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Province of the EASTERN CAPE HEALTH

NATIONAL INSTITUTE FOR COMMUNICABLE DISEASES
Division of the National Health Laboratory Service

Daily Epidemiological Report for SARS-Cov_2

Report No. 249

Date Issued 08th Dec. 2020 @ 23h00

1. PURPOSE

The report provides a descriptive analysis of SARS-Cov-2 related cases and deaths, which were detected, reported and investigated in the Eastern Cape, as on the 08th Dec. 2020.

2. HIGHLIGHTS

a. **An increase in the number of new SARS-Cov-2 cases.**

- In the last 24 hours, 53,9% were from NM Metro and Sarah Baartman, 38,1% from BC Metro, Chris Hani and Amathole, and 7,4% were from Alfred Nzo and OR Tambo.
- Fifty-three percent (53,3%) cases of the 7,983 active cases were from NM Metro and Sarah Baartman, 33,2% BC Metro, Chris Hani and Amathole, and 12,5% from OR Tambo and Alfred Nzo.
- Of all the cases which were detected, 90,6% recovered. Six (6) districts have more than 90% recovery rate, except for NM Metro and Sarah Baartman. The case fatality rate for all the districts in the province was 2,0% and above.
- **All districts reported 5 cases per 100,000 and above. The SARS-Cov-2 burden of disease is gradually increasing in some parts of Alfred Nzo and OR Tambo.**

b. Antigen Testing

- On the 7 December 716 (13, 7%) of the 5,231 persons tested positive using the antigen testing method.
- The access to testing has increased to enhance early implementation of the public health interventions.

c. Covid-19 related deaths

- In the last 24 hours, 82 deaths were reported there no deaths which were reported from BC Metro, C Hani, Joe Gqabi, NM Metro, and Sarah Baartman.

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- **The number of deaths have significantly increase in November and December especially in those districts with high burden of disease. As the number of cases increases, so are the deaths.**

d. Hospitalizations and outcomes

- Of the 18,656 hospitalizations, 67,0% occurred in public sector and 33,0% in private sector. Forty-four percent (43,3%) of the hospitalizations occurred in NM Metro and 23,1% in BC Metro.
- Sixty-two percent (61,5%) of the hospitalizations were discharged alive, and 25,9% demised due to SARS-Cov-2 related causes. Seventy-two percent (72,4%) of the deaths occurred in public and 27,6% in private sector facilities.
- **As the number of cases increases, hospitalizations also increases**. Recently, the number of admissions was declining with the number of cases.

e. Healthcare workers

- Six percent (6,4%) of the 8,850 SARS-Cov-2 cases were healthcare workers and 1,7% (153) of healthcare workers demised.
- Nurses were the most affected, followed by doctors and clinical associates. **There is an increase in the positivity rate among healthcare workers in the metros.**

f. Clusters and cases in populations of interest

- Identification, investigation and public health response to clusters and outbreaks is critical in containing transmission. Cases in colleges, schools and other high transmission contexts need to be managed timeously to prevent larger outbreaks or "fires". Household levels clusters continue to be identified.

In conclusion, the burden of disease due to SARS-Cov-2 appear to have significantly increased during the November-December period. The concern is that there is an increase in deaths related to SARS-Cov-2 during the abovementioned period. The second peak of the pandemic is more likely to exceed the first peak which occurred during June-July period. The key risk factors are associated with the relaxation of the lockdown restrictions. These factors may include failure to use the non-pharmaceutical prevention strategies (wearing of masks, social distancing and hand washing or sanitation), mass gatherings (in funerals & memorials, parties, bashes with famous artists or DJs, etc.), and high mobility rates.

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3. SARS-Cov-2 CASES & DEATHS

3.1. Summary of all cases and deaths

In the last 24 hours, there were 1,035 newly reported cases and 82 deaths (77 occurred in the last 48 hours) which occurred in the province. The cumulative number of cases and deaths to **139,055** and **5,060** respectively.

Table 1. SARS-Cov-2 cases and deaths in the Eastern Cape by sex, as on 08th Dec. 2020

	No. of cases#	New Cases	Total	%	Deaths#	New Deaths		Total	Case Fatality Rate (%)
						*Newly Reported	**Newly occurred		
Male	54532	409	54941	39,5	2208	2	22	2232	4,1
Female	83459	626	84085	60,5	2770	3	55	2828	3,4
Unknown	29	0	29	0,0	0	0	0	0	0,0
Total	**138020**	**1035**	**139055**	**100**	**4978**	**5**	**77**	**5060**	**3,6**

* Deaths which occurred more than 48 hours ago ** Deaths which occurred within the last 48 hours of reporting # As on 07th Dec. 2020

Sixty-one percent (60,5%) of the SARS-Cov-2 cases were females and 39,5% were males. The case fatality rate related to SARS-Cov-2 was 3,6%, i.e. 4,1% among males and 3,4% females.

Table 2. Number of positive SARS-Cov-2 cases, recoveries and deaths, as on 08th Dec. 2020

District	Cases (as on 07 Dec)	New Cases	Total Confirmed	Recoveries	Deaths (as on 07 Dec)	New Deaths		Total Deaths	CFR%	Recovery Rate	Active Cases
						*Newly Reported	**Newly occurred				
Alfred Nzo	4029	23	4052	3652	77	0	0	77	1,9	90,1	323
Amathole	12568	86	12654	11490	391	0	0	391	3,1	90,8	773
BC Metro	26824	239	27063	24551	1041	0	54	1095	4,0	90,7	1417
Chris Hani	11703	69	11772	10698	609	0	2	611	5,2	90,9	463
Joe Gqabi	4333	2	4335	4179	108	0	4	112	2,6	96,4	44
NM Metro	46958	372	47330	42393	1928	0	10	1938	4,1	89,6	2999
OR Tambo	14666	54	14720	13605	433	1	5	439	3,0	92,4	676
Sarah Baartman	15954	186	16140	14495	387	4	2	393	2,4	89,8	1252
Imported	393	4	397	383	2	0	0	2	0,5	96,5	12
Unspecified	592	0	592	566	2	0	0	2	0,3	95,6	24
E. Cape	**138020**	**1035**	**139055**	**126012**	**4978**	**5**	**77**	**5060**	**3,6**	**90,6**	**7983**

* Deaths that occurred more than 48 hours ** Deaths which occurred within the past 48 hours of reporting

Of all the new cases, 558 (53,9%) were from NM Metro and Sarah Baartman, 394 (38,1%) from BC Metro, Chris Hani and Amathole, and 77 (7,4%) were from Alfred Nzo and OR Tambo. The case fatality rate for all the districts in the province was 2,0% and above.

The number of active cases was 7,983, where 4,251 (53,3%) cases were from NM Metro and Sarah Baartman, 2,653 (33,2%) were from BC Metro, Chris Hani and Amathole, and 999 (12,5%) were from OR Tambo and Alfred Nzo.

Of all the cases which were detected, 90,6% recovered. Six (6) districts have more than 90% recovery rate, except for NM Metro and Sarah Baartman.

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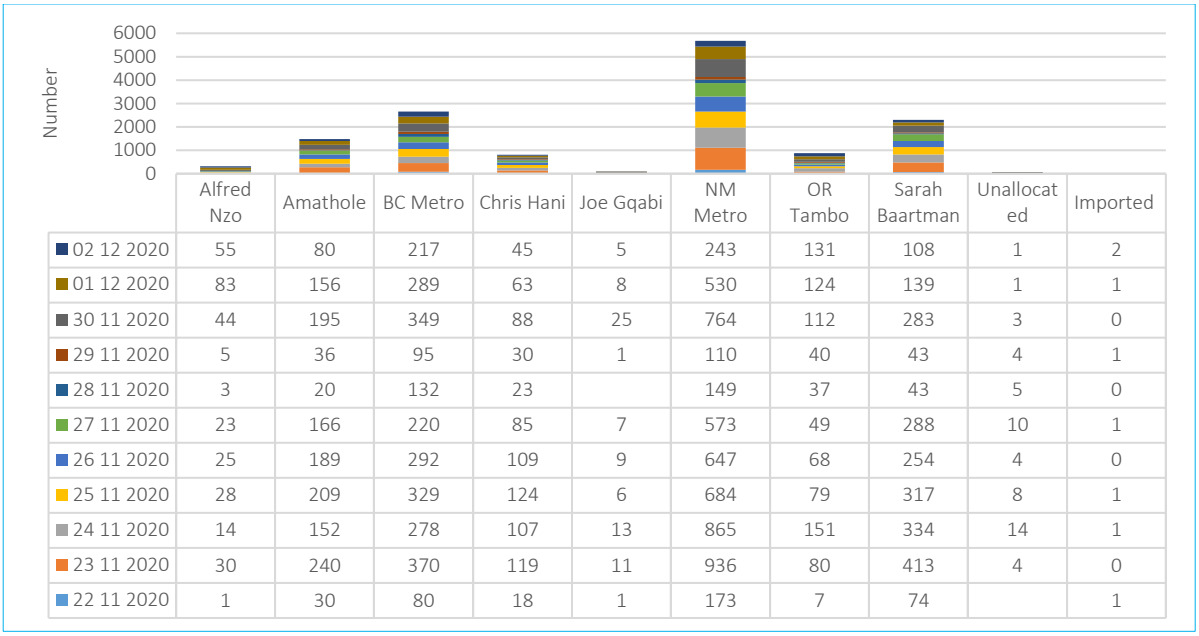
3.2. Newly diagnosed cases

From the 15th November to date, 24,982 cases were detected from all health districts in the Eastern Cape.



	Alfred Nzo	Amathole	BC Metro	Chris Hani	Joe Gqabi	NM Metro	OR Tambo	Sarah Baartman	Unallocated	Imported
02 12 2020	55	80	217	45	5	243	131	108	1	2
01 12 2020	83	156	289	63	8	530	124	139	1	1
30 11 2020	44	195	349	88	25	764	112	283	3	0
29 11 2020	5	36	95	30	1	110	40	43	4	1
28 11 2020	3	20	132	23		149	37	43	5	0
27 11 2020	23	166	220	85	7	573	49	288	10	1
26 11 2020	25	189	292	109	9	647	68	254	4	0
25 11 2020	28	209	329	124	6	684	79	317	8	1
24 11 2020	14	152	278	107	13	865	151	334	14	1
23 11 2020	30	240	370	119	11	936	80	413	4	0
22 11 2020	1	30	80	18	1	173	7	74		1

Fig. 1. No. of SARS-Cov-2 cases by district and date of collection, as on 05th Dec. 2020

The number of SARS-Cov2 cases has decreased from 9,800 on the 15-21 November to 9,733 on the 22-28 November, with a percentage change of -0,6%. From the 29th November to the 04th December, the number of new cases decreased by -46,0%. However, the results of the 05th are still pending and the burden of disease is still high.

4. SARS-Cov-2 LAB TESTS & RESULTS

4.1. Test Results by Laboratory

The number of specimens tested by public and private sector laboratories was 650,942.

Table 3. Number of tests for Private and Public by Laboratories, as on 07th Dec. 2020

	Private	Public	Total	Percentage (%)
Alfred Nzo	2449	18914	21 363	3,3
Amathole	8339	48449	56 788	8,7
BC Metro	30821	73529	104 350	16,0
Chris Hani	6866	38931	45 797	7,0
Joe Gqabi	1281	18053	19 334	3,0
NMB Metro	35290	97476	132 766	20,4
OR Tambo	16631	48784	65 415	10,0
Sarah Baartman	3764	63406	67 170	10,3
Unclassified	137959	0	137 959	21,2
Eastern Cape	**243400**	**407542**	**650 942**	**100,0**

Sixty-three percent (62,6%) of the tests were done in the public sector and 37,4% in private sector laboratories. Tests from the two metros constitute about 36,4% of all the tests.

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4.2. Antigen Testing

The number of specimens, tested using the antigen testing, was 5,231. Fourteen percent (13,7%) of the specimens tested positive for SARS-Cov-2.

Table 4. No. of Antigen Tests and Positive SARS-Cov-2 cases, as on 07 Dec. 2020

	Negative	Positive	Total Tests	Percentage (%)
Alfred Nzo	403	6	409	1,5
Amathole	63	38	101	37,6
BC Metro	678	179	857	20,9
Chris Hani	90	16	106	15,1
Joe Gqabi	51	1	52	1,9
NM Metro	3171	465	3636	12,8
O R Tambo	56	11	67	16,4
Sarah Baartman	3		3	0,0
Total	**4515**	**716**	**5231**	**13,7**

Thirty-eight percent (37,6%) of the tests were positive in Amathole, 20,9% in BC Metro, 16,4% in OR Tambo, and 15,1% in Chris Hani.

4.3. Tests by age group and sex

The following graphs provide the number of tests by age group and sex using. Data that is used was from the 01st October to 3rd December, as reported on the 04th December by National Health Laboratory Services (NHLS).

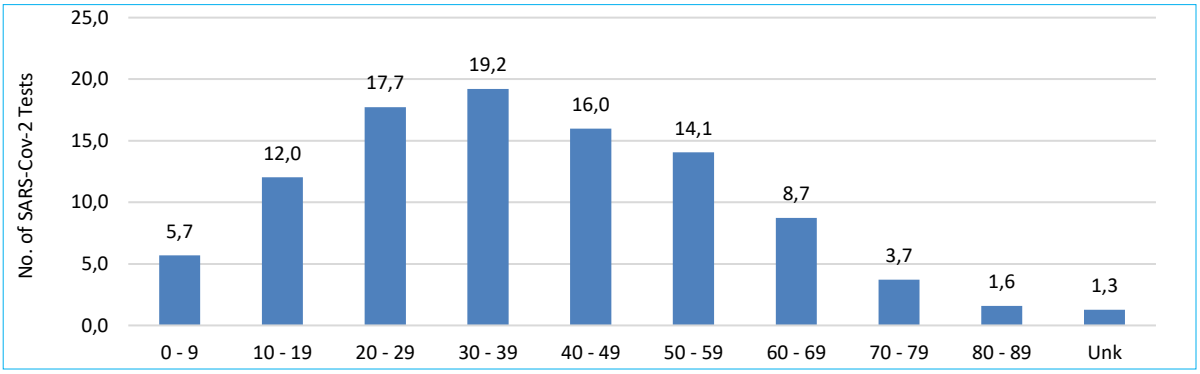

Fig. 3. SARS-Cov-2 Tests by age group & date of last report, as on 04th Dec. 2020 (N=79,530)

Most of the people who tested for SARS-Cov-2 were between the age of 20 and 59 years, i.e. the economically active age-group populations. The number of tests has increased from 60,476 on the 28th November to 79,530 on the 04th December in the public sector, with the percentage change of 31,5%.

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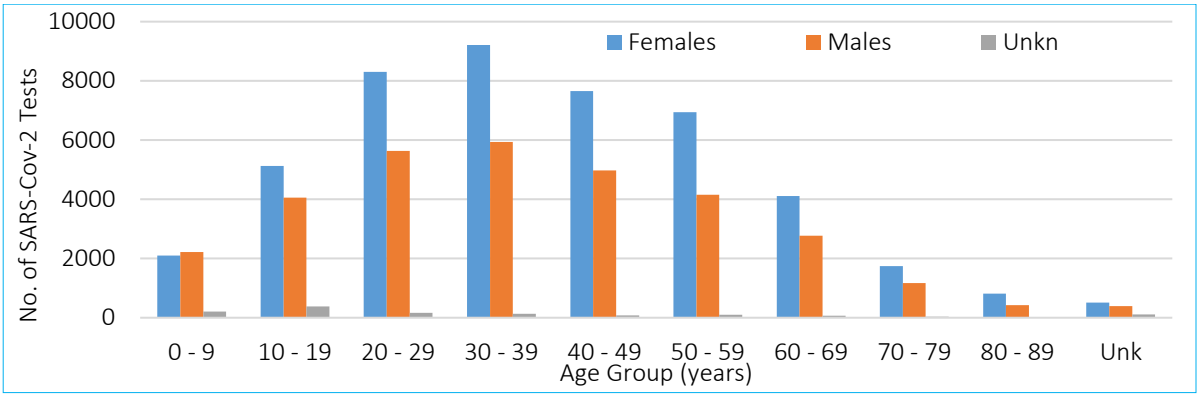

Fig. 4. No. of SARS-Cov-2 Tests by Age Group & Gender, as on 04th Dec. 2020 (N=79,530)

Majority of the persons who were tested for SARS-Cov-2 were females, i.e. 46,509 (58,5%), 31,722 (39,9%) were males, and 1,299 (1,6%) did not age information on sex.

4.4. Turnaround Time

The turnaround time is the noticeable sign of laboratory service and used as a key performance indicator of the laboratory performance. The table below provides the turnaround time for all the tests that tested positive for SARS-Cov-2 in both public and private laboratories, submitted to NICD.

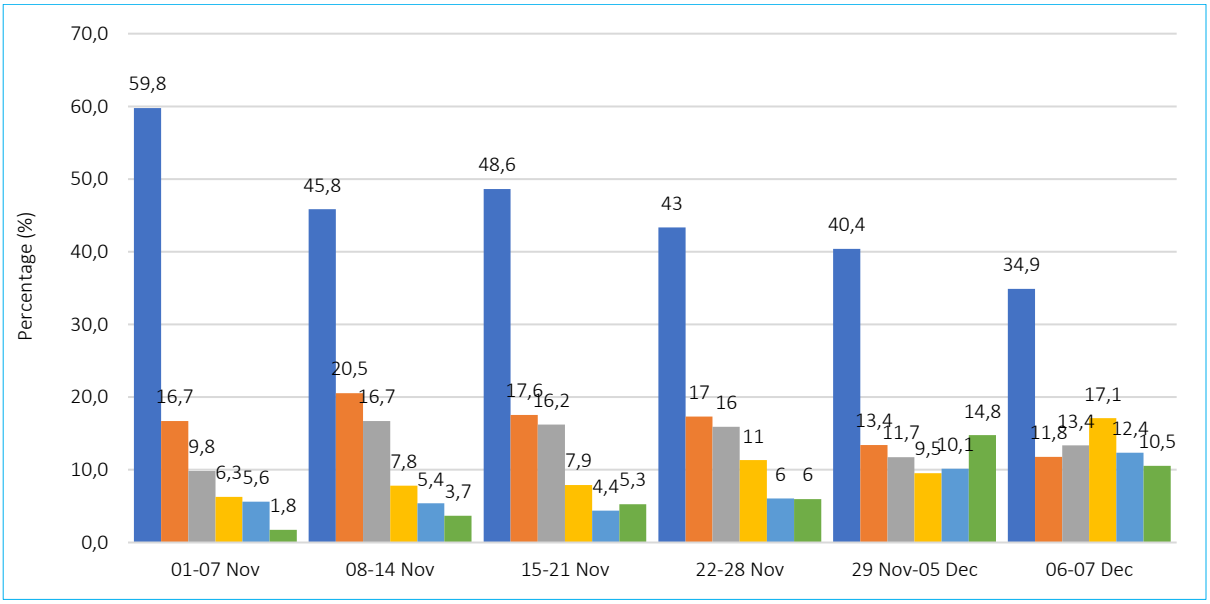

Fig. 5. Turnaround time for SARS-Cov-2 positive results by week, as on 08th Dec. 2020

Sixty percent (60,0%) of the SARS-Cov-2 results were available within 72 hours in the first 3 days of the current week, compared to 65,5% in the previous week. There is a decrease in the percentage of the specimens with results within 24 hours from 40,4% in the previous week to 34,9% in the current week.

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4.5. The 7-day moving average of SARS-Cov-2 tests & positivity rate

The figure below provides the 7-day moving average for the tests and the positivity rate.

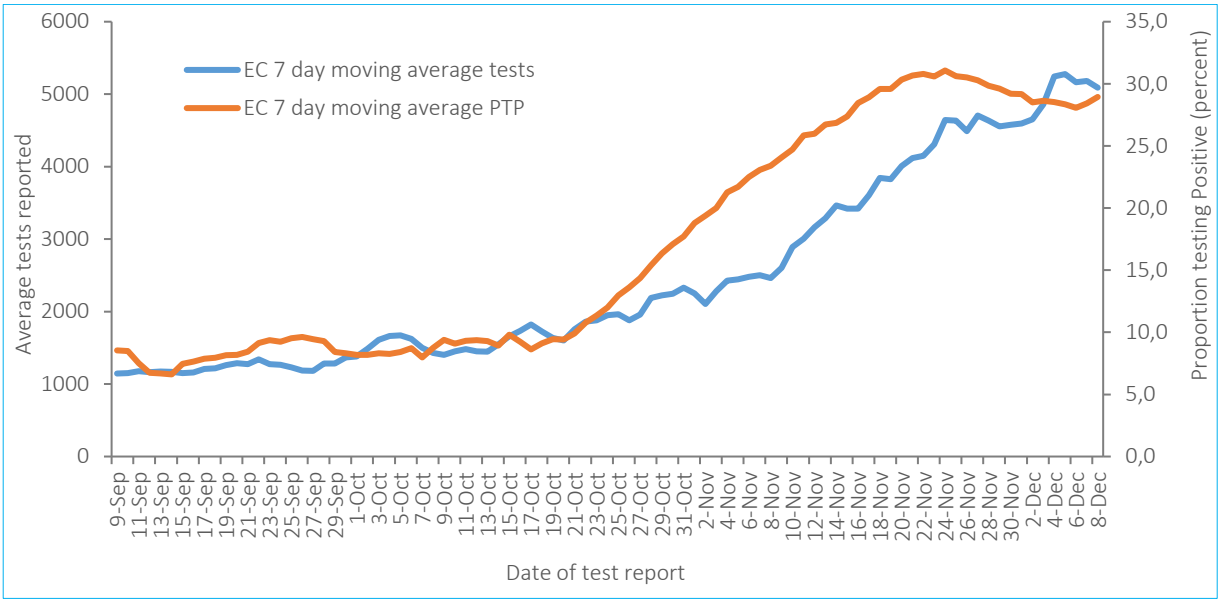

Fig. 6. 7-day moving average for lab tests and positivity rate, as on 8 Dec. 2020

Average positivity (seven day moving average) increased by 2% from 28.5% on 1 December 2020 to 29.1% on 8 December 2020. Over the same period, the average tests have increased by 11% from 4596 to 5089.

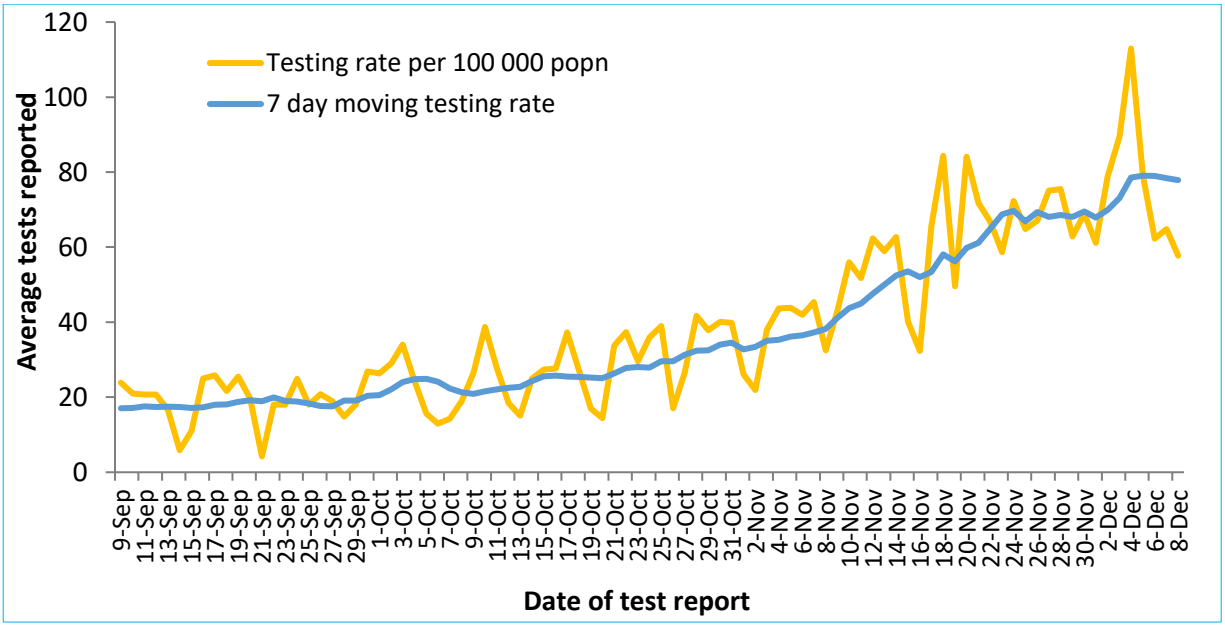

Fig. 7. The 7-day moving average for tests and testing rate, as on 8 Dec 2020

Between 1 December 2020 and 8 December 2020, the testing rate decreased by 6% from an average of 68 tests per 100,000 to 78 tests per 100,000 on the 8 December 2020.

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3. ACTIVE CASES, INCIDENCE & POSITIVITY RATE

3.1. Active SARS-Cov-2 cases and positivity rate

The number of active cases was 7,983, i.e. 118,9 cases per 100,000 population at risk. The cumulative positivity rate was 23,7%, and 39,9% in NM Metro, followed by 28,0% in Sarah Baartman, 27,6% in Chris Hani, and 27,5% in BC Metro.

Table 4. Confirmed SARS-Cov-2 cases, incidence & positivity rate, as on 08th Dec. 2020

District	Population Estimates	No. of tests	SARS-Cov-2 Cases (ALL)	Active SARS-Cov-2 Cases	SARS-Cov-2 per 100,000	Positivity Rate
Alfred Nzo	827826	19763	4052	323	39,0	20,5
Amathole	798067	50990	12654	773	96,9	24,8
BC Metro	798798	98578	27063	1417	177,4	27,5
Chris Hani	733743	42576	11772	463	63,1	27,6
Joe Gqabi	343075	18731	4335	44	12,8	23,1
NM Metro	1210803	118488	47330	2999	247,7	39,9
OR Tambo	1520922	61915	14720	676	44,4	23,8
Sarah Baartman	480223	57668	16140	1252	260,7	28,0
Imported	0	118151	397	12	0,0	0,3
Unspecified		0	592	24		
Eastern Cape	**6713457**	**586860**	**139055**	**7983**	**118,9**	**23,7**

All districts reported more than 5 active cases per 100,000. The highest incidence of active SARS-Cov-2 was observed in Sarah Baartman (260,7 per 100,000), NM Metro (247,7 per 100,000), and BC Metro (177,4 per 100,000).

3.2. Incidence of SARS-Cov-2 cases

The figure provides the incidence of SARS-Cov-2 cases by district from week 10 to week 49.

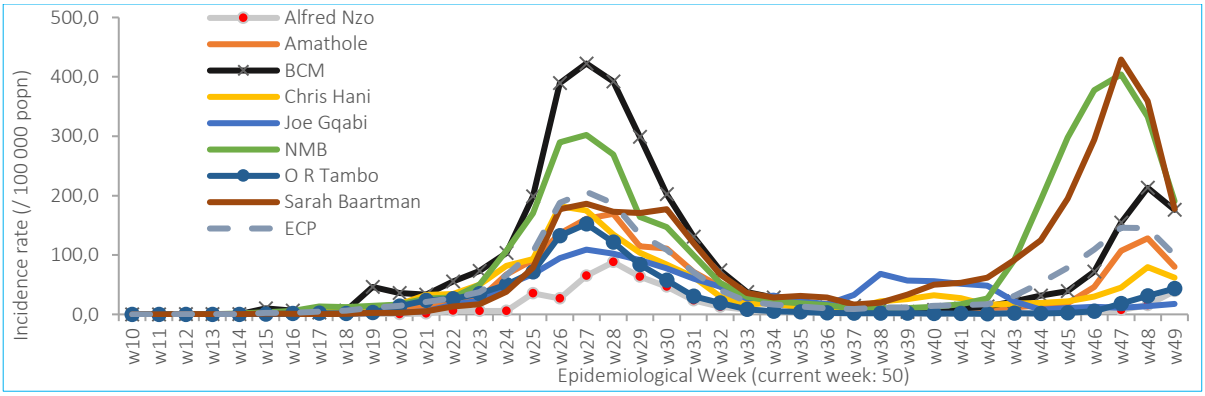

Fig. 8. The incidence (per 100,000) of SARS-Cov-2 by district, as on 06 Dec. 2020

Following the resurgence of SARS-Cov-2 in NM Metro and Sarah Baartman, there was an increase in the incidence in other districts, i.e. BC Metro, Amathole and Chris Hani. In recent weeks, there was a re-emergence of disease in OR Tambo and Alfred Nzo.

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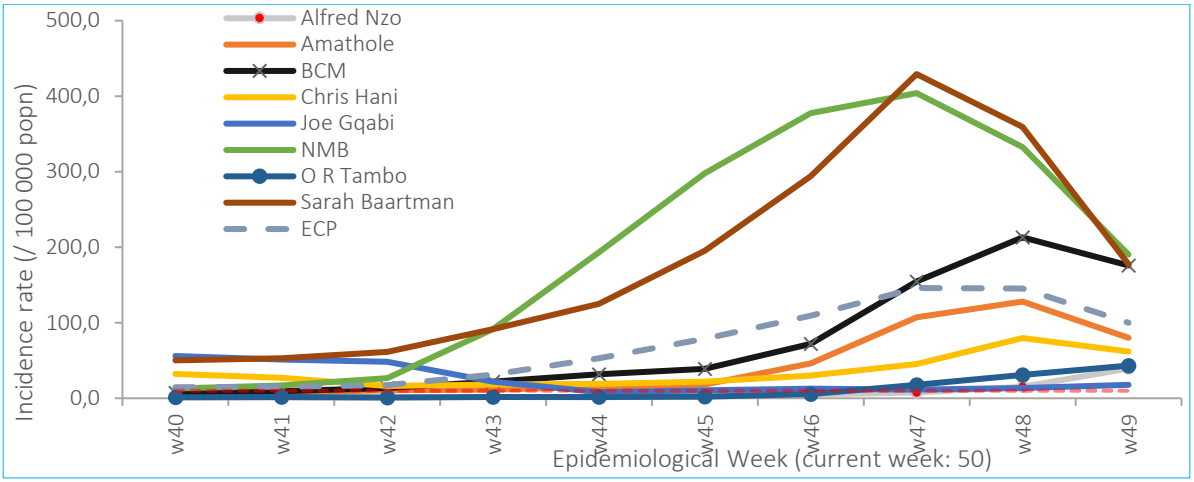
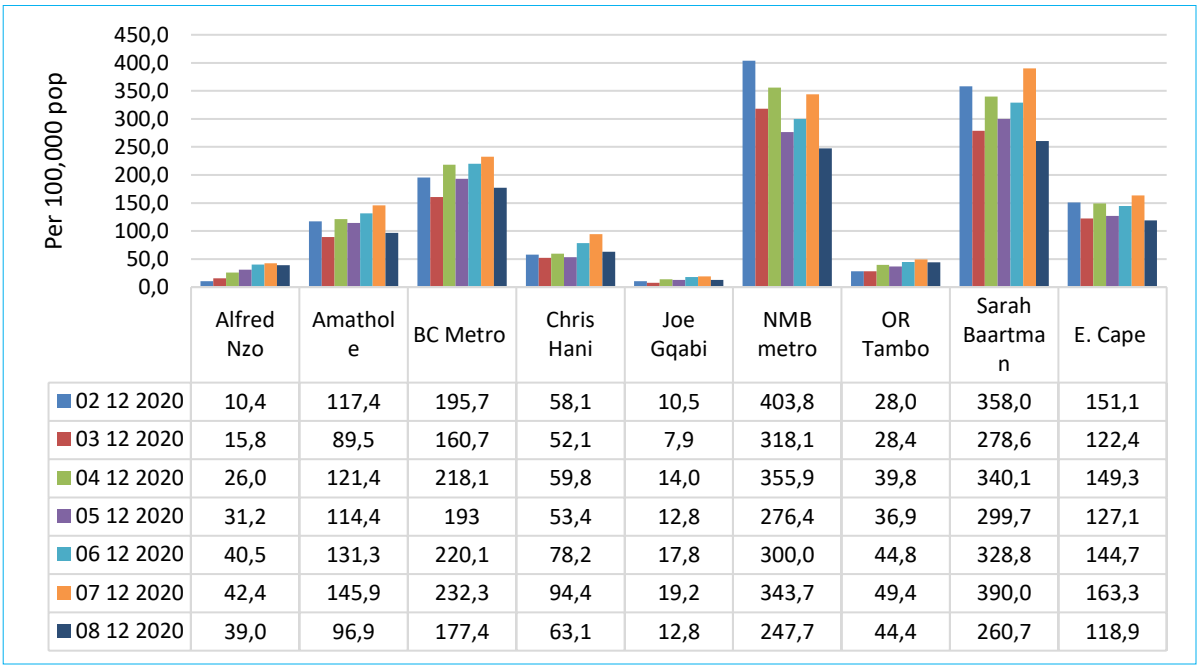


Fig. 9. Incidence of SARS-Cov-2 cases by epidemiological week, as on 6 Dec. 2020

The incidence of SARS-Cov-2 appears to be above the resurgence threshold in all districts. There is a decline in the incidence in all the districts except OR Tambo and Alfred Nzo which were showing upward growth of incidence.



	Alfred Nzo	Amathole	BC Metro	Chris Hani	Joe Gqabi	NMB metro	OR Tambo	Sarah Baartman	E. Cape
02 12 2020	10,4	117,4	195,7	58,1	10,5	403,8	28,0	358,0	151,1
03 12 2020	15,8	89,5	160,7	52,1	7,9	318,1	28,4	278,6	122,4
04 12 2020	26,0	121,4	218,1	59,8	14,0	355,9	39,8	340,1	149,3
05 12 2020	31,2	114,4	193	53,4	12,8	276,4	36,9	299,7	127,1
06 12 2020	40,5	131,3	220,1	78,2	17,8	300,0	44,8	328,8	144,7
07 12 2020	42,4	145,9	232,3	94,4	19,2	343,7	49,4	390,0	163,3
08 12 2020	39,0	96,9	177,4	63,1	12,8	247,7	44,4	260,7	118,9

Fig. 10. Incidence of SARS-Cov-2 (per 100,000) by district and date, as on 08th Dec. 2020

In the past 7 days, the incidence of SARS-Cov-2 has increased from 151,1 per 100,000 on the 02nd to 118,9 per 100,000 on the 08th December. All districts reported more than 5 cases per 100,000 populations.

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3.3. Incidence by districts

The figures below provide the incidence of SARS-Cov-2 from week 40 to 49 for the districts in the Eastern Cape.

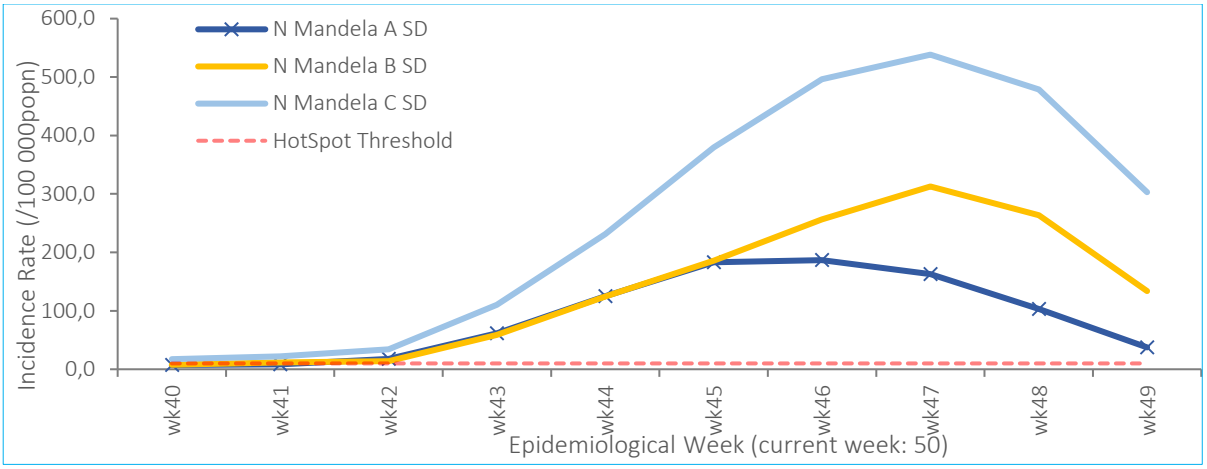

Fig. 11. Incidence of SARS-Cov-2 (per 100,000) in NM Metro, as on 06th Dec. 2020

The incidence of SARS-Cov-2 continues to decline in all the three sub-districts especially from week 47. However, the incidence remains high in Sub-district C and B and a significant decline in Sub-district A, which started in week 45.

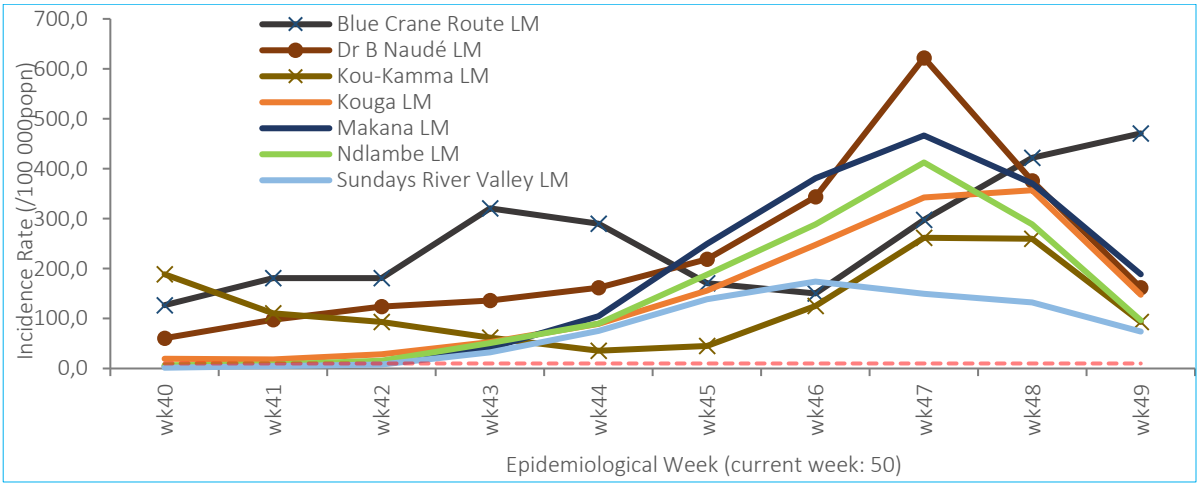

Fig. 12. Incidence of SARS-Cov-2 (per 100,000) in Sarah Baartman, as on 06 Dec. 2020

There was a gradual increase in the incidence of SARS-Cov-2 from week 38 especially in Kou-Kamma, Blue Crane Route, and Kou-Kamma. From week 47, the incidence of SARS-Cov-2 has decreased in the other local municipalities except for Blue Crane Route, which continues to show an upward trend.

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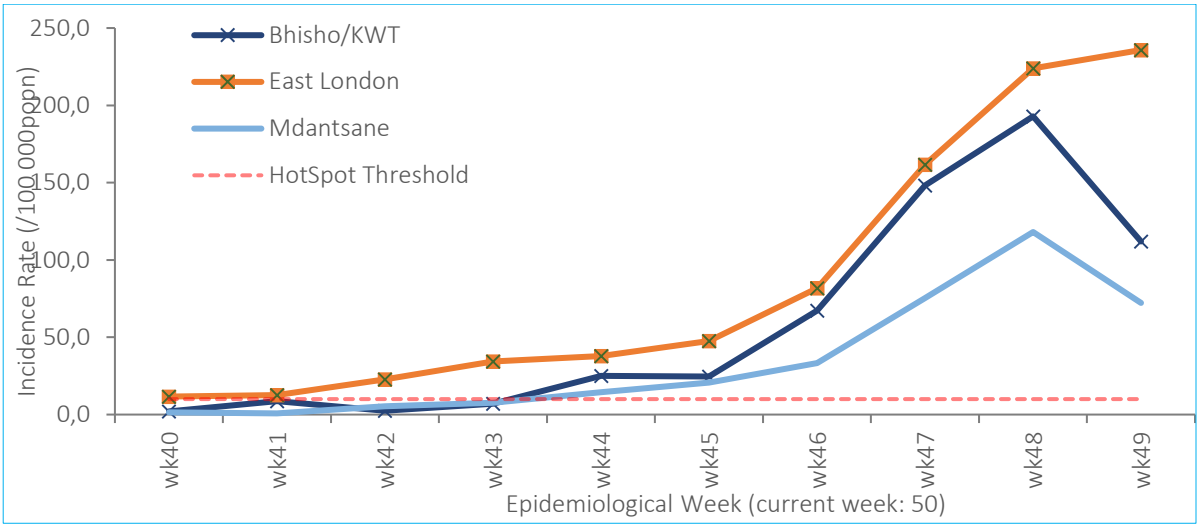

Fig. 13. Incidence of SARS-Cov-2 in Buffalo City Metro, as on 06 Dec. 2020

In the past 10 weeks, the incidence of SARS-Cov-2 had a gradual increase especially from week 45 in all the sub-districts. East London, Bisho /King Williams and Mdantsane have emerged as hotspots in the Metro. The incidence in East London continues to show an upward trend when Bhisho /KWT and Mdantsane are showing a downward trend from week 48.

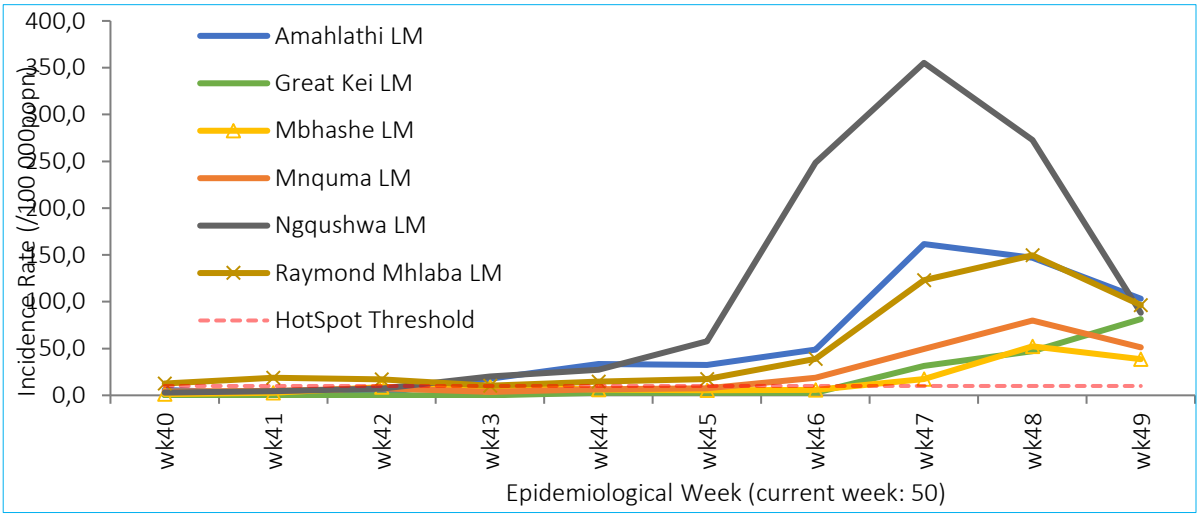

Fig. 14. Incidence of SARS-Cov-2 cases in Amathole District, as on 06 Dec. 2020

Similar to the other districts, all sub-districts have passed the hotspot threshold in the district. However, Ngqushwa, Amahlathi and Raymond Mhlaba reported the highest incidence of SARS-Cov-2 from week 42 or even before. From week 48, the incidence appears to be decreasing in the other sub-districts except for Great Kei, which shows an upward trend of the incidence especially from week 45 or 46.

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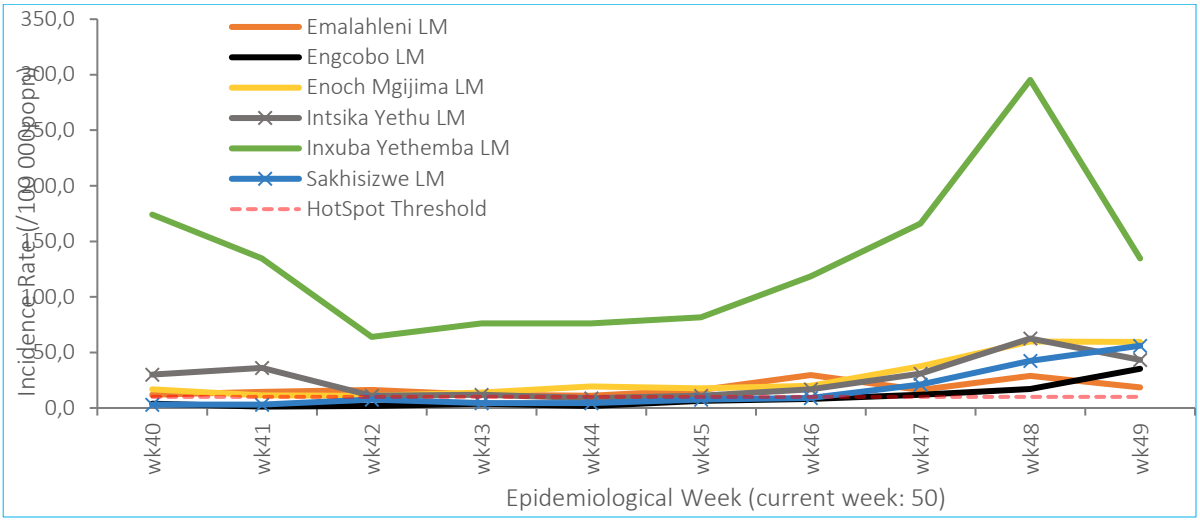

Fig. 15. Incidence of SARS-Cov-2 cases in Chris Hani District, as on 06 Dec. 2020

The highest incidence of SARS-Cov-2 occurred in Inxuba Yethemba local municipality. From week 47, the incidence of SARS-Cov-2 has increased in all the other local municipalities, but show a decline from week 48 in the other sub-districts except Engcobo and Sakhisizwe (showing an upward trend).

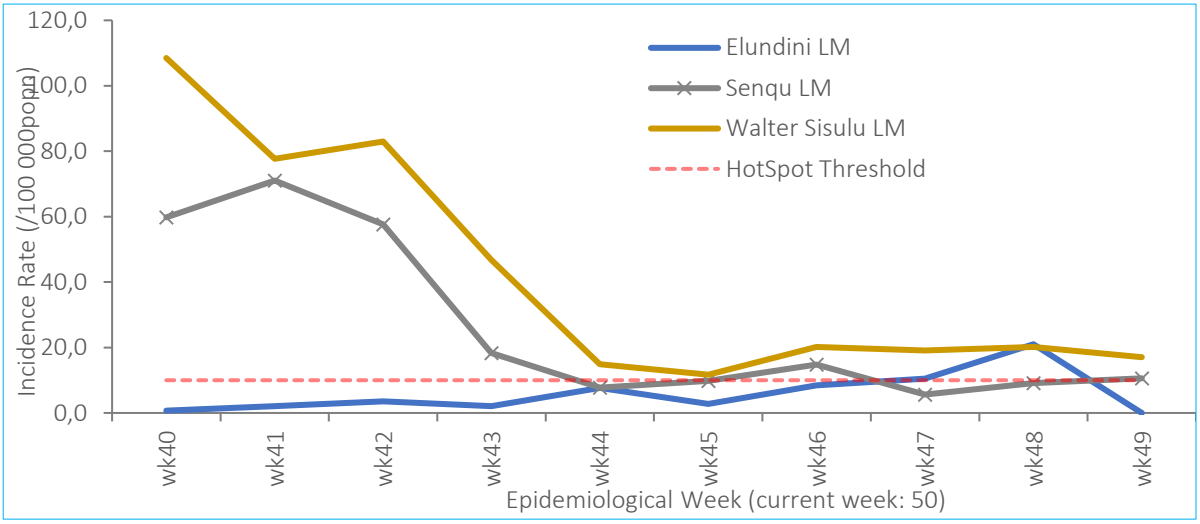

Fig. 16. Incidence (per 100,000) of SARS-Cov-2 in Joe Gqabi, as on the 06 Dec. 2020

Walter Sisulu Local municipality has a high incidence of SARS-Cov-2 and Elundini has the lowest incidence until to date in Joe Gqabi especially in week 49. The incidence in Senqu appear to be increasing and is currently in line with the hotspot threshold.

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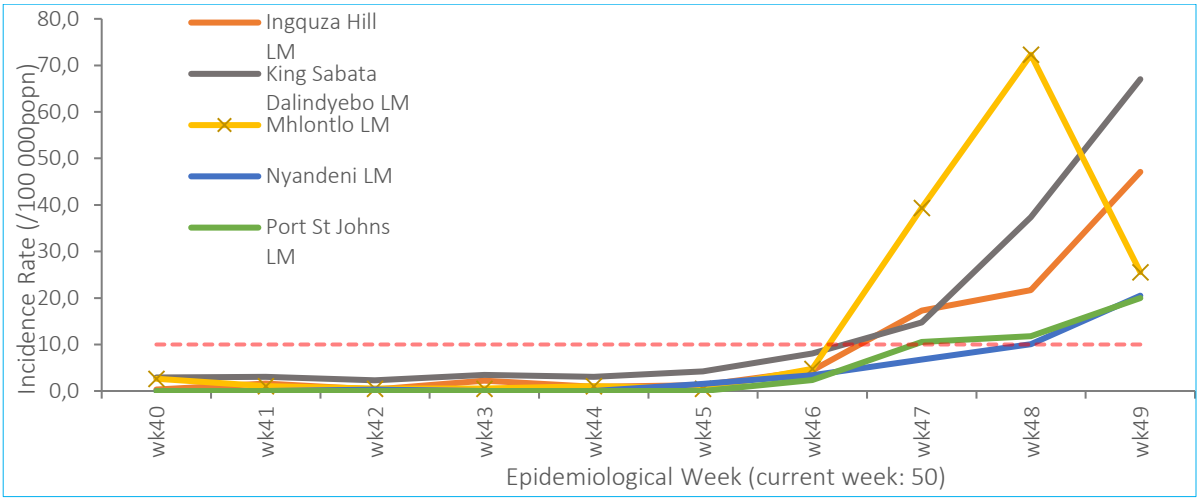

Fig. 17. Incidence (per 100,000) of SARS-Cov-2 in OR Tambo, as on 6 Dec. 2020

From week 46, the incidence of SARS-Cov-2 has increased in nearly all sub-districts, with Mhlontlo and KSD having a high incidence. Four local municipalities show an upward trend, KSD, Inqquza Hill, Nyandeni and Port St Johns. The incidence in Mhlontlo continues to decrease but remains above the hotspot threshold during the current weeks.

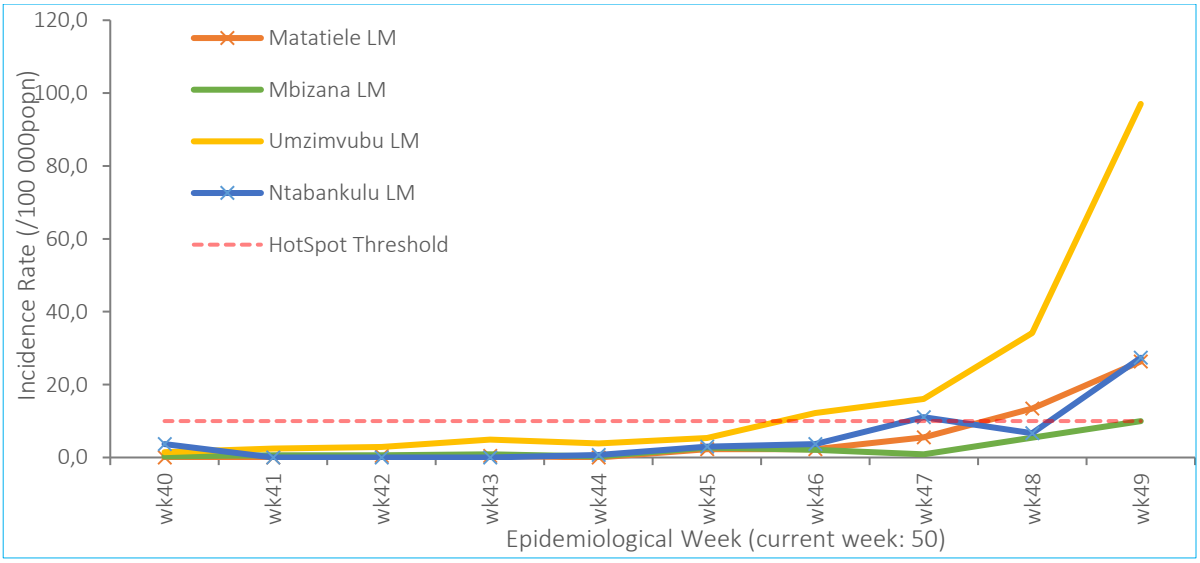

Fig. 18. The incidence of SARS-Cov-2 in Alfred Nzo, as on 6 Dec. 2020

After a long period of low transmission, Alfred Nzo appears to be joining the other districts with high transmission rate. The incidence of SARS-Cov-2 in Alfred Nzo appear to be increasing in all local municipalities. There is a high incidence in Umzimvubu followed Matatiele and Ntabankulu. Mbizana is also showing an upward trend of the incidence of SARS-Cov-2 but remains below the hotspot threshold.

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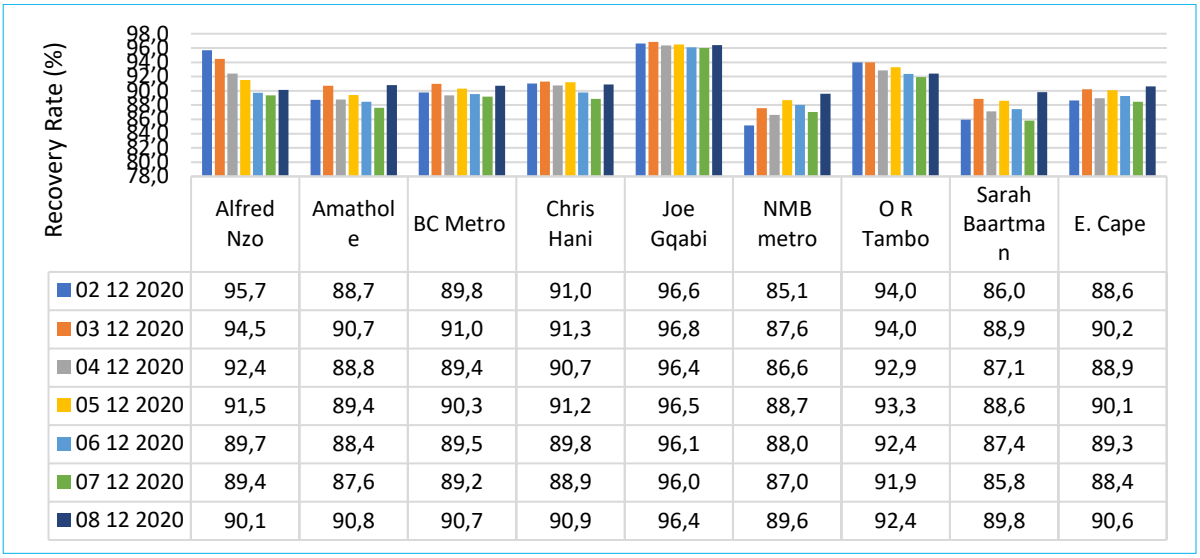
3.4. Recovery Rate (%)

The figure below provides the recovery rate for the past 7 days for each district.



	Alfred Nzo	Amatholе	BC Metro	Chris Hani	Joe Gqabi	NMB metro	O R Tambo	Sarah Baartman	E. Cape
02 12 2020	95,7	88,7	89,8	91,0	96,6	85,1	94,0	86,0	88,6
03 12 2020	94,5	90,7	91,0	91,3	96,8	87,6	94,0	88,9	90,2
04 12 2020	92,4	88,8	89,4	90,7	96,4	86,6	92,9	87,1	88,9
05 12 2020	91,5	89,4	90,3	91,2	96,5	88,7	93,3	88,6	90,1
06 12 2020	89,7	88,4	89,5	89,8	96,1	88,0	92,4	87,4	89,3
07 12 2020	89,4	87,6	89,2	88,9	96,0	87,0	91,9	85,8	88,4
08 12 2020	90,1	90,8	90,7	90,9	96,4	89,6	92,4	89,8	90,6

Fig. 19. SARS-Cov-2 Recovery Rate (%) by districts, as on the 08th Dec. 2020 (N=126,012)

The provincial recovery rate 90,6% recovery rate. Six (6) districts have the recovery rate that was 90% and above, and only 2 districts with less than 90% recovery rate.

3.5. Mapping of active cases, recoveries and deaths

The maps presented in this section shows the distribution of active cases, recoveries and deaths related to SARS-Cov-2. These maps show that the cases and deaths were widely distributed throughout the province.

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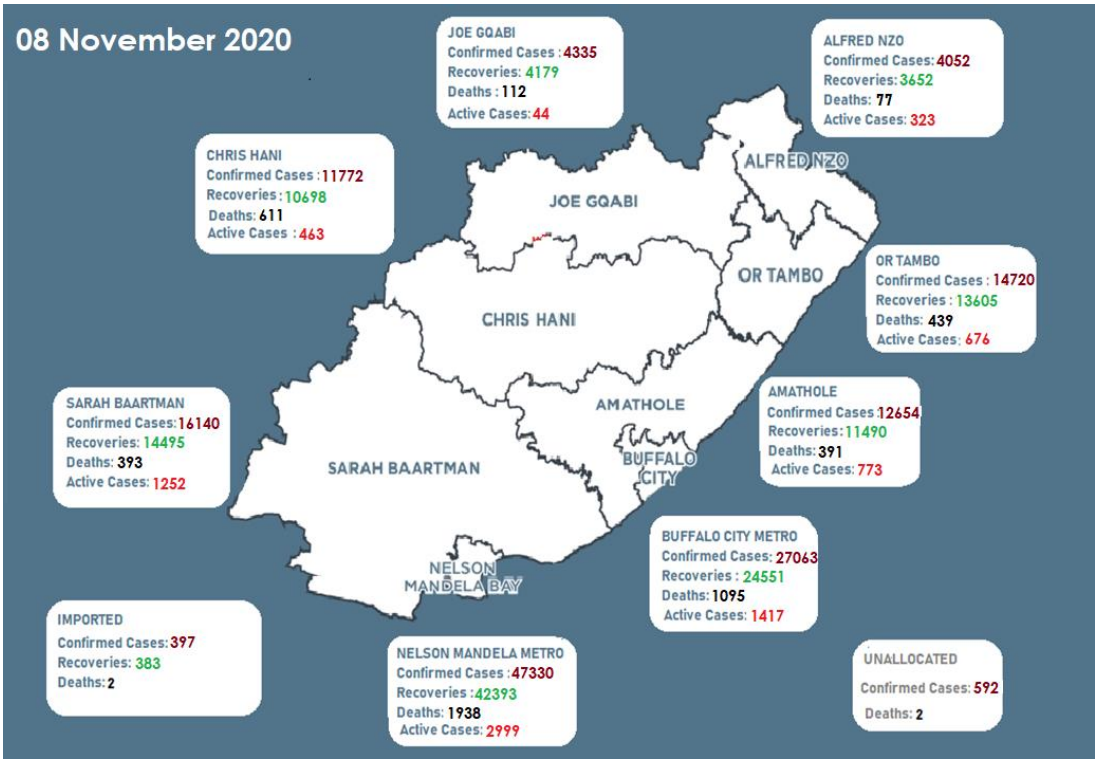

Fig. 20. No. of Covid-19 cases, recoveries and deaths, as on 08th Dec. 2020

The metros and Sarah Baartman have a high number of active cases. There is evidence that nearly all the districts in the province have more than 5 cases per 100,000 pop at risk.

4. SARS-COV-2 CASES AND 7-DAY MOVING AVERAGE

This graph provides the number (including cumulative) of cases and 7-day moving average.

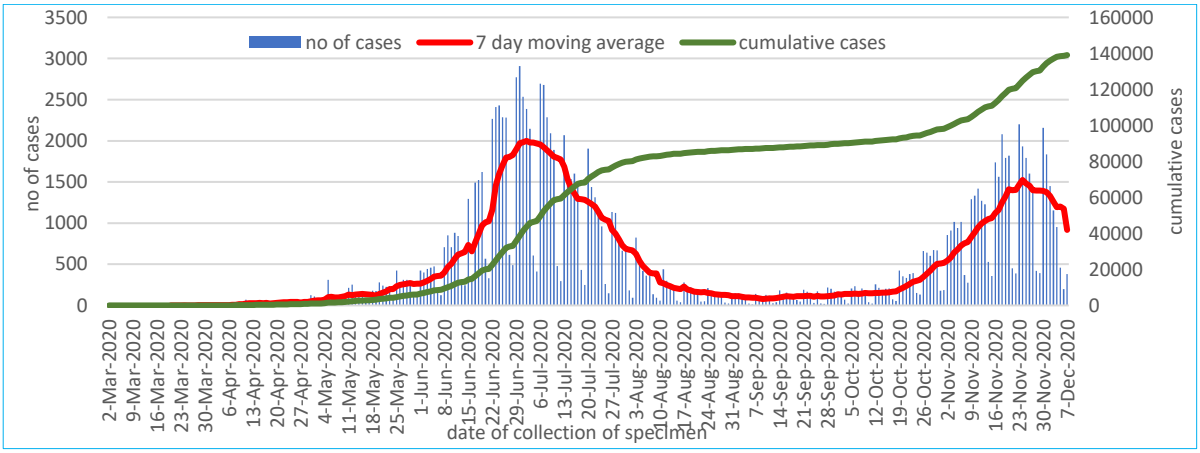

Fig. 21. The 7-day moving average for covid-19 cases by collection date, as on 08th Dec. 2020

The number of daily newly diagnosed cases has increased from the second half of October and peaked in the last part of November, and then decreased until to date. However, the cumulative number continues to show an upward trend of the cases. The second peak of the pandemic appear to be approaching the level of the first peak.

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5. SARS-Cov-2 RELATED MORTALITY

5.1. SARS-Cov-2 related deaths

The table below provides the number of cases and deaths, and mortality rate by the month.

Table 5. Number of cases and deaths by month, as on 08th Dec. 2020

	Cases	Percent (%)	Deaths	Percent (%)	Case Fatality Rate (%)	Mortality Rate (per 100,000)
March	12	0,0	0	0,0	0,0	0,0
April	635	0,5	30	0,6	4,7	0,4
May	3280	2,4	241	4,8	7,3	3,6
June	23759	17,1	925	18,3	3,9	13,8
July	50252	36,1	1739	34,4	3,5	25,9
August	8278	6,0	529	10,5	6,4	7,9
September	2990	2,2	175	3,5	5,9	2,6
October	8619	6,2	228	4,5	2,6	3,4
November	33658	24,2	1016	20,1	3,0	15,1
December	7572	5,4	108	2,1	1,4	1,6
Unkn	0	0,0	69	1,4	0,0	1,0
Total	**139055**	**100,0**	**5060**	**100,0**	**3,6**	**75,4**

Fifty-three percent (53,2%) of the SARS-Cov-2 cases and 52,7% of the deaths occurred during the June-July period. The case fatality rate has decreased from 7,3% in May to 3,0% in November and 1,4% in December. The mortality rate has decreased from 25,9 per 100,000 in July to 15,1 per 100,000 in November, and 1,6 per 100,000 in the first few days of December.

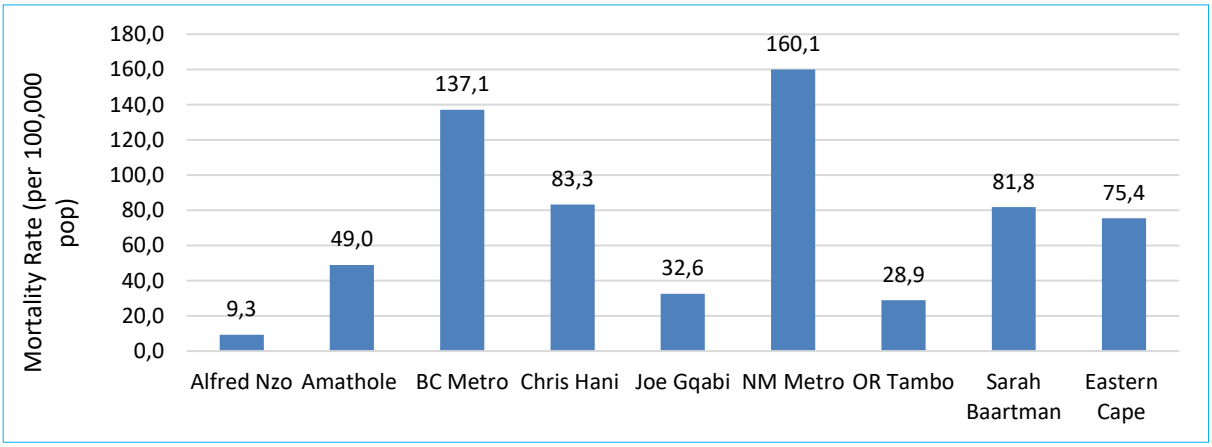

Fig. 22. SARS-Cov-2 related mortality per 100,000 by district, as on 08th Dec. 2020

The mortality rate related to SARS-Cov-2 was 75,4 deaths per 100,000 populations. The highest mortality rate was observed in NM Metro (160,1 deaths per 100,000) followed by BC Metro (137,1 deaths per 100,000), Chris Hani (83,3 per 100,000) and Sarah Baartman (81,8 per 100,000).

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5.2. Number of reported SARS-Cov-2 related deaths

The figure below provides the daily deaths and the cumulative number of deaths.

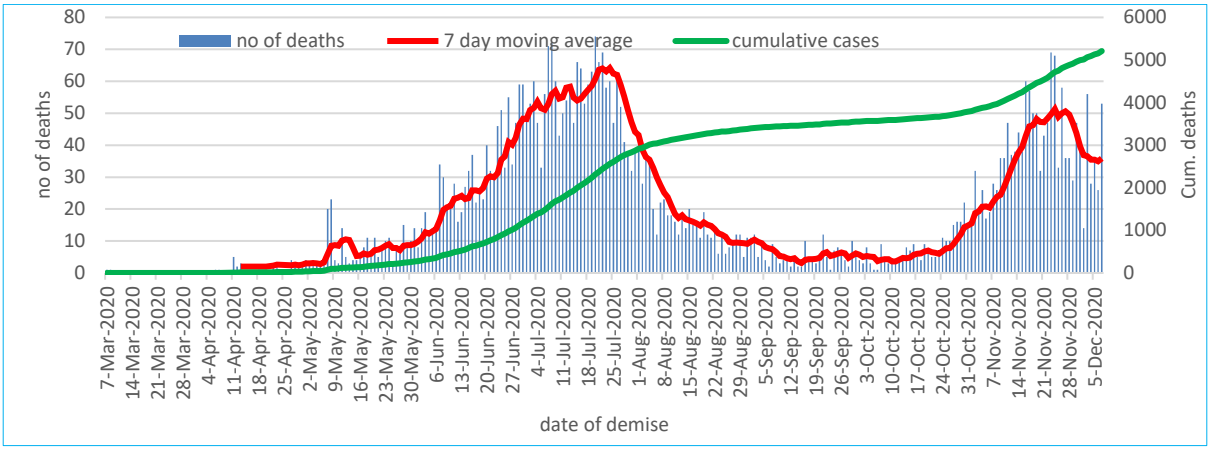
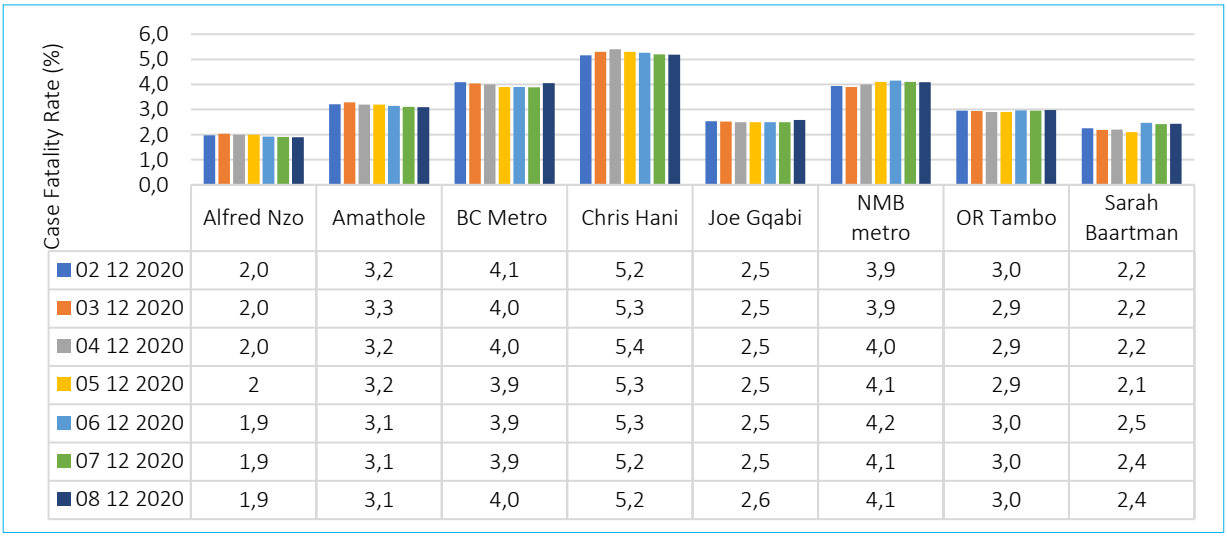


Fig. 23. Daily & cum. SARS-Cov-2 related deaths by date of demise, as on 08th Dec. 2020

The number of daily deaths appears to have increased from May and peaked on the 20th July, and rapidly declined to fewer cases in August and October. From the last week of October, the number of deaths has increased and peaked in the last part of November. However, the cumulative number of deaths appears to continue to increase until to date.

5.3. Case Fatality Rate by district

The case fatality rate for the SARS-Cov-2 has not significantly changed in the past 7 days.



	Alfred Nzo	Amathole	BC Metro	Chris Hani	Joe Gqabi	NMB metro	OR Tambo	Sarah Baartman
02 12 2020	2,0	3,2	4,1	5,2	2,5	3,9	3,0	2,2
03 12 2020	2,0	3,3	4,0	5,3	2,5	3,9	2,9	2,2
04 12 2020	2,0	3,2	4,0	5,4	2,5	4,0	2,9	2,2
05 12 2020	2	3,2	3,9	5,3	2,5	4,1	2,9	2,1
06 12 2020	1,9	3,1	3,9	5,3	2,5	4,2	3,0	2,5
07 12 2020	1,9	3,1	3,9	5,2	2,5	4,1	3,0	2,4
08 12 2020	1,9	3,1	4,0	5,2	2,6	4,1	3,0	2,4

Fig. 24. SARS-Cov-2 Case Fatality Rate (%) by district, as on 08th Dec. 2020 (N=5,060)

Five percent (5,2%) of the cases demised in Chris Hani, followed by BC Metro (4,0%), NM Metro (4,1%), Amathole (3,1%), OR Tambo (3,0%), Joe Gqabi (2,6%) and Sarah Baartman (2,4%).

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5.4. Case Fatality Rate by age group

The figure below provides the case fatality rate for both males and females.

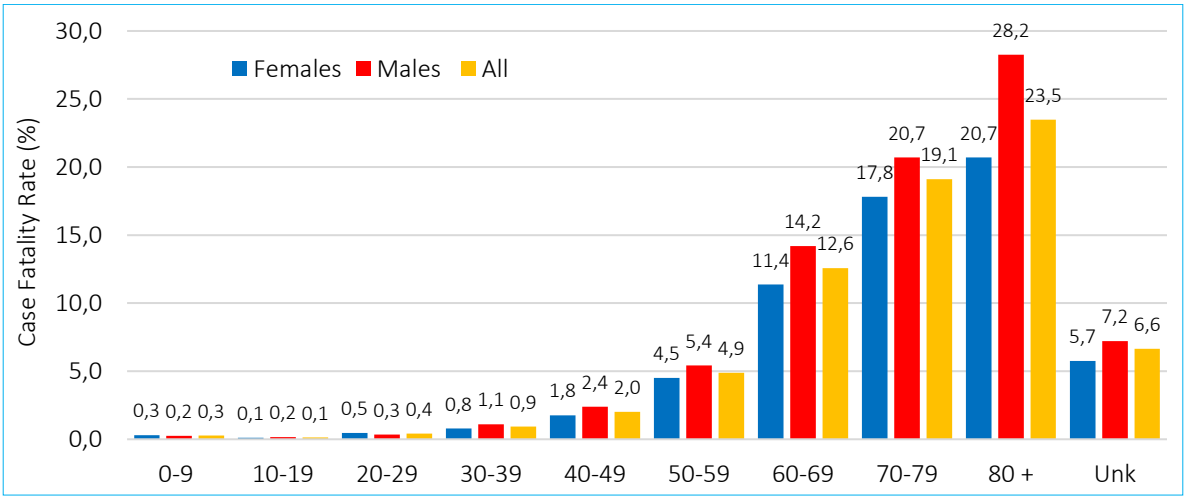

Fig. 25. SARS-Cov-2 related Case Fatality Rate (%) by age group, as on 29th Nov. 2020

The case fatality rate increases with an increase in age. The younger population had a low case fatality rate and the older population has an increased case fatality rate. The male population has a high case fatality rate compared to the female population.

5.5. Deaths by health facilities

The graph provides the number of deaths by hospital or place in which the death occurred. Only hospitals with a minimum of 10 deaths are included in the figure below.

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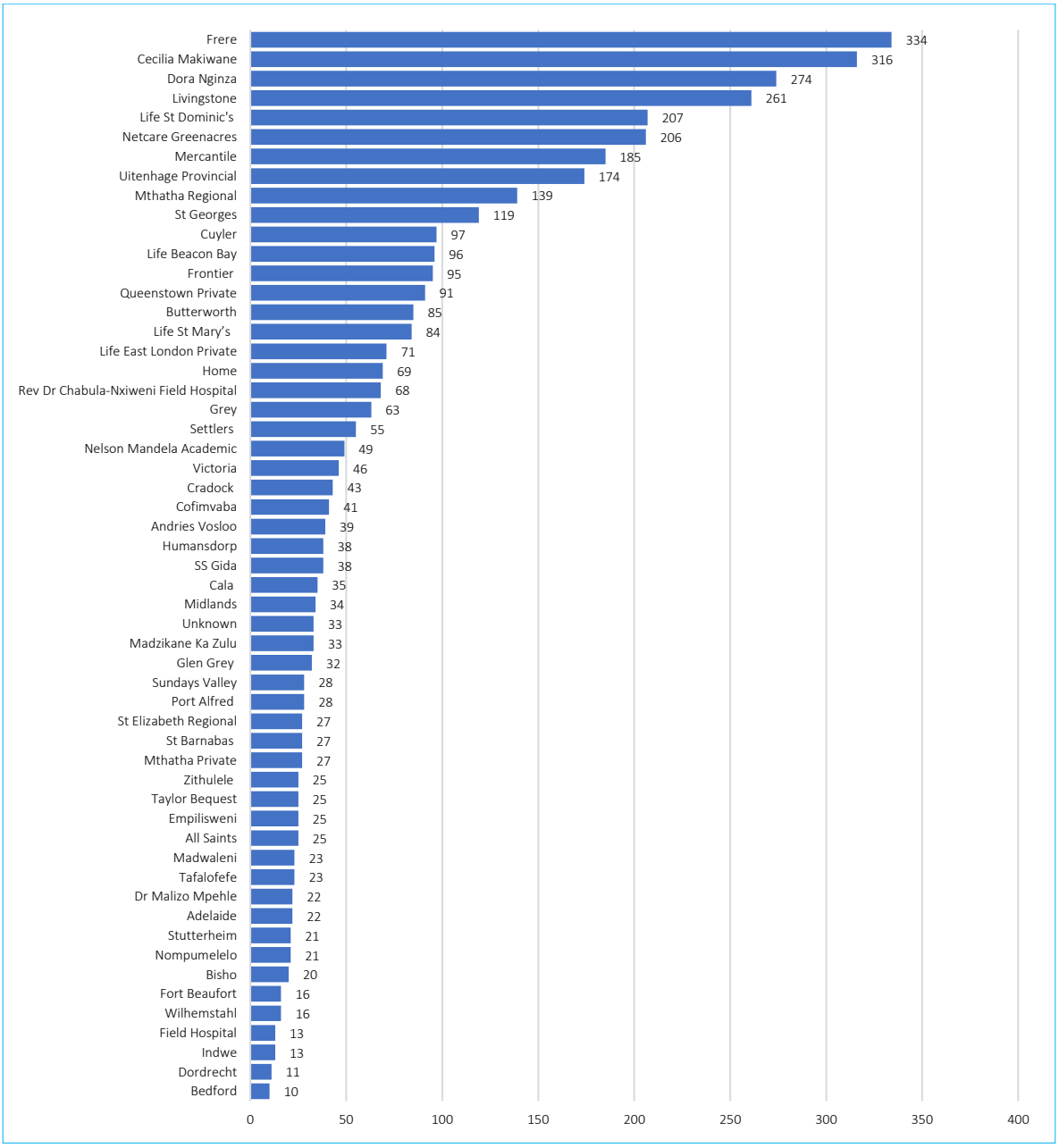

Fig. 26. No. of SARS-Cov-2 related deaths by the facility, as on 05th Dec. 2020 (N=4,789)

Fifty percent (49,6%) of the deaths occurred in 13 hospitals, i.e. 6 public and 7 private hospitals, i.e. Frere, Life St. Dominics, Dora Nginza, Mthatha Regional, Netcare Greenacres, Livingstone, Life Beacon Bay, Cecilia Makiwane, Uitenhage, Life St. Marys, Life Queenstown, Mercantile, and St. Georges hospitals. Sixty-seven (67) of the deaths occurred at home, i.e. outside the health facility.

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6. HEALTHCARE WORKERS

6.1. Cases and deaths among HCWs

A total number of 8,850 healthcare workers tested positive for SARS-Cov-2 and 153 persons demised.

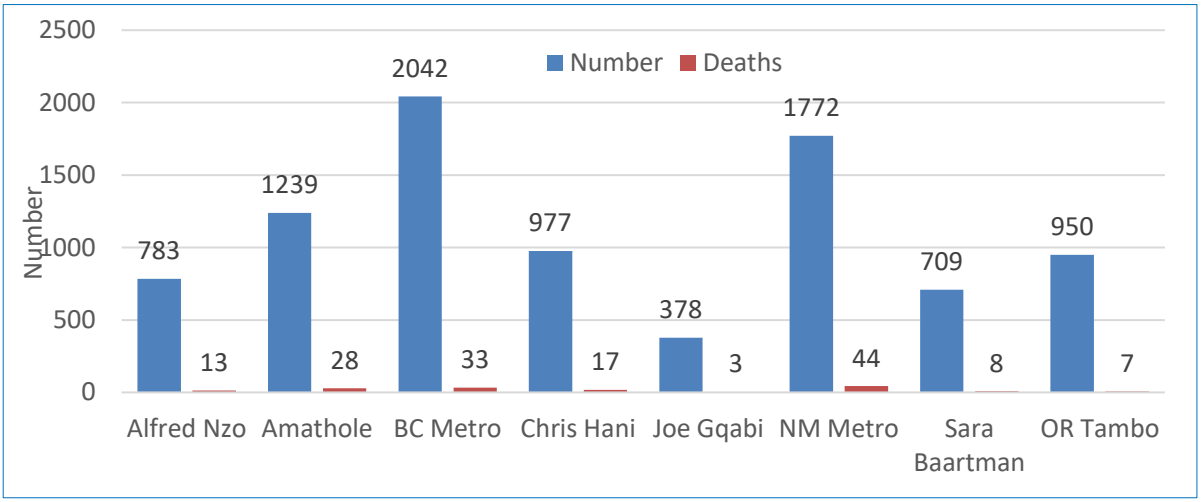

Fig. 27. SARS-Cov-2 positive Healthcare Workers, as on 03rd Dec. 2020 (N = 8,850)

The number of healthcare workers who tested positive for SARS-Cov-2 in BC Metro was 2,042 (33 deaths), 1,772 in NM Metro (44 deaths), 1,239 in Amathole (28 deaths), 977 in Chris Hani (17 deaths), 950 in OR Tambo (7 deaths), and 709 in Sarah Baartman (8 deaths). Two districts reported the lowest number of cases, i.e. Alfred Nzo (783 cases & 13 deaths) and Joe Gqabi (378 cases & 3 deaths).

6.2. SARS-Cov-2 Cases by job category

The table below provides the number of selected healthcare professionals employed by the State and SARS-Cov-2 cases by job categories, and the positivity rate of that job category.

Table 7. SARS-Cov-2 cases by selected job categories, as on 29th Nov. 2020

	Number	Cases	Positivity Rate (%)
Admin	12434	621	5,0
Allied Professionals	3041	136	4,5
Doctors & Clinical Assoc	2369	297	12,5
Nurses	20650	3674	17,8
Emergency Medical Services	2498	158	6,3

The positivity rate for the nurses was 17,7%, followed by doctors and clinical associates (12,2%), allied professionals (4,4%), EMS (6,3%), and admin personnel (5,0%). The positivity rates among healthcare workers have a negative impact on patient safety, staff morale and confidence, and the capacity of the State to provide quality health services to the population.

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6.3. SARS-Cov-2 cases among HCWs in NM Metro & Sarah Baartman

The epi-curve for healthcare workers who tested positive in NM Metro and Sarah Baartman.

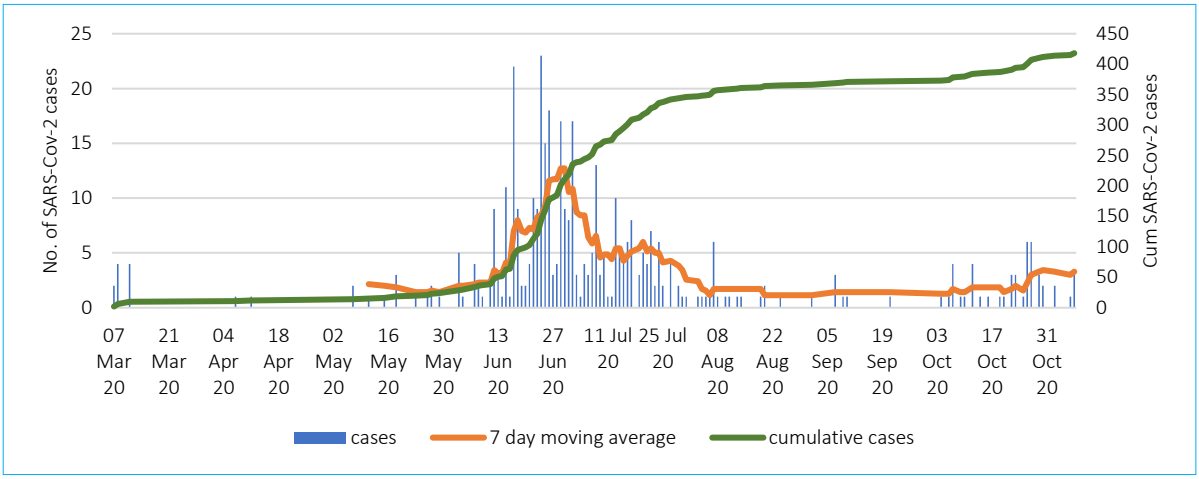

Fig. 28. No. of SARS-Cov-2 cases in NM Metro and Sarah Baartman, as on 13th Nov. 2020

The 7-day moving average shows an increase in the number of cases among healthcare workers that occurred during June and July. After the June to July period, the number of healthcare workers who tested positive decreased with the number in the general population. However, the number of cases has increased from the middle of October to date, mimicking the epi-curve for the general population. Similar to the general population, the cumulative number of cases among healthcare workers appear to continue to increase with time.

6.4. Case Fatality Rate (%) among HCWs

The figure below provides the cases fatality rate among all healthcare workers.

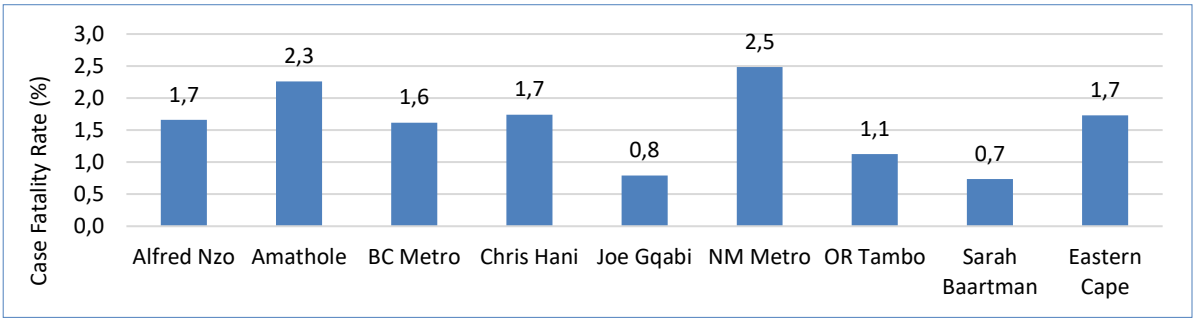

Fig. 29. SARS-Cov-2 Case Fatality Rate (%) among HCWs, as on 20th Nov. 2020 (N = 146)

The case fatality rate among healthcare workers was 1,7%. Both Amathole and NM Metro has more than 2% of the healthcare workers succumbing to SARS-Cov-2, followed by Chris Hani (1,7%), Alfred Nzo (1,7%), BC Metro (1,6%), and OR Tambo (1,1%). The lowest case fatality rate was observed in Sarah Baartman (0.7%) and Joe Gqabi (0,8%) districts.

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7. Hospitalization and outcomes

DATCOV database was used to provide information on the hospitalizations and the outcomes of service provision to the patients.

7.1. Admissions and outcomes

Table 8. No. of hospitalizations by districts, as on 08th Dec. 2020

Districts	Public	Private	Total	Percentage (%)
Alfred Nzo	609	37	646	3,5
Amathole	1196	0	1196	6,4
Buffalo City Metro	2490	1821	4311	23,1
Chris Hani	1362	407	1769	9,5
Joe Gqabi	224	0	224	1,2
Nelson Mandela Bay Metro	4700	3376	8076	43,3
O R Tambo	968	440	1408	7,5
Sarah Baartman	955	71	1026	5,5
Total	**12504**	**6152**	**18656**	**100,0**

Of the 18,656 hospitalizations, 12,504 (67,0%) occurred in public sector and 6,152 (33,0%) in private sector. Forty-four percent (43,3%) of the hospitalizations occurred in NM Metro and 23,1% in BC Metro.

Table 9. No. of hospitalizations and outcomes, as on 08th Dec. 2020

Eastern Cape	Public	Private	Total
Cumulative Admissions	12504	6152	18656
Died	3500	1335	4835
Discharged Alive	7286	4191	11477
Transferred Out	659	5	664
Currently Admitted	1053	621	1674
In ICU	17	115	132
In High Care	12	21	33
In General	1024	485	1509
On Oxygen	436	226	662
Ventilated	17	43	60

Sixty-two percent (61,5%) of the hospitalizations were discharged alive, and 25,9% demised due to SARS-Cov-2 related causes. Seventy-two percent (72,4%) of the deaths occurred in public and 27,6% in private sector facilities. Current admissions were 1,674, with 1,509 (90,1%) admitted in the general ward, 132 (7,9%) in ICU and 33 (2,0%) in High Care. The public sector accounts for 1,053 (62.9%) of the current admissions.

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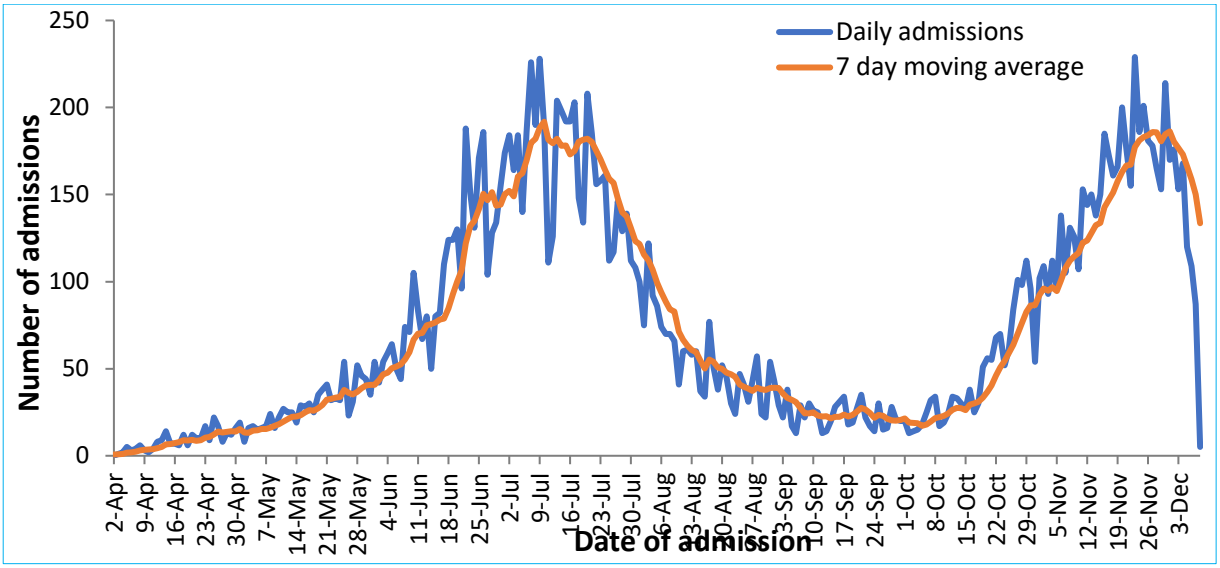

Fig. 30. 7-day moving average of admitted cases, as on 8 Dec. 2020 (DATCOV)

The number of hospitalizations appears to have increased from the first week of October. As the number of newly diagnosed cases increased, the number of daily hospitalizations also increased. However, there is also evidence that the number of admissions appears to be declining from the last part of November.

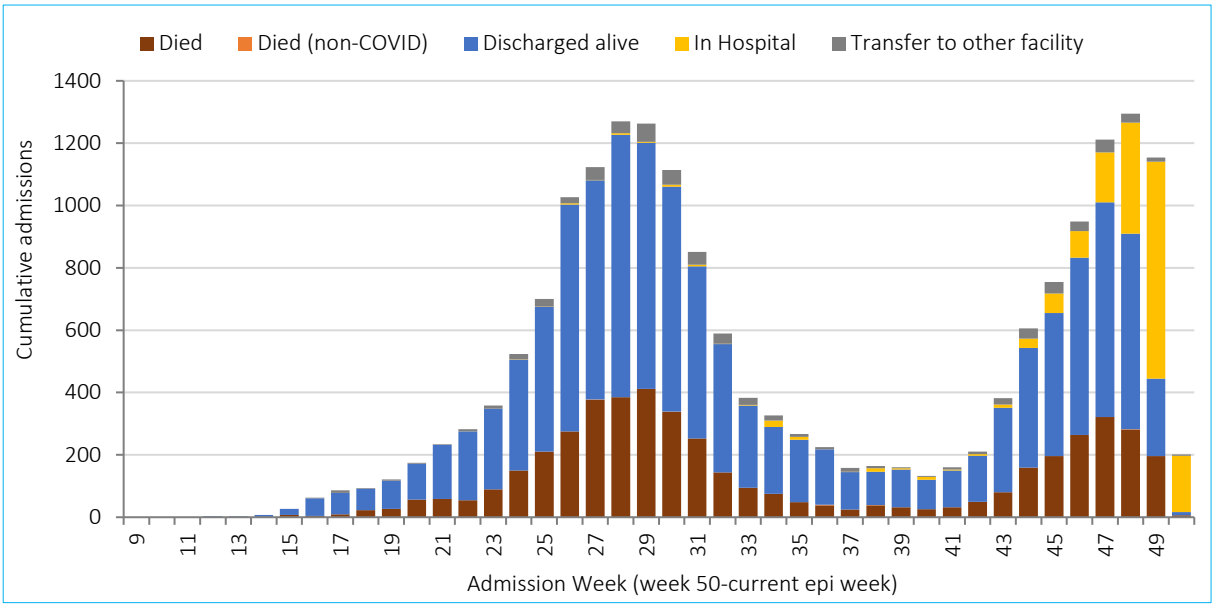

Fig. 31. Hospitalizations & outcomes by admission week, as on 8 Dec. 2020 (DATCOV)

From week 40 to 49, the number of hospitalizations has increased with an increase in the number of SARS-Cov-2 cases. The number of patients who are still in the hospitals remains high for week 48 and week 49. This is due to an increase in the burden of disease imposed by SARS-Cov-2.

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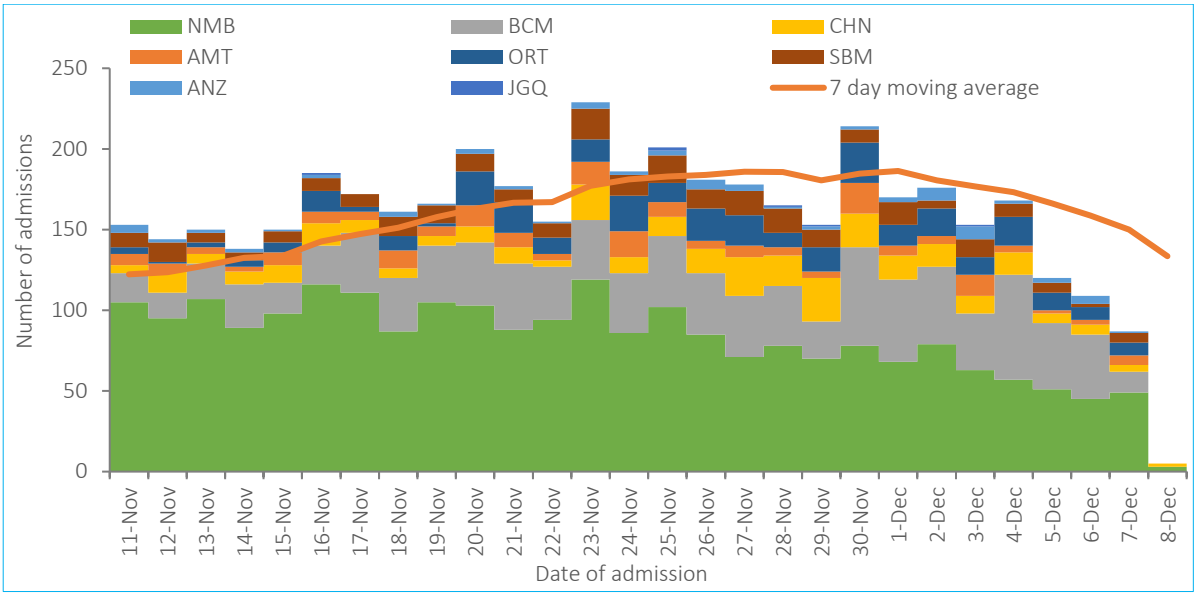

Fig. 32. Number of hospitalizations by date of admission & district, as on 8 Dec 20. 2020

The average daily admissions have decreased from 186 on 1 December to 134 average daily admissions on 8 December 2020. This represents a decrease of 28% over the specified period.

7.2. Co-morbidities among admitted cases

The most common co-morbidities were hypertension (29,5%) and diabetes (20,6%) among hospitalized SARS-Cov-2 cases. Four other co-morbidities which were common include HIV (5,4%), obesity (4,7%) and asthma (2,6%).

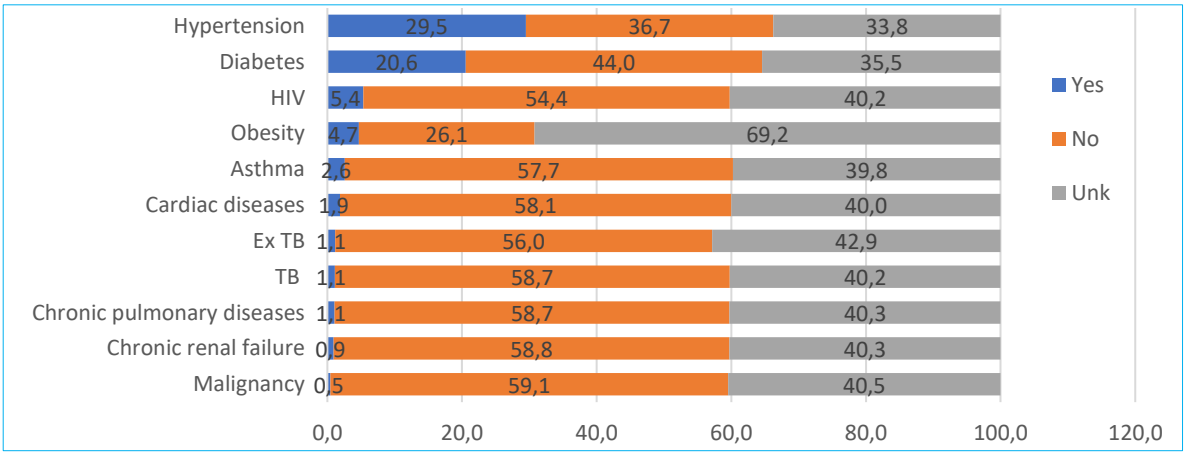

Fig. 33. Co-morbidities of SARS-Cov-2 hospitalizations, as on 08th Dec. 2020 (DATCOV)

A significant percentage of hospitalized patients did not have co-morbidities. The concern was those cases without information on the presence or absence of the co-morbidities. This may have resulted in the under-estimation of the burden of co-morbidities among hospitalized SARS-Cov-2 cases.

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6. CLUSTERS

Table 10. Possible Clusters Identified from Case Line List

District	Location_Area	Cluster type	Name of cluster	Specimen collection dates range	Number of confirmed cases detected	Cases <11 days post specimen collection (active cases - proxy)	Comments
Alfred Nzo	Mt Frere	Correctional Services	Sophia Ngase DCS	04 Dec 20	1	1	22yr old female
	Matatiele	School	Mariazel High School	16 - 2 Dec 20	36	21	13 - 17 yr old male
Amathole	Butterworth	College	WSU - Butterworth/ Ibika	24 Nov - 5 Dec 20	7	6	20 - 24 yr old
	Willowvale	School	Mente SSS	27 Nov 20	2	2	24 & 34 yr old males
	Idutywa	School	Mida School	02 Dec 20	1	1	51 yr old male
	Idutywa	School	Esingeni JS School	05 Dec 20	1		15 yr old female
BCM	East London	Retirement Home	Old Age Home - Southernwood	01 Dec 20	1	1	85 yr old male
NMB	Port Elizabeth	College	Key College	28 - 29 Nov 20	4	4	25&26 yr olds and a 36yr old
	Port Elizabeth	School	Sapphire School	27 Nov 20	1	1	49 yr old female
	Port Elizabeth	Retirement Home - various	Retirement Villa in Admilirty	01 Dec 20	1	1	76 yr old male
	Port Elizabeth		Retirement Home - Kabega	04 Dec 20	1	1	71 yr old female
	Port Elizabeth		Retirement Home - Suridge Park	02 Dec 20	1	1	91 yr old female
	Port Elizabeth		Retirement Home - Central	06 Dec 20	1	1	86 yr old female
	Port Elizabeth		Old Age Home, Adcokvale	02 Dec 20	1	1	78-year-old male
O R Tambo	Mthatha	College	WSU - Mthatha	26 & 3 Dec 2020	2	1	21 & 35 yr old females
	Mthatha	School	Efata School	30 Nov 20	1	1	51 yr old female
Sarah Baartman	Thornhill	School	Woodridge School	16 - 3 Dec 20	8	1	11 - 16 yr old and 50&49 yr olds
	Grahamstown	School	St Andrews College	16 - 4 Dec 20	11	1	15 - 18 year old cases

During November and December, 18 clusters where specimens were collected and one or more cases tested positive. This includes schools, colleges, correctional centres and retirement homes.

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8. CONCLUSION

The burden of disease of the SARS-Cov-2 remains high in the two metros and Sarah Baartman. There was also an emergency of SARS-Cov-2 in those districts, which had a low transmission rate for more than 14 weeks, i.e. Alfred Nzo and OR Tambo. There is a significant increase in the incidence of SARS-Cov-2 in nearly all districts. As the number of cases increases, the number of hospitalizations and deaths increases also.

The introduction of the Antigen Testing, which was launched in NM Metro, will provide an opportunity to early detect cases and their contacts. This will further provide an opportunity for early isolate cases and quarantine the contacts of those cases.

The re-emergence of SARS-Cov-2 was driven by poor compliance with the regulations by the communities, which includes failure to wear masks in the public, lack of social distancing, and routine hand washing or sanitization. The unbanning of selling of liquor and opening of the taverns, unsupervised funeral have become public health risks, which may contribute to the spread of the disease. This continues to threaten the public health interventions and reverse the gains, which have already achieved.

There is also a need to continue to strengthen public health surveillance of the disease and improve investigation and response to the outbreaks. This includes strengthening the monitoring and evaluation of the pandemic.

There are key issues, which require improvement

- Strengthen surveillance of SARS-Cov-2 including collection and testing of specimens.
- Prioritize contact tracing and monitoring to minimize the spread of the infections.
- Isolate positive cases and quarantine contacts to minimize transmission.
- Promote the use of prevention measures against SARS-Cov-2, i.e. wearing of masks, routine hand washing or sanitization, and social distancing.
- Strengthen IPC and OHS at the facility level.
- Health education, promotion, and community engagement to empower the communities to protect themselves from SARS-Cov-2.

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DISTRICT	TOTAL SCREENED	TOTAL TESTED	TOTAL CASES	RECOVERIES	DEATHS	ACTIVE CASES	AREAS
ALFRED NZO	694 706	21,363	4,052	3,652	77	323	Badibanise,Bhakubha,Bizana,Brooksnek,Cedarville,Chithwa,Dutyini,Emanxiweni,Ezinteteni,Kokstad,Lucingweni,Maluti, Mandileni , Matatiele ,Mount Ayliff, Mount Frere , Ndlantana, Ngcingo , Ntabakhulu, Sugar Bush, Tabankulu
AMATHOLE	658 126	56,788	12,654	11,490	391	773	Adelaide, Alice, Bolotwa, Butterworth, Cathcart, Centane, Cuba, Debe Nek, Dikana, Elliotdale, Ethafeni, Frankfort, Fort Beaufort, Ibika, Idutywa, Keiskammahoek, Willowale, Lower Mbhangcolo,Debe Nek, Mgababa, Nyaniso, Peddie
BUFFALO CITY METRO	210 367	104,350	27,063	24,551	1095	1,417	Abbottsford, Amalinda , Beacon Bay, Bisho, Braelynn, Buffalo Flats, Dimbaza, Duncan Village, East London, Ginsberg, Gonubie, Greenfields, Haven Hills, King William's Town, Mamata, Mdantsane, Masingata, Mantlaneni, Nahoon, Ndevana, Needs Camp, Parkside, Selbourne, Sunnyridge, Sunset Bay,Tshatshu, Vincent, West Bank, Zwelitsha
CHRIS HANI	515 346	45,797	11,772	10,698	611	463	Bankies, Dordrecht, Dukathole, Ekunene, Ezibeleni, Kwanobuhle, Mcwangele, Madeira Park, New Rest, Ngcobo, Ngonyama, Popcorn Valley, Qebe, Qoqodala, Queenstown, Sigadleni, Vaalbank, Sada, Middleburg, Thornhill, Ndzamela, Mlungisi,Westbourne,Ntlonze, Maya Village,Ekuphumuleni, TopTown, Vleipoort, Zola
JOE GQABI	87 855	19,334	4,335	4,179	112	44	Aliwal North, Barkley East, Bhodi, Land Camp, Ugie, Inglewood, Maclear, Solomzi, Sunduza,Robbern,Venterstsad
NELSON MANDELA METRO	694 179	132,766	47,330	42,393	1938	2,999	Algoa Park, Bethelsdorp, Bloemendal, Bluewater Bay, Booysens Park, Cotswold, Cuyler, Daleview, Despatch, Fernglen Port, Gelvandale, Govan Mbeki, Heath Park, Helenvale, Jacksonville, Joe Slovo, Kabega Park, Kamma Park, Kamvelihle, Khayalethu, Kleinskool, Kwa Dwesi, Kwa-Magxaki, Kwanobuhle, Kwanoxolo, KwaZakhele, Lovemore Heights, Missionvale, Motherwell, Mount Croix, New Brighton, Newton Park ,North End, Port Elizabeth, Rowallan Park, Salt Lake, Sardinia Bay, Schauderville, Sherwood, Silvertown, Soweto-On-Sea, Steve Tshwete, Summerstrand, Tamboville, Uitenhage, Veeplaas, Walmer, West End, Westering, Zwide, Lorraine, Hillside, Daleview
OR TAMBO	265 613	65,415	14,720	13,605	439	676	Gomora, Lutatweni, Machibi, Majola, Mandilini ,New Payne Ngqeleni, Ntsimbini, Old Payne, Libode, Lusikisiki, Mqanduli, Tombo, Marhewini, Mpikwana,Bhongweni,Cibeni, Flagstaff,Magcakeni,Ngangelizwe, Ngqanda,Tyebelana, Pollar Park, Tabase Mission, Slovo Park, Southernwood, Waterfall Park, Zandukwana,Zimbane, Ziphunzana
SARAH BAARTMAN	288 877	64,301	16,140	14,495	393	1,252	Aberdeen, Alexandria, Graaf-Reinet, Grahamstown, Jeffrey's Bay, Jourbertina, Humansdorp, Parson, St. Francis Bay, Kirkwood, Lotusville, Bergendal, Bratenfel, Joza, Santaville, Somerset East, Thornhill, Willomore
IMPORTED*	-	2,869	397	383	2	12	Bloemfontein, Ceres, Cape Town, Dunoon, Fishoek, George, Green Point, Gugulethu, Hout Bay, Langa, Khayelitsha, Knysna, Phillipi, Stellenbosch, Strand
PENDING	-	137,959	592	566	2	24	
GRAND TOTALS	3 415 069	650,942	139,055	126,012	5,060	7,983	

ACKNOWLEDGEMENTS

The epidemiological and surveillance functions continue to happen because of the strong partnership between the following stakeholders;

- Centre for Disease Control (Atlanta-Pretoria). CDC provided the Department with an epidemiologist and a statistician to support the province.
- DOH. Both the National and Provincial Department of Health re-purposed the employees to focus on the control and prevention of the pandemic.
- NICD. The NICD provided the province with epidemiologists and technical support.
- Laboratories, i.e National Health Laboratory Services, Pathcare and Ampath for prompt and regular reporting of SARS-Cov-2 cases.
- WHO. Just like CDC, WHO provided the Department with epidemiologists and surveillance officer to support the province.
- TB/HIV Care. The data analyst from TB/HIV Care has been useful in data management, mapping of the cases and other functions in the department.
- Right to Care. Assist in mapping the cases in different areas in the province.