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

COVID-19 Hospital Surveillance

Update: Week 51, 2021

Overview of report

This report summarises data of COVID-19 cases admitted to DATCOV hospital surveillance sites in all provinces. The report is based on data collected from 5 March 2020 to 25 December 2021.

Highlights

- As of 25 December 2021, 467,229 COVID-19 admissions and 96,122 in-hospital deaths were reported to DATCOV from 666 facilities (407 public-sector and 259 private-sector) in all nine provinces of South Africa.
- In the fourth COVID-19 wave dominated by Omicron, there has been an increase in admissions in Gauteng since week 45, followed by increased admissions in all other provinces. The number of admissions has decreased in all provinces since week 49 or 50, except Western Cape.
- There has been a small increase in deaths in all provinces.

Methods

Data on hospitalisation was accessed from DATCOV, a hospital surveillance system for COVID-19 admissions, initiated on the 1 April 2020. A COVID-19 case was defined as a person with a positive reverse transcriptase polymerase chain reaction (RT-PCR) assay for SARS-CoV-2 or a person who had a positive SARS-CoV-2 antigen test who was admitted to hospital.

Data on SARS-CoV-2 cases diagnosed in public and private laboratories submitted to the NICD were reported from the line list on the NMCSS.

Case fatality ratio (CFR) was calculated for all closed cases, i.e. COVID-19 deaths divided by COVID-19 deaths plus COVID-19 discharges, excluding individuals who are still admitted in hospital. For the calculation of cumulative incidence risks, StatsSA mid-year population estimates for 2020 were utilised. For comparisons of change in admission, we used 14-day daily average admissions in the current 14-day period compared to the previous 14-day period.

Severity was defined as patients receiving oxygen or invasive ventilation, treated in high care or intensive care wards, developing acute respiratory distress syndrome, or died. While oxygen, ventilation and ward of stay variables are updated daily for all admissions in the private sector, there may be delays with the data being updated in the public sector. Also, as patients remain in hospital their condition may change and percentage of severity may change over time.

Data are submitted by public and private hospitals that have agreed to report COVID-19 admissions through DATCOV surveillance in all nine provinces of South Africa. On 15 July 2020, the National Health Council decided that all hospitals should report to DATCOV. As of 25 December 2021, a total of 666 facilities submitted data on hospitalised COVID-19 cases, 407 from public sector and 259 from private sector (Table 1). This reflects 100% coverage of all public and private hospitals that have had COVID-19 admissions. As new hospitals join the surveillance system, they have retrospectively captured all admissions recorded although there may be some backlogs in retrospective data capture.

Table 1: Number of hospitals reporting data on COVID-19 admissions by province and sector, South Africa, 5 March 2020-25 December 2021.

Facilities reporting	Public	Private
Eastern Cape	86	18
Free State	35	20
Gauteng	40	96
KwaZulu-Natal	69	47
Limpopo	41	7
Mpumalanga	31	9
North West	17	13
Northern Cape	29	6
Western Cape	59	43
South Africa	407	259

Results

Epidemiological and demographic trends in admissions

From 5 March 2020 to 25 December 2021, a total of 467,229 COVID-19 admissions were reported from 666 facilities in all nine provinces of South Africa. South Africa experienced three waves of the COVID-19 pandemic. There has been an increase in admissions in both sectors since week 45 of 2021 and a reduction in the rate of increase since week 49 (Figure 1). Decreases in the most recent week may be related to delays in submission of data.

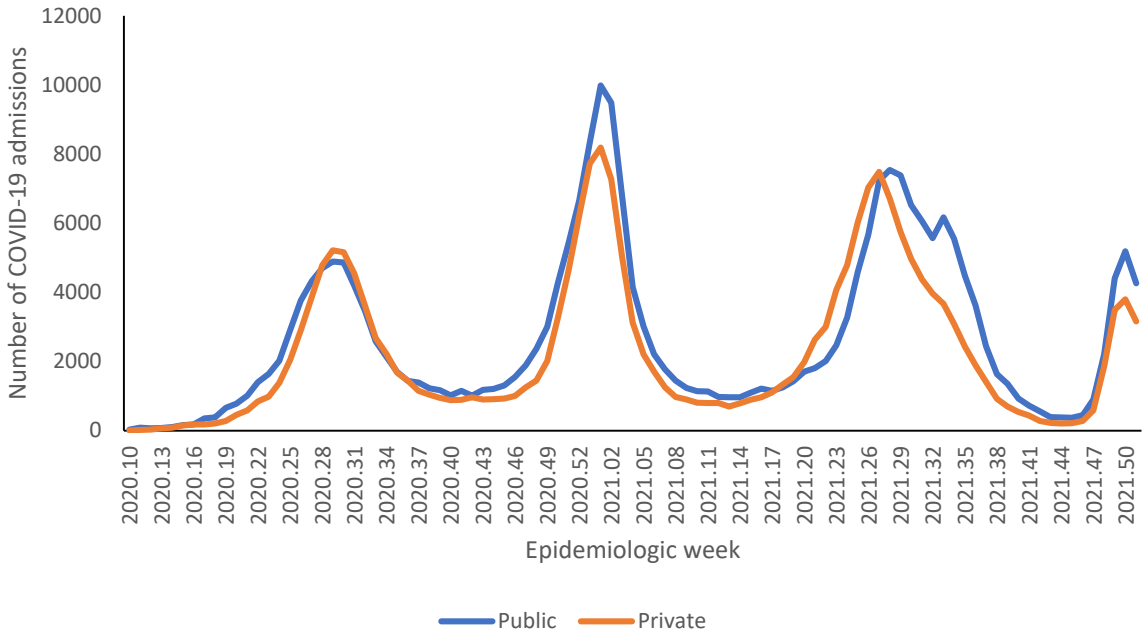

Figure 1: Number of reported COVID-19 admissions by health sector and epidemiologic week of diagnosis, South Africa, 5 March 2020-25 December 2021, N=467,229

The majority of admissions were recorded in four provinces, Gauteng 137,309 (29%), Western Cape 103,435 (22%), KwaZulu-Natal 75,155 (16%) and Eastern Cape 43,736 (9%) provinces. The weekly COVID-19 admissions have increased in all provinces in the fourth wave with a number of provinces now seeing a decrease in admissions over the past week (Figures 2a and 2b).

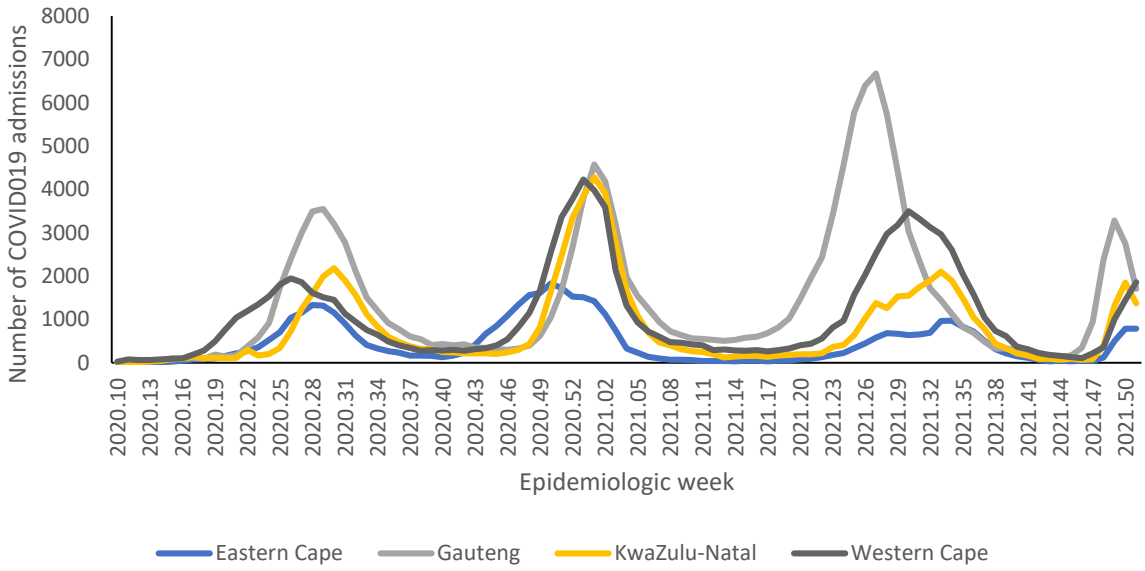

Figure 2a: Number of reported COVID-19 admissions, by provinces with highest admissions and epidemiologic week of diagnosis, South Africa, 5 March 2020-25 December 2021, N=467,229

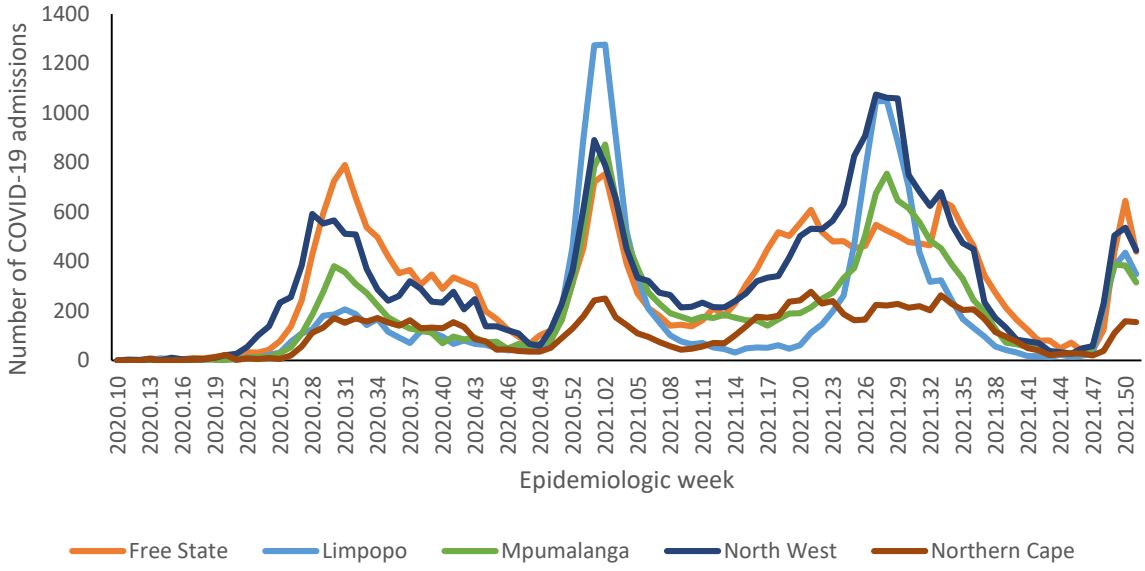

Figure 2b: Number of reported COVID-19 admissions, by provinces with lowest admissions and epidemiologic week of diagnosis, South Africa, 5 March 2020-25 December 2021, N=467,229

The incidence risk of COVID-19 admissions increased with age and was highest amongst individuals aged 65 years and older (Figure 3). During the fourth wave, there were 4,732 admissions in <20 years, 11,463 in 20-39 years, 7,158 in 40-59 years, and 7,819 in >60 years.

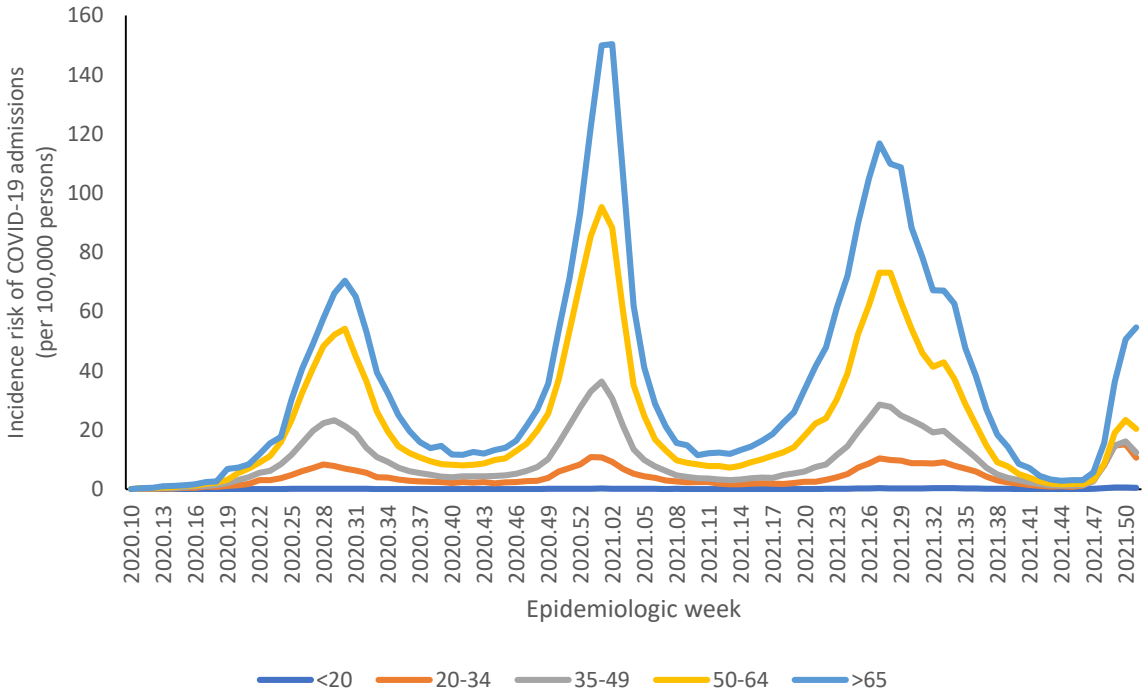

Figure 3: Incidence risk of COVID-19 admissions per 100,000 persons, by age group and epidemiologic week of diagnosis, South Africa, 5 March 2020-25 December 2021, N=467,229

Epidemiological and demographic trends in in-hospital mortality

A total of 96,122 COVID-19 in-hospital deaths were reported in all nine provinces of South Africa. More deaths have been reported in the public sector in all three waves. There has been an increase in in-hospital COVID-19 deaths in both sectors since week 48 (Figure 4).

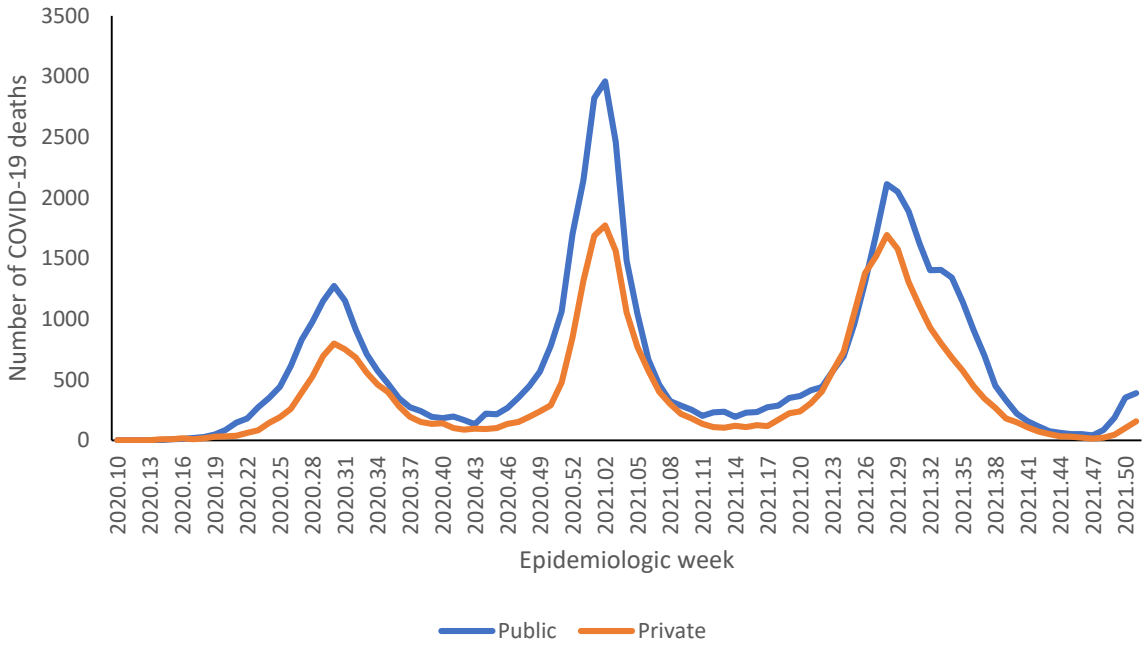

Figure 4: Number of reported COVID-19 in-hospital deaths, by health sector and epidemiologic week, South Africa, 5 March 2020-25 December 2021, N=96,122

Most deaths were reported in Gauteng 28,367 (30%), Western Cape 17,335 (18%), KwaZulu-Natal 15,966 (17%), and Eastern Cape 12,357 (13%). There has been a small increase in deaths in all provinces. (Figures 5a and 5b).

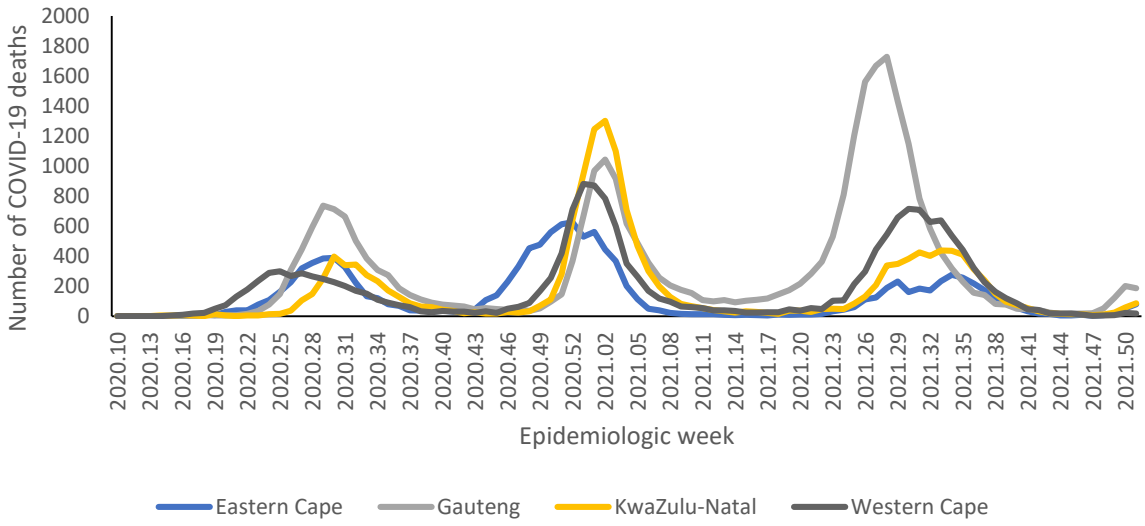

Figure 5a: Number of reported COVID-19 in-hospital deaths, by province with highest deaths and epidemiologic week of death, South Africa, 5 March 2020-25 December 2021, N=96,122

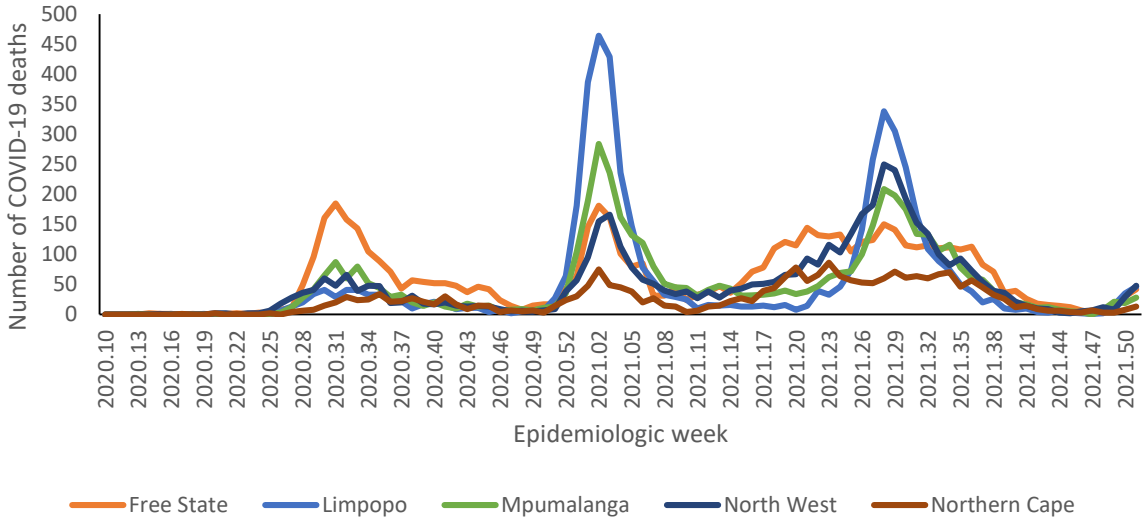

Figure 5b: Number of reported COVID-19 in-hospital deaths, by province with lowest deaths and epidemiologic week of death, South Africa, 5 March 2020-25 December 2021, N=96,122

The incidence risk of COVID-19 deaths increased with age and was highest amongst individuals aged 65 years and older (Figure 6). During the fourth wave, there were 58 deaths in <20 years, 228 in 20-39 years, 427 in 40-59 years, and 841 in >60 years.

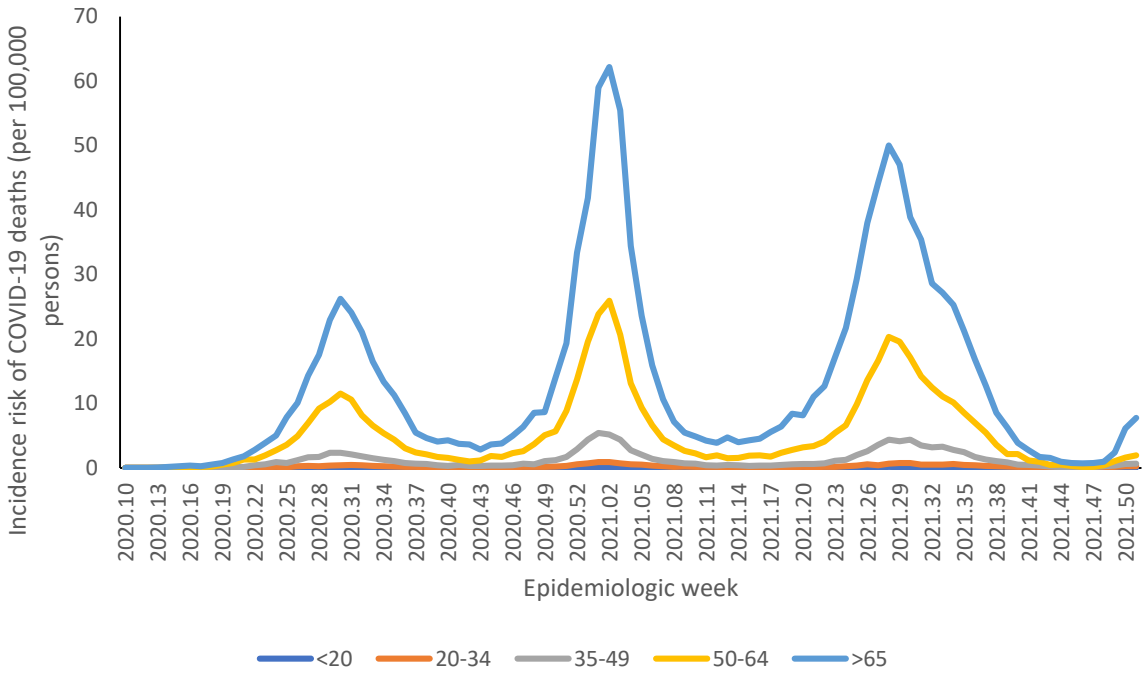

Figure 6: Incidence risk of COVID-19 in-hospital deaths per 100,000 persons, by age group and epidemiologic week of death, South Africa, 5 March 2020-25 December 2021, N=96,122

Provincial trends

The cumulative incidence risks of COVID-19 admissions and in-hospital deaths were highest in Western Cape, Free State and Gauteng provinces (Table 2).

Table 2: Number and cumulative incidence risk of COVID-19 hospitalisations and in-hospital deaths per 100,000 persons by province, South Africa, 5 March 2020-25 December 2021.

Province	Provincial Population mid 2020*	Cumulative admissions	Cumulative incidence risk of admissions / 100,000	Cumulative deaths	Cumulative incidence risk of deaths / 100,000
Eastern Cape	6734001	43736	649.5	12357	183.5
Free State	2928903	28137	960.7	5689	194.2
Gauteng	15488137	137 309	886.5	28367	183.2
KwaZulu-Natal	11531628	75155	651.7	15963	138.4
Limpopo	5852553	18685	319.3	4969	84.9
Mpumalanga	4679786	19810	423.3	4588	98.0
North West	4108816	30 505	742.4	4547	110.7
Northern Cape	1292786	10 457	808.9	2303	178.1
Western Cape	7005741	103 435	1476.4	17334	247.4
South Africa	**59622350**	**467 229**	**783.6**	**96 117**	**161.2**

*StatsSA mid-year population estimates 2020

There has been an increase in the average daily COVID-19 admissions and deaths comparing the previous 14 days and the current 14 days in all province except Gauteng (Table 3).

Table 3: Previous 14 days and current 14 days daily average COVID-19 admissions and deaths and percentage changes, South Africa, 27 November-25 December 2021.

Province	Hospital admissions		Percentage change in admissions	Hospital deaths		Percentage change in deaths
	Previous 14 days average admissions	Current 14 days average admissions		Previous 14 days average deaths	Current 14 days average deaths	
Eastern Cape	43.93	111.86	154.63	1.86	9.43	407.69
Free State	40.21	77.43	92.54	1.36	5.14	278.95
Gauteng	404.07	316.64	-21.64	12.57	27.50	118.75
KwaZulu-Natal	121.64	230.14	89.20	2.57	10.36	302.78
Limpopo	42.36	55.93	32.04	1.29	5.79	350.00
Mpumalanga	43.64	49.86	14.24	2.07	3.36	62.07
North West	52.36	70.07	33.83	1.43	5.50	285.00
Northern Cape	10.64	22.43	110.74	0.43	1.50	250.00
Western Cape	96.50	235.93	144.49	0.93	2.86	207.69

* Reporting of new admissions in the most recent week may be delayed

There has been a decrease in the average daily COVID-19 admissions and deaths comparing the previous 7 days and the current 7 days in all province except Western Cape (Table 4).

Table 4: Previous 7 days and current 7 days daily average COVID-19 admissions and deaths and percentage changes, South Africa, 11-25 December 2021.

Province	Hospital admissions		Percentage change in admissions	Hospital deaths		Percentage change in deaths
	Previous 7 days average admissions	Current 7 days average admissions		Previous 7 days average deaths	Current 7 days average deaths	
Eastern Cape	112,00	111,71	-0,26	7,43	11,43	53,85
Free State	92,14	62,71	-31,94	4,29	6,00	40,00
Gauteng	391,14	242,14	-38,09	28,43	26,57	-6,53
KwaZulu-Natal	264,29	196,00	-25,84	8,29	12,43	50,00
Limpopo	62,14	49,71	-20,00	5,00	6,57	31,43
Mpumalanga	54,71	45,00	-17,75	2,71	4,00	47,37
North West	76,57	63,57	-16,98	4,14	6,86	65,52
Northern Cape	22,71	22,14	-2,52	1,14	1,86	62,50
Western Cape	206,14	265,71	28,90	3,14	2,57	-18,18

* Reporting of new admissions in the most recent week may be delayed

Eastern Cape

In all three waves, there were higher numbers of admissions in the public sector. Weekly admissions at the peak of the second wave exceeded the weekly numbers of admissions at the peak of the first wave in both sectors, while weekly admissions in the third wave were lower than the second wave in both sectors. There has been an increase in admissions in both sectors since week 46 (Figure 7).

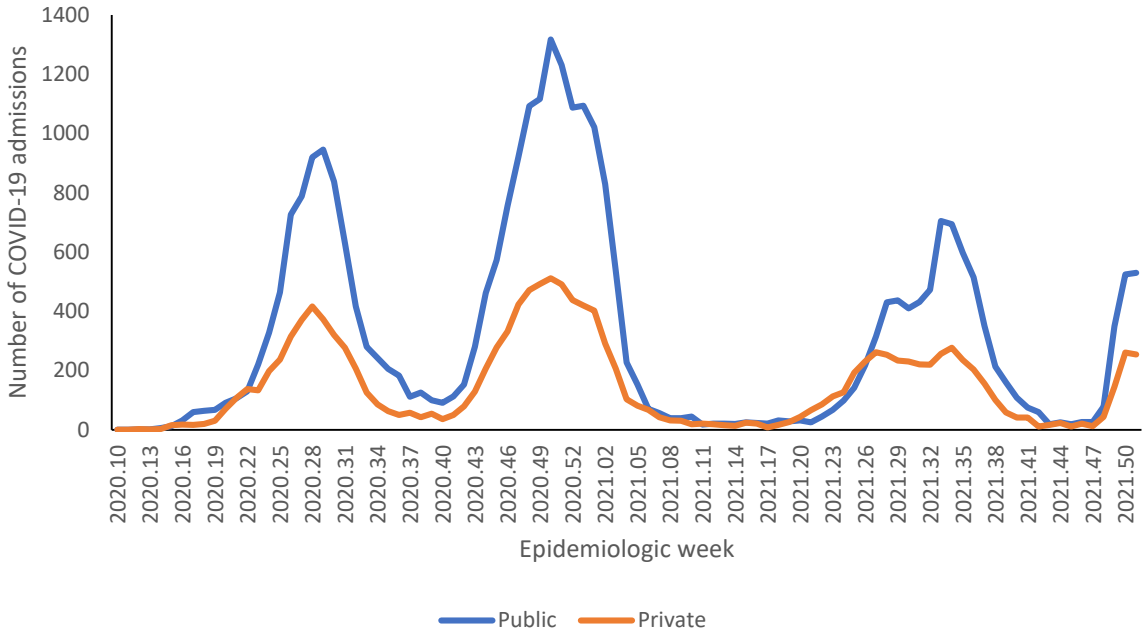

Figure 7: Number of reported COVID-19 admissions by health sector and epidemiologic week of diagnosis, Eastern Cape, 5 March 2020-25 December 2021, N=43,736

The weekly admissions at the peak of the second wave exceeded the numbers of admissions at the peak of the first wave in all districts, while weekly admissions in the third wave were lower than the second wave in all districts (Figure 8). There has been an increase in admissions in all districts since week 46.

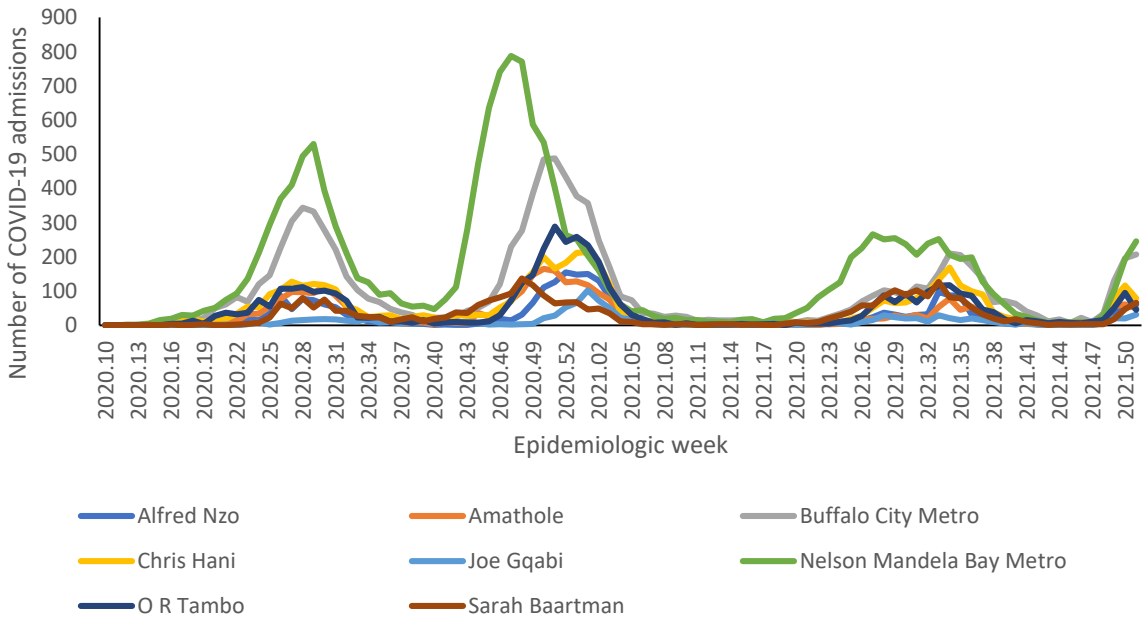

Figure 8: Number of reported COVID-19 admissions, by district and epidemiologic week, Eastern Cape, 5 March 2020-25 December 2021, N=43,736

The weekly deaths at the peak of the second wave exceeded the numbers of deaths at the peak of the first wave in all districts, while weekly deaths in the third wave were lower than the second wave in both sectors (Figure 9). There has not been a small increase in weekly numbers of deaths in all districts.

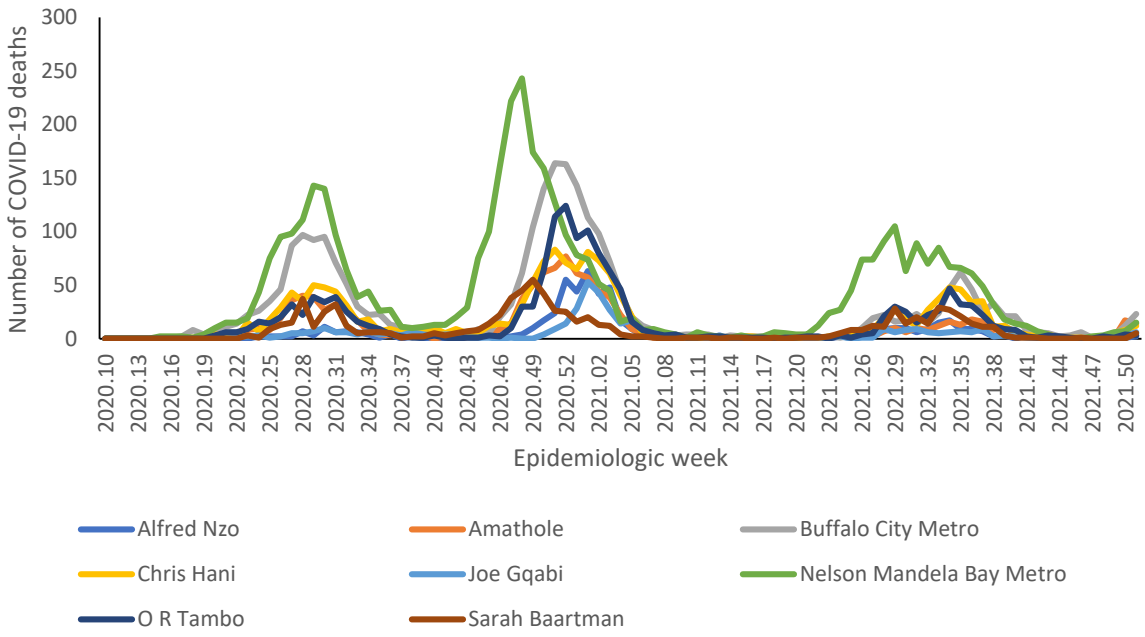

Figure 9: Number of reported COVID-19 in-hospital deaths, by district and epidemiologic week, Eastern Cape, 5 March 2020-25 December 2021, N=12,357

There has been an increase in the average daily COVID-19 admissions comparing the previous 14 days and the current 14 days in all districts (Table 5).

Table 5: Previous 14 days and current 14 days average COVID-19 admissions and deaths and percentage changes, Eastern Cape, 27 November-25 December 2021.

District	Previous 14 days admissions average	Current 14 days admissions average	Percentage change in admissions	Previous 14 days deaths average	Current 14 days deaths average	Percentage change in deaths
Alfred Nzo	3,57	8,29	132,00	0,07	0,21	200,00
Amathole	4,71	7,86	66,67	0,07	2,21	3000,00
Buffalo City Metro	11,64	28,79	147,24	0,29	2,50	775,00
Chris Hani	6,64	13,93	109,68	0,43	1,43	233,33
Joe Gqabi	1,93	3,64	88,89	0,14	0,64	350,00
Nelson Mandela Bay	9,21	31,29	239,53	0,64	1,57	144,44
O R Tambo	4,71	10,00	112,12	0,21	0,50	133,33
Sarah Baartman	1,50	8,07	438,10	0,00	0,36	0,00

Free State

In the first and third waves there were roughly equal numbers of admissions in both sectors, while in the second wave there were higher numbers of admissions in the public sector (Figure 10). Weekly admissions at the peak of the second wave exceeded the weekly numbers of admissions at the peak of the first wave in the public sector. Weekly admissions at the peak of the third wave exceeded the weekly numbers of admissions at the peak of the second wave in the private sector. There has been an increase in weekly admissions in both sectors since week 46 and decreased admissions since week 50.

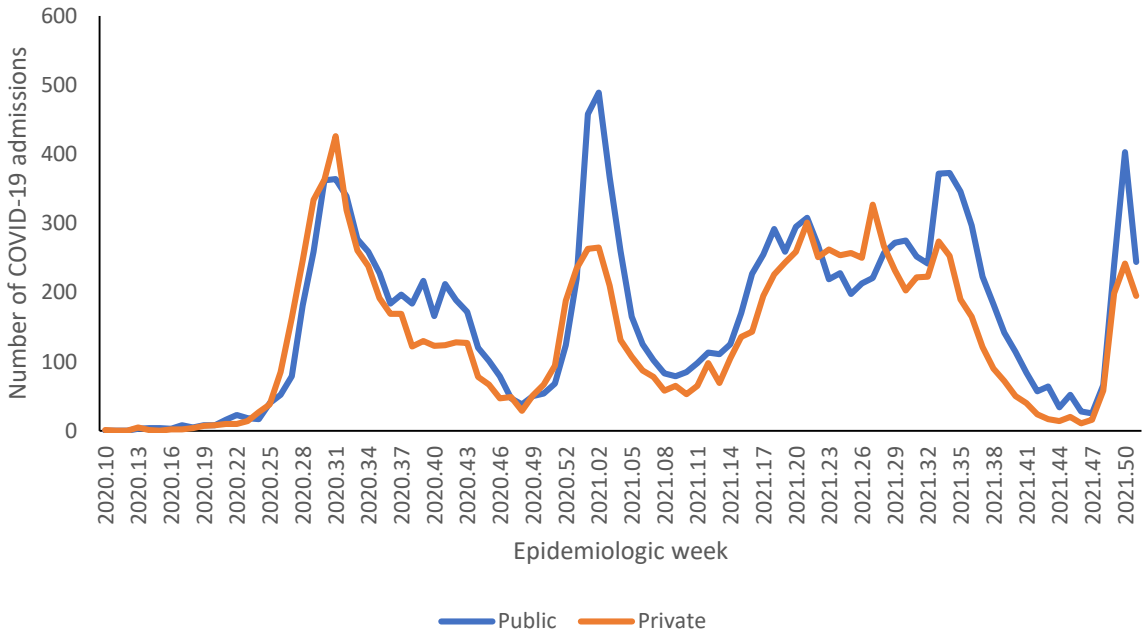

Figure 10: Number of reported COVID-19 admissions by health sector and epidemiologic week of diagnosis, Free State, 5 March 2020-25 December 2021, N=28,137

Weekly admissions at the peak of the second wave exceeded the weekly numbers of admissions at the peak of the first wave in Fezile Dabi, Thabo Mofutsanyane and Xhariep. Weekly admissions at the peak of the third wave exceeded the weekly numbers of admissions at the peak of the second wave in Lejweleputswa and Mangaung Metro (Figure 11). There has been an increase in admissions in all districts since week 46 and decreased admissions since week 50.

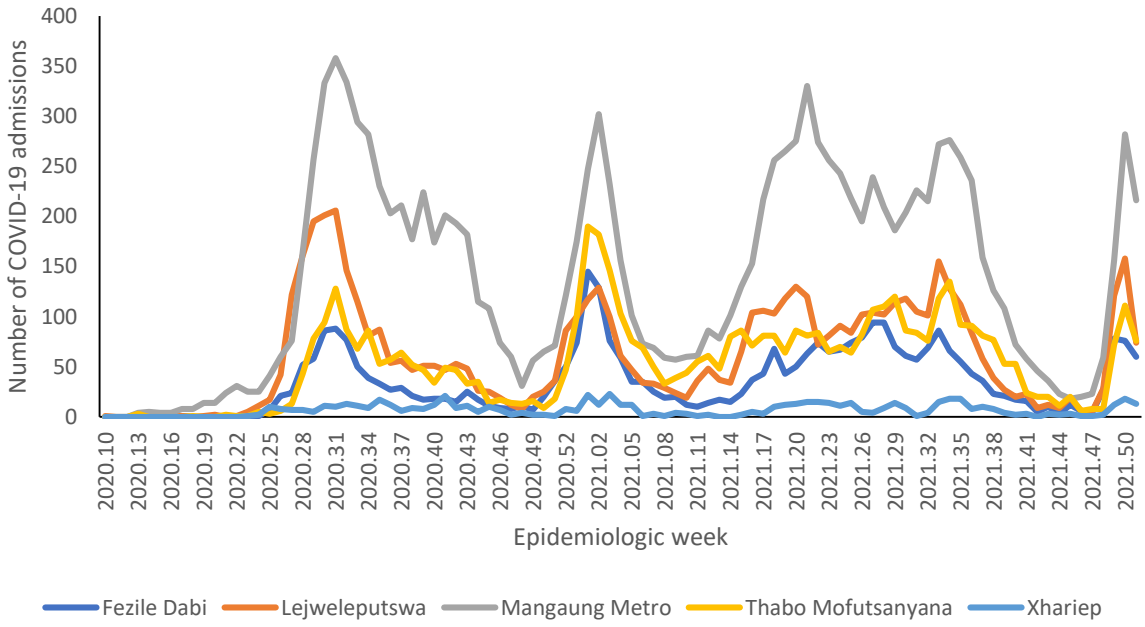

Figure 11: Number of reported COVID-19 admissions, by district and epidemiologic week, Free State, 5 March 2020-25 December 2021, N=28,137

Weekly deaths at the peak of the second wave exceeded the weekly numbers of deaths at the peak of the first wave in Thabo Mofutsanyana, Fezile Dabi and Xhariep. Weekly deaths at the peak of the third wave exceeded the weekly numbers of deaths at the peak of the second wave in Mangaung Metro and Lejweleputswa (Figure 12). There has been a small increase in deaths in all districts.

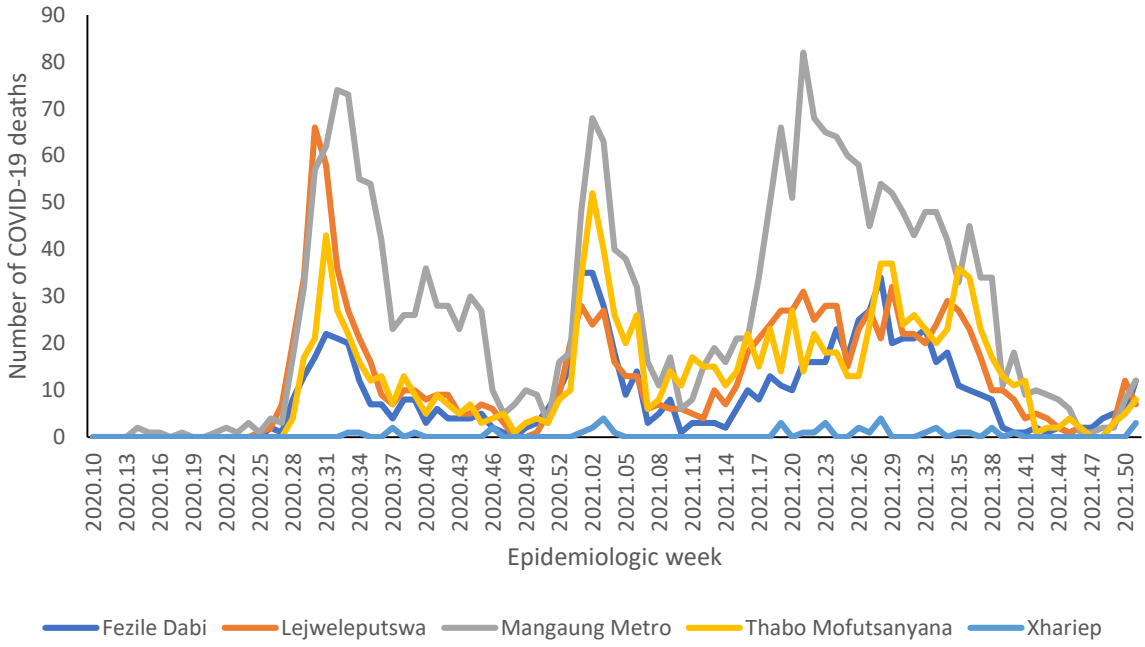

Figure 12: Number of reported COVID-19 in-hospital deaths, by district and epidemiologic week, Free State, 5 March 2020-25 December 2021, N=5,689

There has been an increase in average daily COVID-19 admissions comparing the previous 14 days and the current 14 days in all districts (Table 6).

Table 6: Previous 14 days and current 14 days average COVID-19 admissions and deaths and percentage changes, Free State, 27 November-25 December 2021.

District	Previous 14 days admissions average	Current 14 days admissions average	Percentage change in admissions	Previous 14 days deaths average	Current 14 days deaths average	Percentage change in deaths
Fezile Dabi	7,50	9,71	29,52	0,64	1,21	88,89
Lejweleputswa	10,64	16,57	55,70	0,21	1,36	533,33
Mangaung Metro	15,36	35,57	131,63	0,29	1,43	400,00
Thabo Mofutsanyana	5,71	13,36	133,75	0,21	0,93	333,33
Xhariep	1,00	2,21	121,43	0,00	0,21	0,00

Gauteng

In all three waves there were higher numbers of admissions in the private sector. Weekly admissions at the peak of the second wave exceeded the weekly numbers of admissions at the peak of the first wave in both sectors. Weekly admissions at the peak of the third wave exceeded the weekly numbers of admissions at the peak of the second wave in both sectors (Figure 13). Following an increase in admissions in both sectors since week 45, the numbers of weekly admissions has decreased in both sectors since week 49.

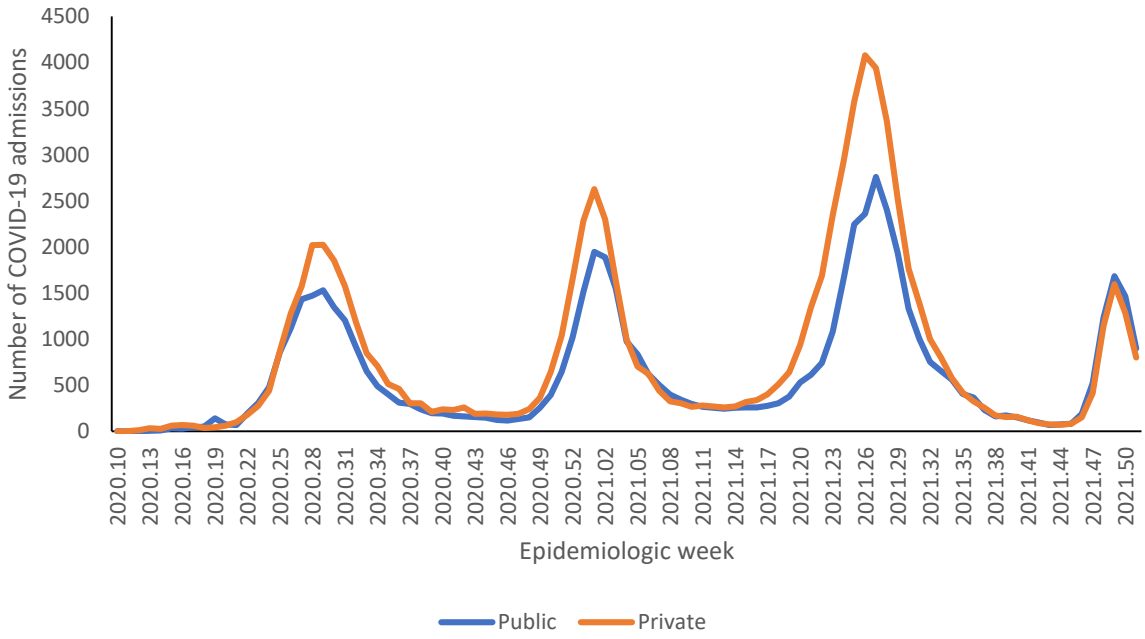

Figure 13: Number of reported COVID-19 admissions by health sector and epidemiologic week of diagnosis, Gauteng, 5 March 2020-25 December 2021, N=137,309

There has been an increase in admissions since week 45 (Figure 14). The numbers of admissions have decreased in all districts since week 49.

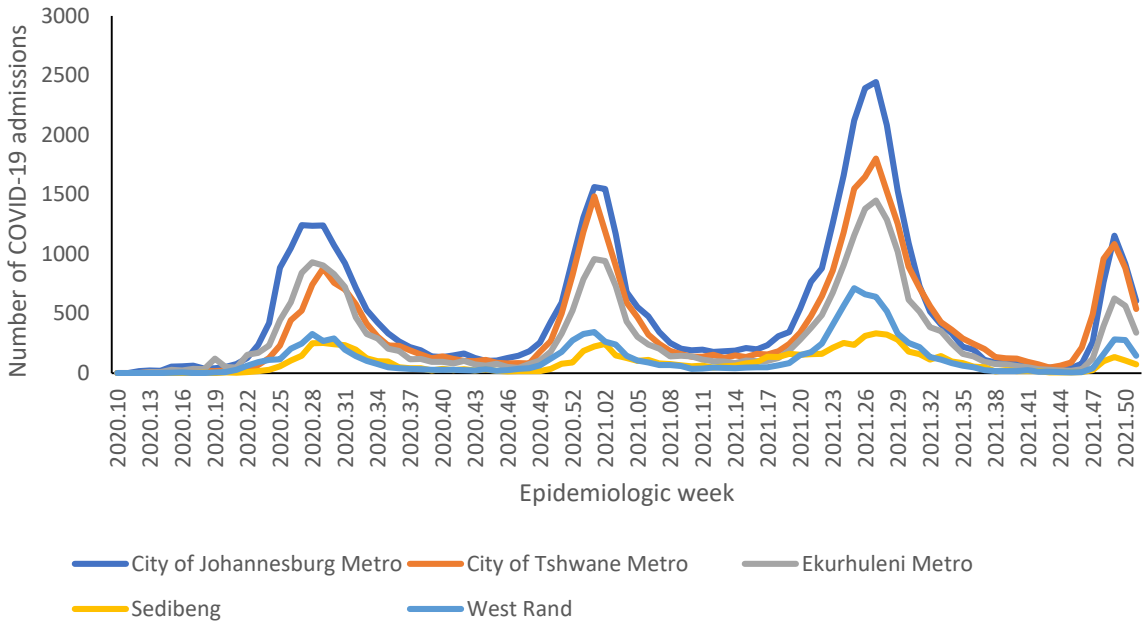

Figure 14: Number of reported COVID-19 admissions, by district and epidemiologic week, Gauteng, 5 March 2020-25 December 2021, N=137,309

There has been a small increase in deaths in all districts (Figure 15).

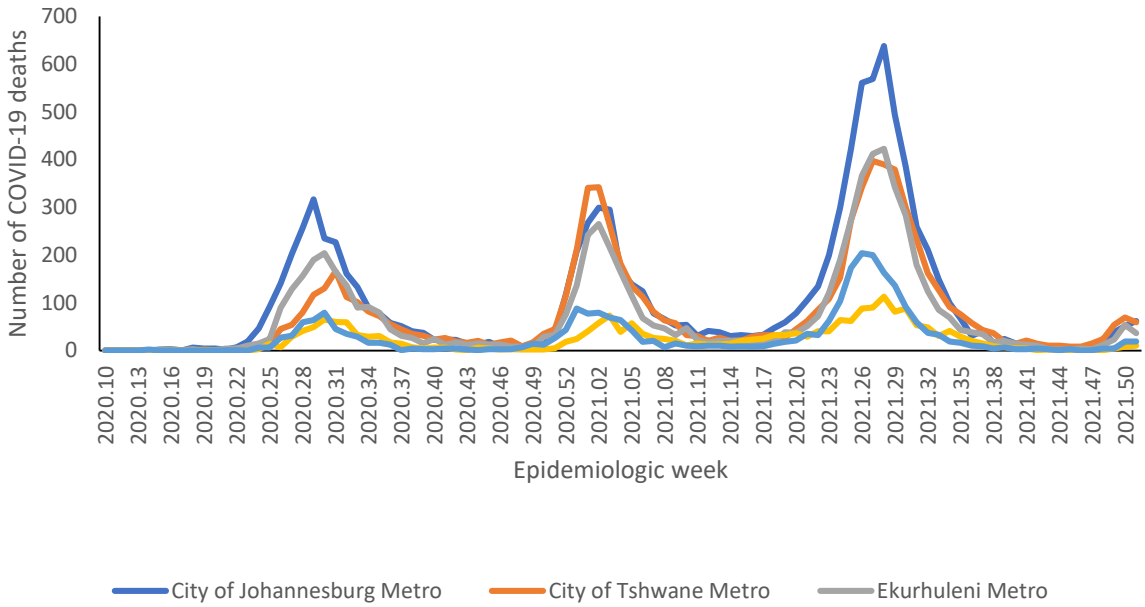

Figure 15: Number of reported COVID-19 in-hospital deaths, by district and epidemiologic week, Gauteng, 5 March 2020-25 December 2021, N=28,367

There has been a decrease in average daily COVID-19 admissions and deaths comparing the previous 14 days and the current 14 days in all district (Table 7).

Table 7: Previous 14 days and current 14 days average COVID-19 admissions and deaths and percentage changes, Gauteng, 27 November-25 December 2021.

District	Previous 14 days admissions average	Current 14 days admissions average	Percentage change in admissions	Previous 14 days deaths average	Current 14 days deaths average	Percentage change in deaths
City of Johannesburg Metro	137,00	108,79	-20,59	3,57	8,07	126,00
City of Tshwane Metro	145,86	100,21	-31,29	5,57	9,07	62,82
Ekurhuleni Metro	73,07	64,57	-11,63	2,50	6,36	154,29
Sedibeng	16,71	12,86	-23,08	0,36	1,29	260,00
West Rand	31,43	30,21	-3,86	0,57	2,71	375,00

KwaZulu-Natal

In the first and second waves there were higher numbers of admissions in the private sector but there have been equal numbers of admissions in the public and private sector in the third wave. Weekly admissions at the peak of the second wave exceeded the weekly numbers of admissions at the peak of the first wave in both sectors, while weekly admissions in the third wave were lower than the second wave in both sectors (Figure 16). There has been an increase in admissions in both sectors since week 47 and decreased admissions since week 50.

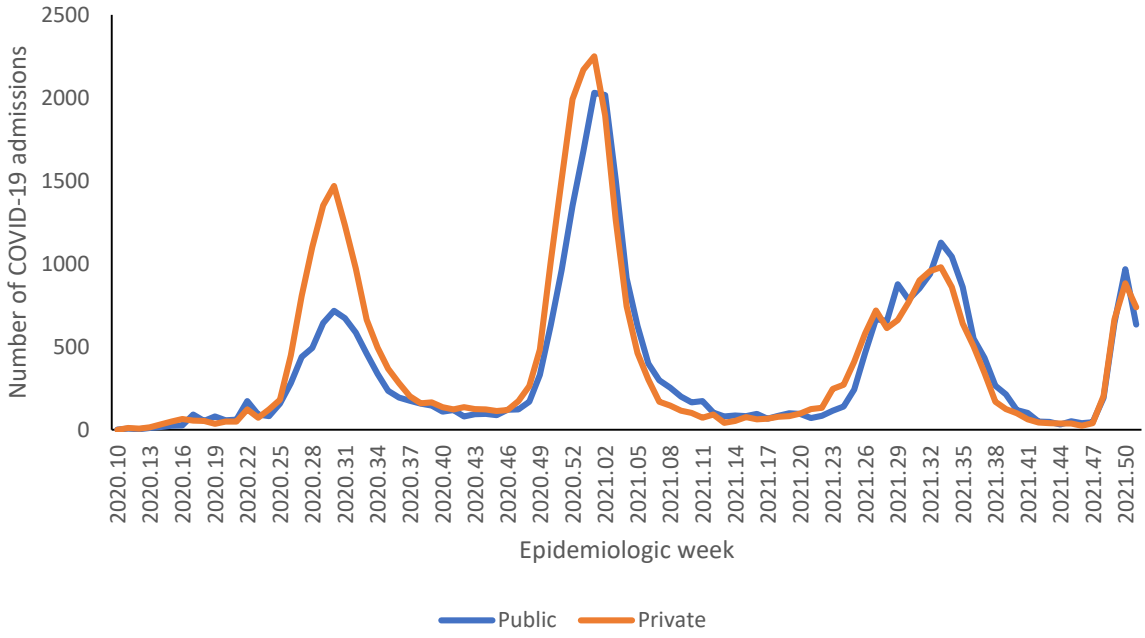

Figure 16: Number of reported COVID-19 admissions by health sector and epidemiologic week of diagnosis, KwaZulu-Natal, 5 March 2020-25 December 2021, N=75,155

Weekly admissions at the peak of the second wave exceeded the weekly numbers of admissions at the peak of the first wave in all districts except Amajuba. Weekly admissions at the peak of the third wave exceeded the weekly numbers of admissions at the peak of the second wave in Amajuba (Figure 17). There has been an increase in admissions in all districts since week 47 and decreased admissions since week 50.

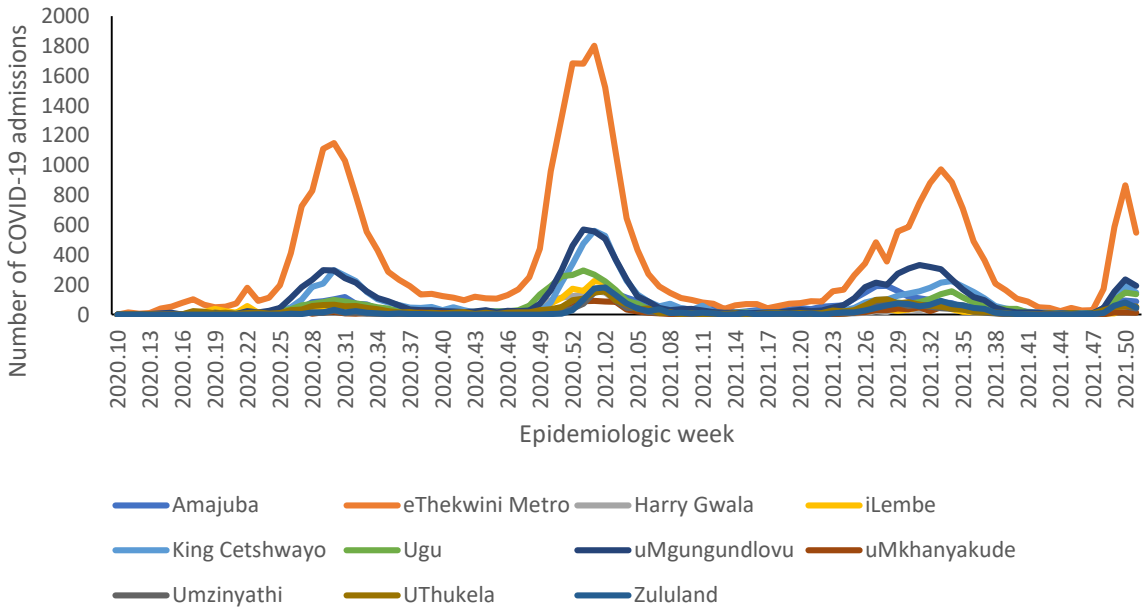

Figure 17: Number of reported COVID-19 admissions, by district and epidemiologic week, KwaZulu-Natal, 5 March 2020-25 December 2021, N=75,155

Weekly deaths at the peak of the second wave exceeded the weekly numbers of deaths at the peak of the first wave in all districts. Weekly deaths at the peak of the third wave exceeded the weekly numbers of deaths at the peak of the second wave in Amajuba (Figure 18) There has been a small increase in numbers of deaths in eThekwini Metro.

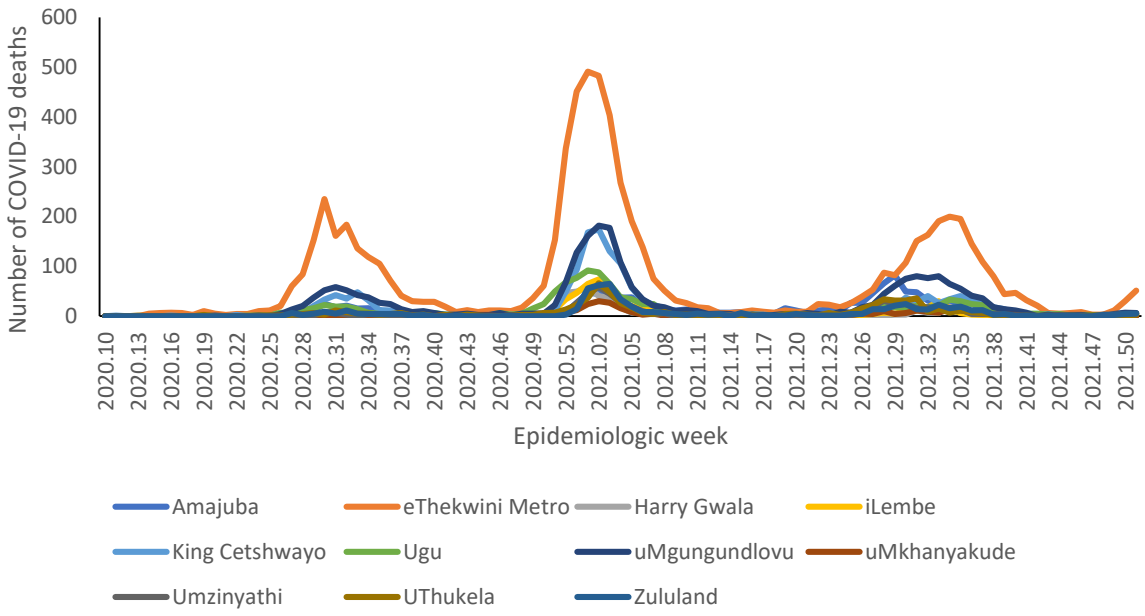

Figure 18: Number of reported COVID-19 in-hospital deaths, by district and epidemiologic week, KwaZulu-Natal, 5 March 2020-25 December 2021, N=15,966

There has been an increase in average daily COVID-19 admissions comparing the previous 14 days and the current 14 days in all districts (Table 8).

Table 8: Previous 14 days and current 14 days average COVID-19 admissions and deaths and percentage changes, KwaZulu-Natal, 27 November-25 December 2021.

District	Previous 14 days admissions average	Current 14 days admissions average	Percentage change in admissions	Previous 14 days deaths average	Current 14 days deaths average	Percentage change in deaths
Amajuba	9,64	13,07	35,56	0,07	0,57	700,00
eThekwini Metro	54,14	101,14	86,81	1,00	5,79	478,57
Harry Gwala	3,29	7,57	130,43	0,00	0,36	0,00
iLembe	1,14	6,79	493,75	0,00	0,07	0,00
King Cetshwayo	12,64	24,21	91,53	0,29	0,86	200,00
Ugu	9,21	20,43	121,71	0,07	0,43	500,00
uMgungundlovu	14,36	30,64	113,43	0,29	0,93	225,00
uMkhanyakude	1,21	2,07	70,59	0,00	0,00	0,00
Umzinyathi	5,21	6,79	30,14	0,43	0,50	16,67
UThukela	5,79	8,14	40,74	0,14	0,21	50,00
Zululand	5,00	9,29	85,71	0,29	0,64	125,00

Limpopo

In the first wave there were roughly equal numbers of admissions in both sectors, but in the second and third waves there were higher numbers of admissions in the public sector. Weekly admissions at the peak of the second wave exceeded the weekly numbers of admissions at the peak of the first wave in both sectors, while weekly admissions in the third wave were lower than the second wave in both sectors (Figure 19). There has been an increase in admissions in both sectors since week 46 and decreased admissions since week 50.

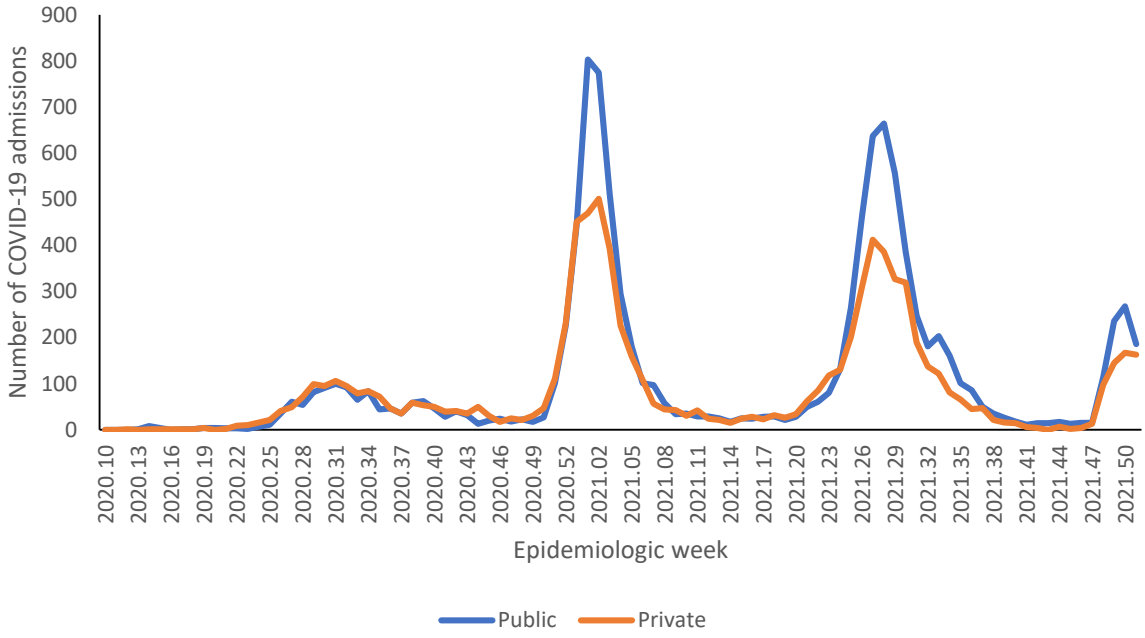

Figure 19: Number of reported COVID-19 admissions by health sector and epidemiologic week of diagnosis, Limpopo, 5 March 2020-25 December 2021, N=18,685

Weekly admissions at the peak of the second wave exceeded the weekly numbers of admissions at the peak of the first wave in all districts. Weekly admissions at the peak of the third wave exceeded the weekly numbers of admissions at the peak of the second wave in Sekhukhune and Waterberg (Figure 20). There has been an increase in admissions in all districts since week 46 and decreased admissions since week 50.

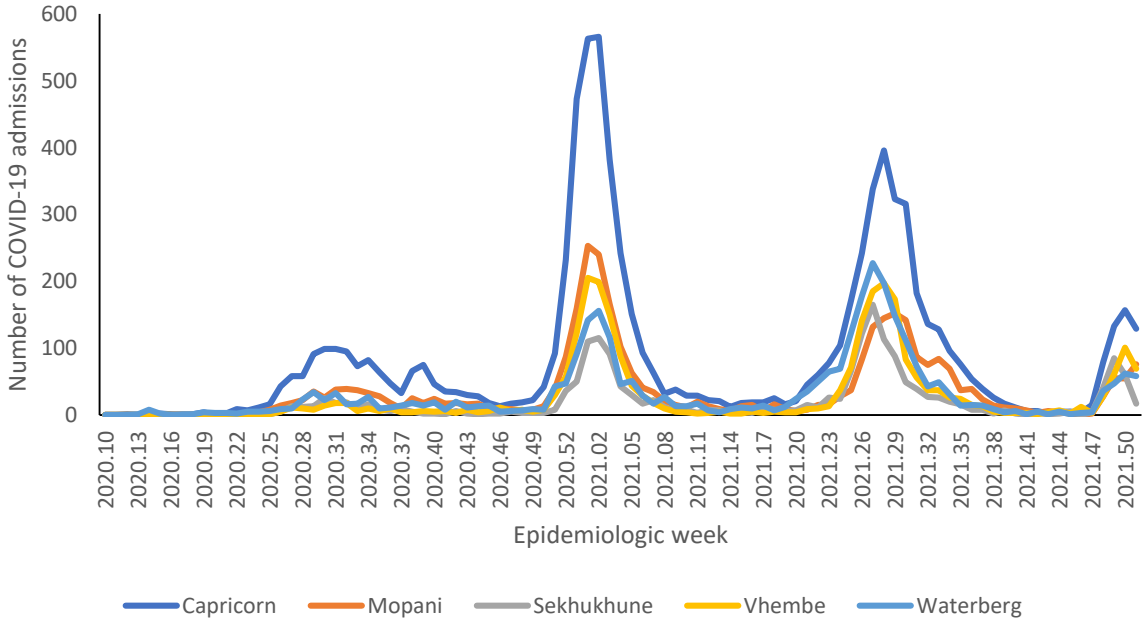

Figure 20: Number of reported COVID-19 admissions, by district and epidemiologic week, Limpopo, 5 March 2020-25 December 2021, N=18,685

Weekly deaths at the peak of the second wave exceeded the weekly numbers of deaths at the peak of the first wave in all districts. Weekly deaths at the peak of the third wave exceeded the weekly numbers of deaths at the peak of the second wave in Sekhukhune and Waterberg (Figure 21). There has not been a small increase in the numbers of deaths in all districts.

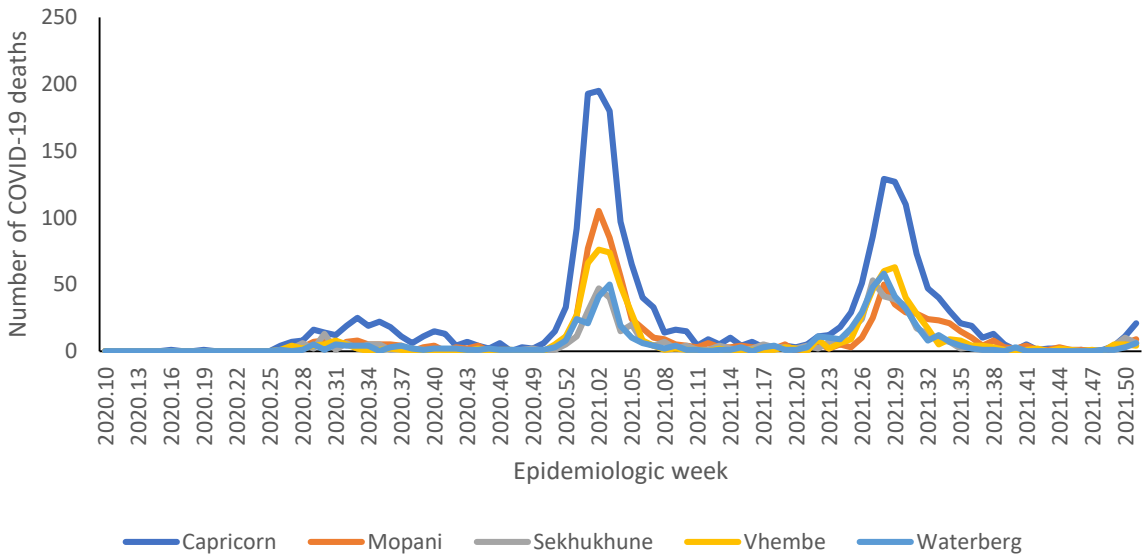

Figure 21: Number of reported COVID-19 in-hospital deaths, by district and epidemiologic week, Limpopo, 5 March 2020-25 December 2021, N=4,970

There has been an increase in average daily COVID-19 admissions comparing the previous 14 days and the current 14 days in all districts except Sekhukhune (Table 9).

Table 9: Previous 14 days and current 14 days average COVID-19 admissions and deaths and percentage changes, Limpopo, 27 November-25 December 2021.

District	Previous 14 days admissions average	Current 14 days admissions average	Percentage change in admissions	Previous 14 days deaths average	Current 14 days deaths average	Percentage change in deaths
Capricorn	15,14	20,43	34,91	0,36	2,29	540,00
Mopani	5,93	9,29	56,63	0,14	1,07	650,00
Sekhukhune	9,00	5,50	-38,89	0,29	1,14	300,00
Vhembe	6,36	12,14	91,01	0,36	0,64	80,00
Waterberg	5,93	8,57	44,58	0,14	0,64	350,00

Mpumalanga

In the first wave there were higher numbers of admissions in the private sector, in the second wave there were higher numbers of admissions in the public sector, and in the third wave there were equal numbers of admissions in both sectors. Weekly admissions at the peak of the second wave exceeded the weekly numbers of admissions at the peak of the first wave in both sectors. Weekly admissions at the peak of the third wave exceeded the weekly numbers of admissions at the peak of the second wave in the private sector (Figure 22). There has been an increase in admissions in both sectors since week 46 and decreased admissions since week 49 in the public sector and week 50 in private sector.

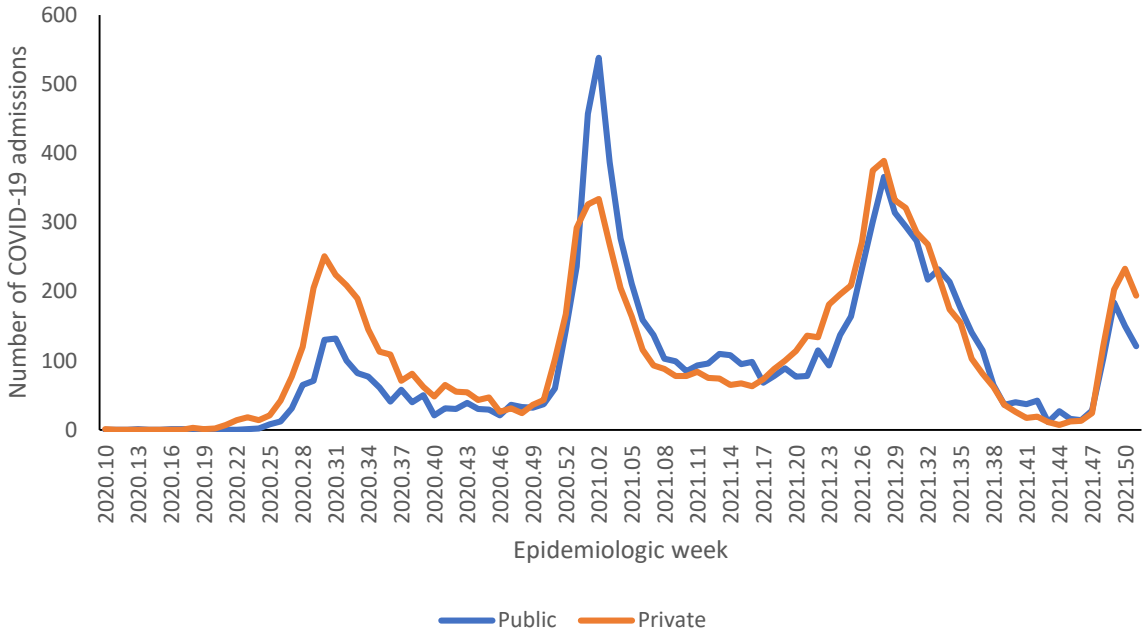

Figure 22: Number of reported COVID-19 admissions by health sector and epidemiologic week of diagnosis, Mpumalanga, 5 March 2020-25 December 2021, N=19,810

Weekly admissions at the peak of the second wave exceeded the weekly numbers of admissions at the peak of the first wave in all districts, while weekly admissions in the third wave were lower than the second wave in all districts (Figure 23). There has been an increase in the number of weekly admissions in all districts since week 46 and decreased admissions in Gert Sibande and Nkangalan since week 49.

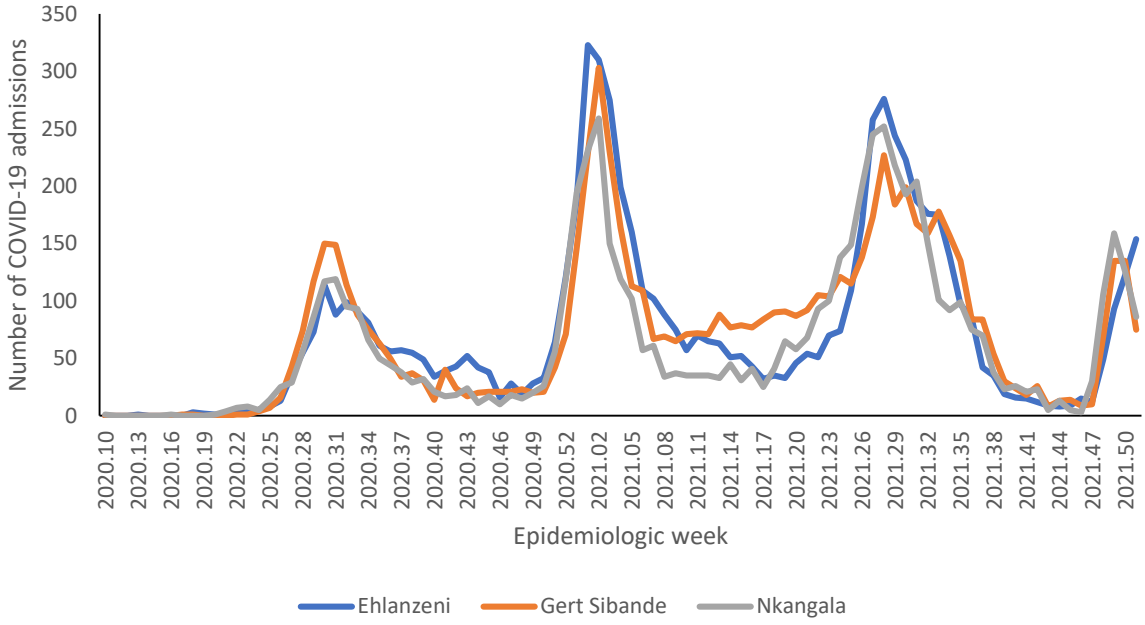

Figure 23: Number of reported COVID-19 admissions, by district and epidemiologic week, Mpumalanga, 5 March 2020-25 December 2021, N=19,810

Weekly deaths at the peak of the second wave exceeded the weekly numbers of deaths at the peak of the first wave in all districts, while weekly deaths in the third wave were lower than the second wave in all districts (Figure 24). There has been a small increase in the number of deaths in all districts.

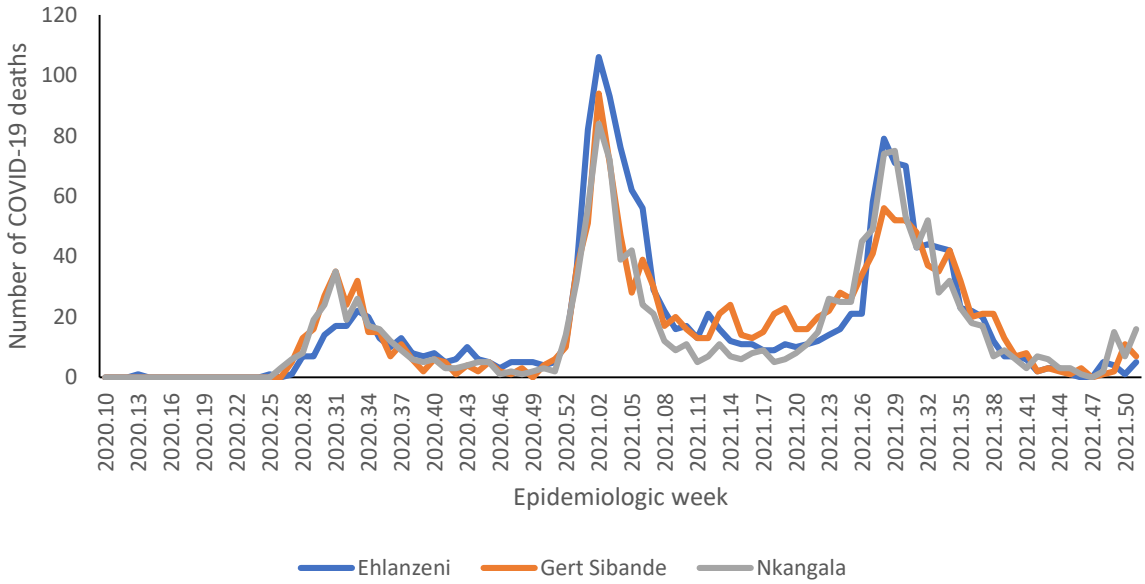

Figure 24: Number of reported COVID-19 in-hospital deaths, by district and epidemiologic week, Mpumalanga, 5 March 2020-25 December 2021, N=4,588

There has been an increase in average daily COVID-19 admissions comparing the previous 14 days and the current 14 days in all districts except Nkangala (Table 10).

Table 10: Previous 14 days and current 14 days average COVID-19 admissions and deaths and percentage changes, Mpumalanga, 27 November-25 December 2021.

District	Previous 14 days admissions average	Current 14 days admissions average	Percentage change in admissions	Previous 14 days deaths average	Current 14 days deaths average	Percentage change in deaths
Ehlanzeni	10,14	19,71	94,37	0,64	0,43	-33,33
Gert Sibande	14,57	15,00	2,94	0,21	1,29	500,00
Nkangala	18,93	15,14	-20,00	1,21	1,64	35,29

North West

In all three waves there were higher numbers of admissions in the public sector. Weekly admissions at the peak of the second wave exceeded the weekly numbers of admissions at the peak of the first wave in both sectors. Weekly admissions at the peak of the third wave exceeded the weekly numbers of admissions at the peak of the second wave in both sectors (Figure 25). There has been an increase in numbers of weekly admissions in both sectors since week 46 and decreased admissions since week 49.

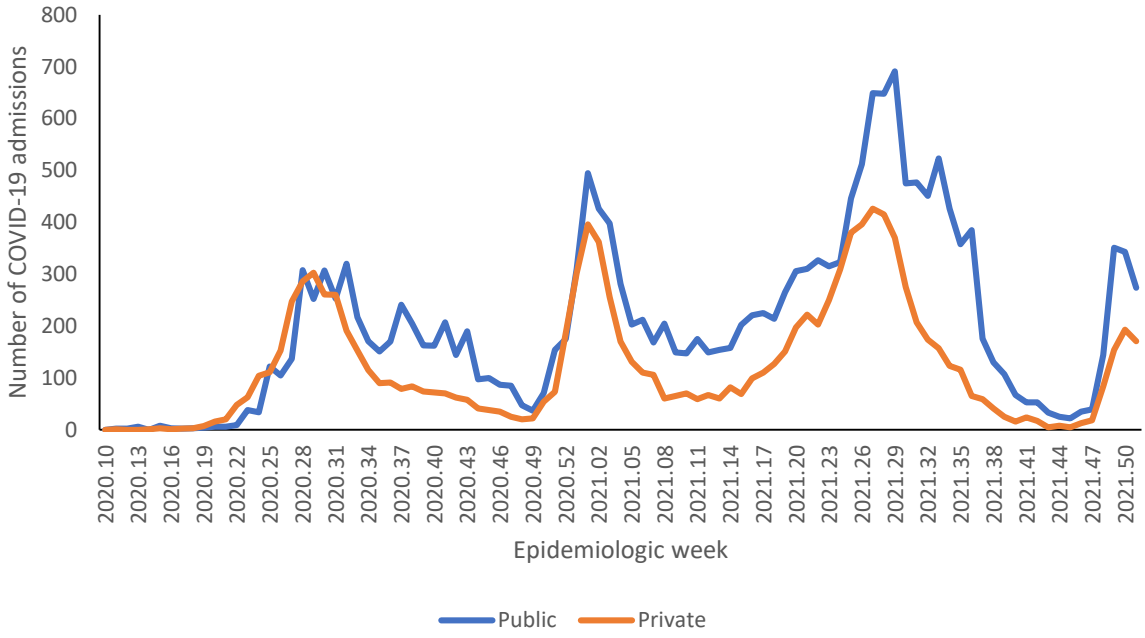

Figure 25: Number of reported COVID-19 admissions by health sector and epidemiologic week of diagnosis, North West, 5 March 2020-25 December 2021, N=30,505

Weekly admissions at the peak of the second wave exceeded the weekly numbers of admissions at the peak of the first wave in all districts except Dr Kenneth Kaunda. Weekly admissions at the peak of the third wave exceeded the weekly numbers of admissions at the peak of the second wave in Bojanala Platinum and Dr Kenneth Kaunda (Figure 26). There has been an increase in the numbers of weekly admissions in all districts since week 46 and decreased admissions since week 50.

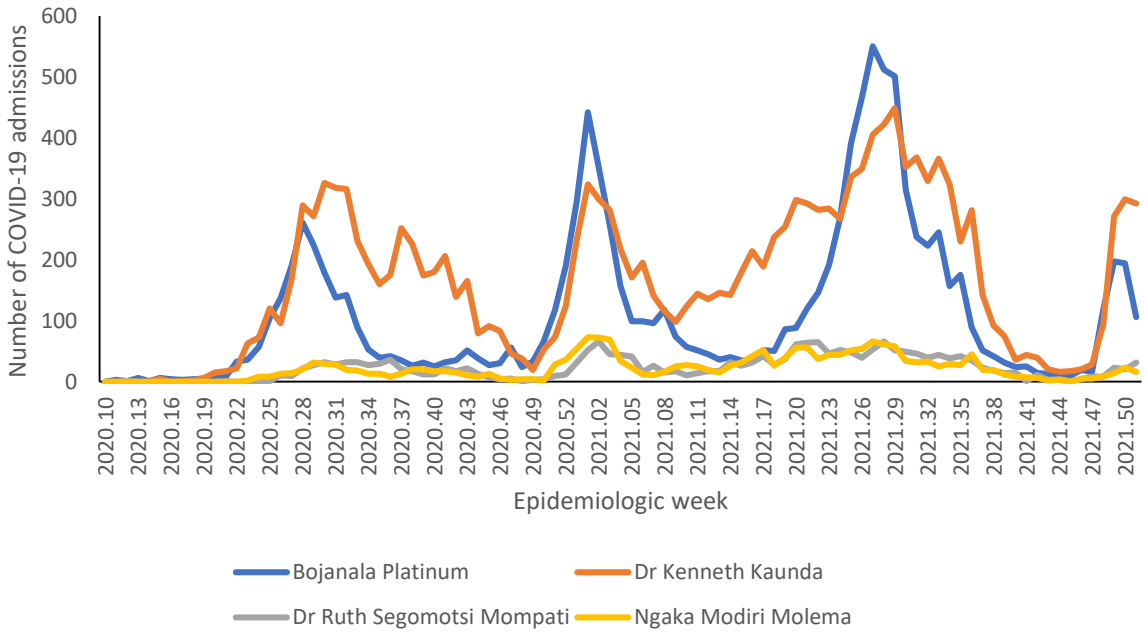

Figure 26: Number of reported COVID-19 admissions, by district and epidemiologic week, North West, 5 March 2020-25 December 2021, N=30,505

Weekly deaths at the peak of the second wave exceeded the weekly numbers of deaths at the peak of the first wave in all districts. Weekly deaths at the peak of the third wave exceeded the weekly numbers of deaths at the peak of the second wave in Bojanala Platinum and Dr Kenneth Kaunda (Figure 27). There has been an increase in deaths in Dr Kenneth Kaunda and Bojanala Platinum district.

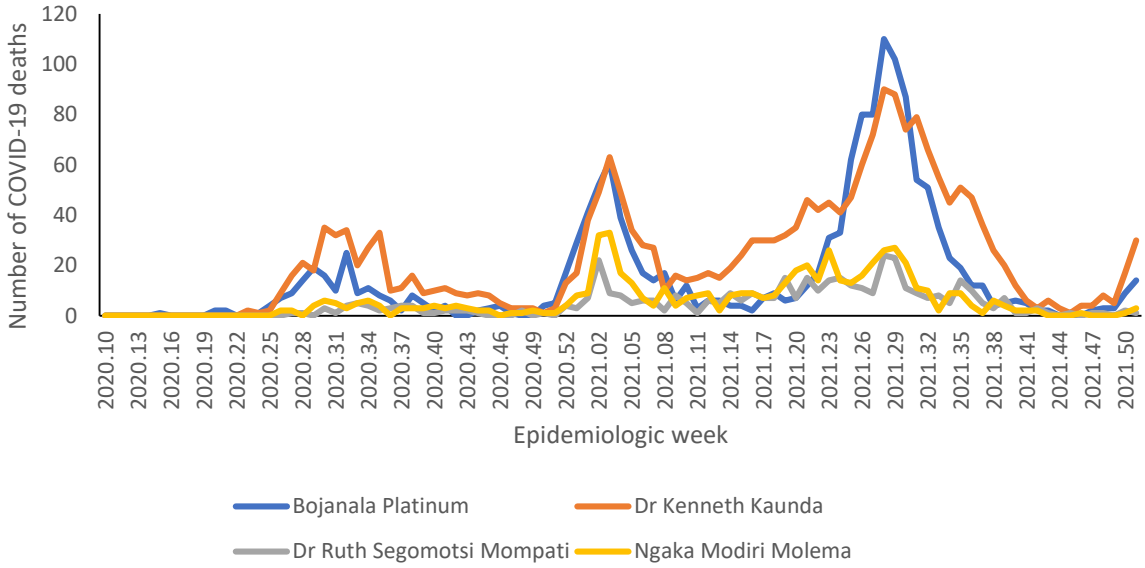

Figure 27: Number of reported COVID-19 in-hospital deaths, by district and epidemiologic week, North West, 5 March 2020-25 December 2021, N=4,547

There has been an increase in average daily COVID-19 admissions comparing the previous 14 days and the current 14 days in all districts except Bojanala (Table 11).

Table 11: Previous 14 days and current 14 days average COVID-19 admissions and deaths and percentage changes, North West, 27 November-25 December 2021.

District	Previous 14 days admissions average	Current 14 days admissions average	Percentage change in admissions	Previous 14 days deaths average	Current 14 days deaths average	Percentage change in deaths
Bojanala Platinum	22,50	21,43	-4,76	0,43	1,64	283,33
Dr Kenneth Kaunda	26,07	42,21	61,92	0,93	3,36	261,54
Dr Ruth Segomotsi Mompati	2,21	3,64	64,52	0,07	0,21	200,00
Ngaka Modiri Molema	1,57	2,79	77,27	0,00	0,29	0,00

Northern Cape

In all three waves there were roughly equal numbers of admissions in both sectors, however a second increase in the third wave was concentrated more in the public sector. Weekly admissions at the peak of the second wave exceeded the weekly numbers of admissions at the peak of the first wave in both sectors. Weekly admissions at the peak of the third wave exceeded the weekly numbers of admissions at the peak of the second wave in both sectors (Figure 28). There has been increases in admissions in both sectors since week 47 and decreased admissions since week 50.

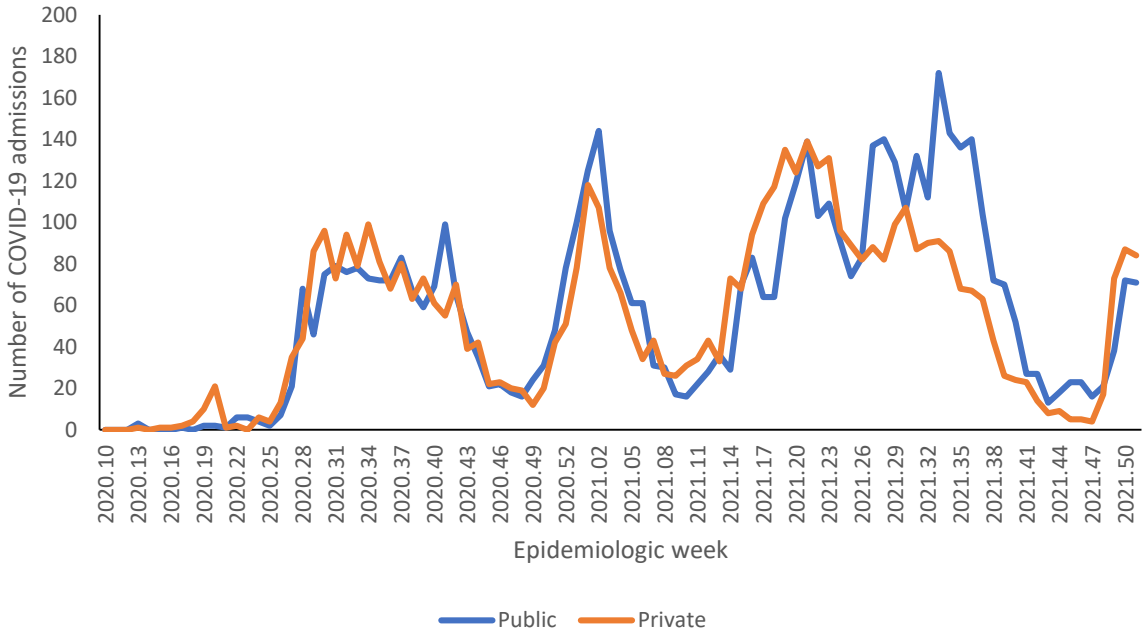

Figure 28: Number of reported COVID-19 admissions by health sector and epidemiologic week of diagnosis, Northern Cape, 5 March 2020-25 December 2021, N=10,457

Weekly admissions at the peak of the second wave exceeded the weekly number of admissions during the peak of the first wave in Pixley Ka Seme, Namakwa and ZF Mgcawu districts. Weekly admissions at the peak of the third wave exceeded the weekly numbers of admissions at the peak of the second wave in all districts (Figure 29). There has been an increase in weekly admissions in all districts since week 47 and decreased admissions since week 50.

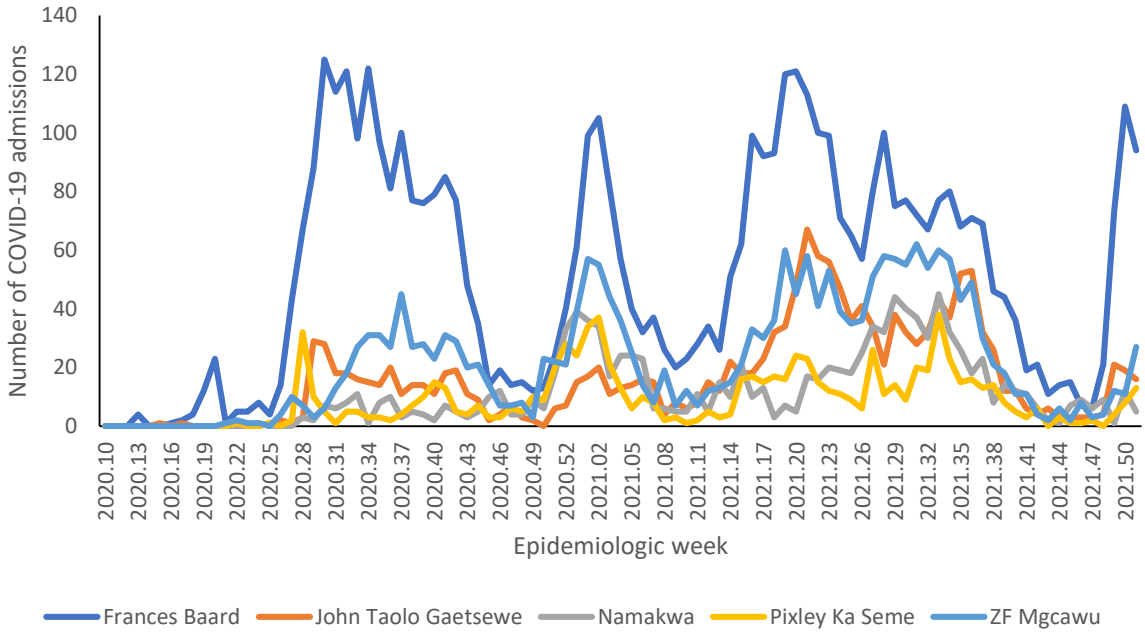

Figure 29: Number of reported COVID-19 admissions by district and epidemiologic week, Northern Cape, 5 March 2020-25 December 2021, N=10,457

Weekly deaths at the peak of the second wave exceeded the weekly numbers of deaths at the peak of the first wave in Pixley ka Seme, Namakwa and ZF Mgcawu districts. Weekly deaths at the peak of the third wave exceeded the weekly numbers of deaths at the peak of the second wave in Frances Baard, John Taolo Gaetsewe and ZF Mgcawu district (Figure 30). There has been a small increase in deaths in all districts.

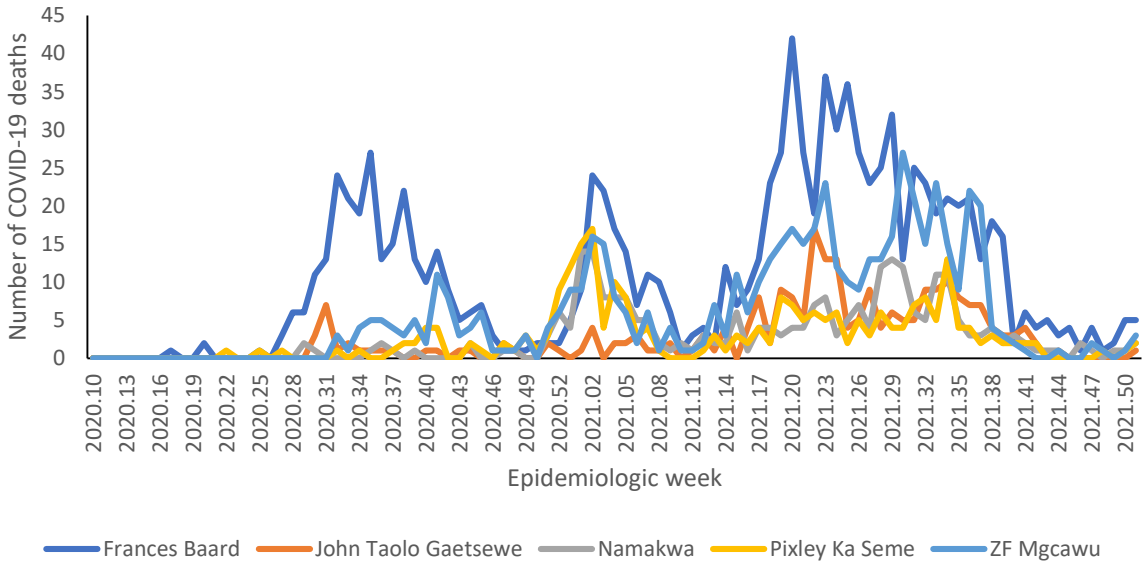

Figure 30: Number of reported COVID-19 in-hospital deaths, by district and epidemiologic week, Northern Cape, 5 March 2020-25 December 2021, N=2,303

There has been a decrease in average daily COVID-19 admissions comparing the previous 14 days and the current 14 days in all districts (Table 12).

Table 12: Previous 14 days and current 14 days average COVID-19 admissions and deaths and percentage changes, Northern Cape, 27 November-25 December 2021.

District	Previous 14 days admissions average	Current 14 days admissions average	Percentage change in admissions	Previous 14 days deaths average	Current 14 days deaths average	Percentage change in deaths
Frances Baard	6,71	14,50	115,96	0,21	0,71	233,33
John Taolo Gaetsewe	1,79	2,50	40,00	0,00	0,07	0,00
Namakwa	0,71	1,21	70,00	0,07	0,21	200,00
Pixley Ka Seme	0,29	1,50	425,00	0,07	0,21	200,00
ZF Mgcawu	1,14	2,71	137,50	0,07	0,29	300,00

Western Cape

In all three waves there were higher numbers of admissions in the public sector. Weekly admissions at the peak of the second wave exceeded the weekly numbers of admissions at the peak of the first wave in both sectors, while weekly admissions in the third wave were lower than the second wave in both sectors (Figure 31). There has been an increase in admissions in both sectors since week 47.

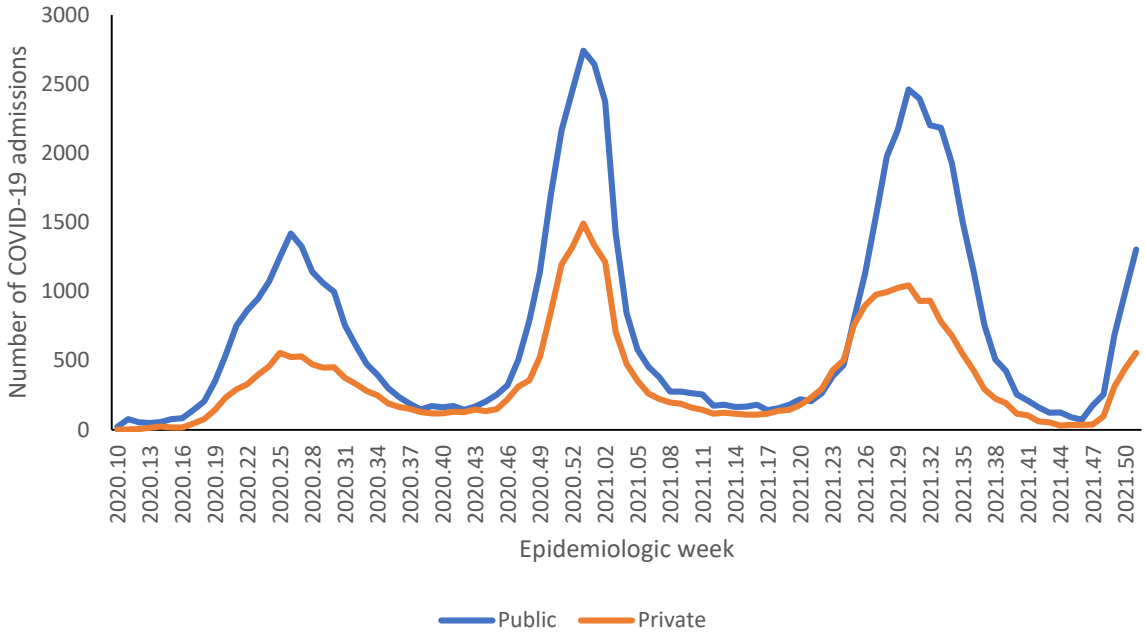

Figure 31: Number of reported COVID-19 admissions by health sector and epidemiologic week of diagnosis, Western Cape, 5 March 2020-25 December 2021, N=103,435

Weekly admissions at the peak of the second wave exceeded the weekly numbers of admissions at the peak of the first wave in all districts. Weekly number of admissions in the third wave exceeded the weekly numbers of admissions at the peak of the second wave in Central Karoo and Garden Route (Figure 32). There has been an increase in admissions in all districts since week 47.

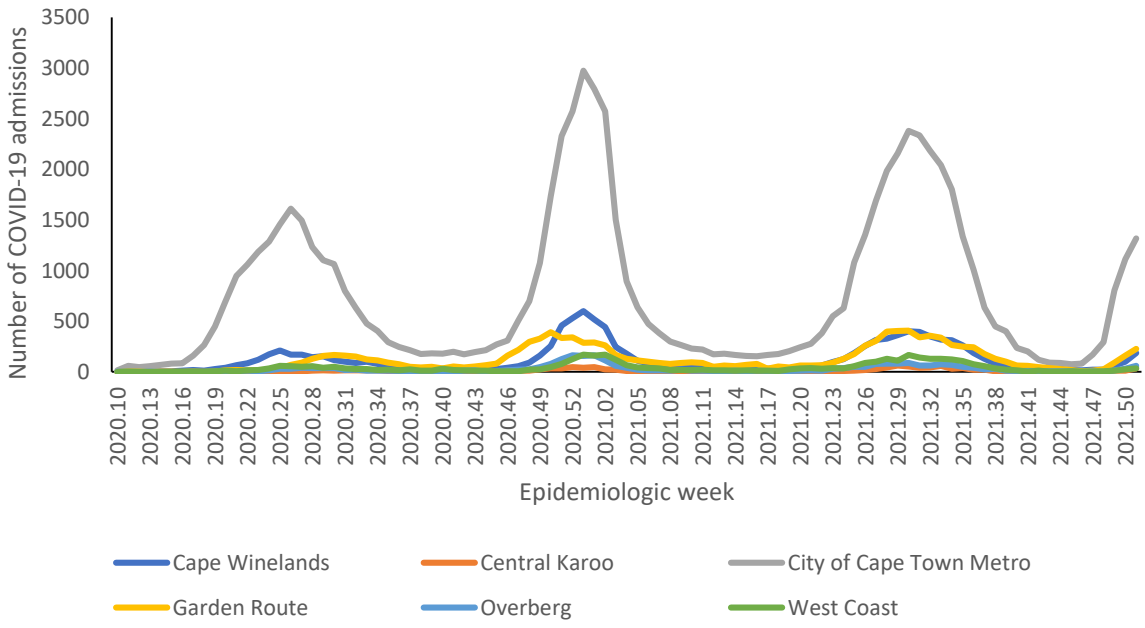

Figure 32: Number of reported COVID-19 admissions, by district and epidemiologic week, Western Cape, 5 March 2020-25 December 2021, N=103,435

Weekly deaths at the peak of the second wave exceeded the weekly numbers of deaths at the peak of the first wave in all districts. Weekly number of deaths in the third wave exceeded the weekly numbers of deaths at the peak of the second wave in Central Karoo, Garden Route and West Coast (Figure 33). There have been small increases in the numbers of deaths in City of Cape Town Metro.

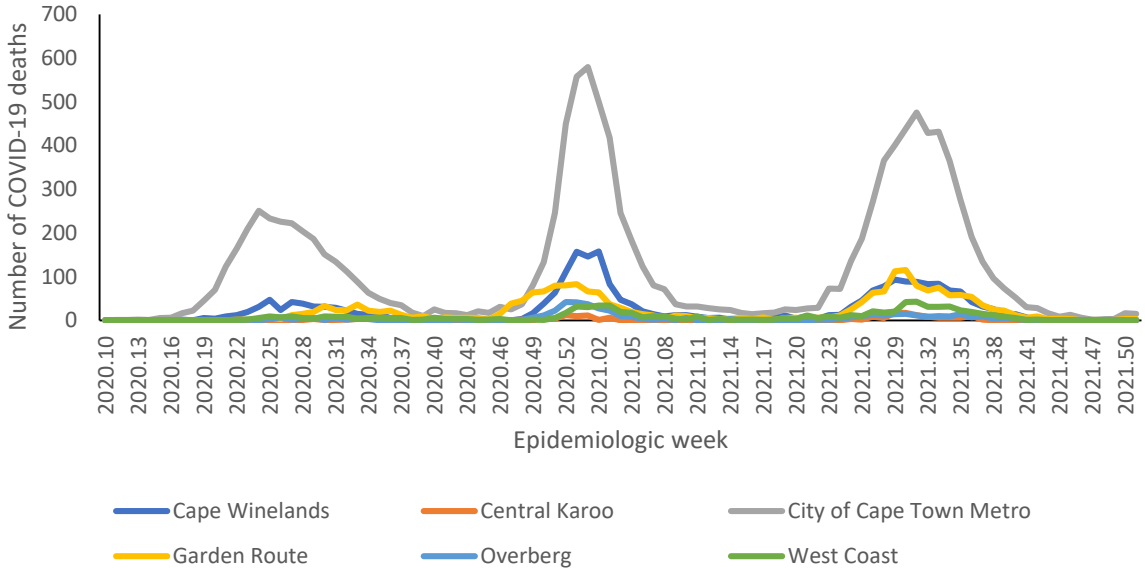

Figure 33: Number of reported COVID-19 in-hospital deaths, by district and epidemiologic week, Western Cape, 5 March 2020-25 December 2021, N=17,335

There has been an increase in average daily COVID-19 admissions comparing the previous 14 days and the current 14 days in all districts (Table 13).

Table 13: Previous 14 days and current 14 days average COVID-19 admissions and deaths and percentage changes, Western Cape, 27 November-25 December 2021.

District	Previous 14 days admissions average	Current 14 days admissions average	Percentage change in admissions	Previous 14 days deaths average	Current 14 days deaths average	Percentage change in deaths
Cape Winelands	6,21	20,50	229,89	0,36	0,21	-40,00
Central Karoo	1,07	3,29	206,67	0,00	0,00	0,00
City of Cape Town Metro	78,50	173,50	121,02	0,36	2,21	520,00
Garden Route	8,29	27,86	236,21	0,14	0,43	200,00
Overberg	1,14	6,50	468,75	0,00	0,00	0,00
West Coast	1,29	4,29	233,33	0,07	0,00	-100,00

Limitations

DATCOV now includes reporting from all hospitals with COVID-19 admissions but many hospitals are yet to reach complete submission of historic data. Data quality in a surveillance system is dependent on the information submitted by healthcare institutions. It is not possible for the NICD to verify or check the quality of all these data, however, the NICD has built-in data quality checks. Delays in reporting of admissions and deaths may affect the numbers reported in the most recent week. The National Department of Health have recruited data capturers to support hospitals to improve data submission.

As hospitals reached capacity, admission criteria may change and therefore influence trends and inferences about the progression of the epidemic. DATCOV only reports hospital-based admissions and deaths and therefore does not include deaths occurring outside hospitals. DATCOV now has a module to record out-of-hospital deaths.

Severity data has some inherent limitations. We rely on a proxy indicator for severity and do not have clinical or laboratory parameters to ascertain clinical severity. In the early and late phases of the wave there is likely to be lower severity due to there being sufficient hospital capacity. It may take a few weeks for hospitalisation outcomes to accumulate. Early reporting on case fatality ratio is also biased particularly in older adults who may have longer admissions and are more likely to die.

Acknowledgements

All public and private sector hospitals submitting data to DATCOV

Private hospital groups submitting data to DATCOV:

- Netcare
- Life Healthcare
- Mediclinic Southern Africa
- National Hospital Network (NHN)
- Clinix Health Group
- Lenmed
- Joint Medical Holdings (JMH)

Appendix

Table 14: Percentage incidence change in hospital admissions over 14 days, by district, South Africa, 4 December-25 December 2021.

Province	District	Total admissions	Incidence (per 100k)	New admissions	New admissions incidence (per 100k)	% average change (14 days)
Eastern Cape	Alfred Nzo	2476	297,51	62	7,45	0,00
	Amathole	3006	376,12	49	6,13	-20,97
	Buffalo City Metro	9653	1205,31	212	26,47	3,92
	Chris Hani	4784	657,46	79	10,86	-33,05
	Joe Gqabi	1073	311,04	32	9,28	60,00
	Nelson Mandela Bay Metro	15197	1252,78	249	20,53	23,88
	O R Tambo	4556	297,36	48	3,13	-50,00
	Sarah Baartman	3009	621,92	69	14,26	40,82
Free State	Fezile Dabi	3338	654,35	60	11,76	-25,00
	Lejweleputswa	5835	892,75	82	12,55	-54,44
	Mangaung Metro	13283	1525,17	235	26,98	-25,16
	Thabo Mofutsanyana	5090	665,52	81	10,59	-30,17
	Xhariep	643	496,74	13	10,04	-27,78
Gauteng	City of Johannesburg Metro	49146	837,73	629	10,72	-34,55
	City of Tshwane Metro	37926	1017,03	596	15,98	-41,11
	Ekurhuleni Metro	29855	749,71	357	8,96	-39,70
	Sedibeng	8599	899,93	80	8,37	-30,43
	West Rand	11994	1256,26	150	15,71	-47,92
KwaZulu-Natal	Amajuba	4305	754,57	91	15,95	-7,14
	eThekwini Metro	34580	868,58	561	14,09	-39,42
	Harry Gwala	2291	445,70	50	9,73	-13,79
	iLembe	2798	402,86	52	7,49	18,18
	King Cetshwayo	8213	846,11	147	15,14	-26,87
	Ugu	5026	626,90	145	18,09	-5,23
	uMgungundlovu	10066	875,73	200	17,40	-18,37
	uMkhanyakude	1328	193,33	13	1,89	-18,75
	Umzinyathi	1751	308,51	41	7,22	-32,79
	UThukela	2777	388,82	54	7,56	-14,29
	Zululand	2067	234,67	49	5,56	-40,96
Limpopo	Capricorn	7886	602,93	136	10,40	-20,00
	Mopani	3315	279,78	80	6,75	40,35
	Sekhukhune	1855	155,84	18	1,51	-71,43
	Vhembe	2629	184,20	72	5,04	-30,10

	Waterberg	3013	405,95	58	7,81	-10,77
Mpumalanga	Ehlanzeni	6891	376,82	168	9,19	28,24
	Gert Sibande	6840	550,66	79	6,36	-45,89
	Nkangala	6094	378,77	88	5,47	-33,33
North West	Bojanala Platinum	10609	550,21	107	5,55	-48,56
	Dr Kenneth Kaunda	15835	1985,04	317	39,74	-6,49
	Dr Ruth Segomotsi Mompati	2099	443,69	32	6,76	52,38
	Ngaka Modiri Molema	2029	223,00	16	1,76	-30,43
Northern Cape	Frances Baard	4939	1190,38	98	23,62	-16,24
	John Taolo Gaetsewe	1520	559,90	18	6,63	-10,00
	Namakwa	1085	938,48	5	4,32	-58,33
	Pixley Ka Seme	845	400,69	13	6,16	62,50
	ZF Mgcawu	2078	742,41	28	10,00	133,33
Western Cape	Cape Winelands	11580	1230,26	211	22,42	83,48
	Central Karoo	1201	1598,92	44	58,58	158,82
	City of Cape Town Metro	72975	1584,70	1628	35,35	4,96
	Garden Route	11667	1870,74	263	42,17	28,29
	Overberg	2773	924,62	64	21,34	64,10
	West Coast	3827	830,49	39	8,46	11,43

Table 15: Number of reported COVID-19 admissions and in-hospital deaths by age and gender, South Africa, 5 March 2020-25 December 2021.

	ADMISSIONS				DEATHS			
Age Group (Years)	**Female**	**Male**	**Unknown**	**Total**	**Female**	**Male**	**Unknown**	**Total**
0-4	4527	5616	31	10174	148	159	2	309
5-9	1278	1656	7	2941	23	25	0	48
10-14	1996	1934	8	3938	59	52	0	111
15-19	5744	3082	3	8829	127	115	0	242
20-24	9160	4495	5	13660	287	224	1	512
25-29	14644	6571	13	21228	653	423	0	1076
30-34	18982	10715	7	29704	1115	930	1	2046
35-39	20022	14348	18	34388	1648	1529	4	3181
40-44	18244	16154	12	34410	2056	2116	0	4172
45-49	20530	20161	13	40704	3022	3163	1	6186
50-54	24075	22408	9	46492	4171	4281	1	8453
55-59	26855	24239	12	51106	5932	5929	5	11866
60-64	23569	21616	19	45204	6367	6544	4	12915
65-69	20284	18037	15	38336	6578	6106	6	12690
70-74	17081	14955	18	32054	5779	5595	4	11378
75-79	12608	10337	10	22955	4529	4203	3	8735
80-84	9550	6603	8	16161	3697	2842	3	6542
85-89	5100	3133	2	8235	2032	1468	0	3500
90-94	2203	1080	1	3284	981	546	0	1527
>=95	688	332	2	1022	312	139	0	451
Unknown	1171	1188	45	2404	69	113	0	182
Total	**258311**	**208660**	**258**	**467229**	**49585**	**46502**	**35**	**96122**