



COVID-19 Weekly Testing Summary

Week 45 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 12 November 2022 (week 45 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 12 November 2022, 21,308,365 PCR tests for SARS-CoV-2 have been reported nationally. The number of PCR tests reported in week 45 of 2022 (n=17,570) was 2.0% lower than the number of PCR tests reported in the previous week (n= 17,929 in week 44).
- In week 45 the PCR testing rate was 29 per 100,000 persons. The overall PCR testing rate did not change from the previous week (29 per 100,000 persons in week 44).
- The PCR testing rate in week 45 was highest in KwaZulu-Natal (50 per 100,000 persons), followed by Gauteng (39 per 100,000 persons) and lowest in Limpopo (5 per 100,000 persons).
- In week 45 the percentage testing positive was 12.8%, which increased significantly from the previous week (11.2% in week 44, $p<0.05$).
- The percentage testing positive in week 45 was highest in Northern Cape (15.0%), followed by the North West (14.9%), Gauteng (14.5%), Western Cape (13.6%), KwaZulu-Natal (12.3%), Free State and Limpopo (11.4%). The percentage testing positive was $<10.0\%$ in all other provinces.
- In week 45, compared to the previous week, the percentage testing positive increased significantly in the Western Cape, KwaZulu-Natal, North West and Mpumalanga ($p<0.05$). The percentage testing positive did not change in all other provinces ($p\geq 0.05$).
- The percentage testing positive in week 45 was highest in the 75-79 years' age group (21.9%), followed by the ≥ 80 years (21.6%) age group.



NATIONAL INSTITUTE FOR COMMUNICABLE DISEASES

Division of the National Health Laboratory Service

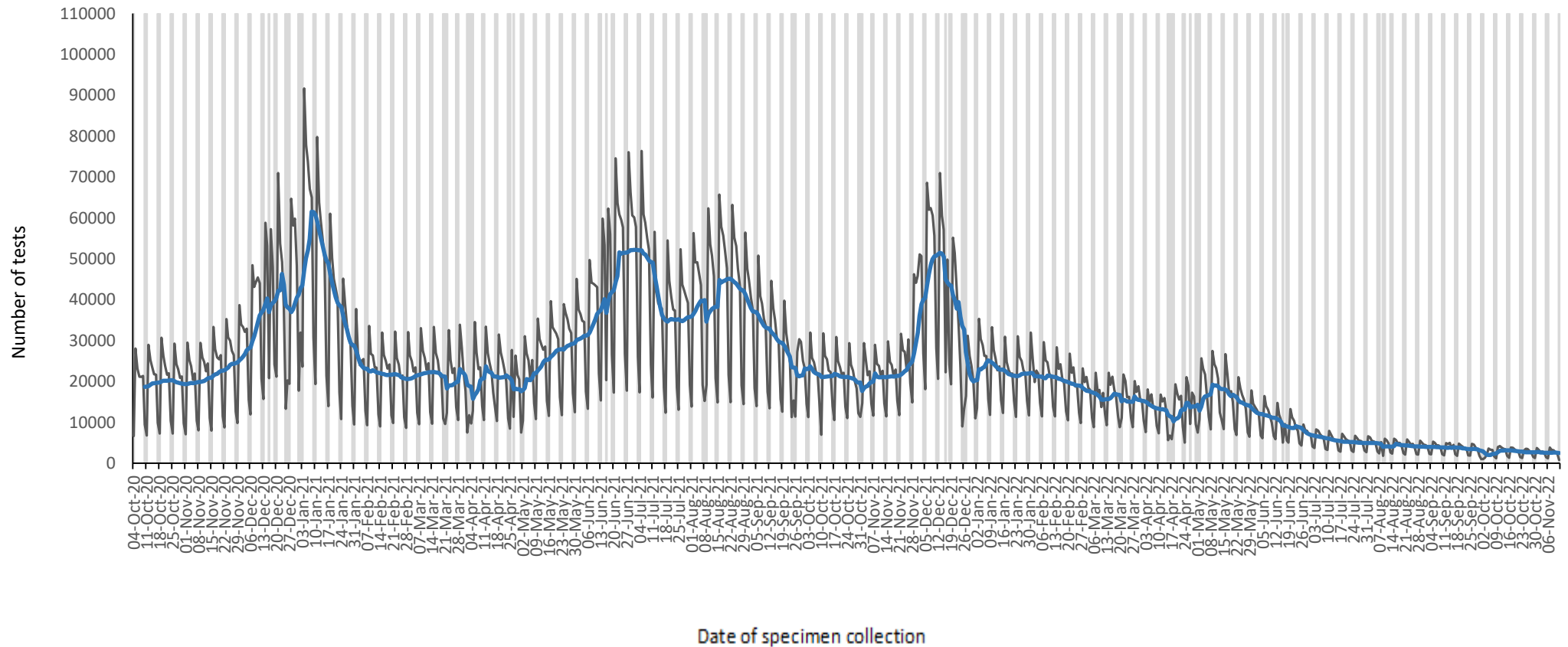


Figure 1. Number of SARS-CoV-2 PCR tests reported by date of specimen collection, South Africa, 4 October 2020 – 12 November 2022. Blue line shows the 7-day moving average of the number of PCR tests reported. Grey bars highlight weekend days and public holiday



Table 1. Weekly number of SARS-CoV-2 PCR tests and positive tests reported, South Africa, 2 January – 12 November 2022

Week number	Week beginning	No. of PCR tests n (%)	No. of positive PCR tests	Percentage positive (%)	testing
1	02-Jan-22	176322 (0.8)	45453	25.8	
2	09-Jan-22	160321 (0.8)	27666	17.3	
3	16-Jan-22	150050 (0.7)	19105	12.7	
4	23-Jan-22	153463 (0.7)	20128	13.1	
5	24-Jan-22	148527 (0.7)	17695	11.9	
6	06-Feb-22	147890 (0.7)	16071	10.9	
7	13-Feb-22	140053 (0.7)	14762	10.5	
8	14-Feb-22	132987 (0.6)	13026	9.8	
9	27-Feb-22	121531 (0.6)	10269	8.4	
10	06-Mar-22	109457 (0.5)	8171	7.5	
11	13-Mar-22	117608 (0.6)	7722	6.6	
12	20-Mar-22	105319 (0.5)	7261	6.9	
13	27-Mar-22	106361 (0.5)	7988	7.5	
14	03-Apr-22	93780 (0.4)	7864	8.4	
15	10-Apr-22	80640 (0.4)	8850	11.0	
16	17-Apr-22	92538 (0.4)	17228	18.6	
17	24-Apr-22	97821 (0.5)	23648	24.2	
18	01-May-22	117061 (0.5)	32991	28.2	
19	08-May-22	126890 (0.6)	34323	27.0	
20	15-May-22	115232 (0.5)	26650	23.1	
21	22-May-22	99452 (0.5)	17374	17.5	
22	29-May-22	84468 (0.4)	10606	12.6	
23	05-Jun-22	77908 (0.4)	7498	9.6	
24	12-Jun-22	63279 (0.3)	4488	7.1	
25	19-Jun-22	61550 (0.3)	3358	5.5	
26	26-Jun-22	47982 (0.2)	2165	4.5	
27	03-Jul-22	43162 (0.2)	2017	4.7	
28	10-Jul-22	38533 (0.2)	1882	4.9	
29	17-Jul-22	36467 (0.2)	1677	4.6	
30	24-Jul-22	34806 (0.2)	1574	4.5	
31	31-Jul-22	34399 (0.2)	1369	4.0	
32	07-Aug-22	28660 (0.1)	1177	4.1	
33	14-Aug-22	30921 (0.1)	1256	4.1	
34	21-Aug-22	28853 (0.1)	1200	4.2	
35	28-Aug-22	28151 (0.1)	1150	4.1	
36	04-Sep-22	27328 (0.1)	1268	4.6	
37	11-Sep-22	27054 (0.1)	1353	5.0	
38	12-Sep-22	24289 (0.1)	1331	5.5	
39	25-Sep-22	21258 (0.1)	1410	6.6	
40	02-Oct-22	16350 (0.1)	1168	7.1	
41	09-Oct-22	22154 (0.1)	2080	9.4	
42	16-Oct-22	20009 (0.1)	1935	9.7	
43	23-Oct-22	18741 (0.1)	1786	9.5	
44	30-Oct-22	17929 (0.1)	2016	11.2	
45	06-Nov-22	17570 (0.1)	2251	12.8	



NATIONAL INSTITUTE FOR COMMUNICABLE DISEASES

Division of the National Health Laboratory Service

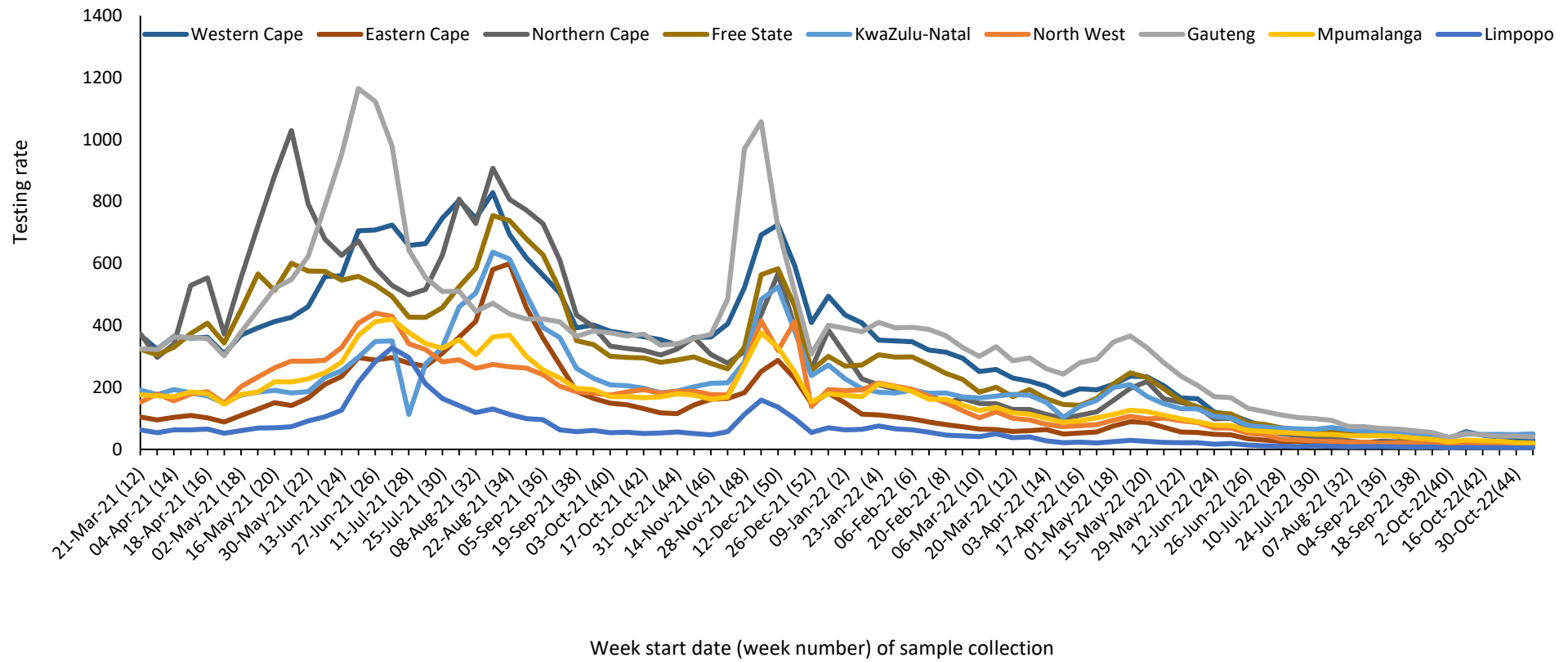


Figure 2. PCR testing rate per 100,000 persons by province and week of specimen collection, South Africa, 21 March 2021 – 12 November 2022

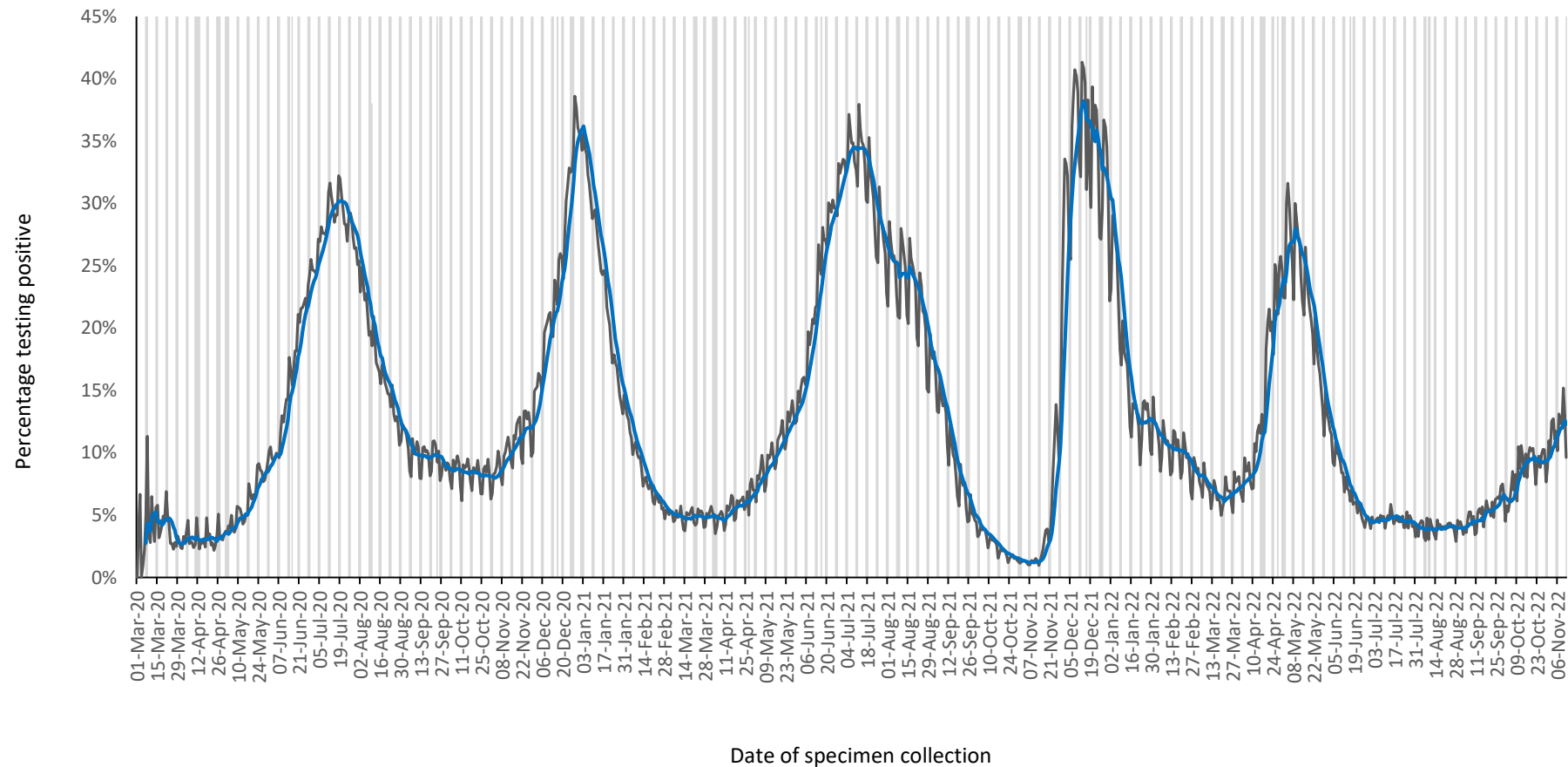


Figure 3. Percentage of PCR tests positive for SARS-CoV-2 by date of specimen collection, South Africa, 1 March 2020 – 12 November 2022. Blue line shows the 7-day moving average of the percentage testing positive. Grey bars highlight weekend days and public holidays.

Table 2. Weekly number of PCR tests and positive tests reported by province, South Africa, 23 October – 12 November 2022

Province	Population ^a	23 - 29 Oct 2022		30 Oct - 5 Nov 2022		6 - 12 Nov 2022			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 (%)	Testing rate per 100,000	
Western Cape	7113776	2752	309 (11.2)	2491	284 (11.4)	2111	288 (13.6)	30	2.2%
Eastern Cape	6676590	968	81 (8.4)	1072	84 (7.8)	1135	80 (7.0)	17	-0.8%
Northern Cape	1303047	175	13 (7.4)	209	26 (12.4)	220	33 (15.0)	17	2.6%
Free State	2932441	508	50 (9.8)	392	49 (12.5)	431	49 (11.4)	15	-1.1%
KwaZulu-Natal	11513575	5575	317 (5.7)	5410	467 (8.6)	5707	701 (12.3)	50	3.7%
North West	4122854	542	54 (10.0)	447	43 (9.6)	455	68 (14.9)	11	5.3%
Gauteng	15810388	6692	856 (12.8)	6641	960 (14.5)	6223	902 (14.5)	39	0.0%
Mpumalanga	4743584	1236	72 (5.8)	1005	72 (7.2)	976	95 (9.7)	21	2.6%
Limpopo	5926724	292	34 (11.6)	262	31 (11.8)	308	35 (11.4)	5	-0.5%
Unknown		1	0 (0.0)	0	0 (0.0)	4	0(0.0)		
Total	60142978	18741	1786 (9.5)	17929	2016 (11.2)	17570	2251 (12.8)	29	1.6%

^a 2021 Mid-year population Statistics SA

^b Current week compared to previous week

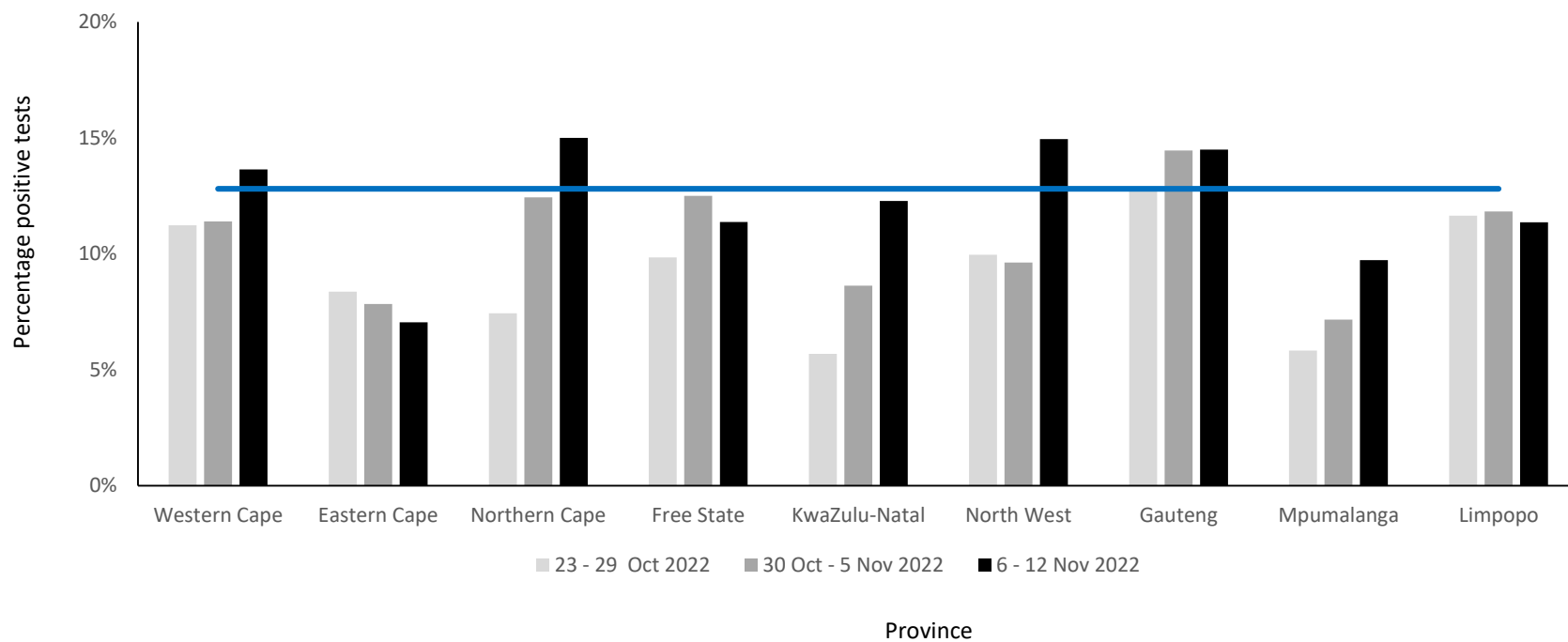


Figure 4. Weekly percentage testing positive (PCR tests only) by province, South Africa, 23 October – 12 November 2022. The horizontal blue line shows the national mean for week 45, beginning 6 November 2022

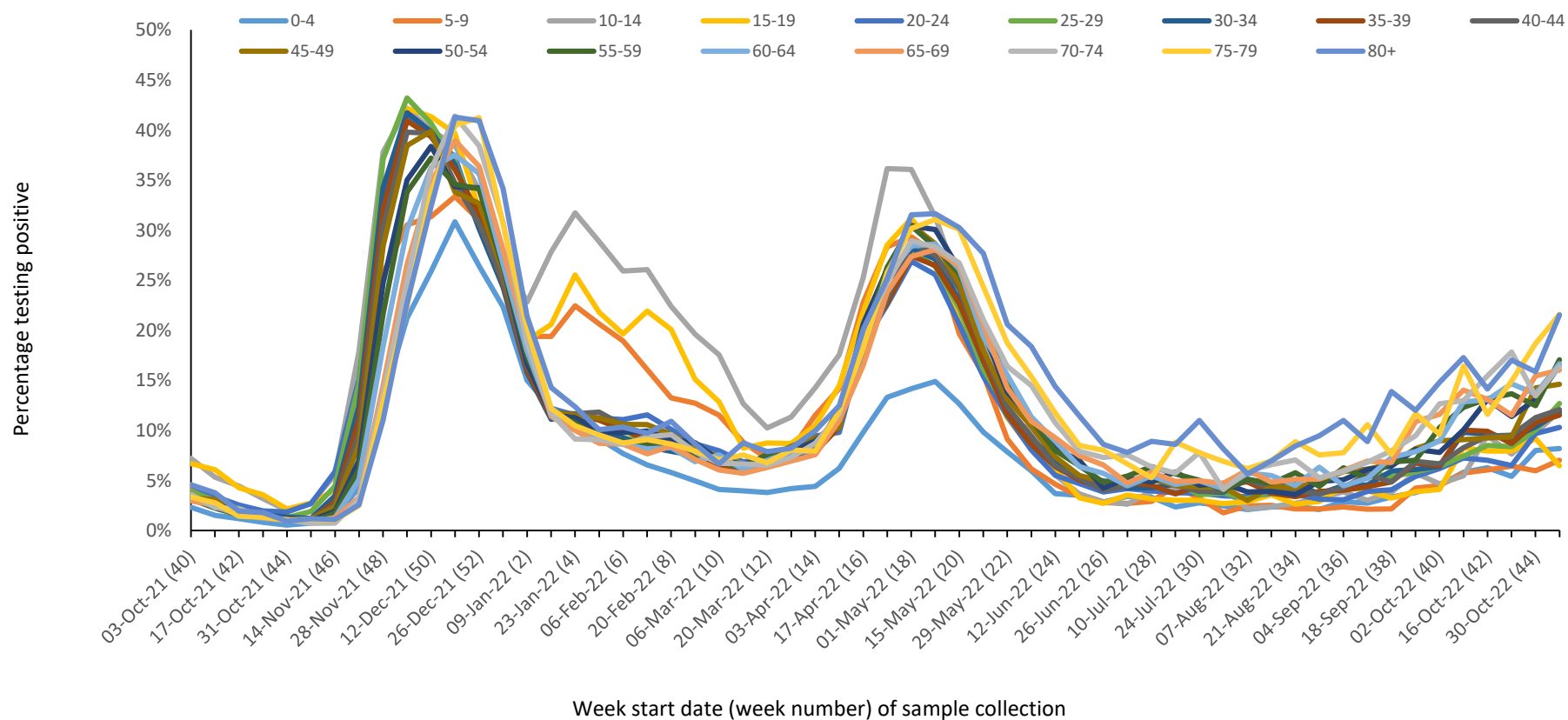


Figure 5. Percentage testing positive (PCR tests only) by age group and week of specimen collection, South Africa, 3 October 2021 – 12 November 2022

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.