

COVID-19 TESTING SUMMARY



NATIONAL INSTITUTE FOR
COMMUNICABLE DISEASES

Division of the National Health Laboratory Service

SOUTH AFRICA WEEK 10 2022

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 12 March 2022 (Week 10 of 2022).

HIGHLIGHTS

- The number of tests reported in week 10 of 2022 (141,490: 106,461 PCR and 35,029 antigen tests) was the lowest weekly number of tests reported since early November 2020.
- In week 10, the testing rate was highest in Gauteng (356 per 100,000 persons) and lowest in Limpopo (55 per 100,000 persons).
- In week 10, the percentage testing positive was 7.0%, which was 0.9% lower than the previous week.
- In week 10, compared to the previous week, the percentage testing positive decreased in the Free State, KwaZulu-Natal, North West, Gauteng and Mpumalanga provinces. The percentage testing positive was unchanged in the Western Cape, Eastern Cape, Northern Cape and Limpopo.
- The percentage testing positive in week 10 was highest in the Western Cape (12.1%) and was <10% in all other provinces.
- The percentage testing positive was highest in the 10-14 years age group (16.6%).

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Executive Summary:

- In the period 1 March 2020 through 12 March 2022, 23 191 581 tests for SARS-CoV-2 have been reported nationally: 19,298,632 PCR and 3,892,949 antigen tests.
- The number of tests reported in week 10 of 2022 (n=141,490: 106,461 PCR and 35,029 antigen tests) was the lowest weekly number of tests reported since early November 2020.
- Gauteng reported the largest proportion of tests (39.7%), followed by KwaZulu-Natal (20.1%) and Western Cape (15.0%).
- The overall testing rate decreased from the previous week (270 per 100,000 persons in week 9 to 235 per 100,000 persons in week 10).
- In week 10, a decrease in the testing rate was observed in all provinces. The testing rate was highest in Gauteng (356 per 100,000 persons) and lowest in Limpopo (55 per 100,000 persons).
- The testing rate in week 10 was highest in the ≥80 years age group (413 per 100,000 persons).
- In week 10, the percentage testing positive was 7.0%, which was 0.9% lower than the previous week (7.9% in week 9 to 7.0% in week 10, $P<0.001$).
- In the past week, the percentage testing positive decreased by 0.3% in the public sector (5.8% in week 9 to 5.5% in week 10, $P=0.020$) and by 1.2% in the private sector (9.2% in week 9 to 8.0% week 10, $P<0.001$).
- In week 10, compared to the previous week, the percentage testing positive decreased in the Free State, KwaZulu-Natal, North West, Gauteng and Mpumalanga provinces. The percentage testing positive was unchanged in the Western Cape, Eastern Cape, Northern Cape and Limpopo.
- The percentage testing positive in week 10 was highest in the Western Cape (12.1%) and was <10% in all other provinces.
- Health sub-districts showing the highest percentage testing positive were concentrated in the Western Cape (n=15) and Free State (n=4).
- The percentage testing positive remains high in the 5-9, 10-14 and 15-19 years age groups, however a decrease has been observed in all three age groups in the past few weeks.
- Antigen tests accounted for 24.8% (35,029/141,490) of tests reported in week 10, however the number of antigen tests is likely underestimated due to under-reporting and delayed reporting of antigen tests.
- In week 10 the public sector accounted for 58.4% (20,460/35,029) of antigen tests reported. A decrease in the number of antigen tests reported was observed across all provinces in the past few weeks.
- The mean turnaround time for PCR tests reported in week 10 was 0.7 days; 1.1 days in the public sector and 0.5 days in the private sector. Turnaround times for public sector PCR tests increased to 4.5 days in Limpopo but remained at <2 days in all other provinces.
- The mean turnaround time for antigen tests reported in week 10 was 24.2 days in the public sector and 0.7 days in the private sector.

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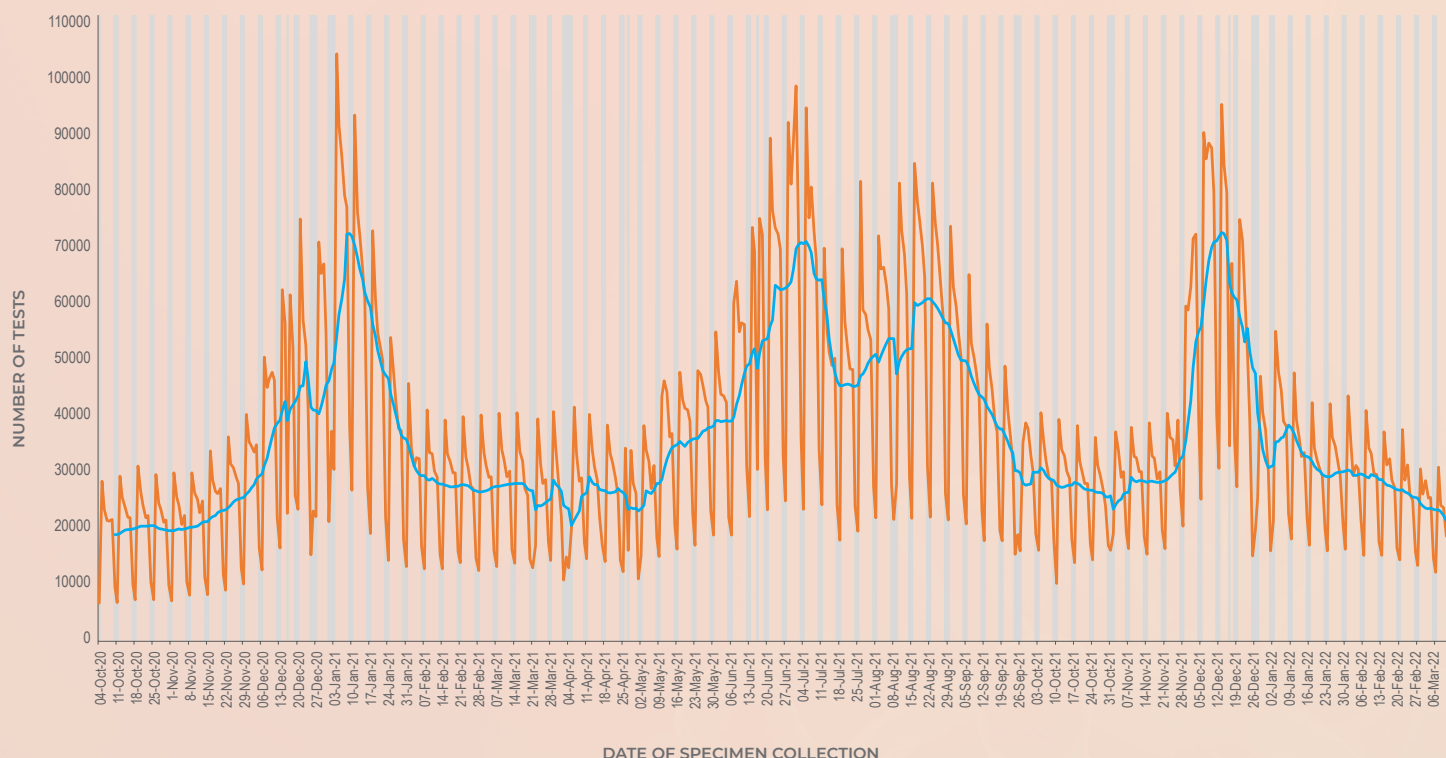


Figure 1. Number of SARS-CoV-2 tests reported by date of specimen collection, South Africa, 4 October 2020 – 12 March 2022. Blue line shows the 7-day moving average of the number of tests reported. Grey bars highlight weekend days and public holidays

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Table 1. Weekly number of SARS-CoV-2 tests and positive tests reported, South Africa, 3 January 2021 – 12 March 2022

Week number	Week beginning	No. of tests n (%)	No. of positive tests	Percentage testing positive (%)
1	03-Jan-21	501382 (2.2)	151072	30.1
2	10-Jan-21	418299 (1.8)	104825	25.1
3	17-Jan-21	327531 (1.4)	63282	19.3
4	24-Jan-21	249622 (1.1)	34652	13.9
5	31-Jan-21	203796 (0.9)	22380	11.0
6	07-Feb-21	193340 (0.8)	16476	8.5
7	14-Feb-21	190711 (0.8)	12191	6.4
8	21-Feb-21	184729 (0.8)	10390	5.6
9	28-Feb-21	189730 (0.8)	8695	4.6
10	07-Mar-21	193453 (0.8)	8341	4.3
11	14-Mar-21	185525 (0.8)	8156	4.4
12	21-Mar-21	173273 (0.7)	7356	4.2
13	28-Mar-21	163973 (0.7)	7063	4.3
14	04-Apr-21	180873 (0.8)	7292	4.0
15	11-Apr-21	185349 (0.8)	8847	4.8
16	18-Apr-21	184920 (0.8)	9471	5.1
17	25-Apr-21	160024 (0.7)	9182	5.7
18	02-May-21	193972 (0.8)	13463	6.9
19	09-May-21	240292 (1.0)	19939	8.3
20	16-May-21	248488 (1.1)	24212	9.7
21	23-May-21	262636 (1.1)	29778	11.3
22	30-May-21	270303 (1.2)	36106	13.4
23	06-Jun-21	337911 (1.5)	59453	17.6
24	13-Jun-21	370985 (1.6)	88086	23.7
25	20-Jun-21	432588 (1.9)	118653	27.4
26	27-Jun-21	490245 (2.1)	146636	29.9
27	04-Jul-21	443836 (1.9)	141460	31.9
28	11-Jul-21	320639 (1.4)	100954	31.5
29	18-Jul-21	313092 (1.4)	88443	28.2
30	25-Jul-21	350485 (1.5)	88355	25.2
31	01-Aug-21	372222 (1.6)	88127	23.7
32	08-Aug-21	359516 (1.6)	83378	23.2
33	15-Aug-21	420833 (1.8)	95385	22.7
34	22-Aug-21	391464 (1.7)	78181	20.0
35	29-Aug-21	345162 (1.5)	55070	16.0
36	05-Sep-21	300460 (1.3)	38855	12.9
37	12-Sep-21	260658 (1.1)	24017	9.2
38	19-Sep-21	209026 (0.9)	14010	6.7
39	26-Sep-21	207752 (0.9)	9491	4.6
40	03-Oct-21	197575 (0.9)	6450	3.3
41	10-Oct-21	191607 (0.8)	5043	2.6
42	17-Oct-21	185313 (0.8)	3412	1.8
43	24-Oct-21	177114 (0.8)	2566	1.4
44	31-Oct-21	182828 (0.8)	2104	1.2
45	07-Nov-21	196422 (0.8)	2320	1.2
46	14-Nov-21	196147 (0.8)	4808	2.5
47	21-Nov-21	223793 (1.0)	18970	8.5
48	28-Nov-21	380942 (1.6)	98359	25.8
49	05-Dec-21	491988 (2.1)	174926	35.6
50	12-Dec-21	422816 (1.8)	154702	36.6
51	19-Dec-21	336436 (1.5)	117483	34.9
52	20-Dec-21	214444 (0.9)	65766	30.7
1	02-Jan-22	265851 (1.1)	60900	22.9
2	09-Jan-22	226935 (1.0)	35014	15.4

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3	16-Jan-22	203120 (0.9)	23916	11.8
4	23-Jan-22	208632 (0.9)	25686	12.3
5	24-Jan-22	205669 (0.9)	22851	11.1
6	06-Feb-22	198709 (0.9)	20290	10.2
7	13-Feb-22	186470 (0.8)	18960	10.2
8	14-Feb-22	176864 (0.8)	16184	9.2
9	27-Feb-22	162274 (0.7)	12861	7.9
10	06-Mar-22	141490 (0.6)	9960	7.0
Total		23,191,581 (100.0)	4,020,195	

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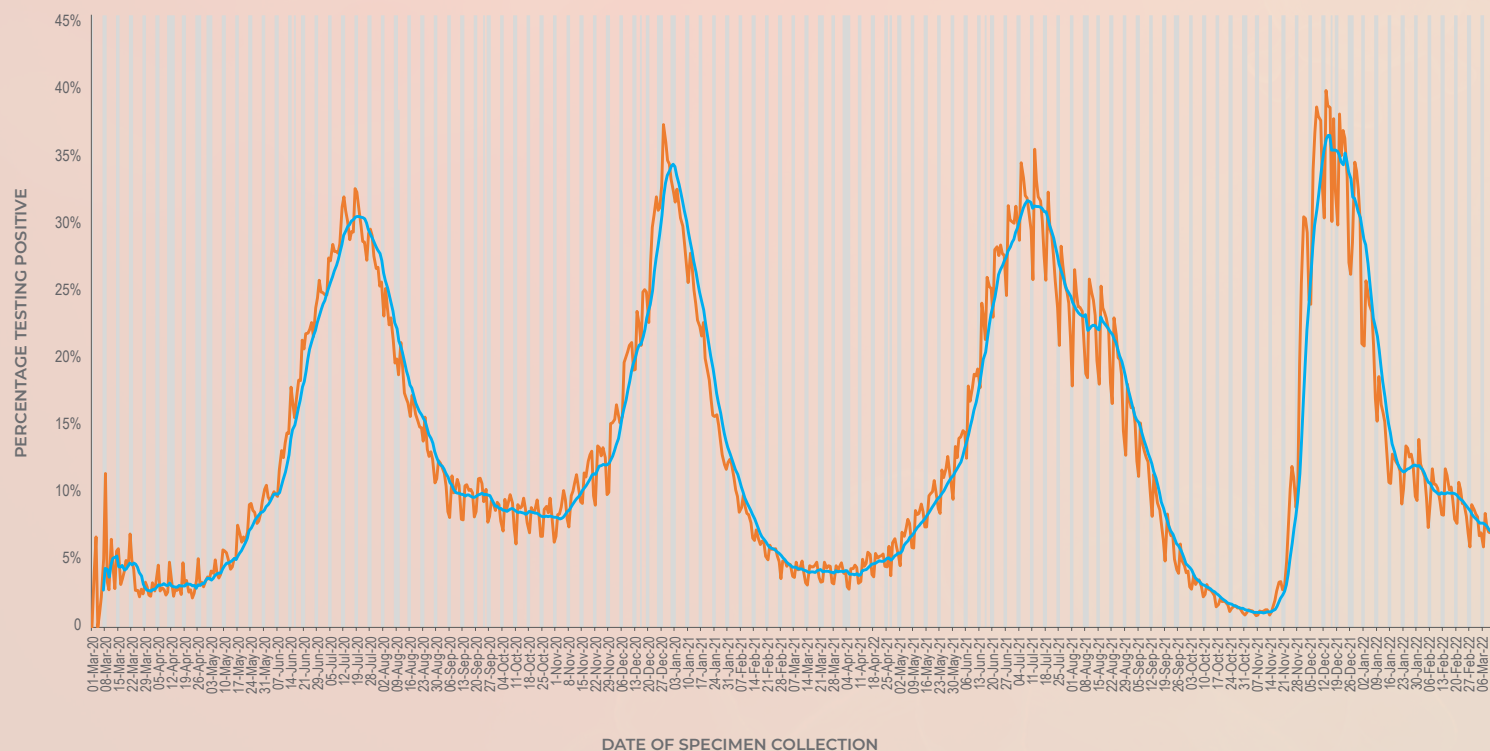


Figure 2. Percentage of tests positive for SARS-CoV-2 by date of specimen collection, South Africa, 1 March 2020 - 12 March 2022. Blue line shows the 7-day moving average of the percentage testing positive. Grey bars highlight weekend days and public holidays.

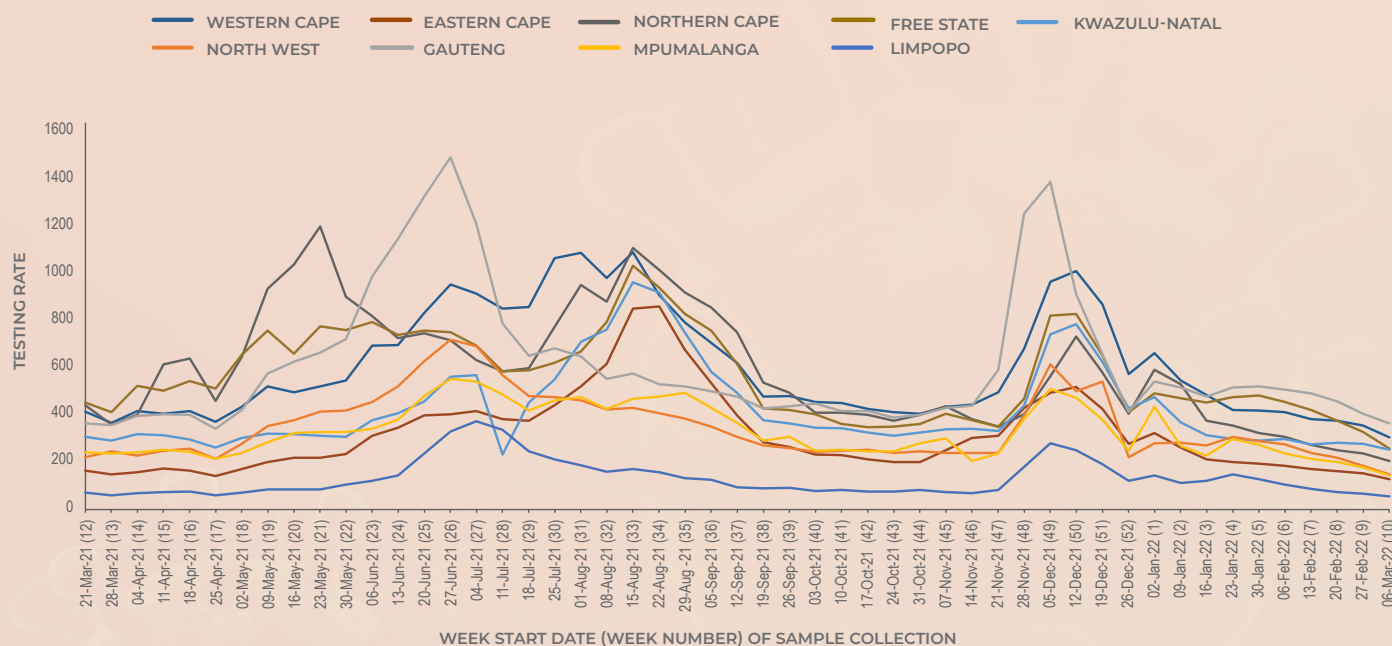


Figure 3. Testing rate per 100,000 persons by province and week of specimen collection, South Africa, 21 March 2021 – 12 March 2022

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Table 2. Weekly number of tests and positive tests reported by province, South Africa, 20 February – 12 March 2022

Province	Population ^a	20-26 Feb 2022		27 Feb - 5 Mar 2022		6-12 Mar 2022		Tests per 100,000 persons	Change in percentage positive ^b
		No. of tests	No. positive tests (%)	No. of tests	No. positive tests (%)	No. of tests	No. positive tests (%)		
Western Cape	7113776	26056	3251 (12.5)	24766	2891 (11.7)	21165	2557 (12.1)	298	0.4%
Eastern Cape	6676590	10611	589 (5.6)	10067	502 (5.0)	8426	377 (4.5)	126	-0.5%
Northern Cape	1303047	3183	267 (8.4)	3033	253 (8.3)	2624	201 (7.7)	201	-0.7%
Free State	2932441	10790	870 (8.1)	9404	659 (7.0)	7388	409 (5.5)	252	-1.5%
KwaZulu-Natal	11513575	31865	2476 (7.8)	31182	2096 (6.7)	28502	1696 (6.0)	248	-0.8%
North West	4122854	8789	901 (10.3)	7469	657 (8.8)	6020	431 (7.2)	146	-1.6%
Gauteng	15810388	70707	6086 (8.6)	62651	4756 (7.6)	56208	3537 (6.3)	356	-1.3%
Mpumalanga	4743584	9364	1294 (13.8)	8299	726 (8.7)	6645	511 (7.7)	140	-1.1%
Limpopo	5926724	4253	352 (8.3)	3860	244 (6.3)	3285	178 (5.4)	55	-0.9%
Unknown		1246	98 (7.9)	1543	77 (5.0)	1227	63 (5.1)		
Total	60142978	176864	16184 (9.2)	162274	12861 (7.9)	141490	9960 (7.0)	235	-0.9%

^a 2021 Mid-year population Statistics SA

^b Current week compared to previous week

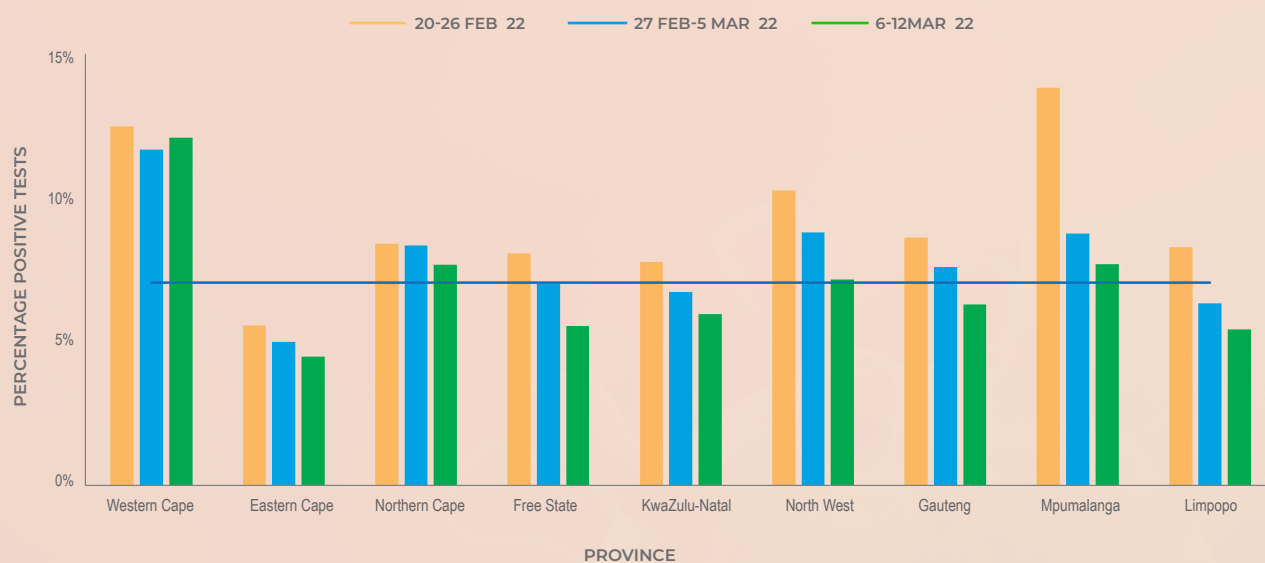


Figure 4. Weekly percentage testing positive by province, South Africa, 20 February – 12 March 2022. The horizontal blue line shows the national mean for week 10, beginning 6 March 2022

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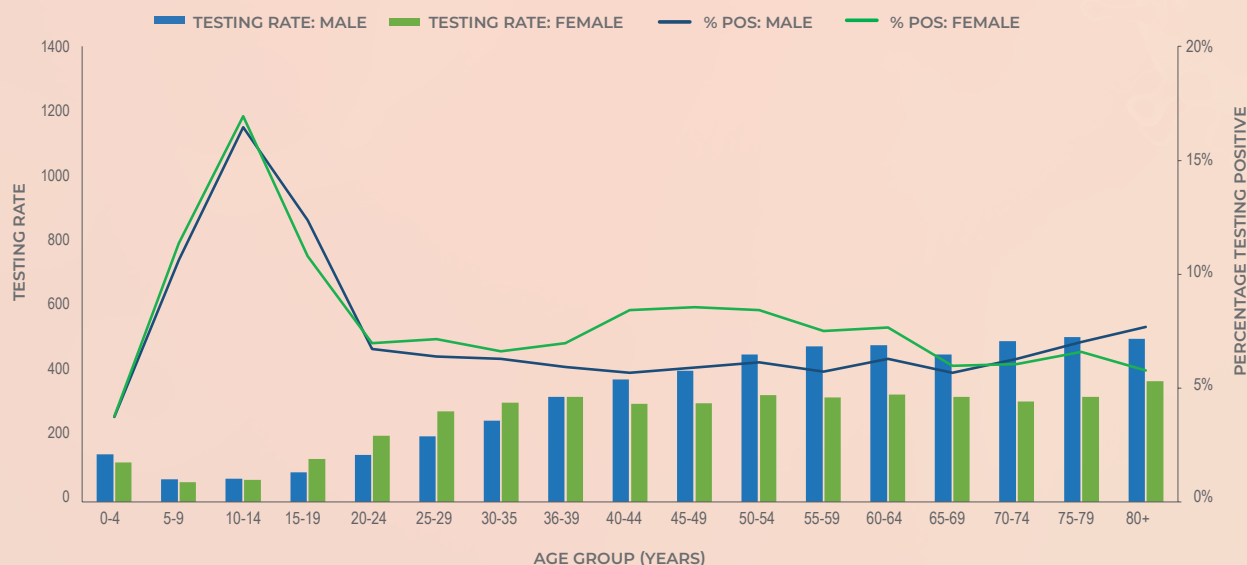


Figure 5. Testing rates per 100,000 persons and percentage testing positive by age group and sex, South Africa, week 10, 6-12 March 2022

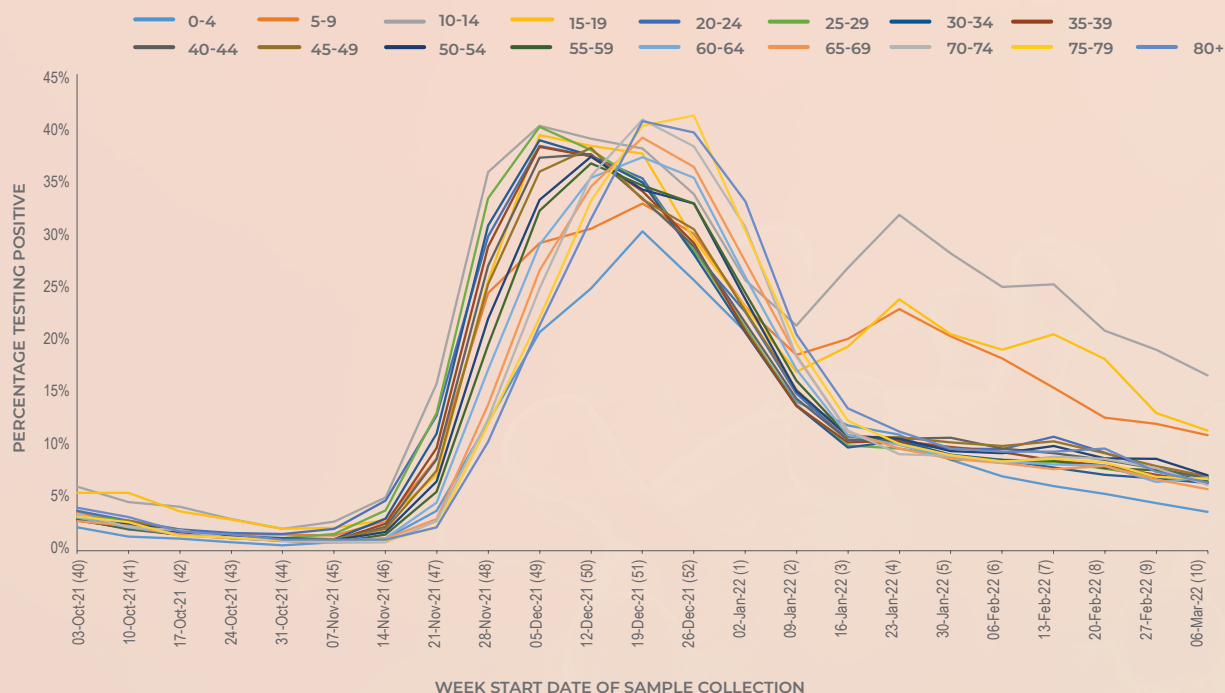


Figure 6. Percentage testing positive by age group and week of specimen collection, South Africa, 3 October 2021 – 12 March 2022

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Table 3. Health sub-districts with the highest proportion testing positive based on public and private sector data for the week of 6-12 March 2022

Health district or sub-district	Province	PTP (95% CI)	Previous week
Randfontein	Gauteng	0.281 (0.241-0.321)	0.281 (0.245-0.318)
Karoo Hoogland	Northern Cape	0.270 (0.122-0.417)	...
Swartland	Western Cape	0.205 (0.076-0.333)	0.150 (0.093-0.207)
Tswelopele	Free State	0.203 (0.100-0.306)	0.261 (0.183-0.340)
Theewaterskloof	Western Cape	0.203 (0.110-0.296)	0.098 (0.033-0.164)
Breede Valley	Western Cape	0.202 (0.154-0.249)	0.185 (0.145-0.224)
Cape Agulhas	Western Cape	0.186 (0.040-0.332)	0.210 (0.071-0.350)
Nala	Free State	0.184 (0.101-0.267)	0.112 (0.038-0.186)
Saldanha Bay	Western Cape	0.181 (0.140-0.222)	0.181 (0.141-0.220)
CT Northern	Western Cape	0.175 (0.156-0.195)	0.192 (0.174-0.210)
Witzenberg	Western Cape	0.173 (0.080-0.266)	0.254 (0.149-0.359)
Tshwane 5	Gauteng	0.170 (0.073-0.267)	0.136 (0.073-0.199)
Swellendam	Western Cape	0.168 (0.080-0.256)	0.163 (0.059-0.267)
Stellenbosch	Western Cape	0.166 (0.135-0.197)	0.158 (0.130-0.187)
Matzikama	Western Cape	0.162 (0.105-0.218)	0.175 (0.121-0.229)
CT Tygerberg	Western Cape	0.160 (0.145-0.175)	0.149 (0.136-0.163)
CT Eastern	Western Cape	0.154 (0.133-0.175)	0.148 (0.129-0.167)
George	Western Cape	0.153 (0.128-0.179)	0.134 (0.111-0.158)
Drakenstein	Western Cape	0.149 (0.123-0.174)	0.144 (0.120-0.169)
Govan Mbeki	Mpumalanga	0.149 (0.119-0.179)	0.152 (0.123-0.180)
Tlokwe City Council	North West	0.143 (0.111-0.174)	0.138 (0.110-0.166)
Setsoto	Free State	0.140 (0.025-0.256)	0.031 (0.000-0.075)
Ba-Phalaborwa	Limpopo	0.139 (0.062-0.215)	0.045 (0.002-0.088)
Kopanong	Free State	0.138 (0.043-0.234)	0.053 (0.000-0.126)
Overstrand	Western Cape	0.137 (0.101-0.173)	0.134 (0.100-0.169)

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.

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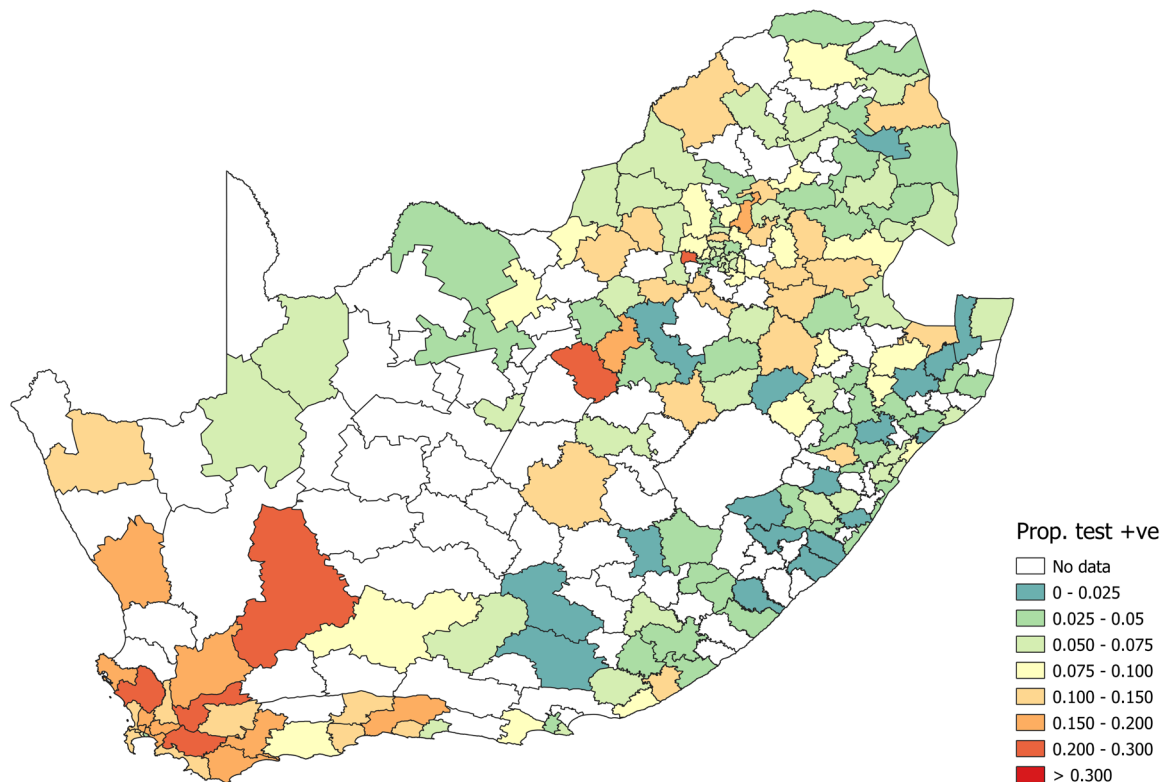


Figure 7. Proportion testing positive by health sub-district in South Africa for the week of 6-12 March 2022. Areas shaded white represent districts in which either (i) no tests were reported (ii) all tests were negative or (iii) the confidence interval exceeded 30%.

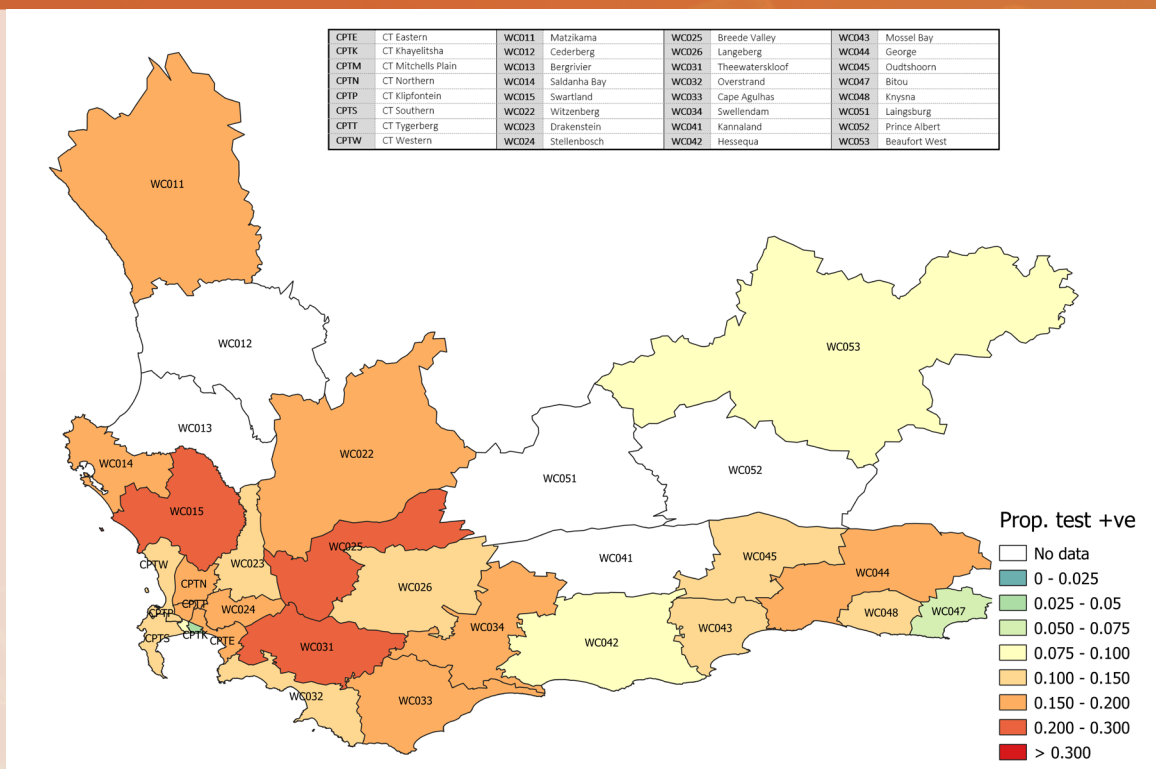


Figure 8. Proportion testing positive by health sub-district in the Western Cape Province for the week of 6-12 March 2022. Areas shaded white represent districts in which either (i) no tests were reported (ii) all tests were negative or (iii) the confidence interval exceeded 30%.

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BUF	Buffalo City	EC122	Mquma	EC135	Intsika Yethu	EC155	Njandeni
EC101	Candelo	EC123	Great Kei	EC136	Emalahleni	EC156	Mthombo
EC102	Blue Crane Route	EC124	Amathali	EC137	Engcobo	EC157	King Sabata Dalindyebo
EC103	Ikwazi	EC126	Ngushwa	EC138	Sakhisizwe	EC441	Matatiele
EC104	Makana	EC127	Nkonkobe	EC141	Ekurhuleni	EC442	Umtshombuzi
EC105	Ndlambe	EC128	Nouba	EC142	Sengq	EC443	Milizana
EC106	Sundays River Valley	EC131	Inxuba Yethemba	EC143	Maletswai	EC444	Ntabankulu
EC107	Baviaans	EC132	Tsoolwana	EC144	Gariep	NMAA	Nelson Mandela Bay A
EC108	Kouga	EC133	Inkwanca	EC153	Nqozu Hill	NMAB	Nelson Mandela Bay B
EC109	Kou-Ramama	EC134	Lukani	EC154	Port St Johns	NMAC	Nelson Mandela Bay C
EC121	Mbhashe						

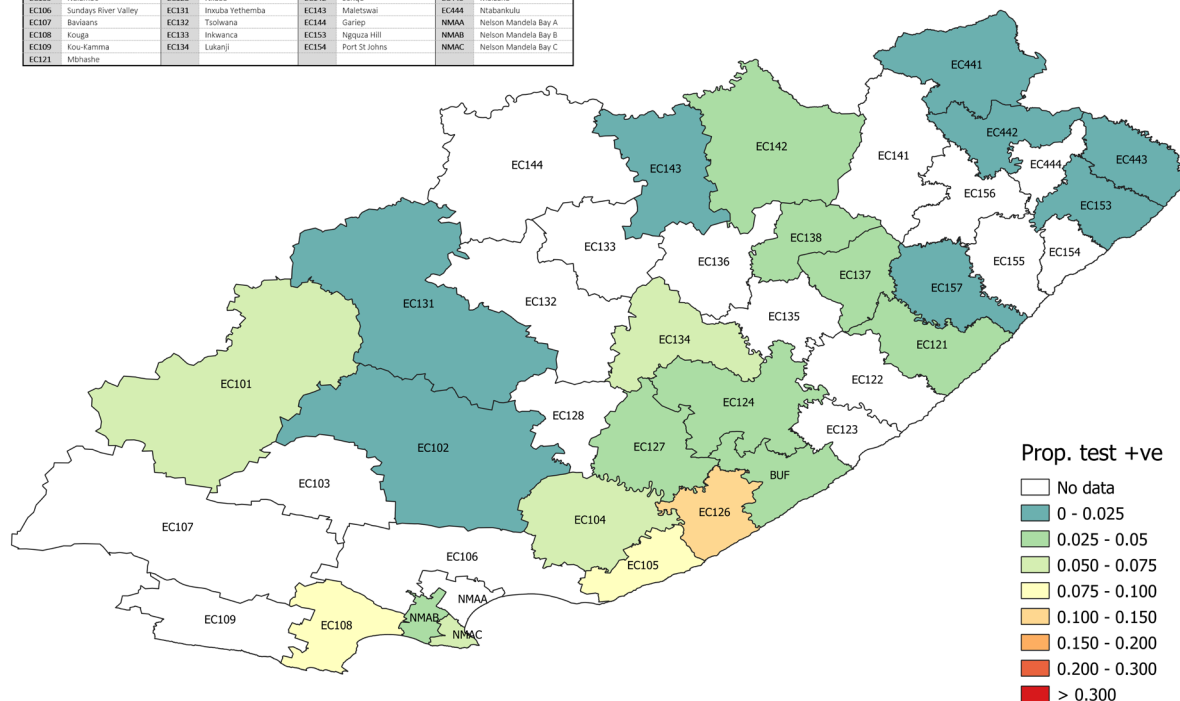


Figure 9. Proportion testing positive by health sub-district in the Eastern Cape Province for the week of 6-12 March 2022. Areas shaded white represent districts in which either (i) no tests were reported (ii) all tests were negative or (iii) the confidence interval exceeded 30%.

NC061	Richtersveld	NC074	Karrebeg	NC085	Tsantabane
NC062	Nama khol	NC075	Renosterberg	NC086	Igatlolepele
NC064	Kamiesberg	NC076	Themburibele	NC091	Sol Phasile
NC065	Hantam	NC077	Siyathemba	NC092	Digatlong
NC066	Karoo Hoogland	NC078	Siyancuma	NC093	Magareng
NC067	Khali-Ma	NC081	Mier	NC094	Phokwane
NC071	Uburu	NC082	Kai Garib	NC451	Joe Morolong
NC072	Umsobomvu	NC083	//Kharu Hais	NC452	Ga-Segonyama
NC073	Emthanjeni	NC084	Ikheis	NC453	Gamagara

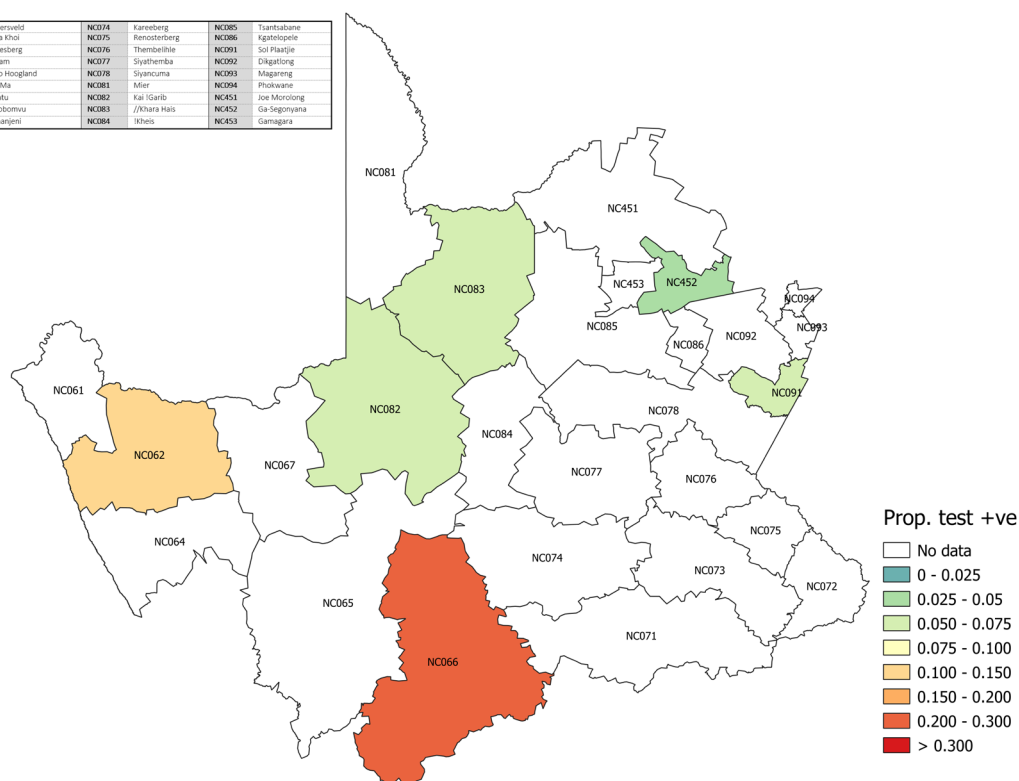


Figure 10. Proportion testing positive by health sub-district in Northern Cape Province for the week of 6-12 March 2022. Areas shaded white represent districts in which either (i) no tests were reported (ii) all tests were negative or (iii) the confidence interval exceeded 30%.

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MAN	Mangaung	FS181	Masikonyana	FS191	Setsoho	FS196	Mantsope
FS161	Letsemeng	FS182	Tokologo	FS192	Dihlabeng	FS201	Moqhaka
FS162	Kopanong	FS183	Tswelopele	FS193	Nketoana	FS203	Ngwatho
FS163	Mohokare	FS184	Matjhabeng	FS194	Maluti a Phofung	FS204	Metsimaholo
FS164	Naledi	FS185	Nala	FS195	Phumelela	FS205	Mafube

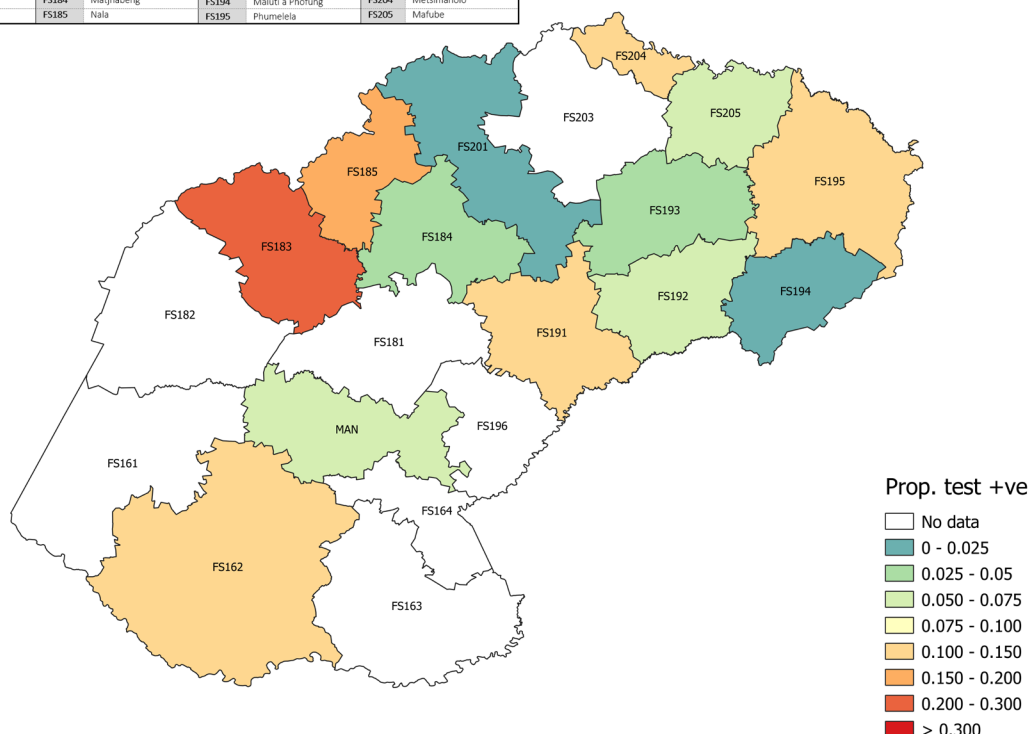


Figure 11. Proportion testing positive by health sub-district in Free State Province for the week of 6-12 March 2022. Areas shaded white represent districts in which either (i) no tests were reported (ii) all tests were negative or (iii) the confidence interval exceeded 30%.

ETHN	eThekweni North	KZN233	Indaka	KZN273	The Big 5 False Bay
ETHS	eThekweni South	KZN234	Umtshezi	KZN274	Hlabisa
ETHS	eThekweni South	KZN235	Okhahlamba	KZN275	Mtubatuba
ETHW	eThekweni West	KZN236	Imbabazane	KZN281	Mfolozi
KZN211	Vulamehlo	KZN241	Endumeni	KZN282	uMhlathuze
KZN212	Umdoni	KZN242	Nqutu	KZN283	Ntambanana
KZN213	Umkumbi	KZN244	Misinga	KZN284	uMlalazi
KZN214	uMuziwabantu	KZN245	Umwoti	KZN285	Mthonjaneni
KZN215	Ezingolweni	KZN252	Newcastle	KZN286	Nkandla
KZN216	Hlabisa Coast	KZN253	Emadlangeni	KZN291	Mandeni
KZN221	uMshwathi	KZN254	Dannhauser	KZN292	KwaDukuza
KZN222	uMgeni	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	Umkhambathini	KZN434	Ubulwazi
KZN232	Emnambithi/Ladysmith	KZN272	Jozini	KZN435	Umkhambathini

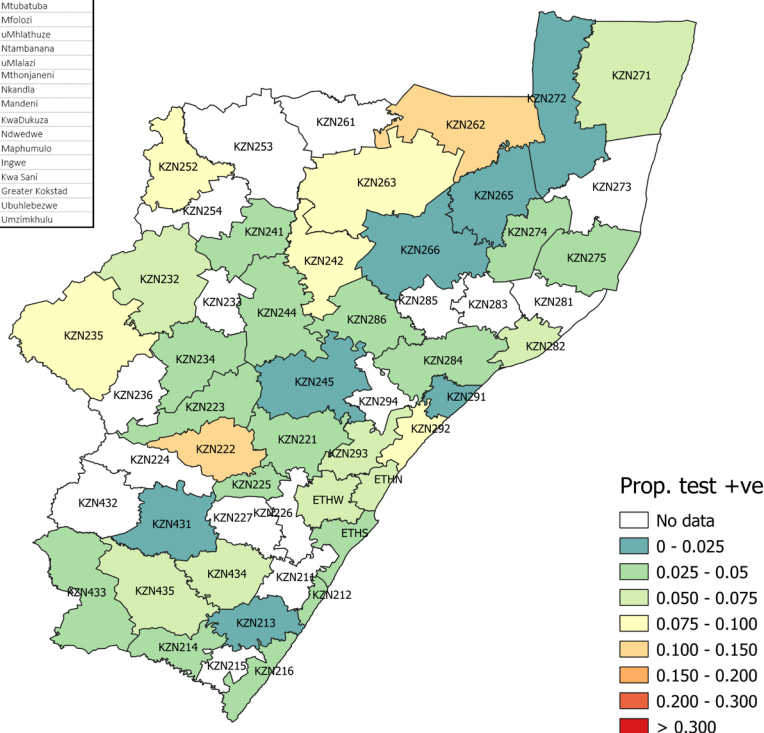


Figure 12. Proportion testing positive by health sub-district in KwaZulu-Natal Province for the week of 6-12 March 2022. Areas shaded white represent districts in which either (i) no tests were reported (ii) all tests were negative or (iii) the confidence interval exceeded 30%.

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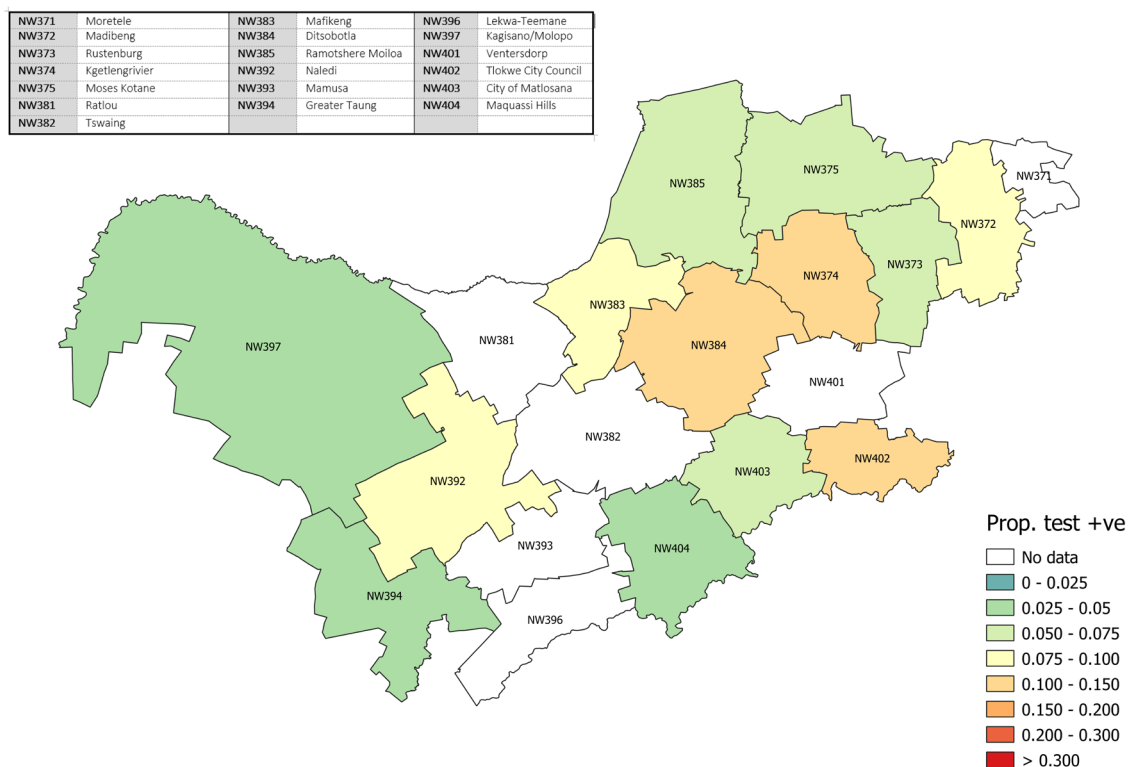


Figure 13. Proportion testing positive by health sub-district in North West Province for the week of 6-12 March 2022. Areas shaded white represent districts in which either (i) no tests were reported (ii) all tests were negative or (iii) the confidence interval exceeded 30%.

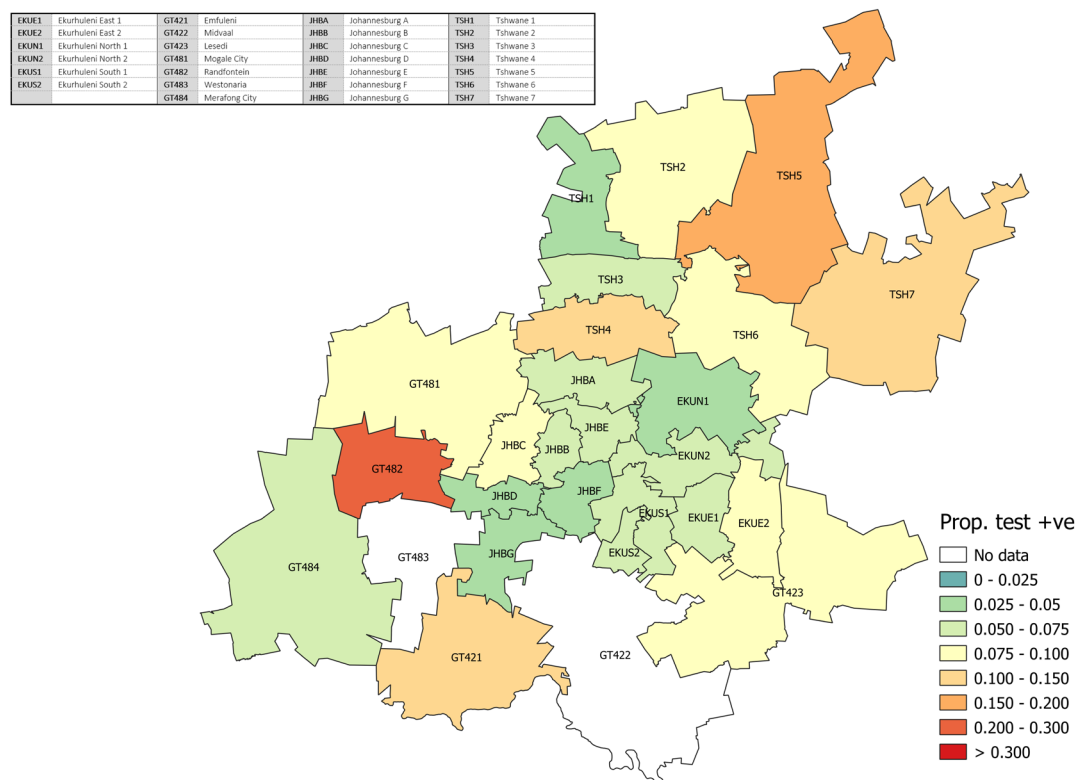


Figure 14. Proportion testing positive by health sub-district in Gauteng Province for the week of 6-12 March 2022. Areas shaded white represent districts in which either (i) no tests were reported (ii) all tests were negative or (iii) the confidence interval exceeded 30%.

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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

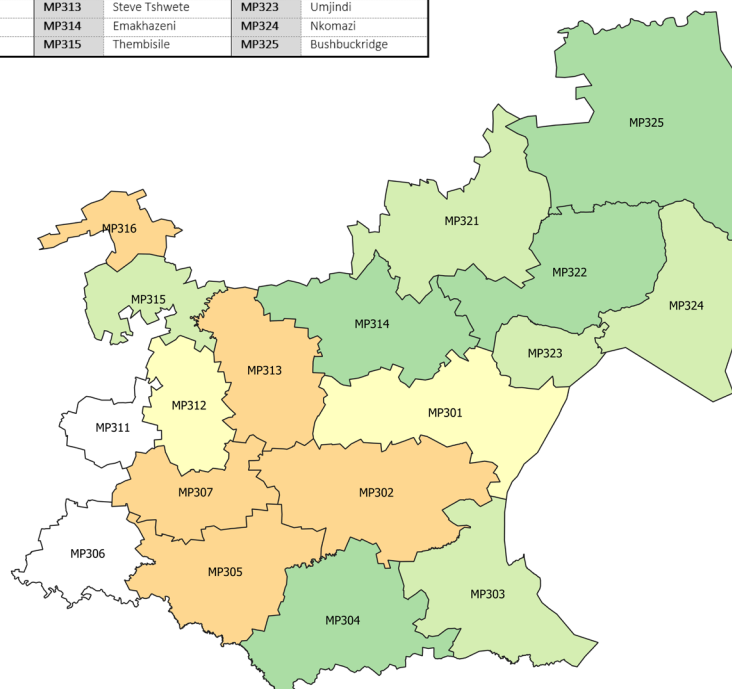


Figure 15. Proportion testing positive by health sub-district in Mpumalanga Province for the week of 6-12 March 2022. Areas shaded white represent districts in which either (i) no tests were reported (ii) all tests were negative or (iii) the confidence interval exceeded 30%.

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

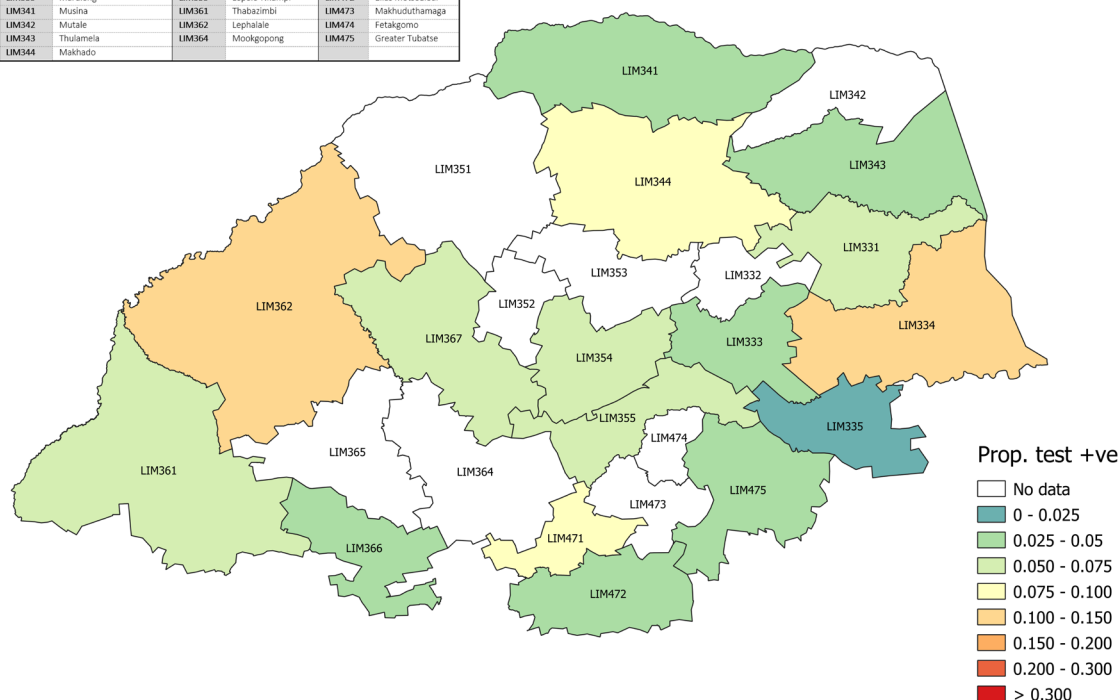


Figure 16. Proportion testing positive by health sub-district in Limpopo Province for the week of 6-12 March 2022. Areas shaded white represent districts in which either (i) no tests were reported (ii) all tests were negative or (iii) the confidence interval exceeded 30%.

COVID-19 TESTING SUMMARY

SOUTH AFRICA

WEEK 10 2022

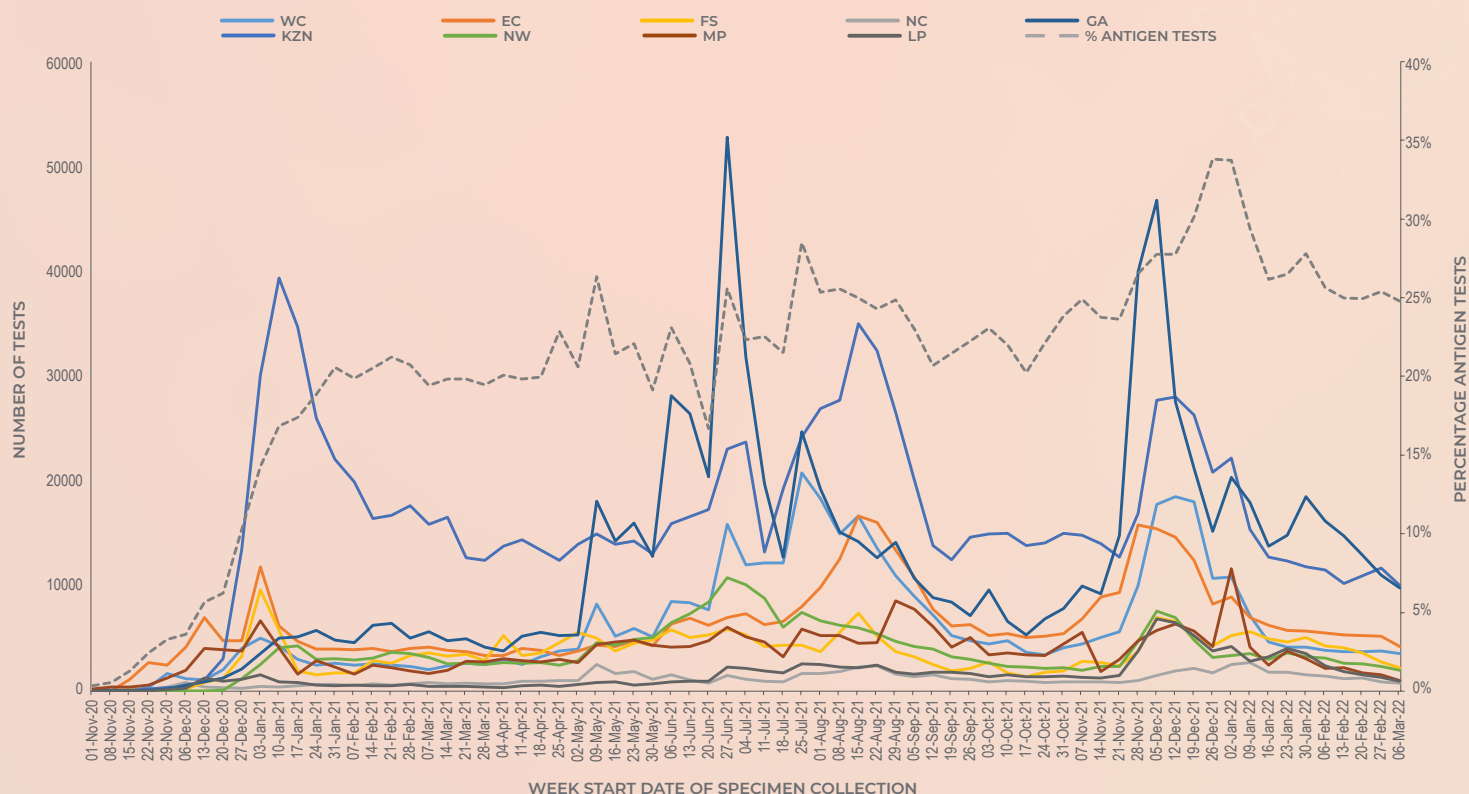


Figure 17. Number of antigen tests by province and overall percentage antigen tests, South Africa, 1 November 2020 – 12 March 2022. WC Western Cape; EC Eastern Cape; FS Free State; KZN KwaZulu-Natal; GA Gauteng; NC Northern Cape; NW North West; MP Mpumalanga; LP Limpopo

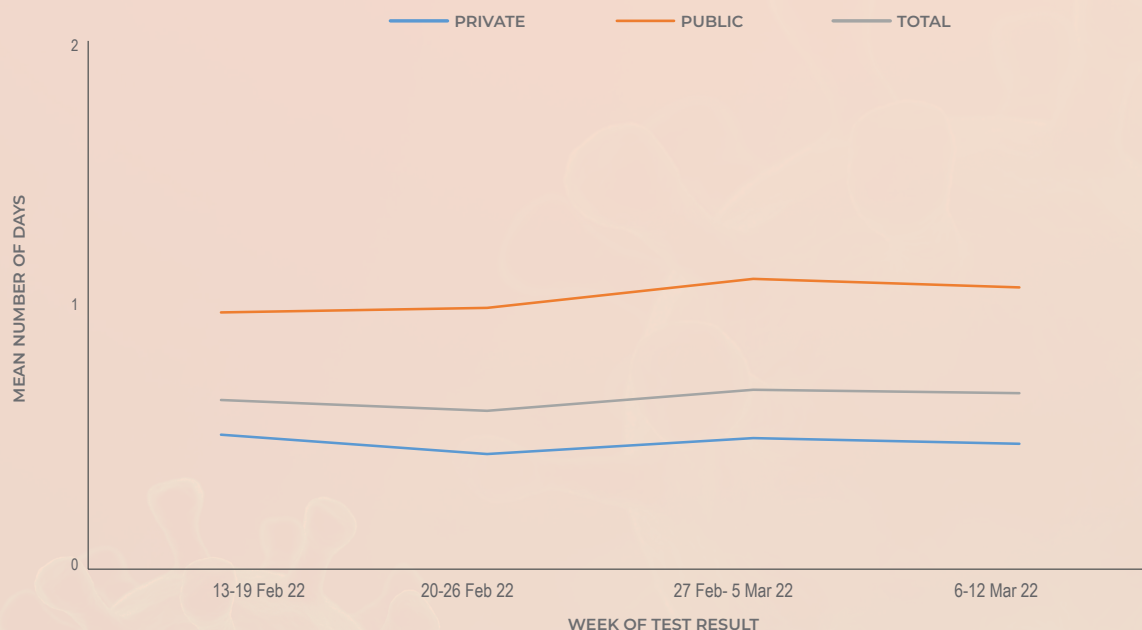


Figure 18. Mean number of days between date of specimen collection and date of test result for PCR tests by week of test result, South Africa, 13 February - 12 March 2022.

COVID-19 TESTING SUMMARY

SOUTH AFRICA WEEK 10 2022

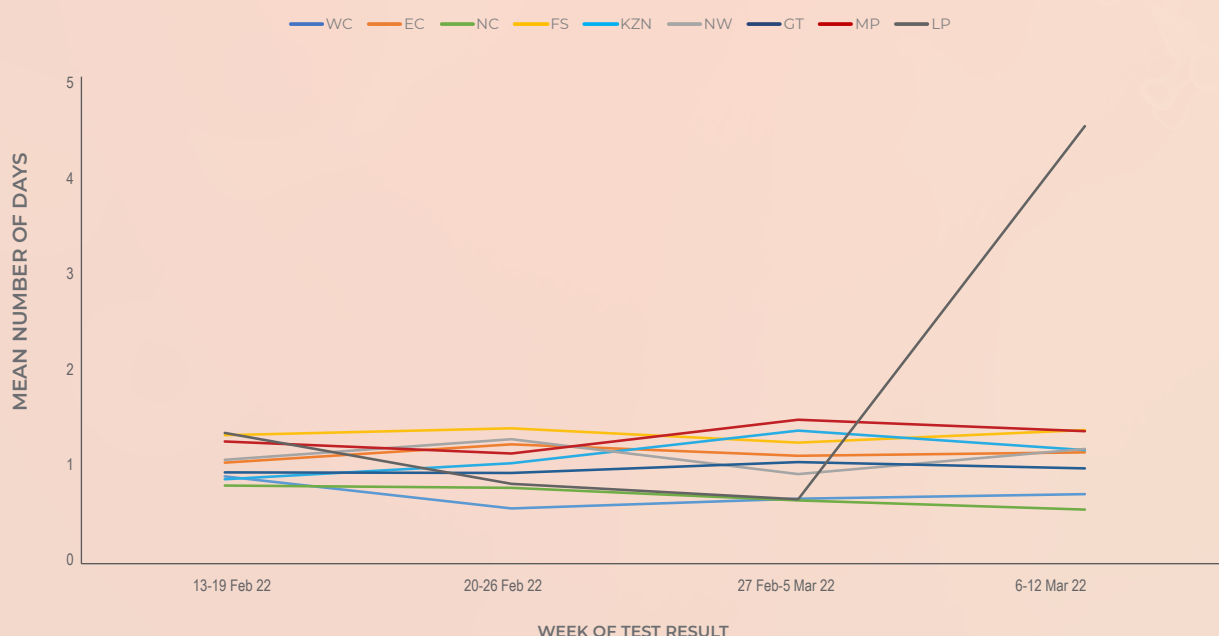


Figure 19. Mean number of days between date of specimen collection and date of test result for PCR tests in the public sector by week of test result and province, South Africa, 13 February – 12 March 2022. WC Western Cape; EC Eastern Cape; FS Free State; KZN KwaZulu-Natal; GT Gauteng; NC Northern Cape; NW North West; MP Mpumalanga; LP Limpopo

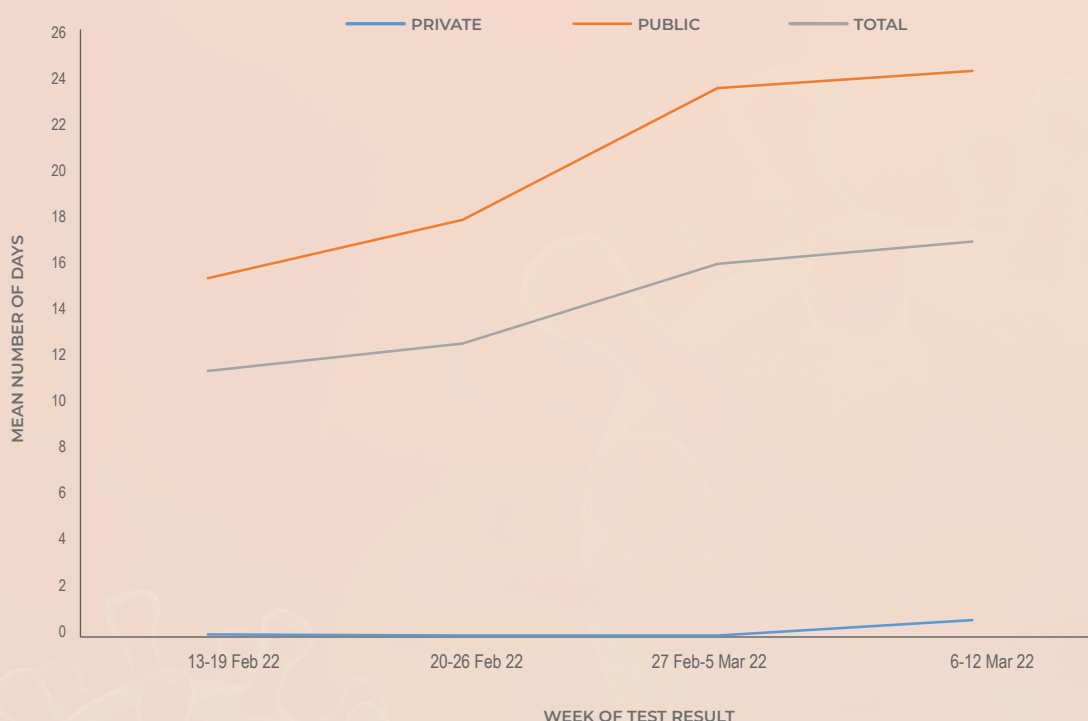


Figure 20. Mean number of days between date of specimen collection and date of test result for antigen tests by week of test result, South Africa, 13 February – 12 March 2022.

COVID-19 TESTING SUMMARY

SOUTH AFRICA WEEK 10 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. Results of reported rapid antigen-based tests are included in this report, however data are incomplete and efforts are ongoing to improve data completeness.

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 – 40 of 2020, 2020 estimates were used from week 41 2021

to week 1 of 2022 and 2021 estimates were used from week 2 of 2022 and onwards). 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, 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 (approximately 95% of public sector facilities in the country) and private (approximately 79% of private testing facilities) 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. Districts with fewer than 20 tests reported during the week have been excluded from the analysis.

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.
- 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.
- Antigen tests may be underestimated as they are used in a number of different settings and results may not be reported.