



COVID-19 Weekly Testing Summary

Week 12 of 2023

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 25 March 2023 (week 12 of 2023).

Highlights:

- **This will be the final weekly testing summary report for SARS-CoV-2. Going forward, trends of SARS-CoV-2 will be monitored using systematic, syndromic surveillance, reported in the weekly respiratory pathogens report published on the NICD webpage.**
- In the period 1 March 2020 through 25 March 2023, 21,577,962 PCR tests for SARS-CoV-2 have been reported nationally. The number of PCR tests reported in week 12 of 2023 (n= 12,180) was 17.8% lower than the number of PCR tests reported in the previous week (n= 14,814 in week 11 of 2023).
- In week 12, the PCR testing rate was 20 per 100,000 persons. The overall PCR testing rate decrease from the previous week (24 per 100,000 persons in week 11 of 2023).
- The PCR testing rate in week 12 was highest in Gauteng (38 per 100,000 persons), followed by Western Cape (21 per 100,000 persons), KwaZulu-Natal and Mpumalanga (both 18 per 100,000 persons), and lowest in Limpopo (4 per 100,000 persons).
- In week 12, the percentage testing positive was 12.7% (1151/12180), which decreased significantly from the previous week (14.0% (2074/14814) in week 11, $p < 0.05$).
- The percentage testing positive in week 12 was highest in the Gauteng (15.7%), followed by Western Cape (14.9%), Northern Cape (14.3%), Free State (11.9%) and Eastern Cape (10.6%). The percentage testing positive was $< 10.0\%$ in all other provinces.
- In week 12, compared to the previous week, the percentage testing positive decreased significantly in the Western Cape and Eastern Cape ($p < 0.05$), while all other provinces did not change significantly ($p \geq 0.05$).
- The percentage testing positive in week 12 was highest in the 75-79-years age group (29.0%), followed by the ≥ 80 -years age group (25.5%).
- Different testing strategies used by different provinces, such as referral of all positive antigen tests for PCR testing, may bias percentage testing positive estimates.



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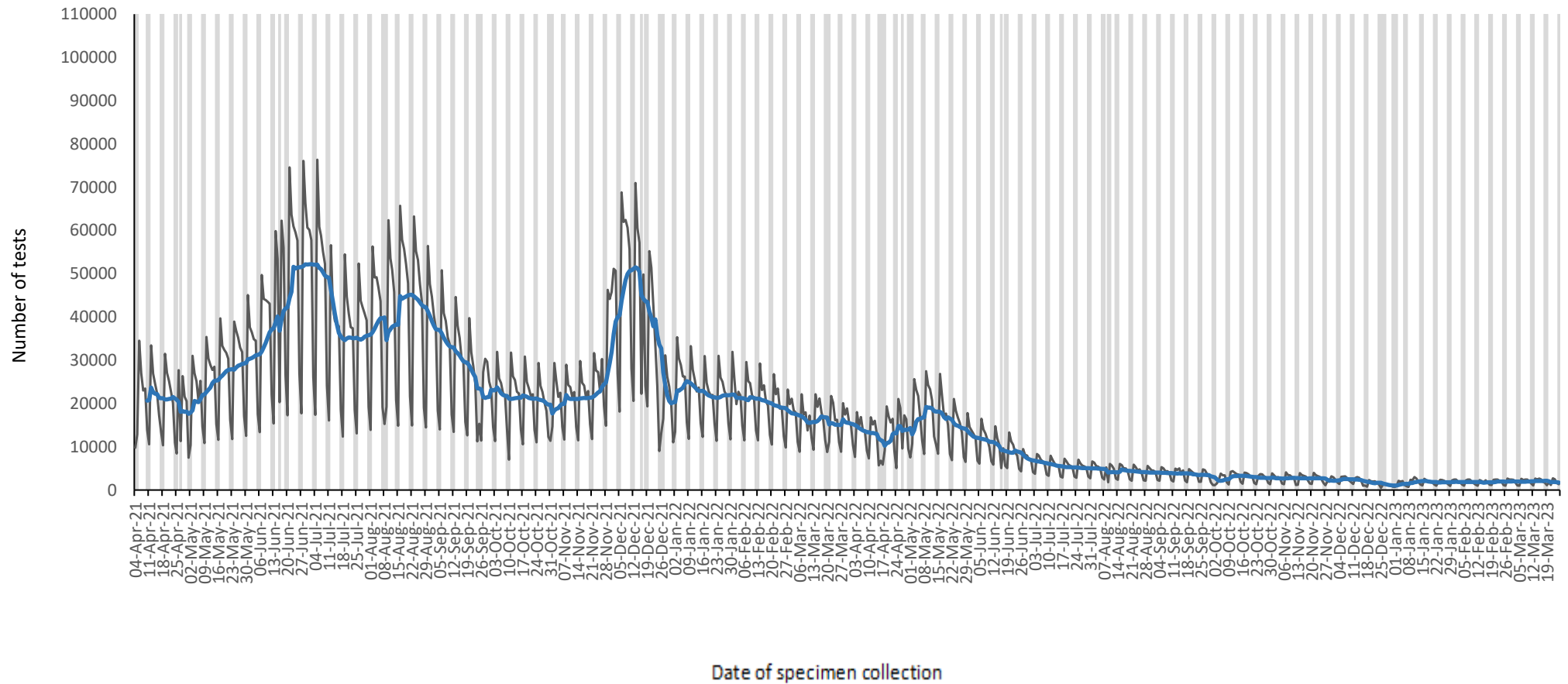


Figure 1. Number of SARS-CoV-2 PCR tests reported by date of specimen collection, South Africa, 4 April 2021 – 25 March 2023. Blue line shows the 7-day moving average of the number of PCR tests reported. Grey bars highlight weekend days and public holidays.



Table 1. Weekly number of SARS-CoV-2 PCR tests and positive tests reported, South Africa, 5 June 2022 – 25 March 2023

Week number	Week beginning	No. of PCR tests n (%)	No. of positive PCR tests	Percentage positive (%)	testing
23	05-Jun-22	77910 (0.4)	7498	9.6	
24	12-Jun-22	63282 (0.3)	4489	7.1	
25	19-Jun-22	61562 (0.3)	3358	5.5	
26	26-Jun-22	47989 (0.2)	2166	4.5	
27	03-Jul-22	43342 (0.2)	2021	4.7	
28	10-Jul-22	38551 (0.2)	1882	4.9	
29	17-Jul-22	36549 (0.2)	1681	4.6	
30	24-Jul-22	35284 (0.2)	1586	4.5	
31	31-Jul-22	34401 (0.2)	1369	4.0	
32	07-Aug-22	28665 (0.1)	1177	4.1	
33	14-Aug-22	30928 (0.1)	1259	4.1	
34	21-Aug-22	28858 (0.1)	1202	4.2	
35	28-Aug-22	28155 (0.1)	1150	4.1	
36	04-Sep-22	27330 (0.1)	1269	4.6	
37	11-Sep-22	27068 (0.1)	1358	5.0	
38	12-Sep-22	24370 (0.1)	1346	5.5	
39	25-Sep-22	21380 (0.1)	1432	6.7	
40	02-Oct-22	17374 (0.1)	1340	7.7	
41	09-Oct-22	23027 (0.1)	2252	9.8	
42	16-Oct-22	20989 (0.1)	2143	10.2	
43	23-Oct-22	19563 (0.1)	1972	10.1	
44	30-Oct-22	18658 (0.1)	2178	11.7	
45	06-Nov-22	19281 (0.1)	2524	13.1	
46	13-Nov-22	18797 (0.1)	2368	12.6	
47	20-Nov-22	18998 (0.1)	2276	12.0	
48	27-Nov-22	15331 (0.1)	1500	9.8	
49	04-Dec-22	17418 (0.1)	1640	9.4	
50	11-Dec-22	14164 (0.1)	1098	7.8	
51	18-Dec-22	11940 (0.1)	904	7.6	
52	25-Dec-22	7279 (0.0)	663	9.1	
1	01-Jan-23	9961 (0.0)	883	8.9	
2	08-Jan-23	14140 (0.1)	1356	9.6	
3	15-Jan-23	13062 (0.1)	1191	9.1	
4	22-Jan-23	12638 (0.1)	1018	8.1	
5	29-Jan-23	12994 (0.1)	1206	9.3	
6	05-Feb-23	12840 (0.1)	1483	11.5	
7	12-Feb-23	12445 (0.1)	1373	11.0	
8	19-Feb-23	13668 (0.1)	1688	12.4	
9	26-Feb-23	13654 (0.1)	1930	14.1	
10	05-Mar-23	14262 (0.1)	1964	13.8	
11	12-Mar-23	14814 (0.1)	2074	14.0	
12	19-Mar-23	12180 (0.1)	1551	12.7	



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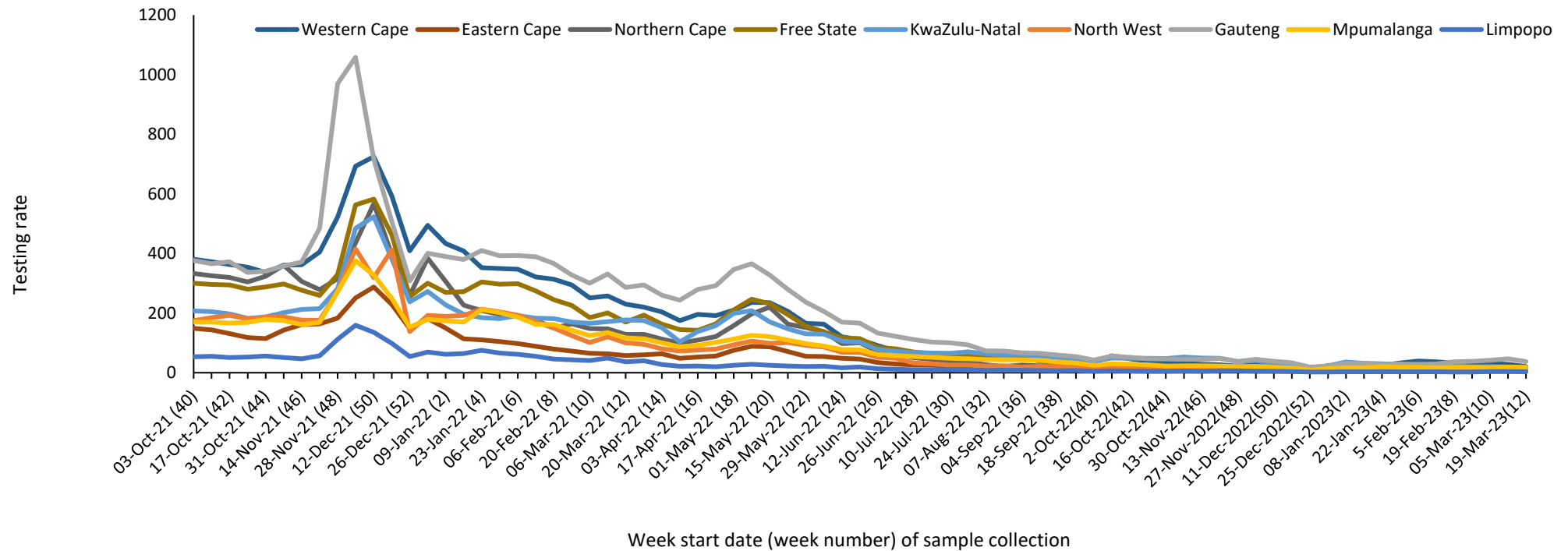


Figure 2. PCR testing rate per 100,000 persons by province and week of specimen collection, South Africa, 3 October 2021 – 25 March 2023

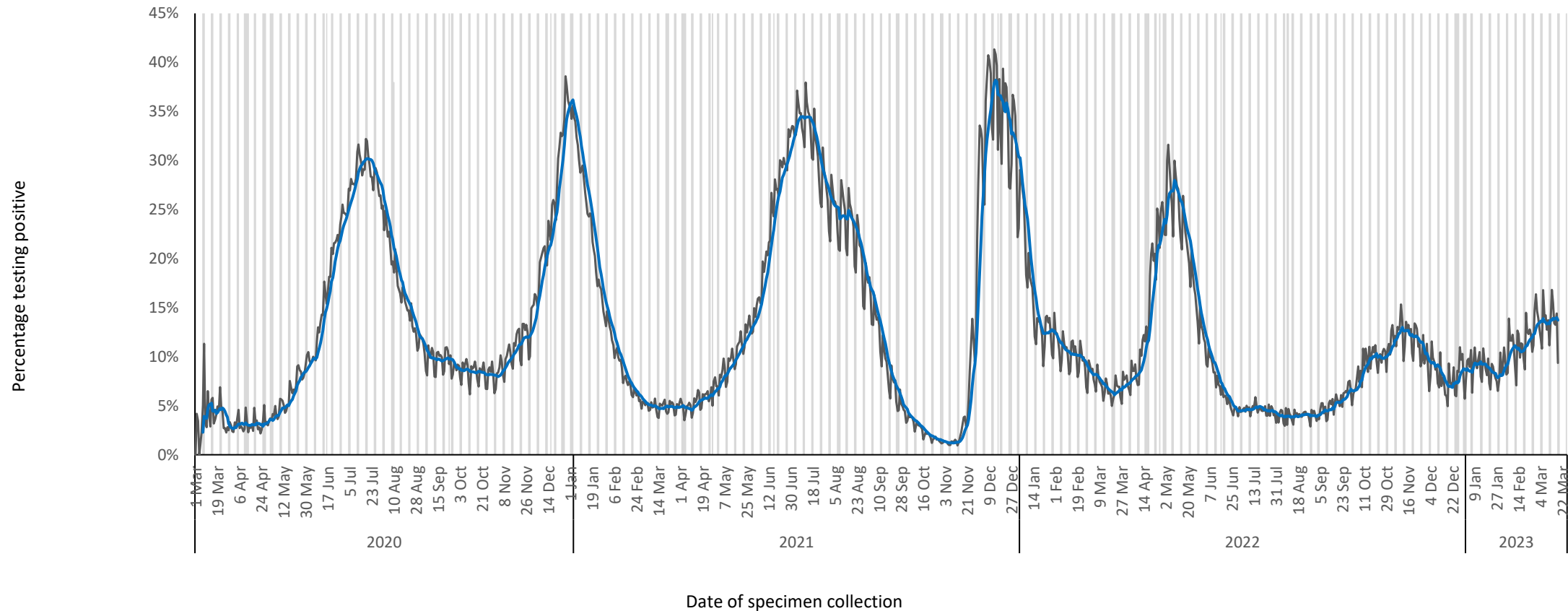


Figure 3. Percentage of PCR tests positive for SARS-CoV-2 by date of specimen collection, South Africa, 1 March 2020 – 25 March 2023. Blue line shows the 7-day moving average of the percentage testing positive. Grey bars highlight weekend days and public holidays.

Table 2. Weekly number of PCR tests and positive tests reported by province, South Africa, 5 March – 25 March 2023

Province	Population ^a	5- 11 Mar 2023		12- 18 Mar 2023		19- 25 Mar 2023		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	7212142	2207	473 (21.4)	2021	371 (18.4)	1481	220 (14.9)	21	-3.5%
Eastern Cape	6676691	784	91 (11.6)	815	95 (11.7)	608	49 (8.1)	9	-3.6%
Northern Cape	1308734	116	8 (6.9)	183	15 (8.2)	105	15 (14.3)	8	6.1%
Free State	2921611	335	28 (8.4)	381	47 (12.3)	344	41 (11.9)	12	-0.4%
KwaZulu-Natal	11538325	2431	123 (5.1)	2183	127 (5.8)	2058	130 (6.3)	18	0.5%
North West	4186984	518	75 (14.5)	519	71 (13.7)	424	45 (10.6)	10	-3.1%
Gauteng	16098571	6767	1071 (15.8)	7570	1248 (16.5)	6095	959 (15.7)	38	-0.8%
Mpumalanga	4720497	830	71 (8.6)	897	75 (8.4)	842	72 (8.6)	18	0.2%
Limpopo	5941439	257	18 (7.0)	234	25 (10.7)	211	20 (9.5)	4	-1.2%
Unknown		17	6 (35.3)	11	0 (0.0)	12	0(0.0)		
Total	60604992	14262	1964 (13.8)	14814	2074 (14.0)	12180	1551 (12.7)	20	-1.3%

^a 2022 Mid-year population Statistics SA

^b Current week compared to previous week

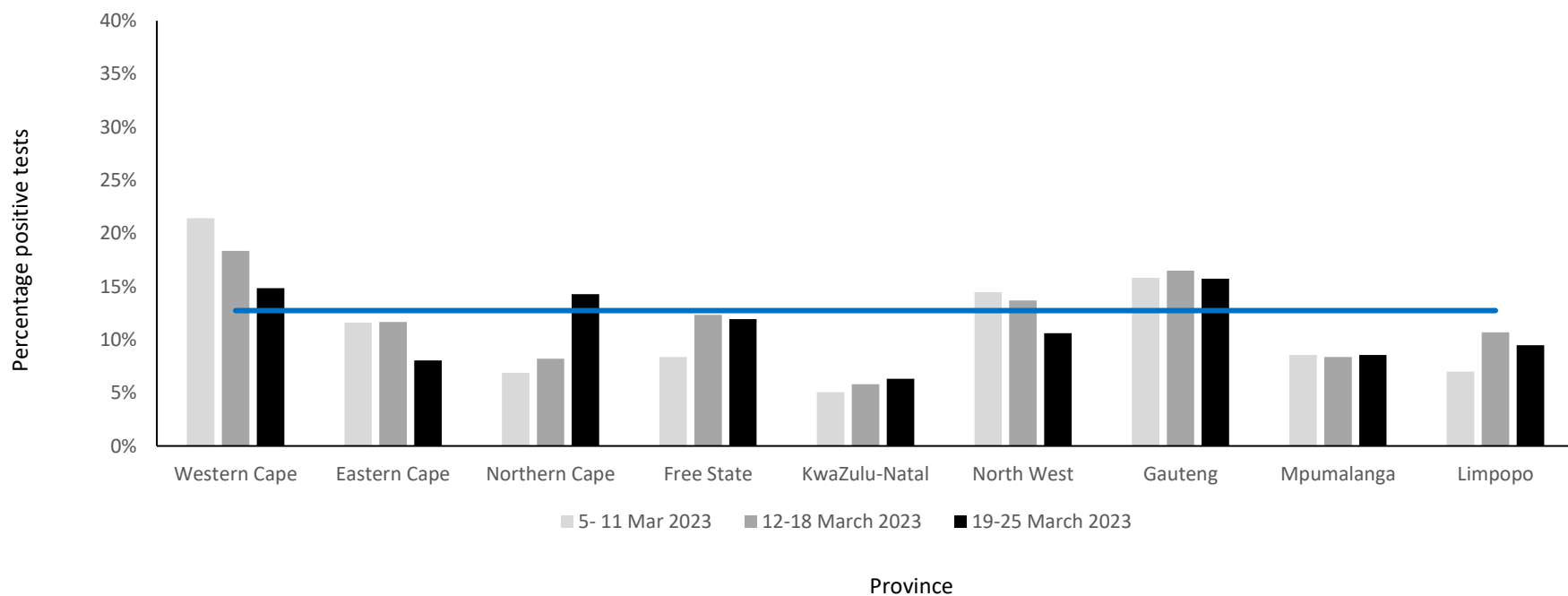


Figure 4. Weekly percentage testing positive (PCR tests only) by province, South Africa, 5 March – 25 March 2023. The horizontal blue line shows the national mean for week 12, beginning 19 March 2023

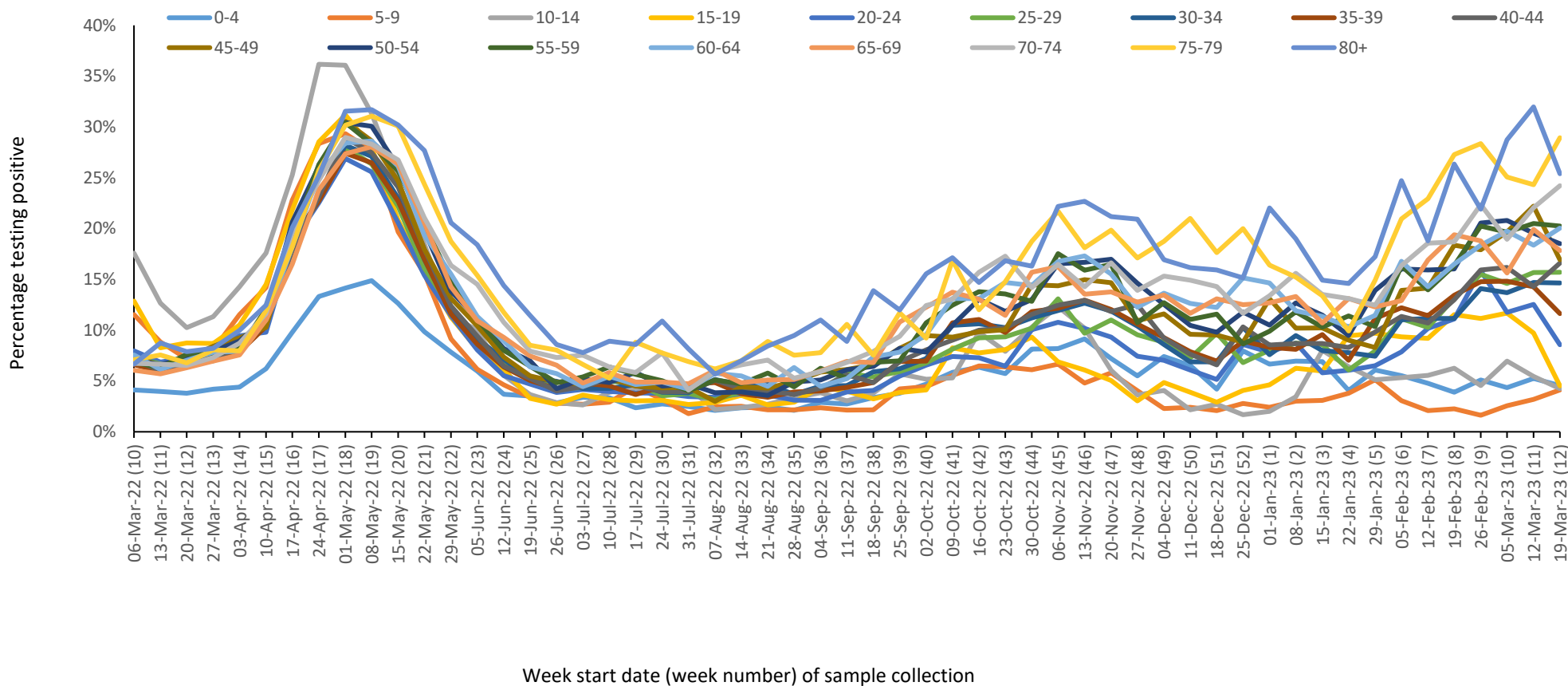


Figure 5. Percentage testing positive (PCR tests only) by age group and week of specimen collection, South Africa, 6 March 2022 – 25 March 2023

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 of 2022 report (week starting 3 July 2022). However, as of the week 28 of 2022 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, 2021 estimates were used from week 2 of 2022 to week 52 of 2022 and 2022 estimates were used from week 1 of 2023 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 and testing practices over holidays makes percentage testing positive and number of reported tests difficult to interpret and compare.