



COVID-19 Weekly Testing Summary

Week 37 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 17 September 2022 (Week 37 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 17 September 2022, 21,147,940 PCR tests for SARS-CoV-2 have been reported nationally. The number of PCR tests reported in week 37 of 2022 (n=25,641) was 5.8% lower than the number of PCR tests reported in the previous week (n= 27,225 in week 36).
- In week 37 the PCR testing rate was 43 per 100,000 persons. The overall PCR testing rate remained the same as the previous week (43 per 100,000 persons in week 36).
- The PCR testing rate in week 37 was highest in Gauteng (63 per 100,000 persons) and lowest in Limpopo (7 per 100,000 persons).
- In week 37, the percentage testing positive was 5.1%, which significantly increased from the previous week (4.6% in week 36, $p=0.03$).
- The percentage testing positive in week 37 was highest in North West (7.4%), followed by Gauteng (6.6%), Limpopo (6.6%) and Eastern Cape (5.1%). The percentage testing positive was $\leq 5.0\%$ in all other provinces.
- In week 37, compared to the previous week, the percentage testing positive increased significantly in Gauteng ($p=0.05$). The percentage testing positive did not change in all other provinces ($p>0.05$).
- The percentage testing positive in week 37 was highest in the 75-79 years age group (10.4%), followed by ≥ 80 years (9.7%), and has increased in these age groups in the past few weeks.



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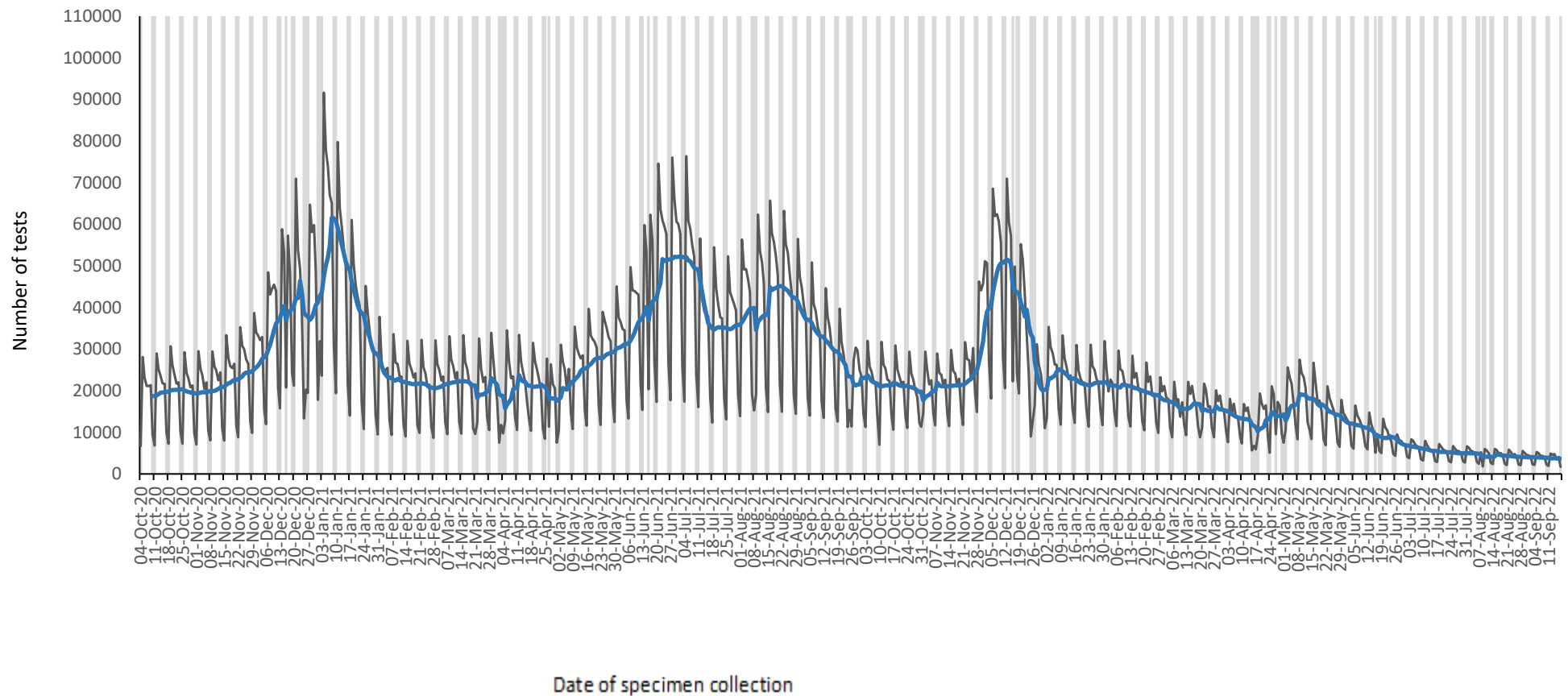


Figure 1. Number of SARS-CoV-2 PCR tests reported by date of specimen collection, South Africa, 4 October 2020 –17 September 2022. Blue line shows the 7-day moving average of the number of PCR tests reported. Grey bars highlight weekend days and public holidays.



Table 1. Weekly number of SARS-CoV-2 PCR tests and positive tests reported, South Africa, 2 January –17 September 2022

Week number	Week beginning	No. of PCR tests n (%)	No. of positive PCR tests	Percentage testing positive (%)
1	02-Jan-22	176315 (0.8)	45451	25.8
2	09-Jan-22	160319 (0.8)	27666	17.3
3	16-Jan-22	150041 (0.7)	19105	12.7
4	23-Jan-22	153461 (0.7)	20128	13.1
5	24-Jan-22	148524 (0.7)	17694	11.9
6	06-Feb-22	147888 (0.7)	16071	10.9
7	13-Feb-22	140051 (0.7)	14761	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	105317 (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	97817 (0.5)	23648	24.2
18	01-May-22	116957 (0.6)	32989	28.2
19	08-May-22	126873 (0.6)	34321	27.1
20	15-May-22	115220 (0.5)	26649	23.1
21	22-May-22	99442 (0.5)	17368	17.5
22	29-May-22	84458 (0.4)	10603	12.6
23	05-Jun-22	77894 (0.4)	7497	9.6
24	12-Jun-22	63270 (0.3)	4484	7.1
25	19-Jun-22	61546 (0.3)	3358	5.5
26	26-Jun-22	47975 (0.2)	2164	4.5
27	03-Jul-22	43141 (0.2)	2012	4.7
28	10-Jul-22	38510 (0.2)	1871	4.9
29	17-Jul-22	36439 (0.2)	1658	4.6
30	24-Jul-22	34779 (0.2)	1561	4.5
31	31-Jul-22	34368 (0.2)	1359	4.0
32	07-Aug-22	28628 (0.1)	1170	4.1
33	14-Aug-22	30884 (0.1)	1253	4.1
34	21-Aug-22	28823 (0.1)	1194	4.1
35	28-Aug-22	28116 (0.1)	1144	4.1
36	04-Sep-22	27225 (0.1)	1263	4.6
37	11-Sep-22	25641 (0.1)	1296	5.1

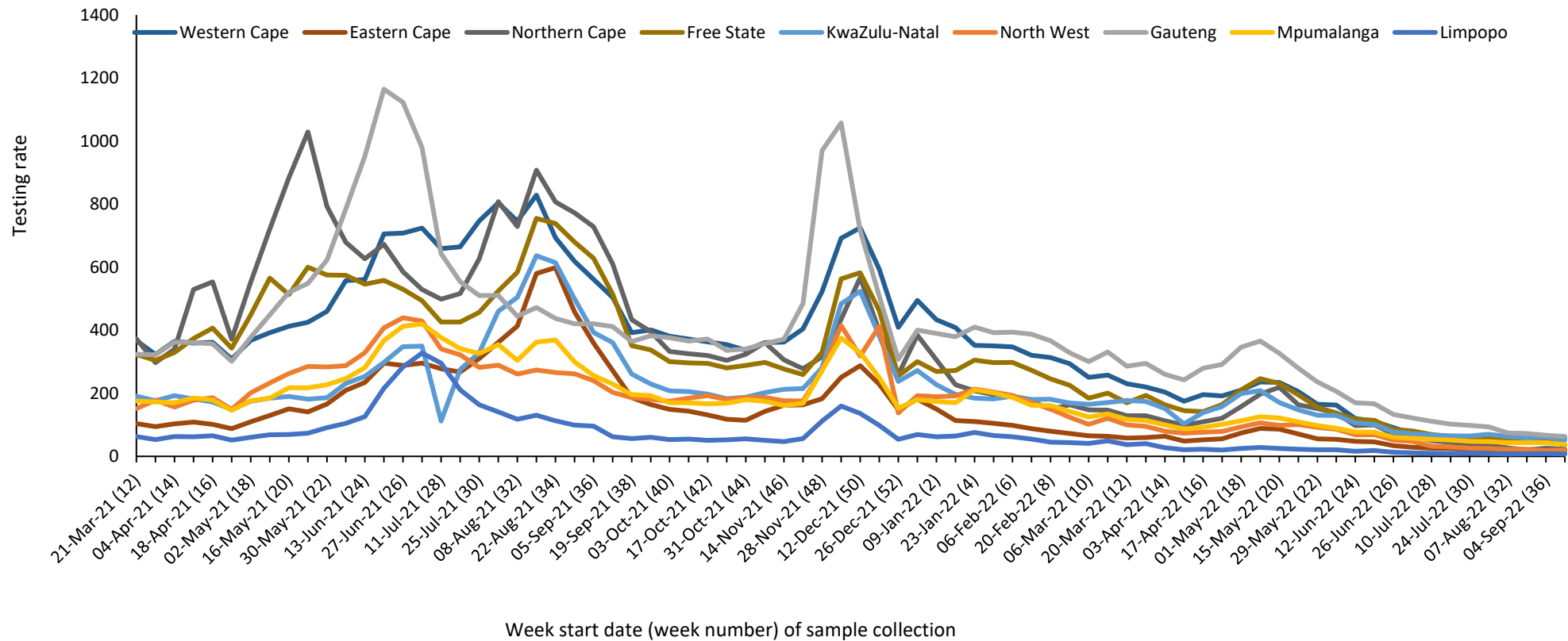


Figure 2. PCR testing rate per 100,000 persons by province and week of specimen collection, South Africa, 21 March 2021 – 17 September 2022

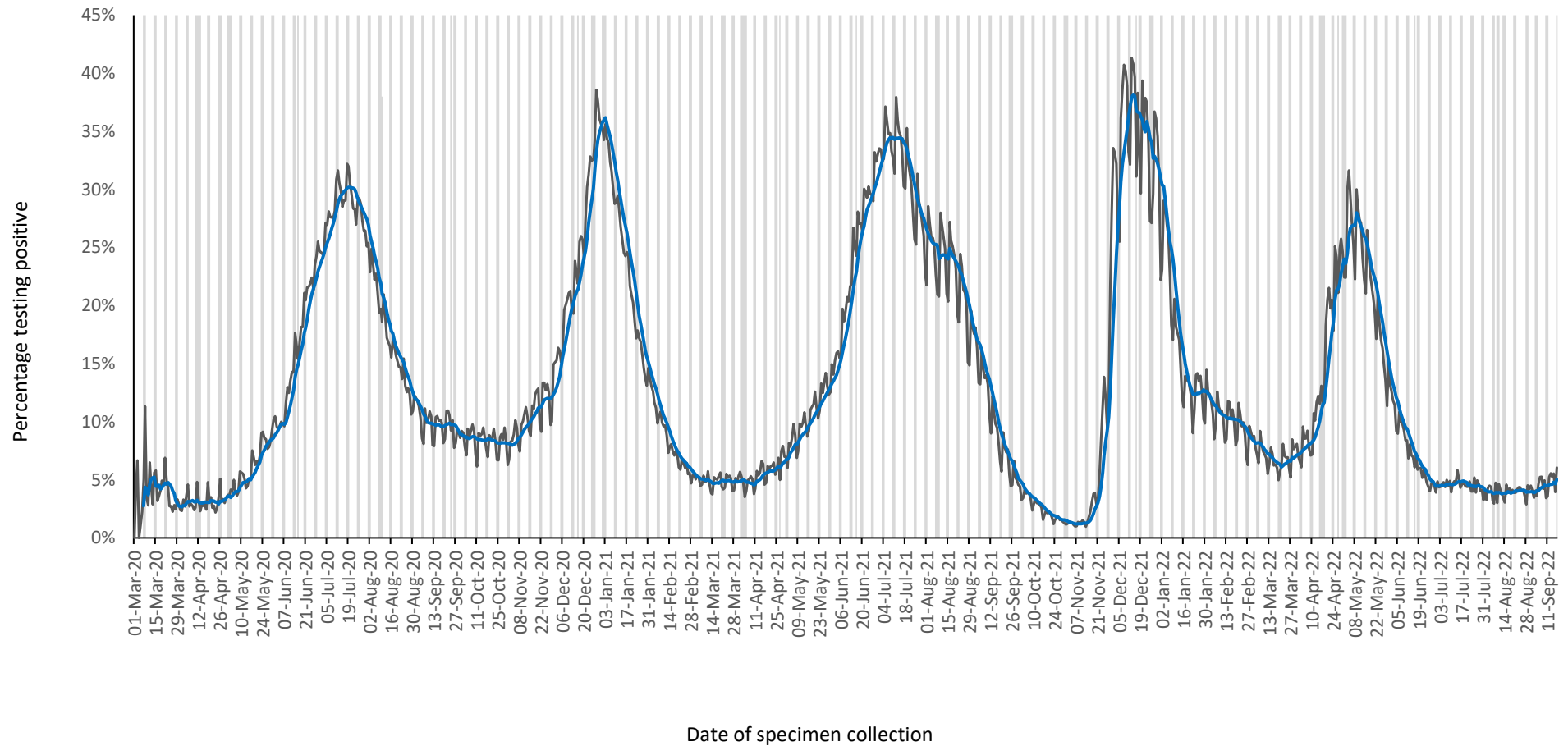


Figure 3. Percentage of PCR tests positive for SARS-CoV-2 by date of specimen collection, South Africa, 1 March 2020 – 17 September 2022. Blue line shows the 7-day moving average of the percentage testing positive. Grey bars highlight weekend days and public holidays.

Table 2. Weekly number of PCR tests and positive tests reported by province, South Africa, 21 August – 17 September 2022

Province	Population ^a	28 Aug - 3 Sep 2022		4 - 10 Sep 2022		11 - 17 Sep 2022		Testing rate per 100,000	Change in percentage positive from previous week ^b
		No. of tests	No. positive tests (%)	No. of tests	No. positive tests (%)	No. of tests	No. positive tests (%)		
Western Cape	7113776	3529	137 (3.9)	3326	165 (5.0)	4222	209 (5.0)	59	0.0%
Eastern Cape	6676590	1201	49 (4.1)	1119	50 (4.5)	1043	53 (5.1)	16	0.6%
Northern Cape	1303047	269	4 (1.5)	335	11 (3.3)	294	5 (1.7)	23	-1.6%
Free State	2932441	1498	60 (4.0)	1500	69 (4.6)	1074	54 (5.0)	37	0.4%
KwaZulu-Natal	11513575	6704	174 (2.6)	7010	185 (2.6)	5968	171 (2.9)	52	0.2%
North West	4122854	949	59 (6.2)	765	41 (5.4)	822	61 (7.4)	20	2.1%
Gauteng	15810388	11431	527 (4.6)	10586	625 (5.9)	9996	656 (6.6)	63	0.7%
Mpumalanga	4743584	2052	87 (4.2)	2063	82 (4.0)	1778	58 (3.3)	37	-0.7%
Limpopo	5926724	480	47 (9.8)	506	34 (6.7)	442	29 (6.6)	7	-0.2%
Unknown		3	0 (0.0)	15	1 (6.7)	2	0 (0.0)		
Total	60142978	28116	1144 (4.1)	27225	1263 (4.6)	25641	1296 (5.1)	43	0.5%

^a 2021 Mid-year population Statistics SA

^b Current week compared to previous week

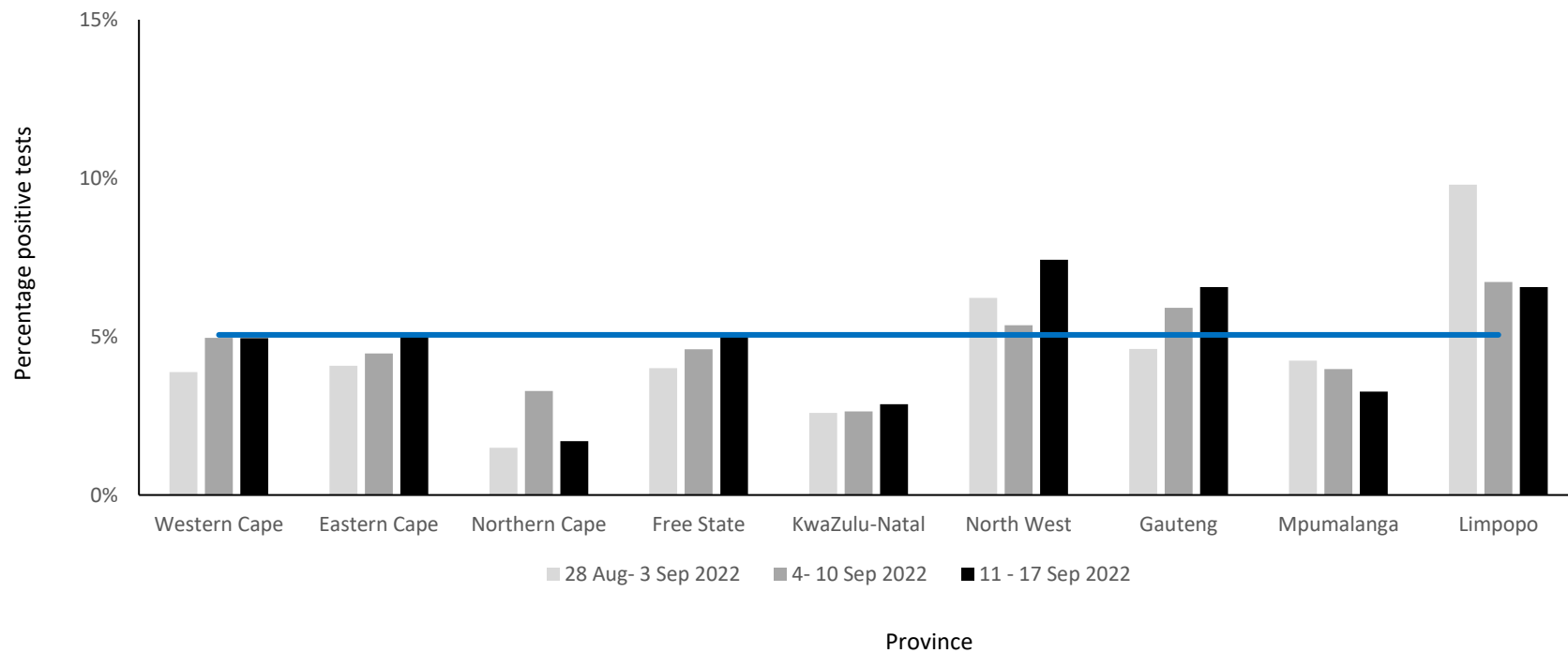


Figure 4. Weekly percentage testing positive (PCR tests only) by province, South Africa, 28 August – 17 September 2022. The horizontal blue line shows the national mean for week 37, beginning 11 September 2022

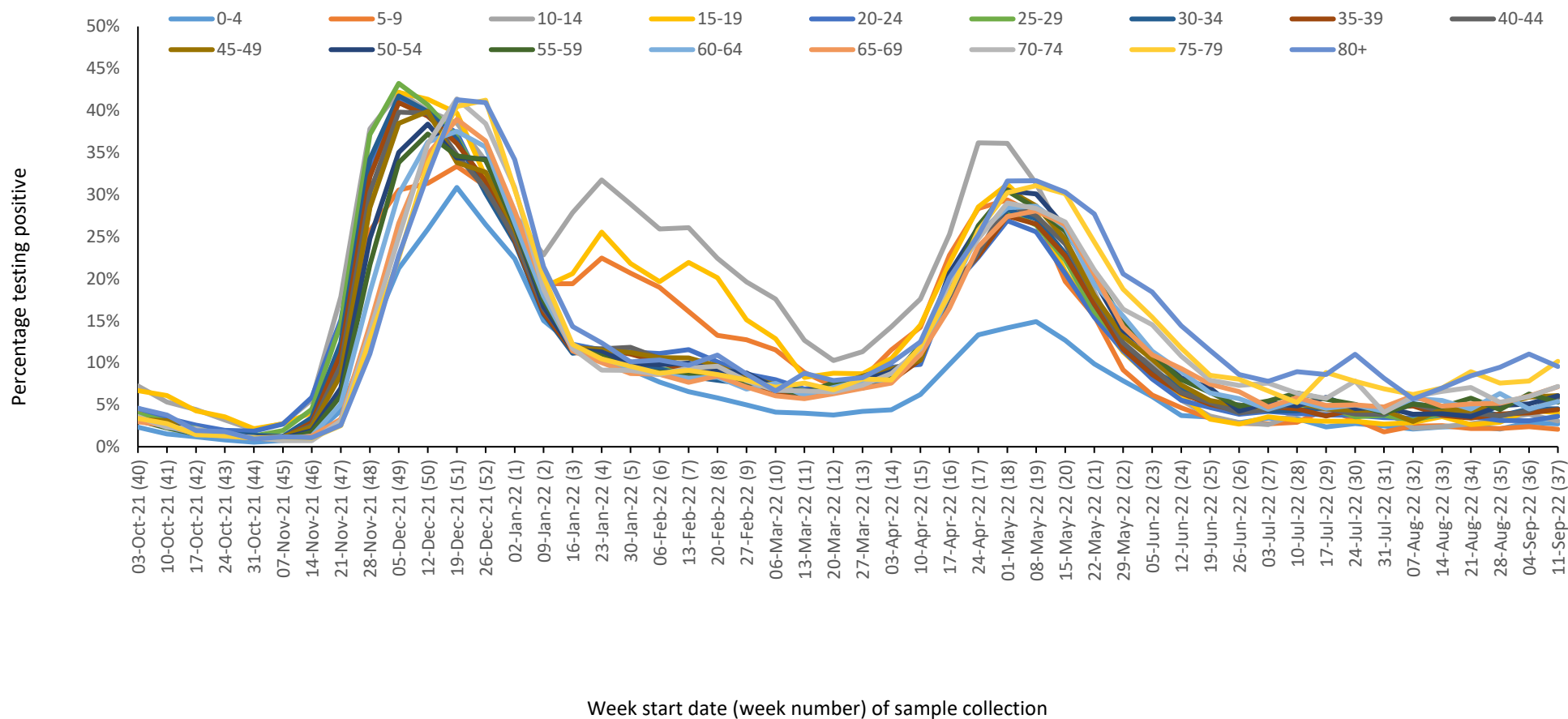


Figure 5. Percentage testing positive (PCR tests only) by age group and week of specimen collection, South Africa, 3 October 2021 – 17 September 2022

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 41 of 2021 to 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.