (10.5)	496	48 (9.7)	478	46 (9.6)	8	-0.1%
Unknown		17	1 (5.9)	10	1 (10.0)	3	0 (0.0)		
Total	60142978	30840	1248 (4.0)	28761	1189 (4.1)	27077	1109 (4.1)	45	0.0%

^a 2021 Mid-year population Statistics SA

^bCurrent week compared to previous week





Figure 4. Weekly percentage testing positive (PCR tests only) by province, South Africa, 14 August – 3 September 2022. The horizontal blue line shows the national mean for week 35, beginning 28 August 2022



Week start date (week number) of sample collection

Figure 5. Percentage testing positive (PCR tests only) by age group and week of specimen collection, South Africa, 3 October 2021 – 3 September 2022

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 and results of reported rapid antigen-based tests were included in this report until the week 27 report (week starting 3 July 2022). However, as of the week 28 report (week starting 10 July 2022), this report was updated to only include reported PCR tests due to incomplete and delayed reporting of antigen-based tests.

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 of 2020 to week 40 of 2021, 2020 estimates were used from week 1 of 2022, and 2021 estimates were used from week 2 of 2022 onwards). Categorical variables were compared using the chi-squared test, with a P-value<0.05 considered statistically significant.

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. antigen-based 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.