

COVID-19 HOSPITAL SURVEILLANCE UPDATE



NATIONAL INSTITUTE FOR
COMMUNICABLE DISEASES

Division of the National Health Laboratory Service

SOUTH AFRICA WEEK 50 2021

OVERVIEW

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 18 December 2021.

HIGHLIGHTS

- As of 18 December 2021, 456,763 COVID-19 admissions and 95,345 in-hospital deaths were reported to DATCOV from 666 facilities (407 public-sector and 259 private-sector) in all nine provinces of South Africa.
- There has also been an increase in admissions in Gauteng since week 45, North West, Mpumalanga, Limpopo and Eastern Cape provinces since week 46, Free State, KwaZulu-Natal and Western Cape since week 47, and Northern Cape since week 48. The number of admissions has decreased in Gauteng since week 49.
- There has been a small increase in deaths in all provinces.

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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 18 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 2020-18 December 2021.

Name of province	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

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RESULTS

Epidemiological and geographic trends in admissions

From 5 March 2020 to 18 December 2021, a total of 447,981 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 (Figure 1). Decreases in the most recent week may be related to delays in submission of data.

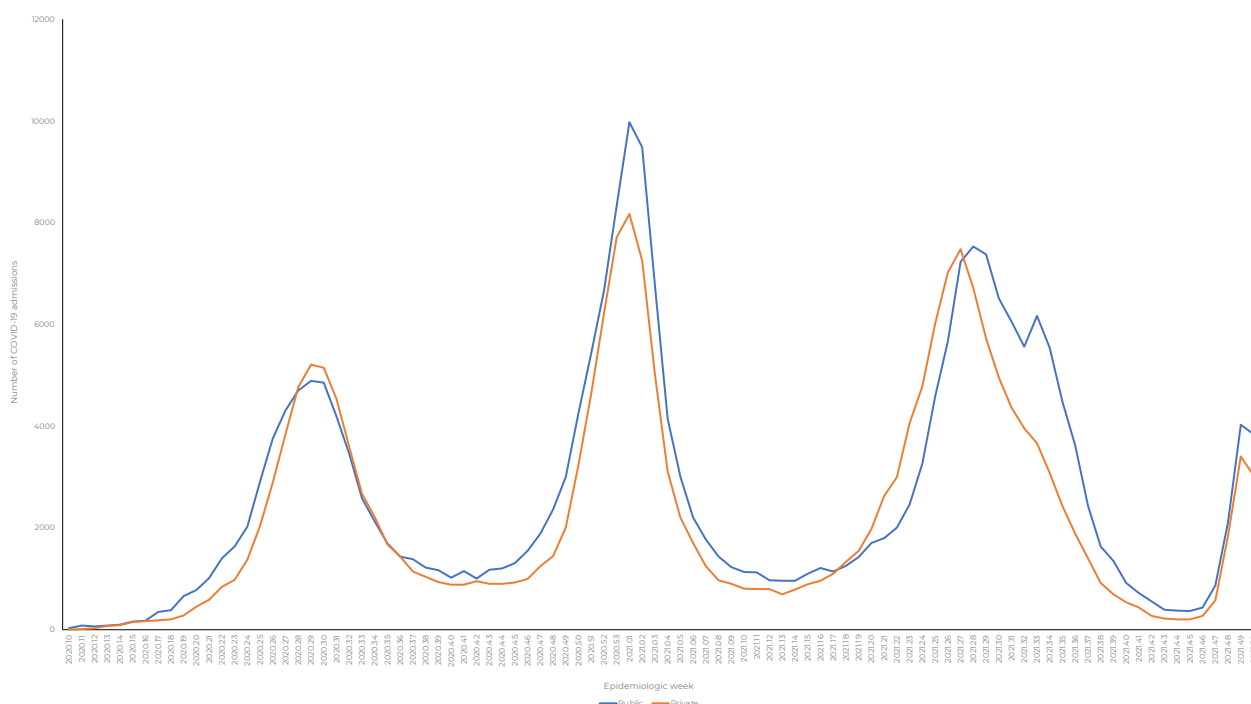


Figure 1. Number of reported COVID-19 admissions by health sector and epidemiologic week of diagnosis, South Africa, 5 March 2020-18 December 2021, N=456,763

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The majority of admissions were recorded in four provinces, Gauteng 134,807 (30%), Western Cape 100,811 (22%), KwaZulu-Natal 73,084 (16%) and Eastern Cape 42,730 (9%) provinces. The weekly COVID-19 admissions have increased in all provinces in the fourth wave (Figures 2a and 2b).

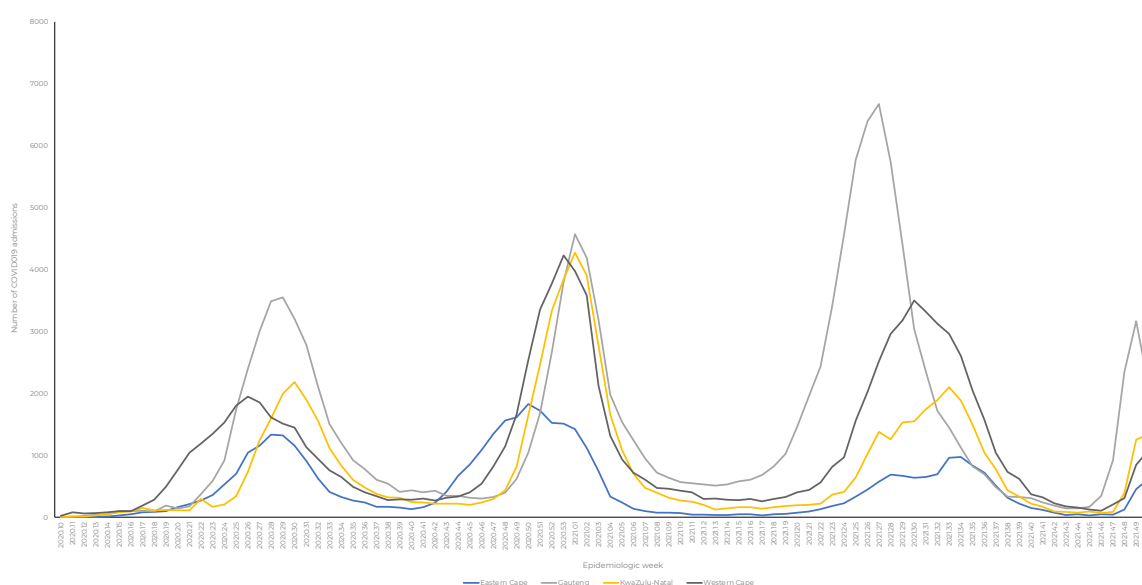


Figure 2a. Number of reported COVID-19 admissions, by provinces with highest admissions and epidemiologic week of diagnosis, South Africa, 5 March 2020-18 December 2021, N=456,763

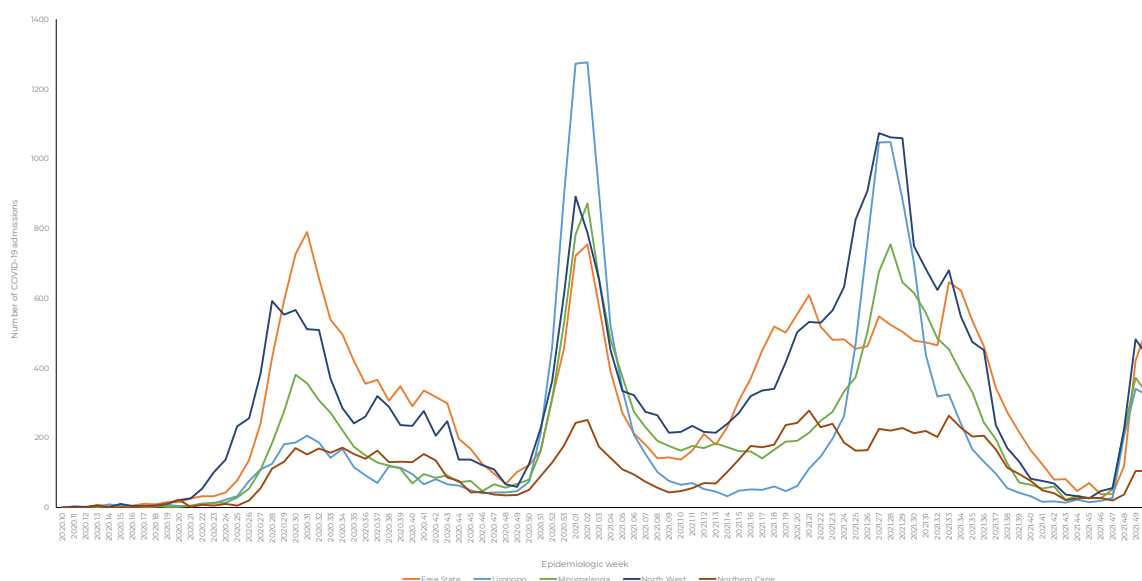


Figure 2b. Number of reported COVID-19 admissions, by provinces with lowest admissions and epidemiologic week of diagnosis, South Africa, 5 March 2020-18 December 2021, N=456,763

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EPIDEMIOLOGICAL AND GEOGRAPHIC TRENDS IN IN-HOSPITAL MORTALITY

A total of 95,345 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 a small increase in in-hospital COVID-19 deaths in both sectors since week 48 (Figure 3).

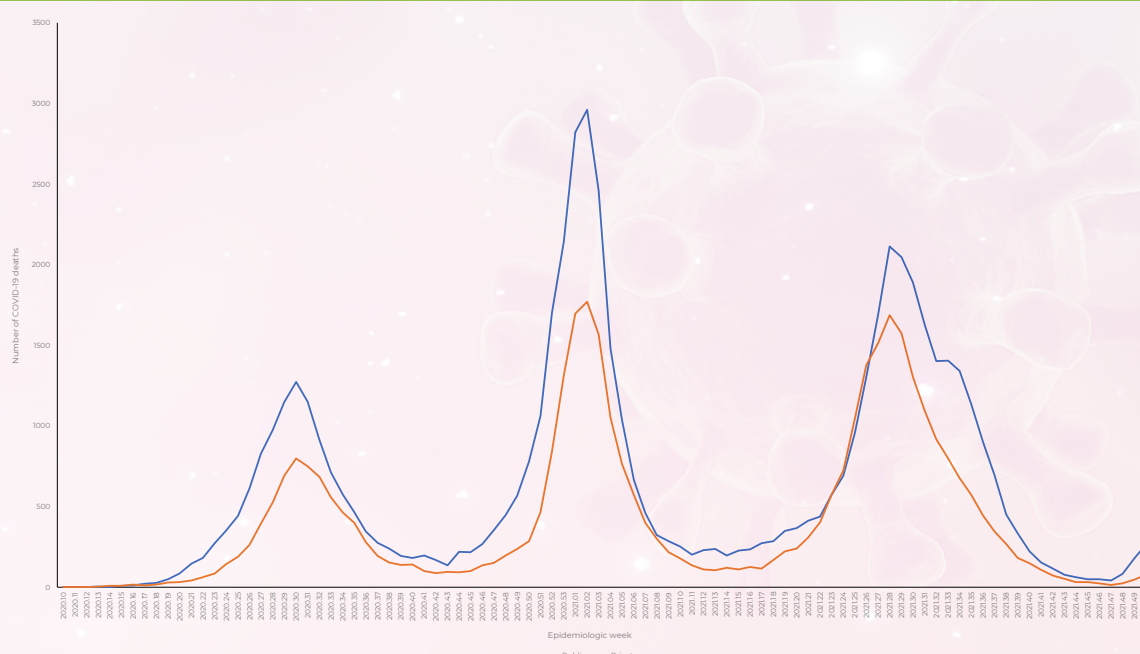


Figure 3. Number of reported COVID-19 in-hospital deaths, by health sector and epidemiologic week, South Africa, 5 March 2020-18 December 2021, N=95,345

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Most deaths were reported in Gauteng 27,947 (29%), Western Cape 17,219 (18%), KwaZulu-Natal 15,786 (18%), and Eastern Cape 12,218 (13%). There has been an increase in deaths in Gauteng and smaller increases in deaths in all provinces. (Figures 4a and 4b).

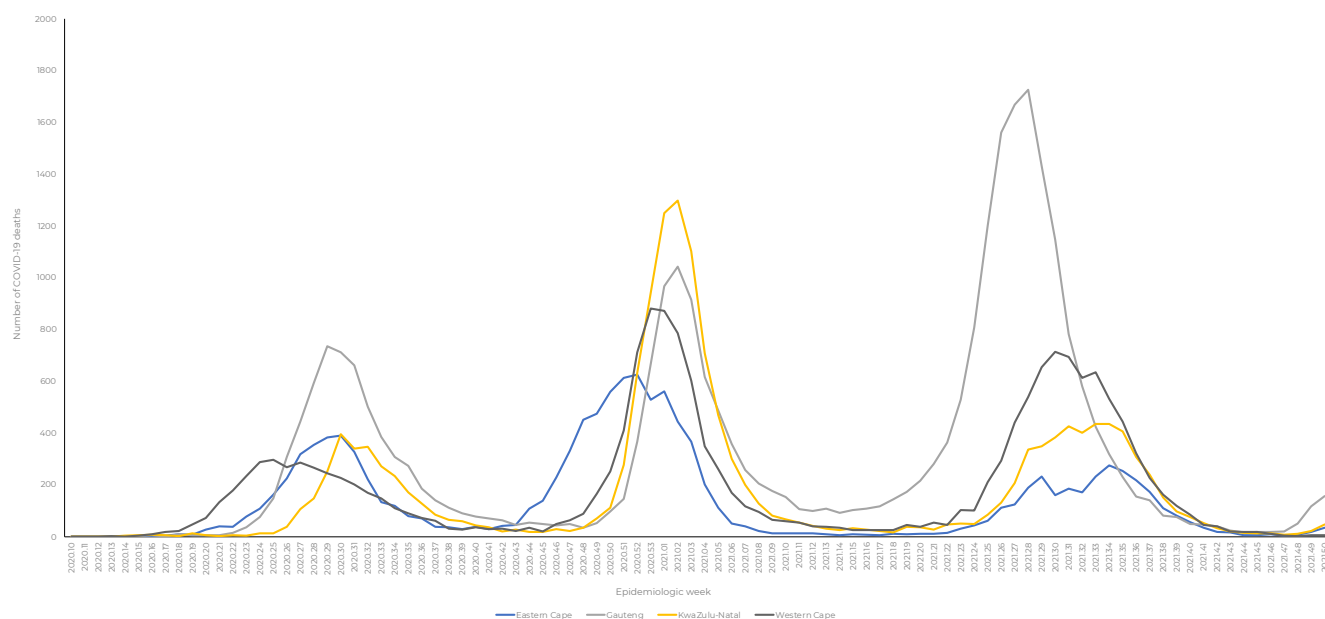


Figure 4a. Number of reported COVID-19 in-hospital deaths, by province with highest deaths and epidemiologic week of death, South Africa, 5 March 2020-18 December 2021, N=95,345

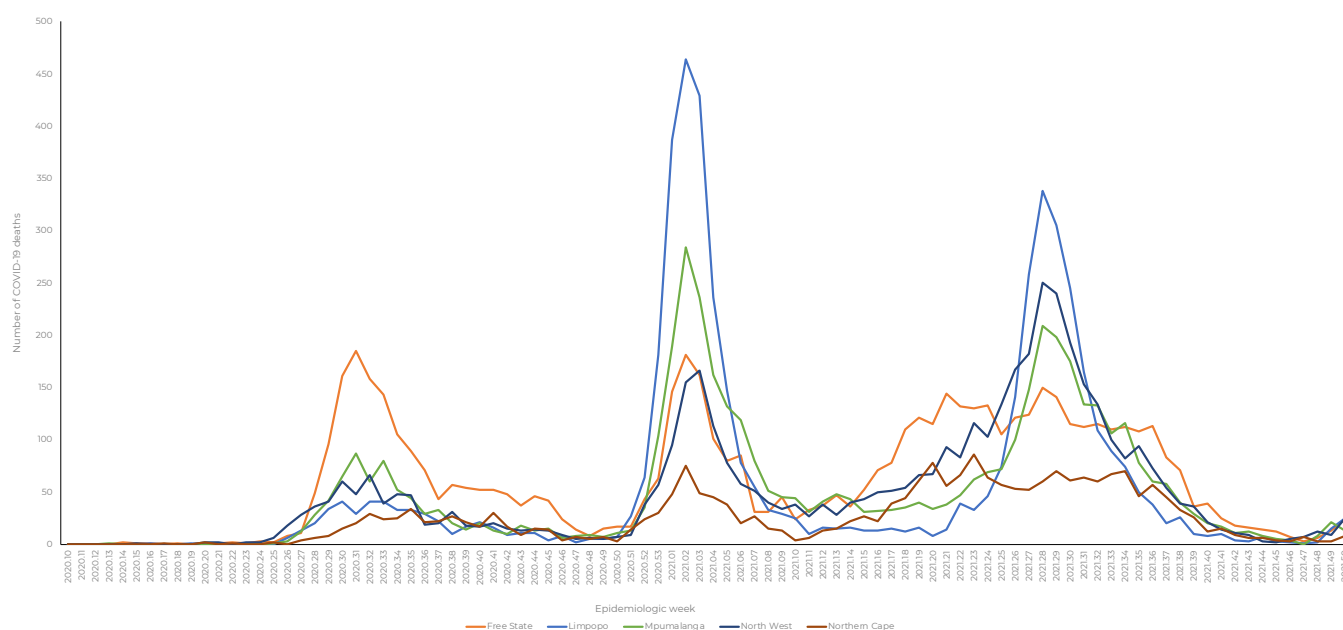


Figure 4b. Number of reported COVID-19 in-hospital deaths, by province with lowest deaths and epidemiologic week of death, South Africa, 5 March 2020-18 December 2021, N=95,345

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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 2020-18 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	42730	634.5	12258	182.0
Free State	2928903	27566	941.2	5640	192.6
Gauteng	15488137	134 807	870.4	28123	181.6
KwaZulu-Natal	11531628	73084	633.8	15841	137.4
Limpopo	5852553	18175	310.5	4913	83.9
Mpumalanga	4679786	19419	415.0	4554	97.3
North West	4108816	29 933	728.5	4498	109.5
Northern Cape	1292786	10 238	791.9	2288	177.0
Western Cape	7005741	100 811	1439.0	17227	245.9
South Africa	59622350	456 763	766.1	95 342	159.9

*StatsSA mid-year population estimates 2020

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PROVINCIAL TRENDS

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 (Table 3).

Table 3. Previous 14 days and current 14 days daily average COVID-19 admissions and deaths and percentage changes, South Africa, 20 November-18 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	11.21	75.71	575.16	0.86	3.79	341.67
Free State	11.29	67.21	495.57	0.64	2.64	311.11
Gauteng	233.07	380.36	63.19	5.14	19.43	277.78
KwaZulu-Natal	33.86	184.50	444.94	1.36	5.00	268.42
Limpopo	16.64	47.36	184.55	0.21	2.86	1233.33
Mpumalanga	19.43	49.86	156.62	0.57	2.43	325.00
North West	20.00	65.50	227.50	1.36	2.43	78.95
Northern Cape	4.07	15.07	270.18	0.71	0.79	10.00
Western Cape	36.79	136.29	270.49	0.50	0.93	85.71

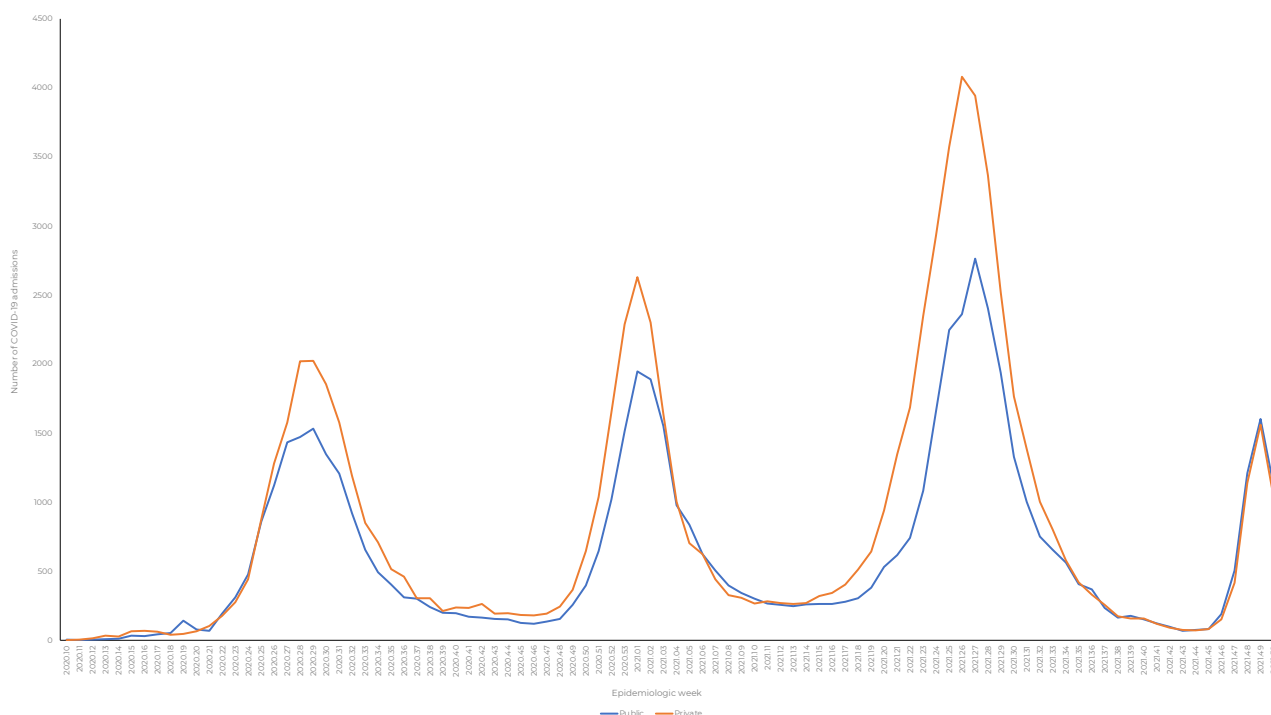
* Reporting of new admissions in the most recent week may be delayed

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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 5). Following an increase in admissions in both sectors since week 45, the numbers of weekly admissions has decreased in both sectors since week 49.



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There has been an increase in admissions in City of Tshwane Metro since week 45, and in City of Johannesburg Metro, Ekurhuleni Metro, Sedibeng and West Rand since week 46 (Figure 6). The numbers of admissions have decreased in all districts since week 49.

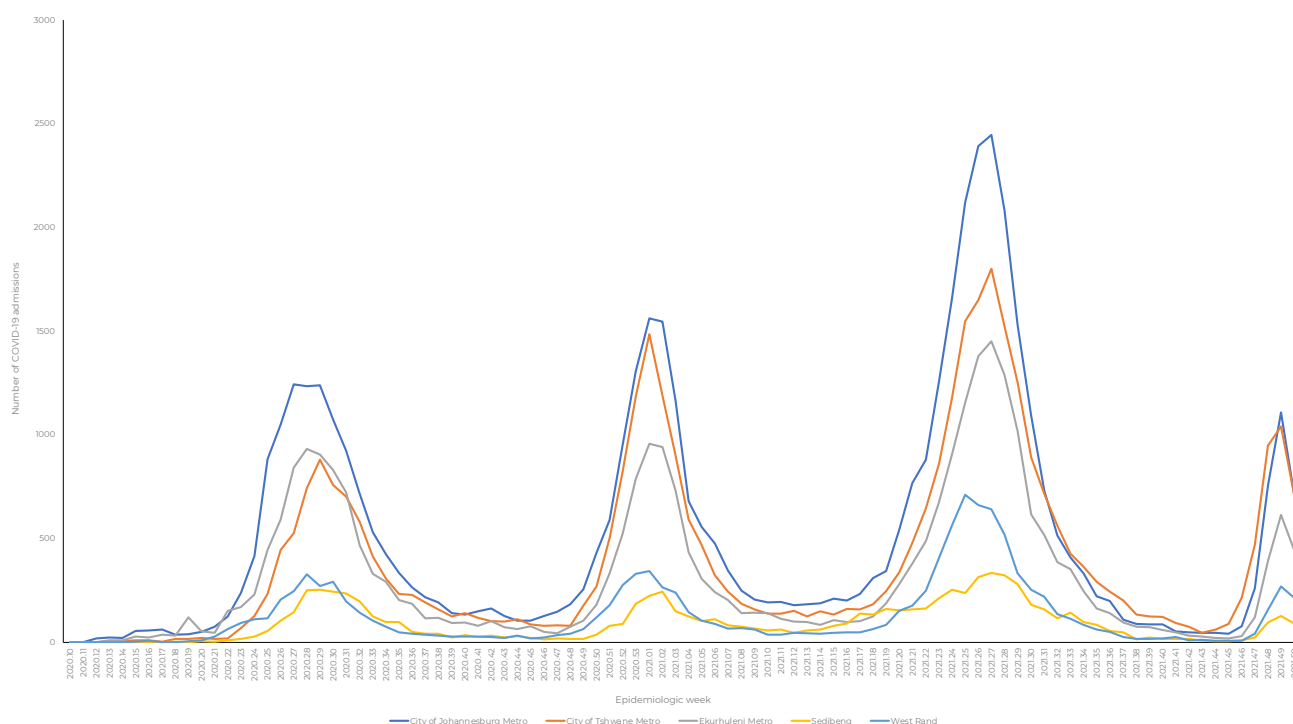


Figure 6. Number of reported COVID-19 admissions, by district and epidemiologic week, Gauteng, 5 March 2020-18 December 2021, N=134,807

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There has been a small increase in deaths in all districts (Figure 7).

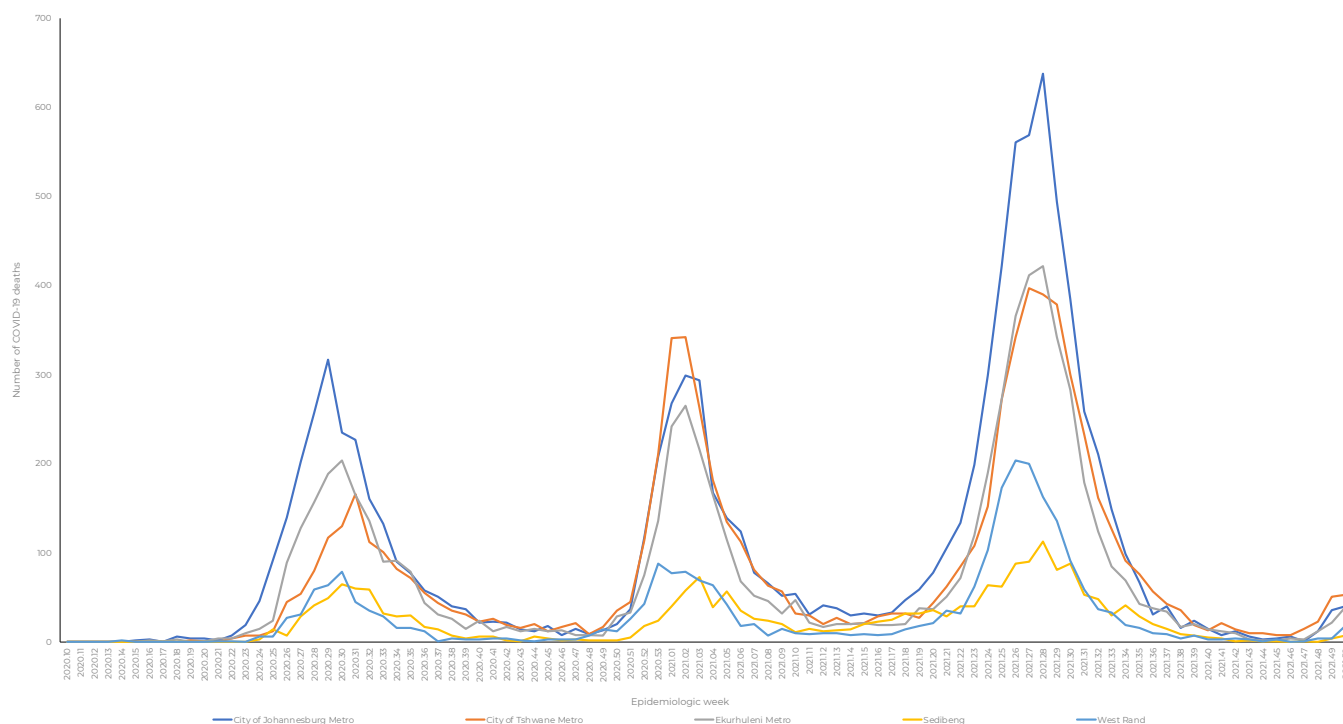


Figure 7. Number of reported COVID-19 in-hospital deaths, by district and epidemiologic week, Gauteng, 5 March 2020-18 December 2021, N=28,123

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There has been an increase in average daily COVID-19 admissions and deaths comparing the previous 14 days and the current 14 days in all district (Table 4).

Table 4: Previous 14 days and current 14 days average COVID-19 admissions and deaths and percentage changes, Gauteng, 20 November-18 December 2021.

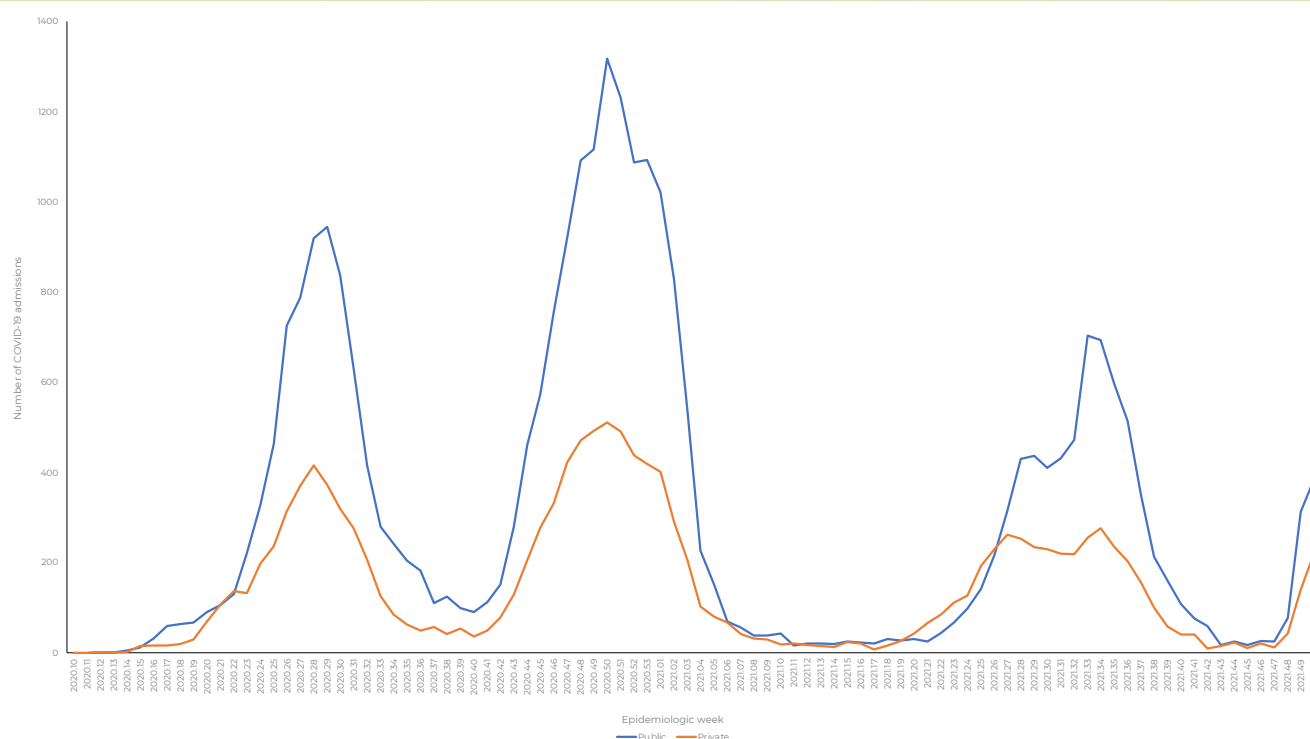
District	Previous 14 days admissions average	Current 14 days admissions average	Percentage change in admissions	Previous 14 days deaths average	Current 14 days deaths average	Percentage change in deaths
City of Johannesburg Metro	72.43	130.07	79.59	0.93	5.43	484.62
City of Tshwane Metro	101.36	124.50	22.83	2.71	7.36	171.05
Ekurhuleni Metro	36.64	75.57	106.24	1.07	4.29	300.00
Sedibeng	8.50	15.64	84.03	0.07	0.79	1000.00
West Rand	14.14	34.57	144.44	0.36	1.57	340.00

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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 8).



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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 9). There has been an increase in admissions in all districts since week 46.

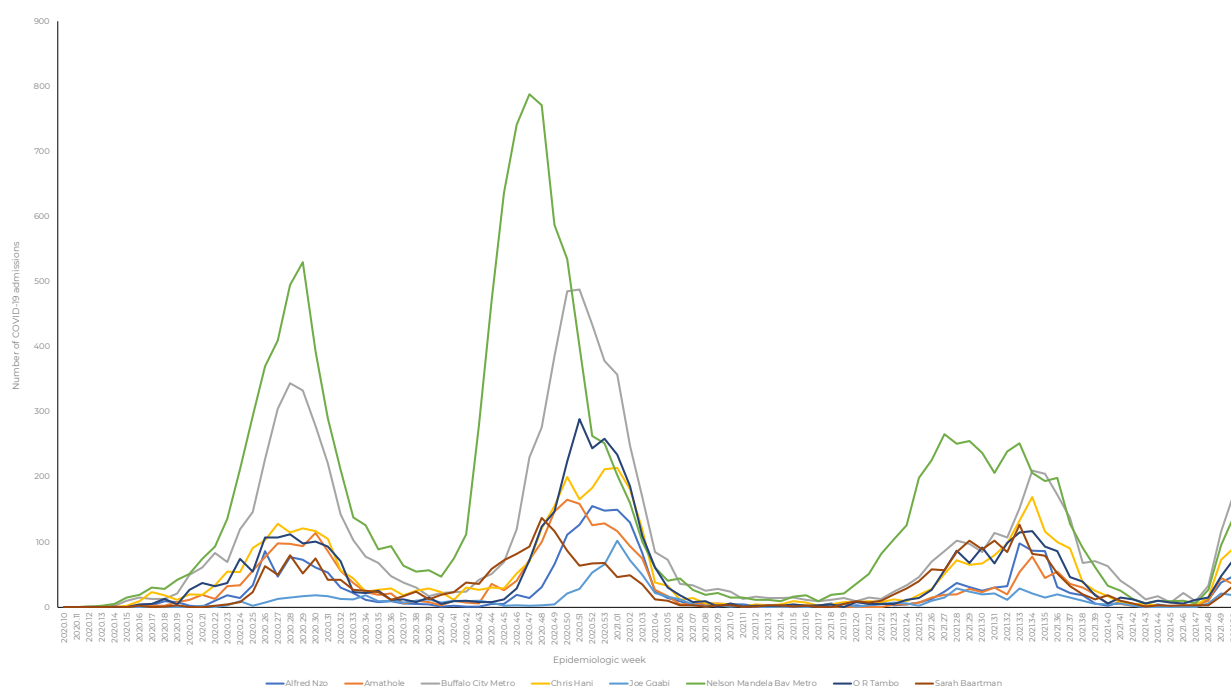


Figure 9: Number of reported COVID-19 admissions, by district and epidemiologic week, Eastern Cape, 5 March 2020-18 December 2021, N=42,730

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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 10). There has not been a small increase in weekly numbers of deaths in all districts.

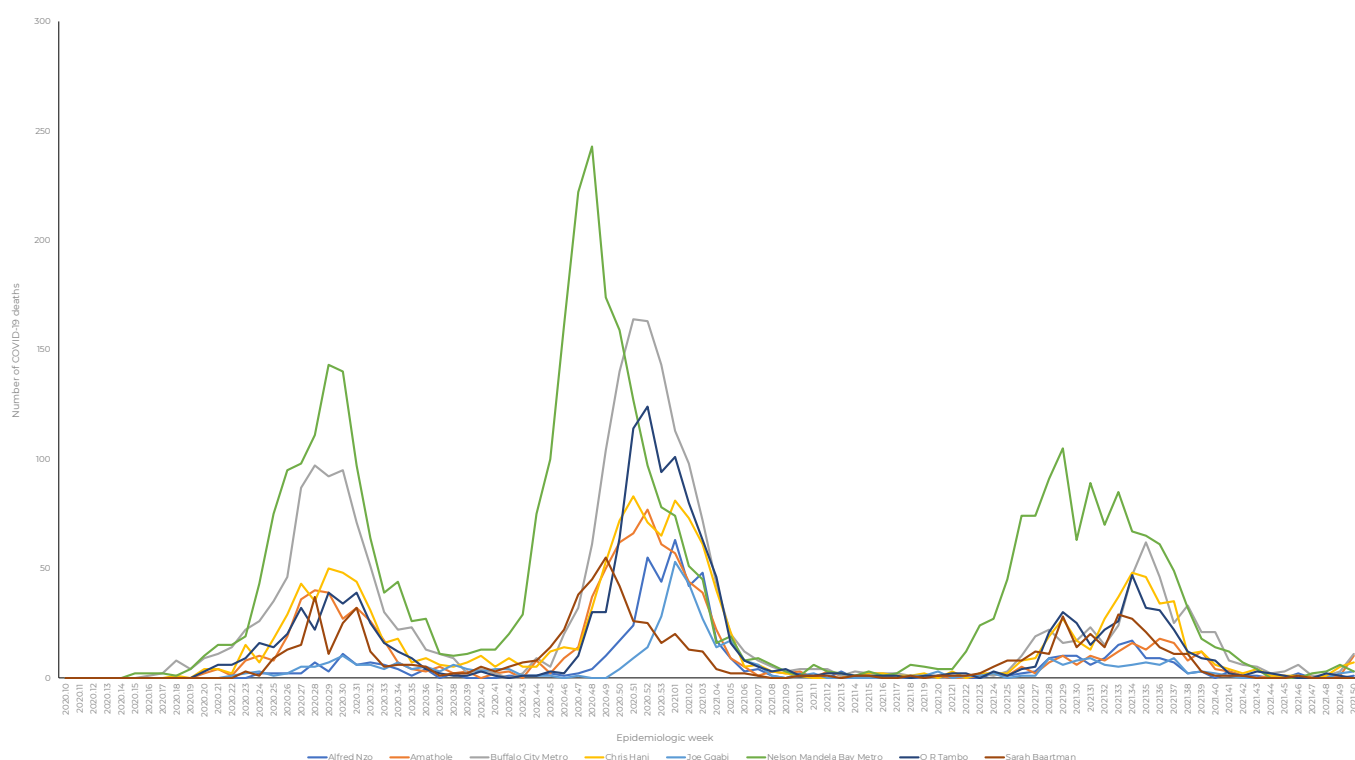


Figure 10: Number of reported COVID-19 in-hospital deaths, by district and epidemiologic week, Eastern Cape, 5 March 2020-18 December 2021, N=12,258

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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, 20 November-18 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	1.00	6.14	514.29	0.07	0.07	0.00
Amathole	0.86	5.71	566.67	0.07	0.79	1000.00
Buffalo City Metro	3.00	20.57	585.71	0.14	1.00	600.00
Chris Hani	1.29	11.64	805.56	0.07	0.86	1100.00
Joe Gqabi	0.43	2.79	550.00	0.00	0.36	0.00
Nelson Mandela Bay	2.36	16.64	8606.06	0.36	0.64	80.00
O R Tambo	1.86	8.64	365.38	0.14	0.07	-50.00
Sarah Baartman	0.43	3.57	733.33	0.00	0.00	0.00

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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 11). 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.

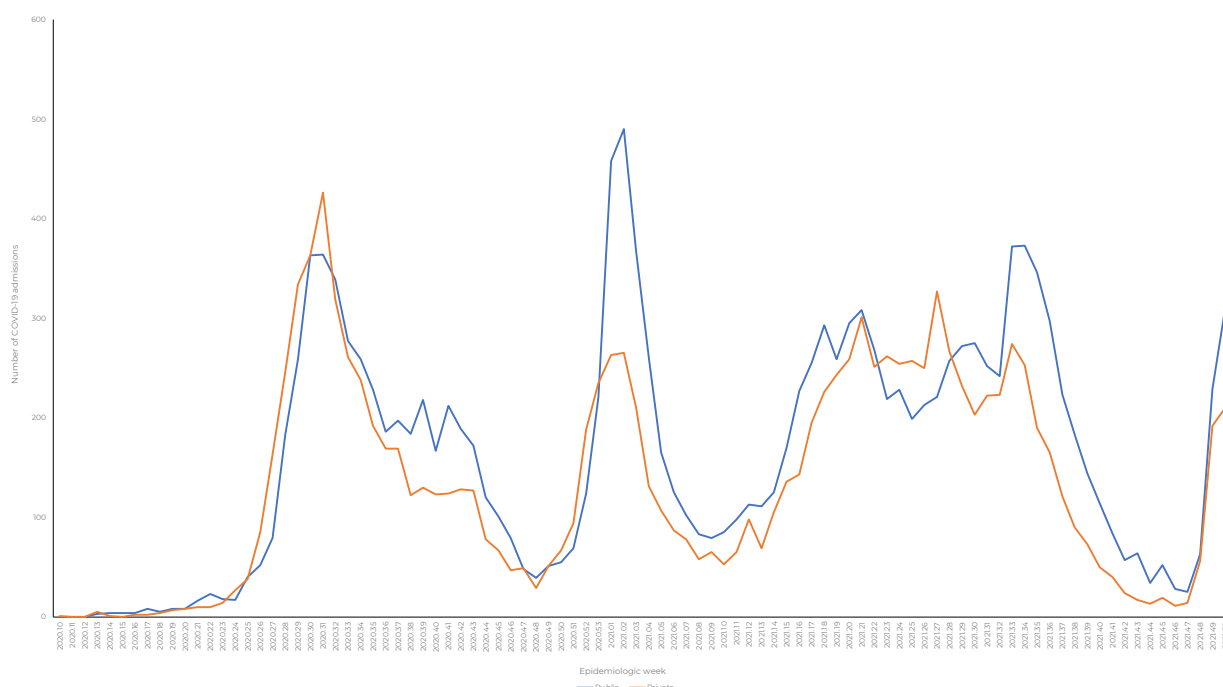


Figure 11: Number of reported COVID-19 admissions by health sector and epidemiologic week of diagnosis, Free State, 5 March 2020-18 December 2021, N=27,566

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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 12). There has been an increase in admissions in all districts since week 46.

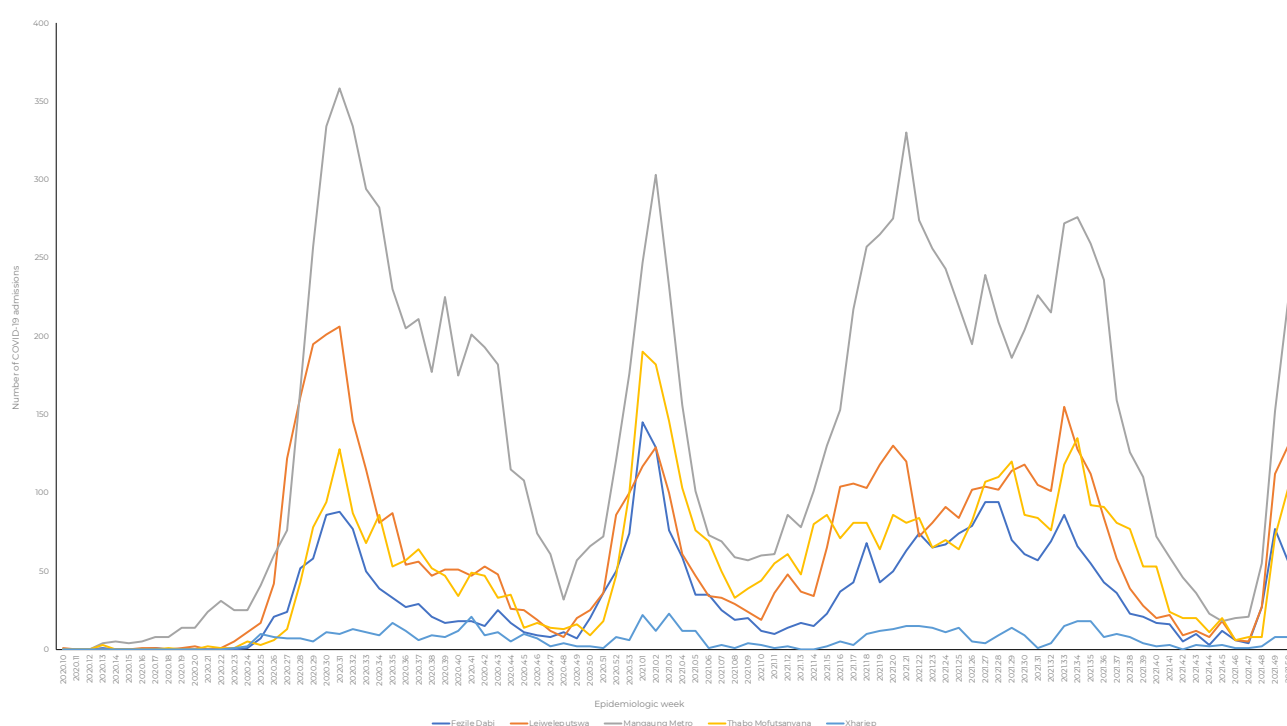


Figure 12: Number of reported COVID-19 admissions, by district and epidemiologic week, Free State, 5 March 2020-18 December 2021, N=27,566

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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 13). There has been a small increase in deaths in all districts.

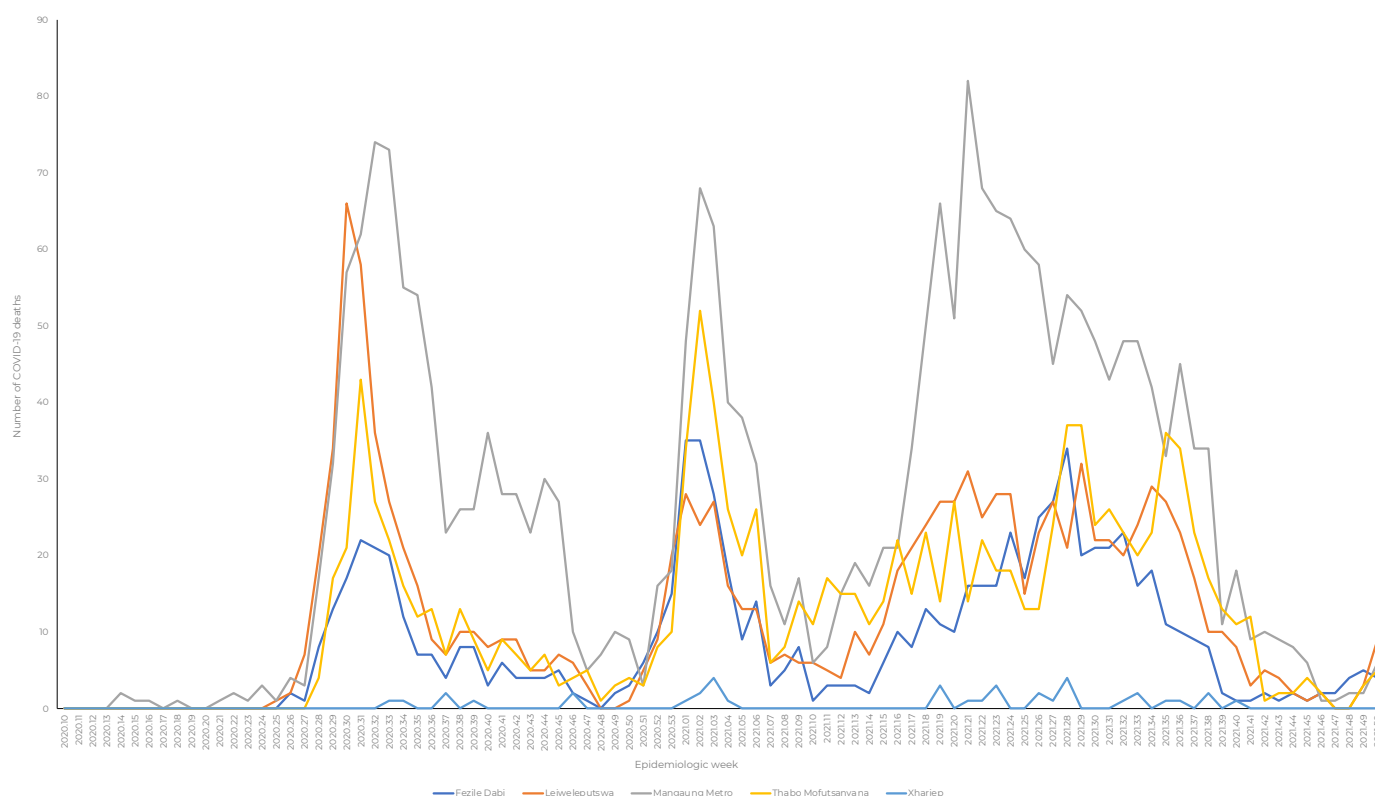


Figure 13: Number of reported COVID-19 in-hospital deaths, by district and epidemiologic week, Free State, 5 March 2020-18 December 2021, N=5,640

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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, 20 November-18 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	2.21	9.50	329.03	0.43	0.64	50.00
Lejweleputswa	2.29	17.29	656.25	0.00	0.86	0.00
Mangaung Metro	5.43	26.79	393.42	0.21	0.57	166.67
Thabo Mofutsanyana	1.14	12.50	993.75	0.00	0.57	0.00
Xhariep	0.21	1.14	433.33	0.00	0.00	0.00

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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 14). There has been an increase in admissions in both sectors since week 47.

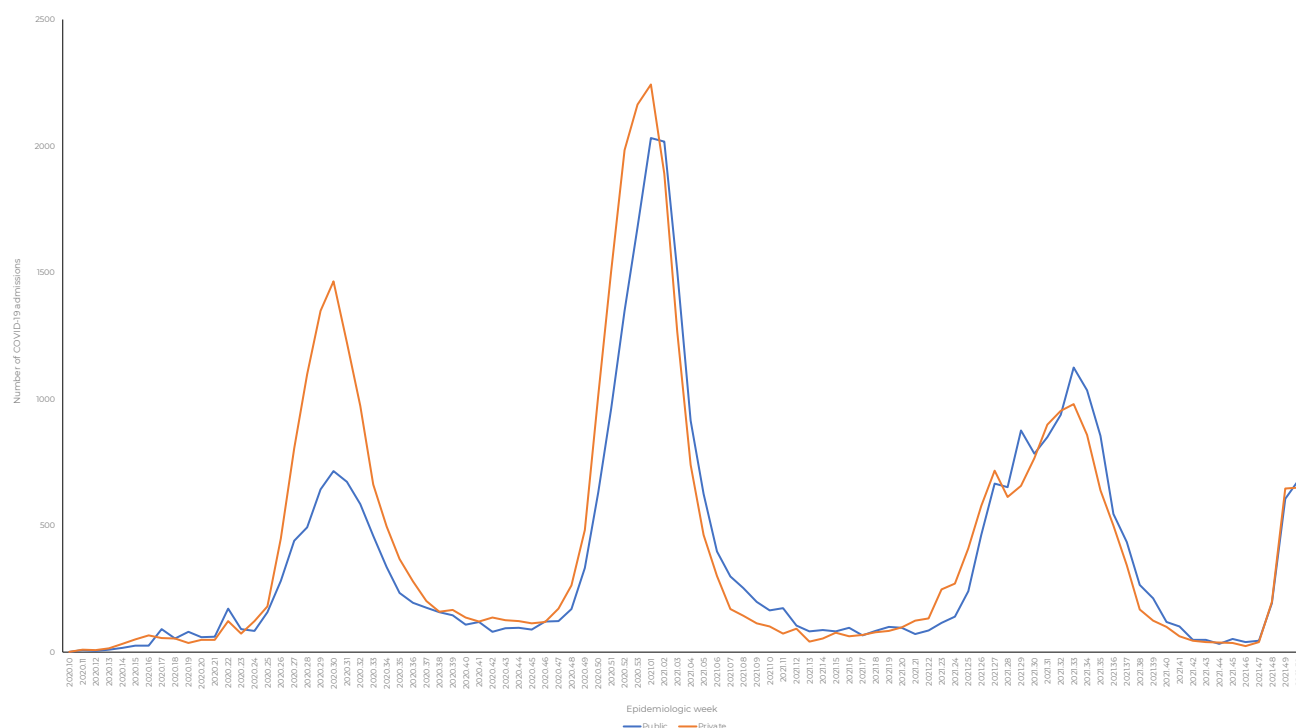


Figure 14: Number of reported COVID-19 admissions by health sector and epidemiologic week of diagnosis, KwaZulu-Natal, 5 March 2020-18 December 2021, N=73,084

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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 15). There has been an increase in admissions in all districts since week 47.

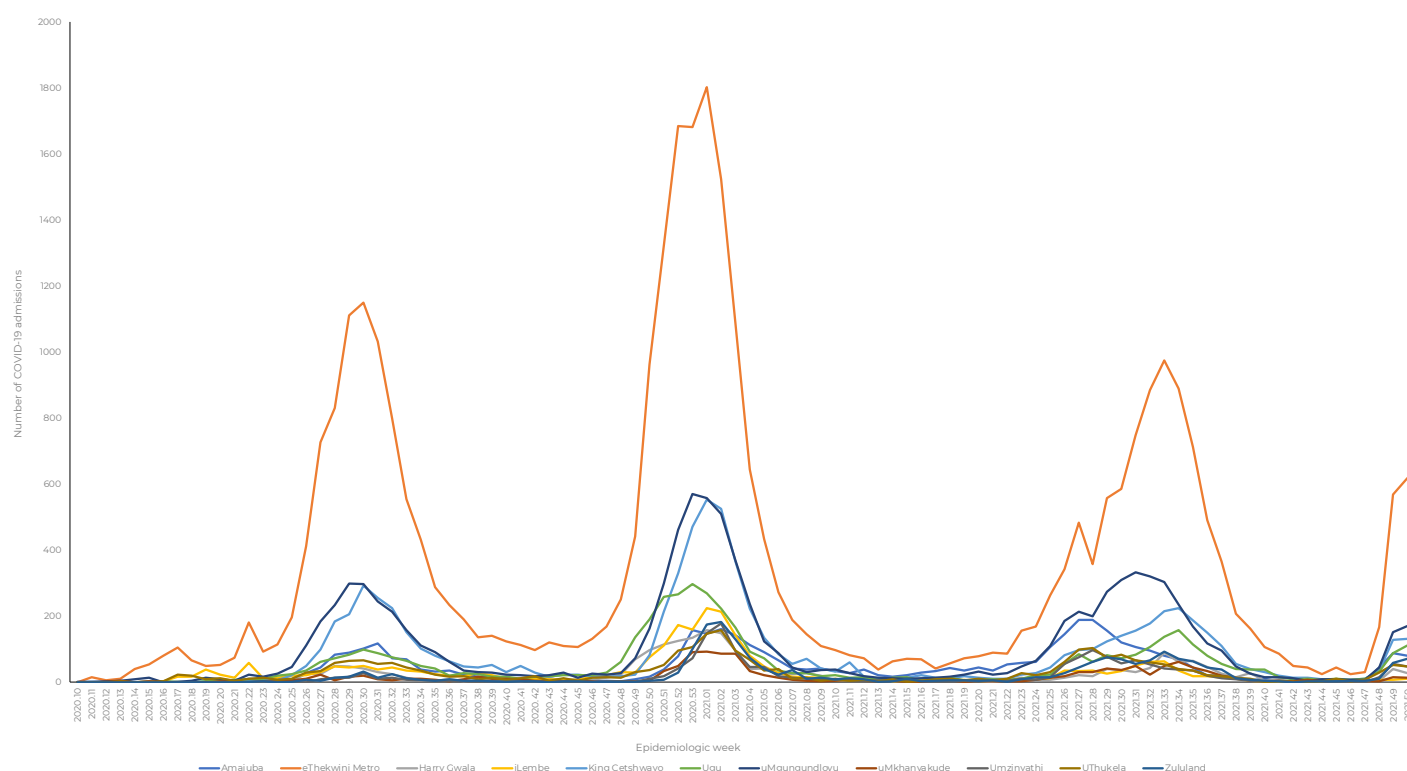


Figure 15: Number of reported COVID-19 admissions, by district and epidemiologic week, KwaZulu-Natal, 5 March 2020-18 December 2021, N=73,084

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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 16) There has been a small increase in numbers of deaths in eThekweni Metro.

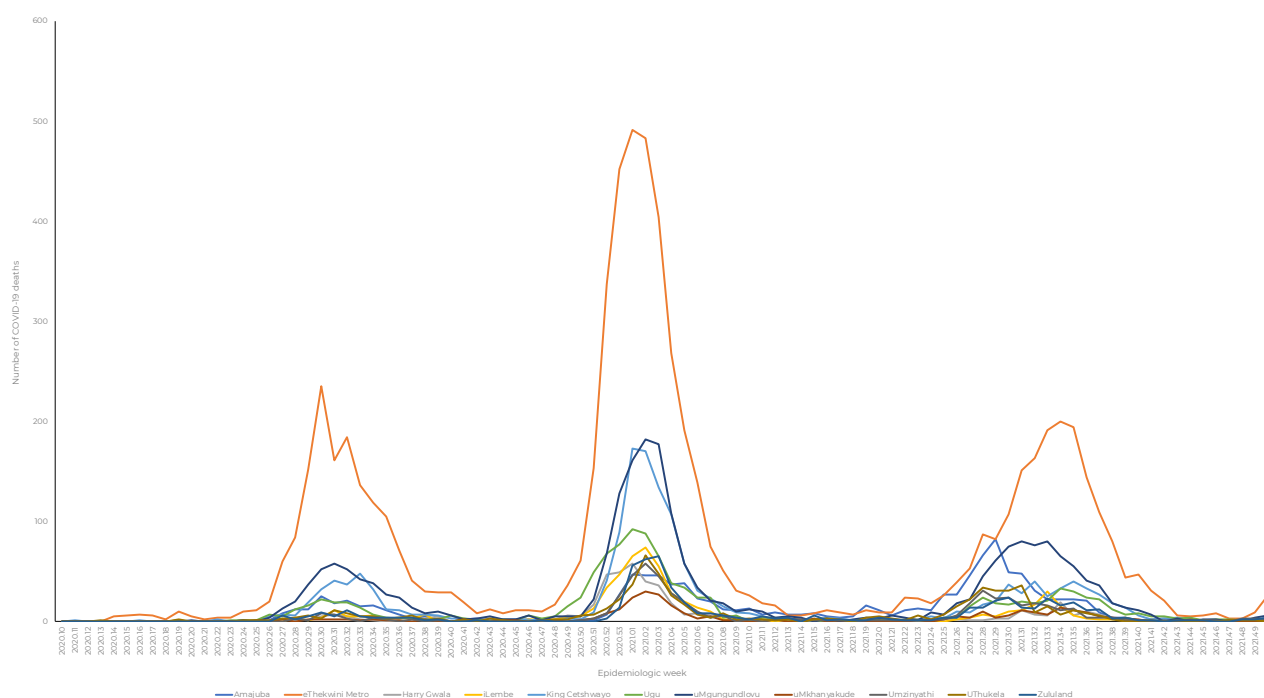


Figure 16: Number of reported COVID-19 in-hospital deaths, by district and epidemiologic week, KwaZulu-Natal, 5 March 2020-18 December 2021, N=15,843

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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 7).

Table 7: Previous 14 days and current 14 days average COVID-19 admissions and deaths and percentage changes, KwaZulu-Natal, 20 November-18 December 2021.

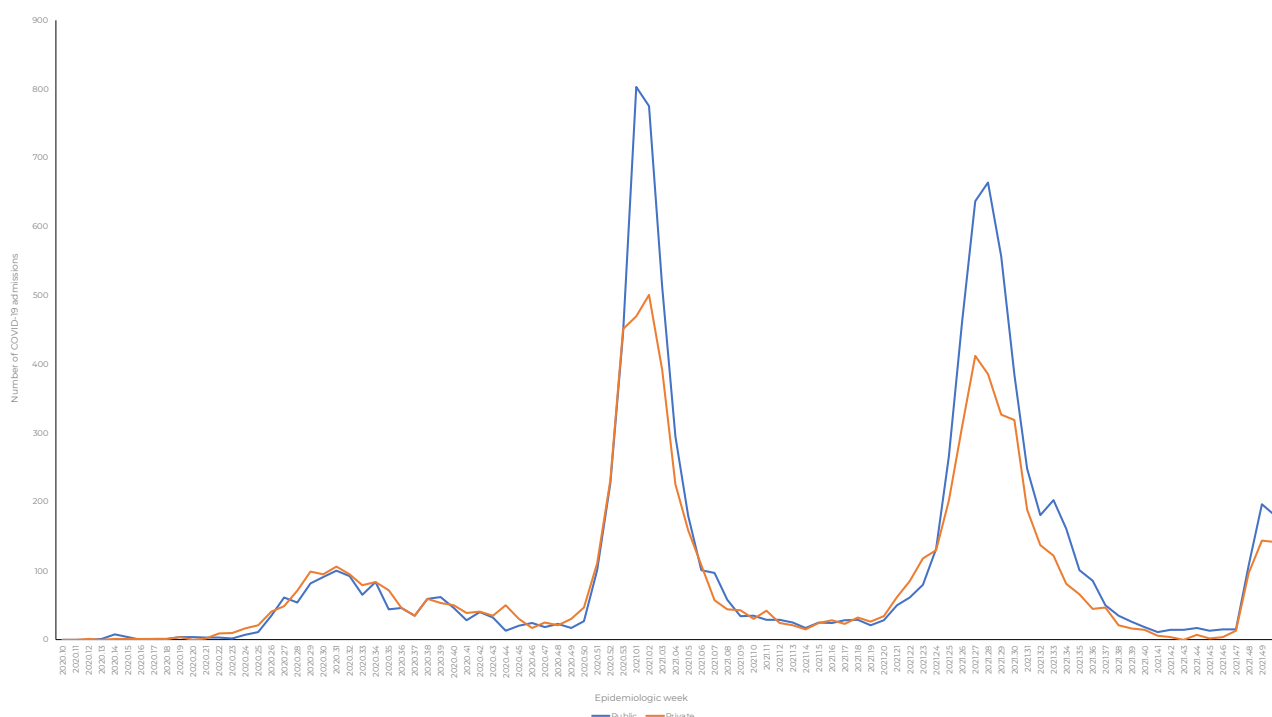
District	Previous 14 days admissions average	Current 14 days admissions average	Percentage change in admissions	Previous 14 days deaths average	Current 14 days deaths average	Percentage change in deaths
Amajuba	3.36	12.07	259.57	0.00	0.36	0.00
eThekweni Metro	14.07	84.71	502.03	0.43	2.50	483.33
Harry Gwala	0.43	4.86	1033.33	0.00	0.14	0.00
iLembe	0.93	1.36	46.15	0.00	0.00	0.00
King Cetshwayo	3.21	18.50	475.56	0.14	0.29	100.00
Ugu	3.00	14.29	376.19	0.21	0.14	-33.33
uMgungundlovu	3.79	23.00	507.55	0.00	0.71	0.00
uMkhanyakude	0.36	2.07	480.00	0.07	0.00	-100.00
Umzinyathi	1.07	7.36	586.67	0.21	0.36	66.67
UThukela	2.57	7.07	175.00	0.14	0.07	-50.00
Zululand	1.07	9.21	760.00	0.14	0.43	200.00

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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 17). There has been an increase in admissions in both sectors since week 46.



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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 18). There has been an increase in admissions in all districts since week 46.

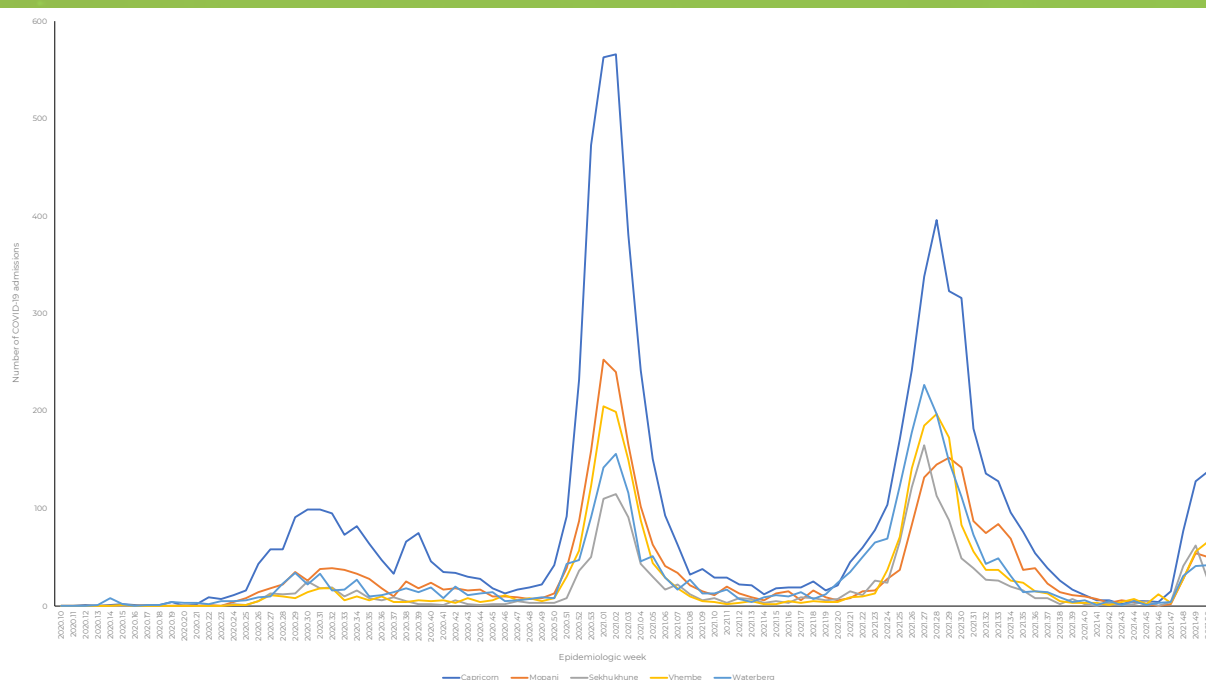


Figure 18: Number of reported COVID-19 admissions, by district and epidemiologic week, Limpopo, 5 March 2020-18 December 2021, N=18,175

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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 19). There has not been a small increase in the numbers of deaths in all districts.

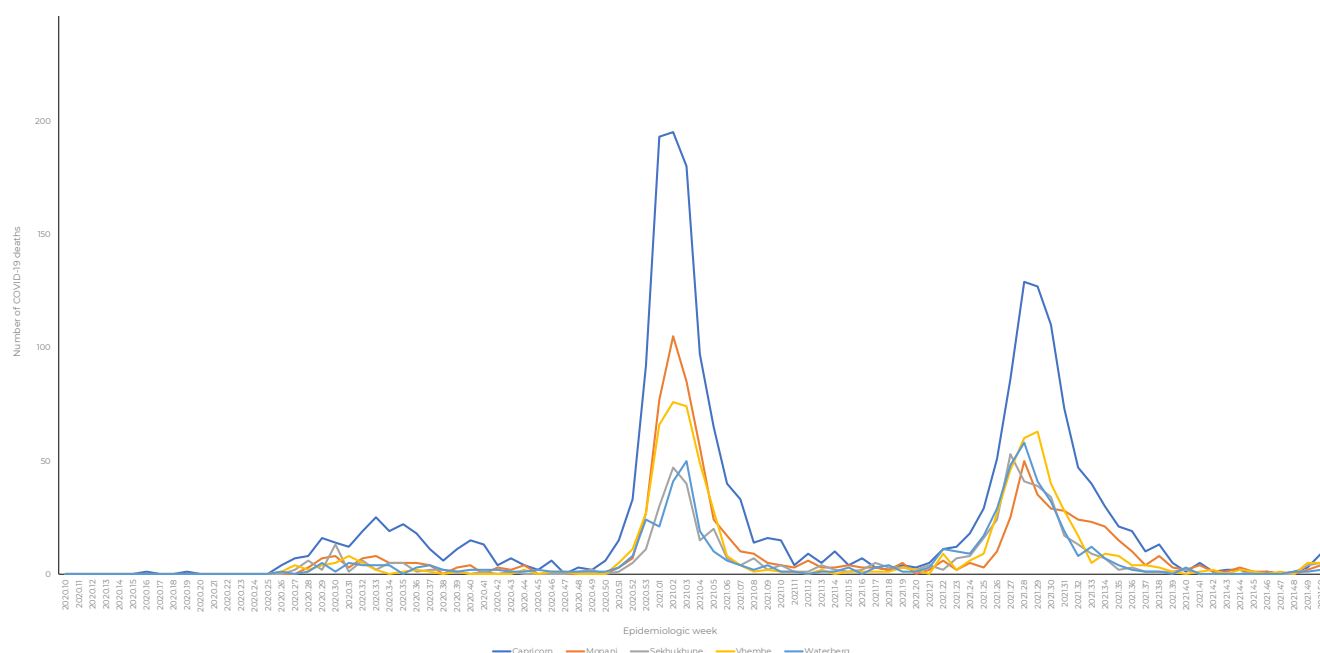


Figure 19: Number of reported COVID-19 in-hospital deaths, by district and epidemiologic week, Limpopo, 5 March 2020-18 December 2021, N=4,913

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, Limpopo, 20 November-18 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	6.57	19.00	189.13	0.07	0.86	1100.00
Mopani	2.14	7.43	246.67	0.00	0.43	0.00
Sekhukhune	3.21	6.29	95.56	0.00	0.64	0.00
Vhembe	2.21	8.71	293.55	0.07	0.71	900.00
Waterberg	2.50	5.93	137.14	0.07	0.21	200.00

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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 20). There has been an increase in admissions in both sectors since week 46.

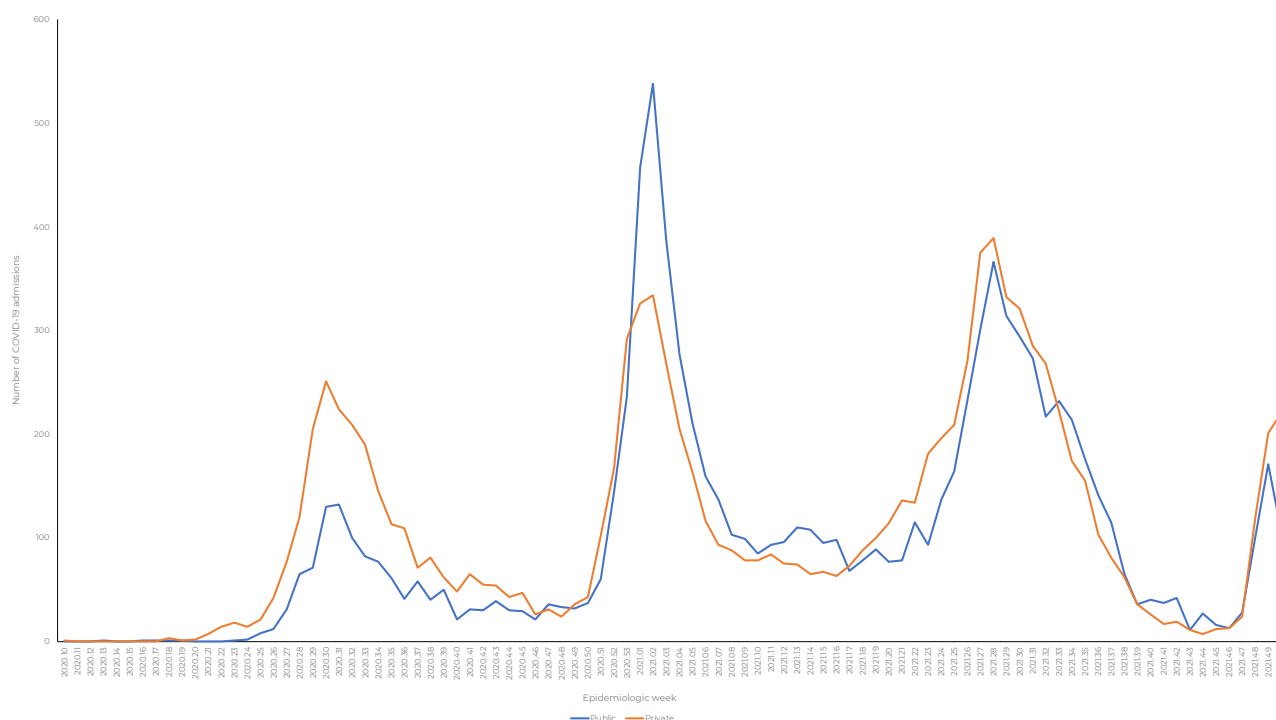


Figure 20: Number of reported COVID-19 admissions by health sector and epidemiologic week of diagnosis, Mpumalanga, 5 March 2020-18 December 2021, N=19,419

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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 21). There has been an increase in the number of weekly admissions in all districts since week 46.

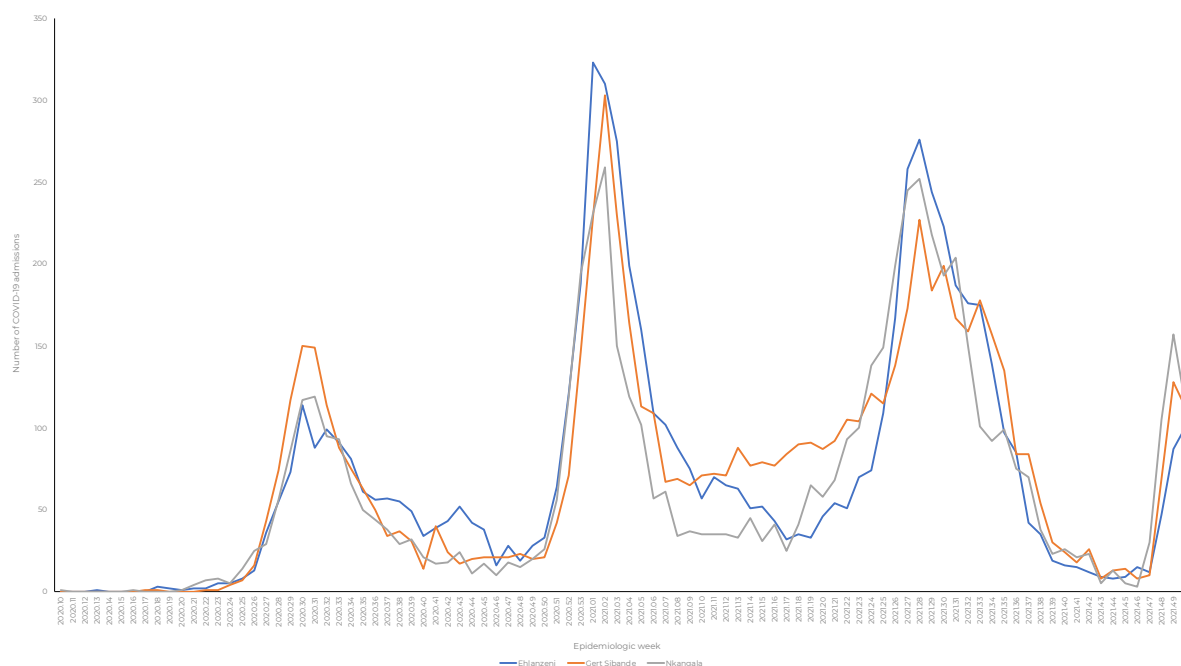


Figure 21: Number of reported COVID-19 admissions, by district and epidemiologic week, Mpumalanga, 5 March 2020-18 December 2021, N=19,419

COVID-19 HOSPITAL SURVEILLANCE UPDATE

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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 22). There has been a small increase in the number of deaths in Nkangala and Gert Sibande.

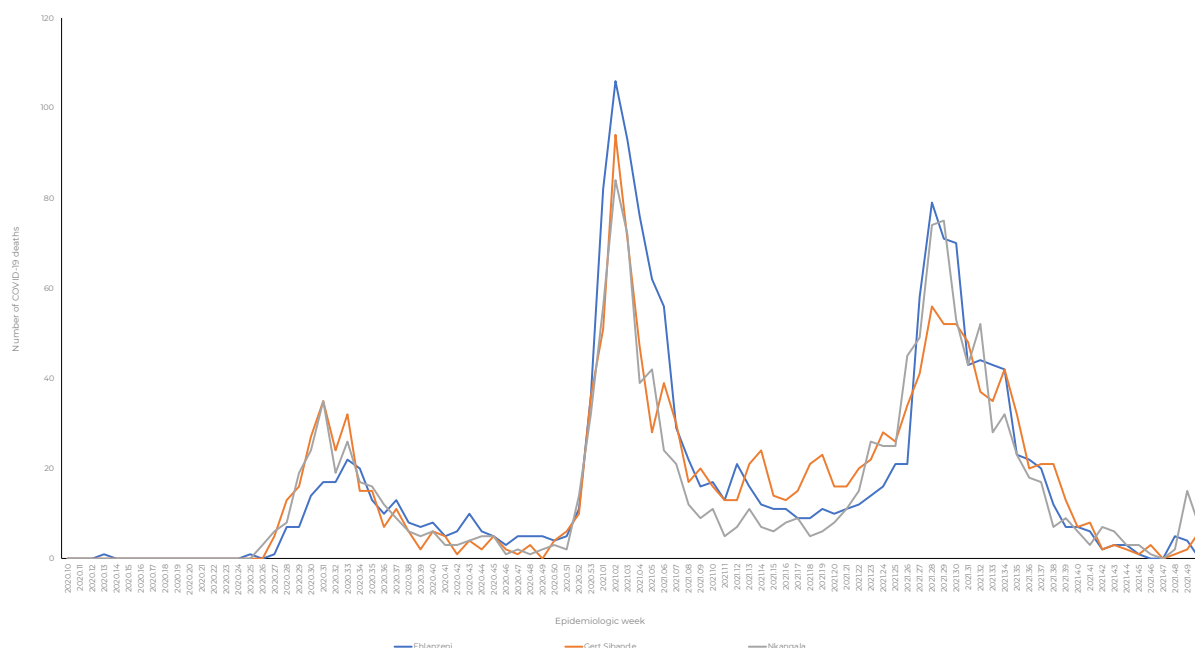


Figure 22: Number of reported COVID-19 in-hospital deaths, by district and epidemiologic week, Mpumalanga, 5 March 2020-18 December 2021, N=4,554

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 9).

Table 9: Previous 14 days and current 14 days average COVID-19 admissions and deaths and percentage changes, Mpumalanga, 20 November-18 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	4.14	13.43	224.14	0.36	0.29	-20.00
Gert Sibande	5.64	17.14	203.80	0.07	0.57	700.00
Nkangala	9.64	19.29	100.00	0.14	1.57	1000.00

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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 23). There has been an increase in numbers of weekly admissions in both sectors since week 46.



Figure 23: Number of reported COVID-19 admissions by health sector and epidemiologic week of diagnosis, North West, 5 March 2020-18 December 2021, N=29,933

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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 24). There has been an increase in the numbers of weekly admissions in all districts since week 46.

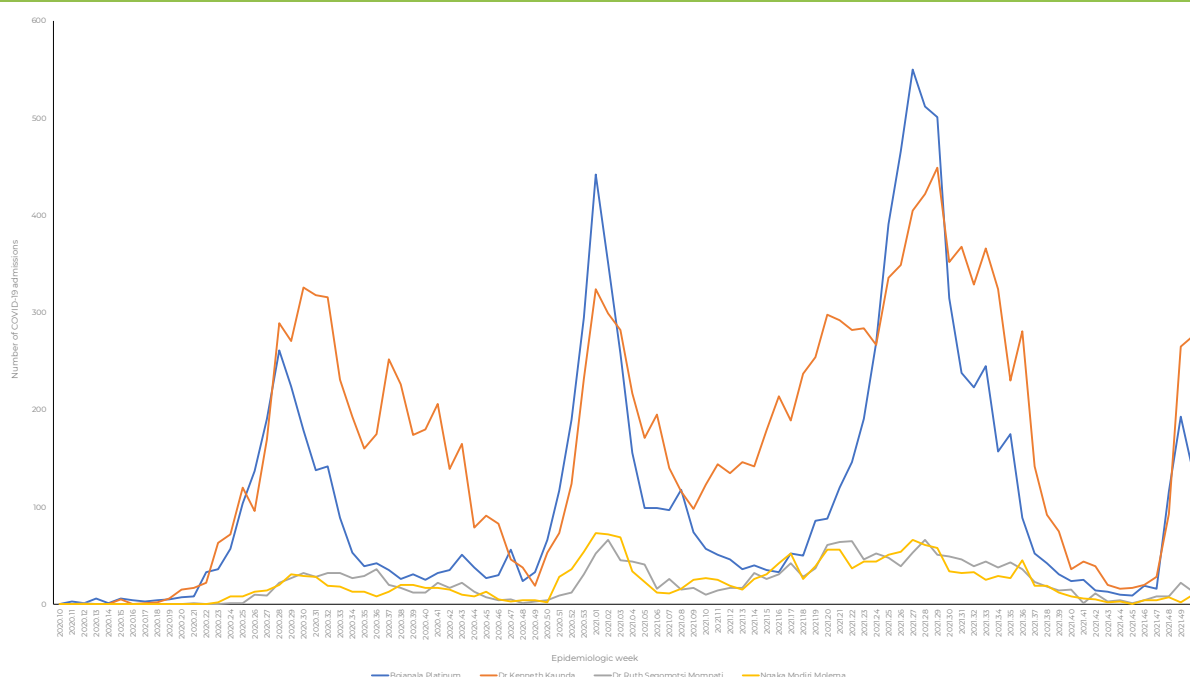


Figure 24: Number of reported COVID-19 admissions, by district and epidemiologic week, North West, 5 March 2020-18 December 2021, N=29,933

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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 25). There has been a small increase in deaths in Dr Kenneth Kaunda and Bojanala Platinum district.

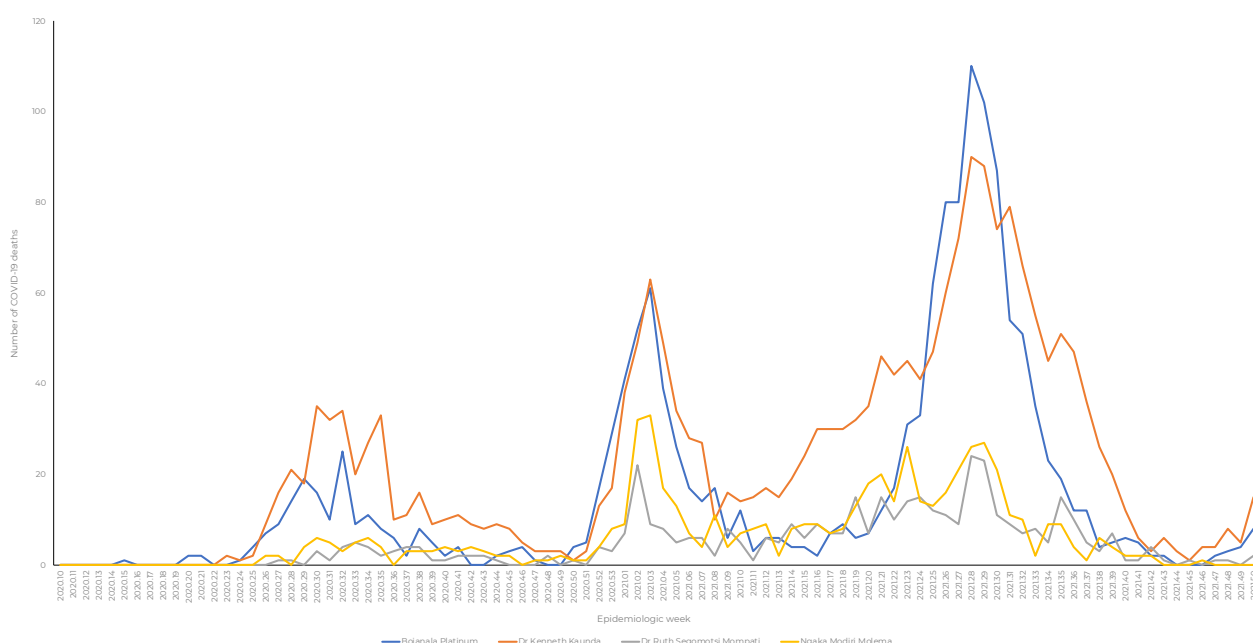


Figure 25: Number of reported COVID-19 in-hospital deaths, by district and epidemiologic week, North West, 5 March 2020-18 December 2021, N=4,498

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 10).

Table 10: Previous 14 days and current 14 days average COVID-19 admissions and deaths and percentage changes, North West, 20 November-18 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	9.43	23.50	149.24	0.36	0.86	140.00
Dr Kenneth Kaunda	8.64	38.64	347.11	0.86	1.43	66.67
Dr Ruth Segomotsi Mompoti	1.14	2.50	118.75	0.14	0.14	0.00
Ngaka Modiri Molema	0.79	0.86	9.09	0.00	0.00	0.00

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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 26). There has been increases in admissions in both sectors since week 47.

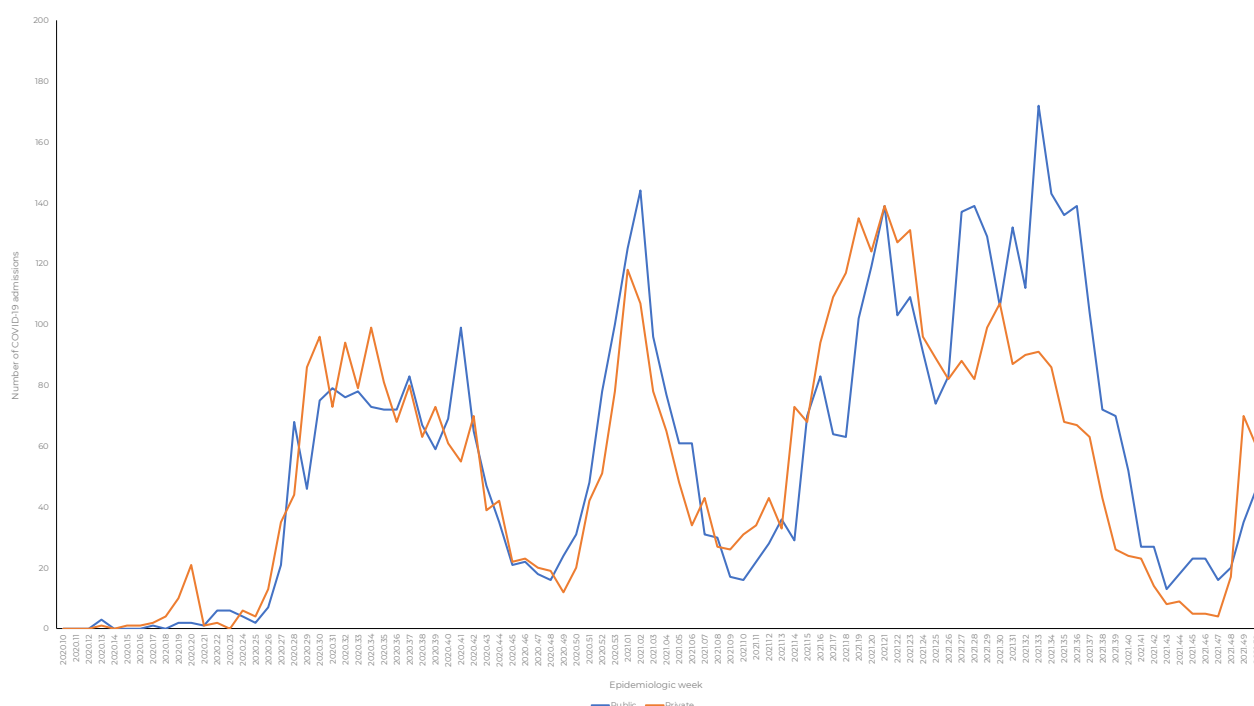


Figure 26: Number of reported COVID-19 admissions by health sector and epidemiologic week of diagnosis, Northern Cape, 5 March 2020-18 December 2021, N=10,238

COVID-19 HOSPITAL SURVEILLANCE UPDATE

WEEK 50 2021

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 27). There has been an increase in weekly admissions in all districts except Namakwa.

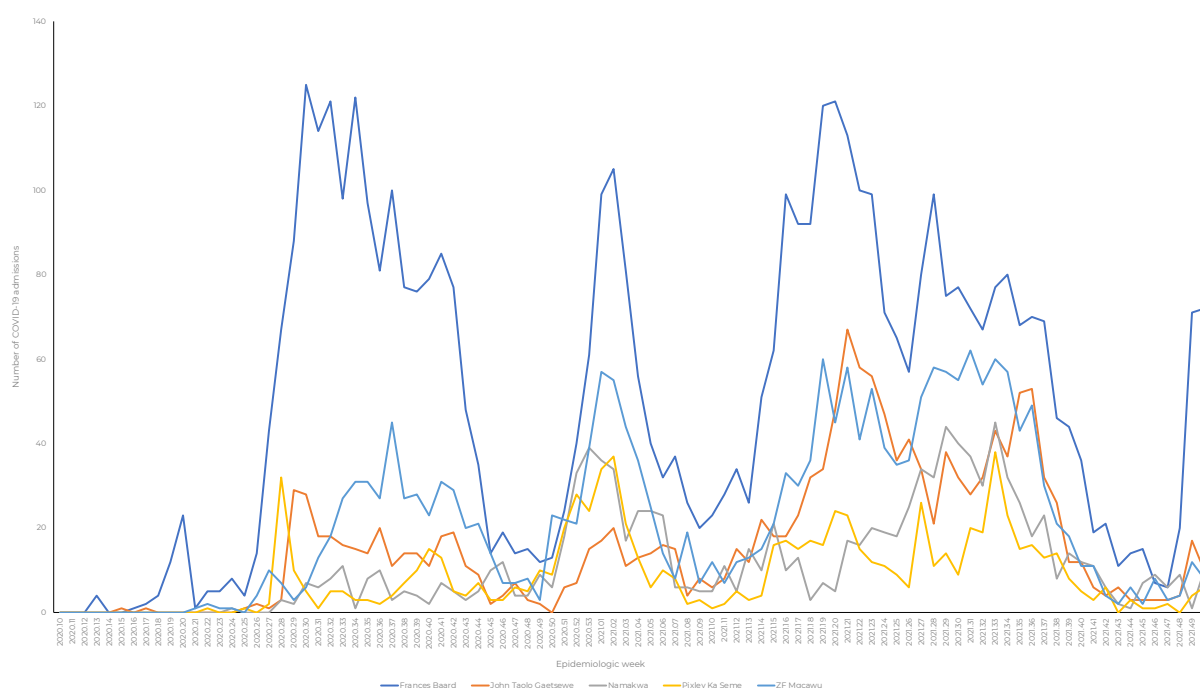


Figure 27: Number of reported COVID-19 admissions by district and epidemiologic week, Northern Cape, 5 March 2020-18 December 2021, N=10,238

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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 28). There has been a small increases in deaths in Frances Baard.

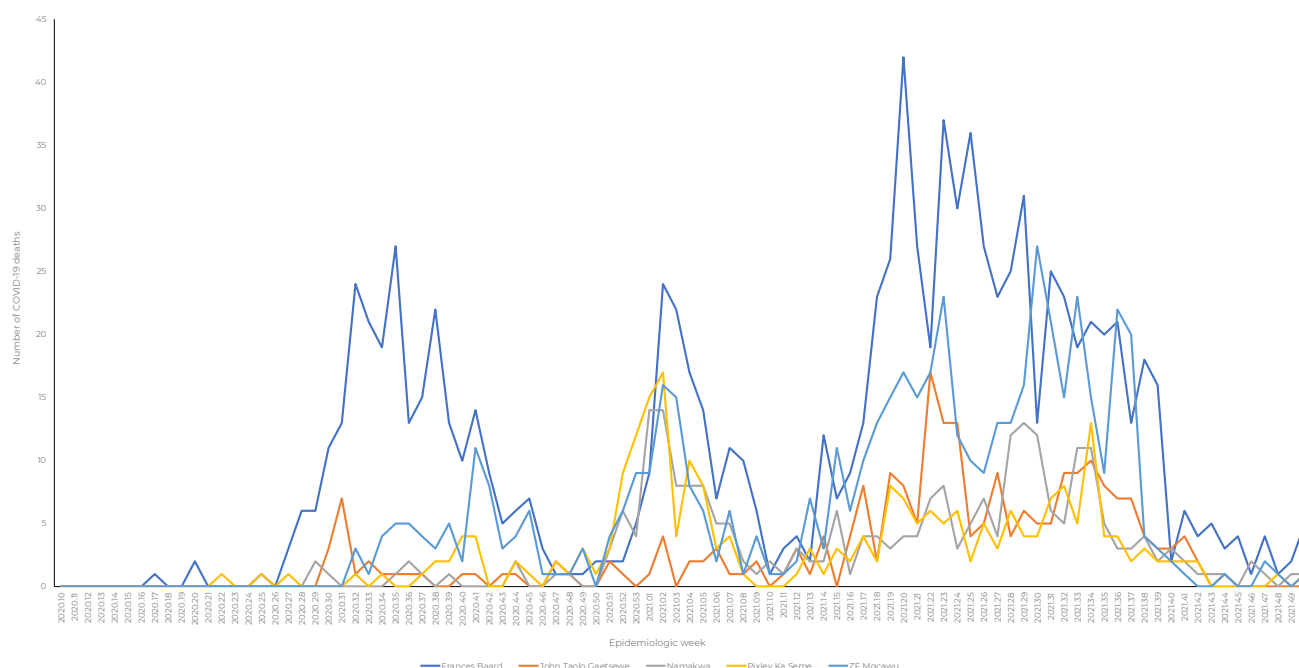


Figure 28: Number of reported COVID-19 in-hospital deaths, by district and epidemiologic week, Northern Cape, 5 March 2020-18 December 2021, N=2,288

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

Table 11: Previous 14 days and current 14 days average COVID-19 admissions and deaths and percentage changes, Northern Cape, 20 November-18 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	1.86	10.21	450.00	0.36	0.50	40.00
John Taolo Gaetsewe	0.50	1.93	285.71	0.00	0.00	0.00
Namakwa	1.07	0.79	-26.67	0.07	0.14	100.00
Pixley Ka Seme	0.14	0.71	400.00	0.07	0.07	0.00
ZF Mgcawu	0.50	1.43	185.71	0.21	0.07	-66.67

COVID-19 HOSPITAL SURVEILLANCE UPDATE

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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 29). There has been an increase in admissions in both sectors since week 47.

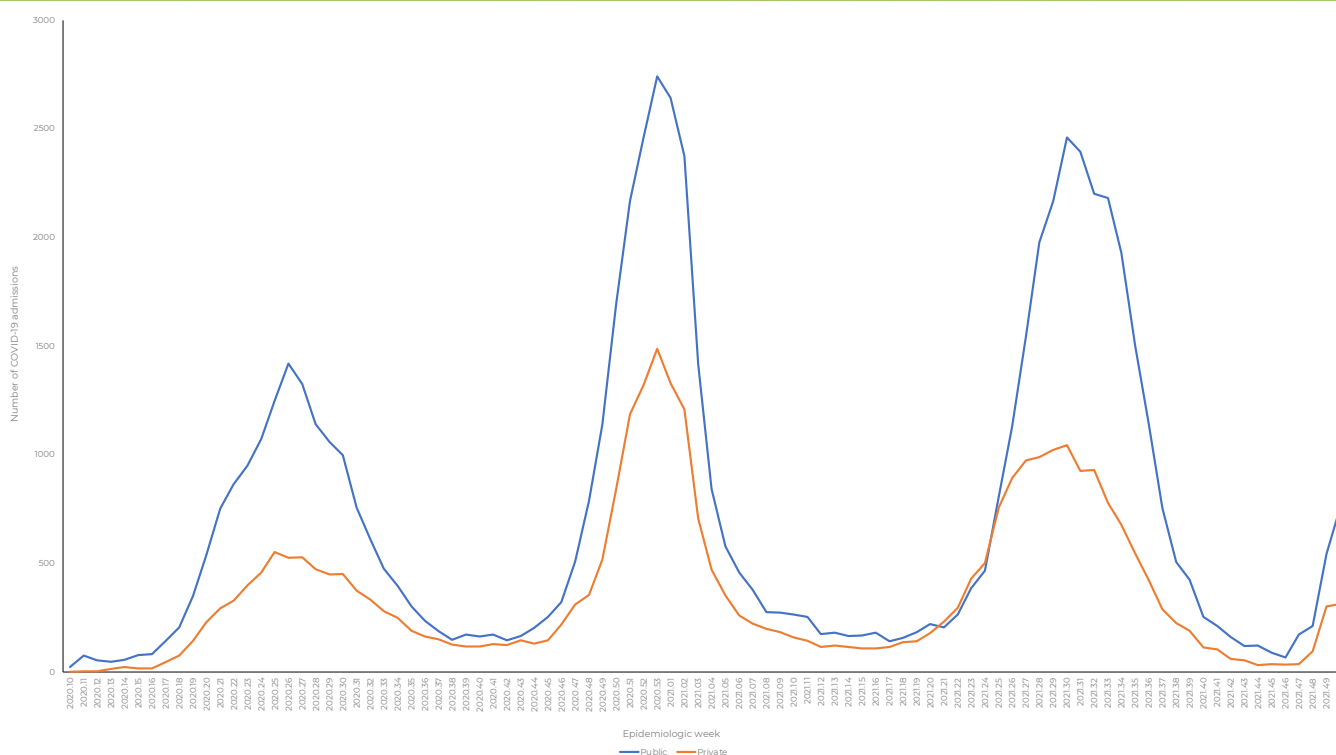


Figure 29: Number of reported COVID-19 admissions by health sector and epidemiologic week of diagnosis, Western Cape, 5 March 2020-18 December 2021, N=100,811

COVID-19 HOSPITAL SURVEILLANCE UPDATE

WEEK 50 2021

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 30). There has been an increase in admissions in all districts since week 47.

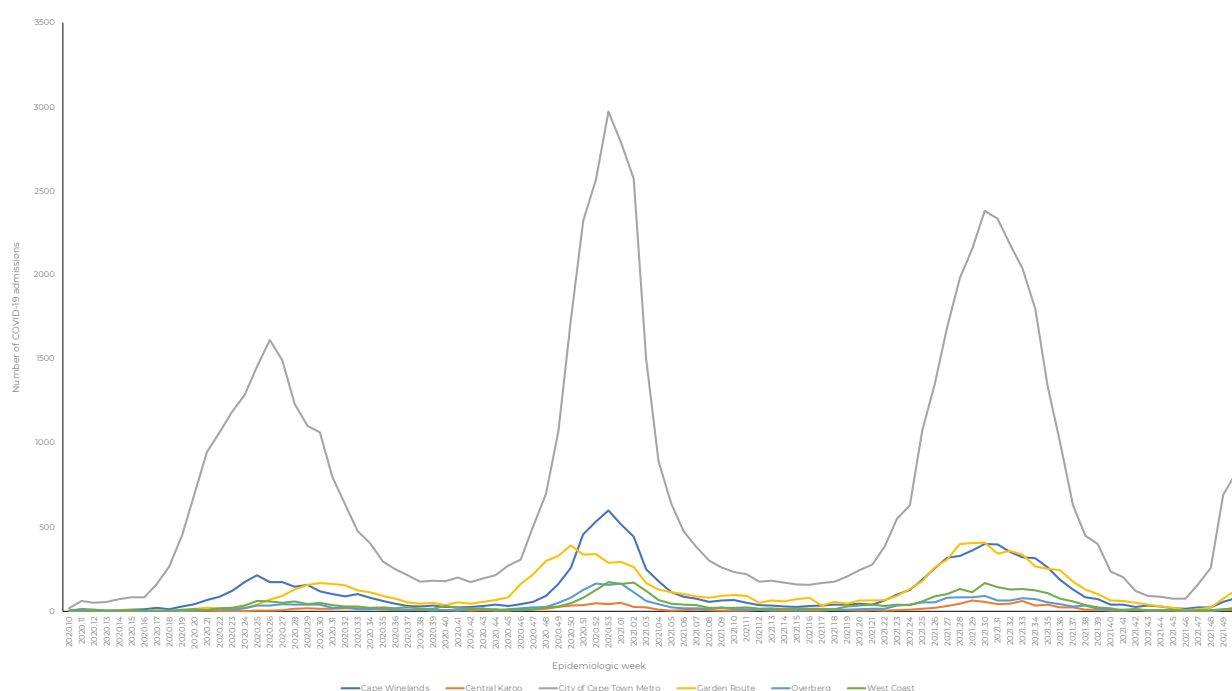


Figure 30: Number of reported COVID-19 admissions, by district and epidemiologic week, Western Cape, 5 March 2020-18 December 2021, N=100,811

COVID-19 HOSPITAL SURVEILLANCE UPDATE

WEEK 50 2021

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 31). There have been no increases in the numbers of deaths in all districts.

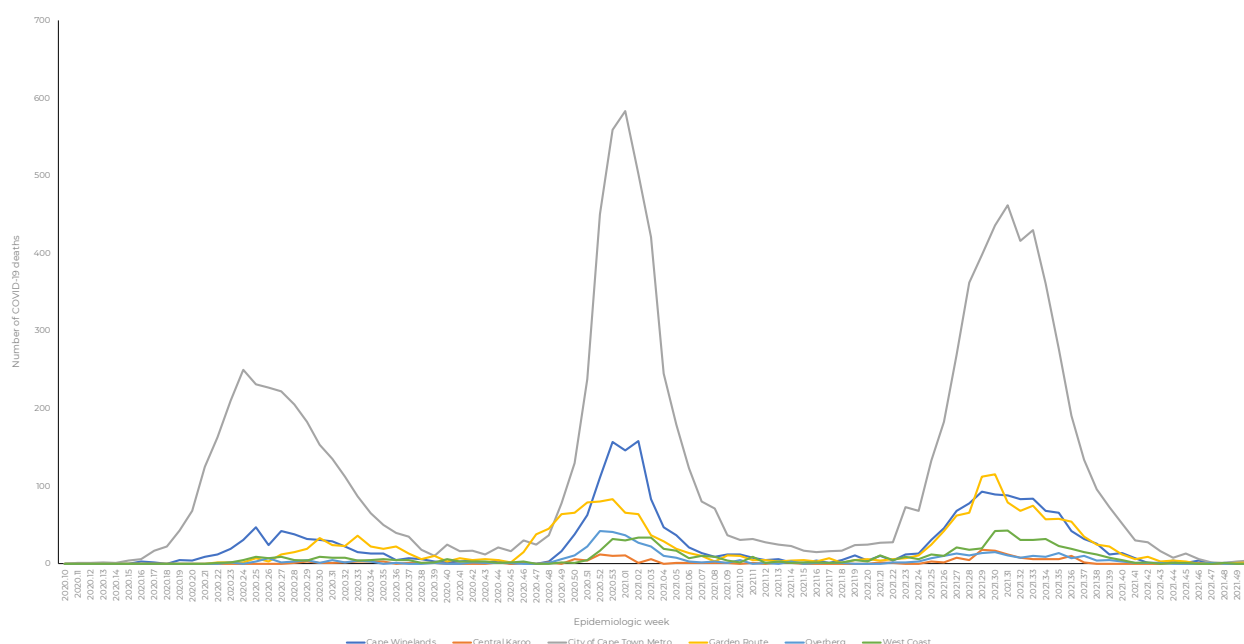


Figure 31: Number of reported COVID-19 in-hospital deaths, by district and epidemiologic week, Western Cape, 5 March 2020-18 December 2021, N=17,228

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 12).

Table 12: Previous 14 days and current 14 days average COVID-19 admissions and deaths and percentage changes, Western Cape, 20 November-18 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	3.14	9.29	195.45	0.07	0.21	200.00
Central Karoo	0.43	0.93	116.67	0.00	0.00	0.00
City of Cape Town Metro	29.86	108.07	261.96	0.21	0.50	133.33
Garden Route	2.29	14.00	512.50	0.07	0.21	200.00
Overberg	0.43	2.00	366.67	0.07	0.00	-100.00
West Coast	0.64	2.00	211.11	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.

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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)

COVID-19 HOSPITAL SURVEILLANCE UPDATE

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APPENDIX

Table 13: Percentage incidence change in hospital admissions over 14 days, by district, South Africa, 4 December-18 December 2021.

Province	District	Total admissions	Incidence (per 100k)	New admissions	New admissions incidence (per 100k)	% average change (14 days)
Eastern Cape	Alfred Nzo	2403	288.74	51	6.13	30.77
	Amathole	2922	365.61	36	4.50	-25.00
	Buffalo City Metro	9406	1174.47	179	22.35	42.06
	Chris Hani	4674	642.34	91	12.51	22.97
	Joe Gqabi	1040	301.48	18	5.22	-18.18
	Nelson Mandela Bay Metro	14886	1227.14	141	11.62	43.88
	O R Tambo	4486	292.79	74	4.83	42.31
	Sarah Baartman	2927	604.98	33	6.82	94.12
Free State	Fezile Dabi	3257	638.47	58	11.37	-28.40
	Lejweleputswa	5721	875.30	145	22.18	10.69
	Mangaung Metro	13008	1493.59	241	27.67	37.71
	Thabo Mofutsanyana	5004	654.28	105	13.73	45.83
	Xhariep	616	475.89	8	6.18	-11.11
Gauteng	City of Johannesburg Metro	48240	822.29	743	12.67	-36.33
	City of Tshwane Metro	37135	995.82	782	20.97	-33.62
	Ekurhuleni Metro	29369	737.50	462	11.60	-28.04
	Sedibeng	8500	889.57	94	9.84	-29.32
	West Rand	11771	1232.90	223	23.36	-18.32
KwaZulu-Natal	Amajuba	4166	730.21	82	14.37	-12.77
	eThekweni Metro	33740	847.48	647	16.25	7.65
	Harry Gwala	2211	430.13	28	5.45	-30.00
	iLembe	2715	390.91	12	1.73	50.00
	King Cetshwayo	7912	815.11	135	13.91	1.50
	Ugu	4842	603.95	113	14.09	26.97
	uMgungundlovu	9801	852.68	178	15.49	9.20

COVID-19 HOSPITAL SURVEILLANCE UPDATE

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Province	District	Total admissions	Incidence (per 100k)	New admissions	New admissions incidence (per 100k)	% average change (14 days)
	uMkhanyakude	1313	191.15	14	2.04	-6.67
	Umzinyathi	1701	299.70	51	8.99	-12.07
	UThukela	2710	379.44	50	7.00	-5.66
	Zululand	2007	227.86	71	8.06	18.33
Limpopo	Capricorn	7729	590.92	145	11.09	9.85
	Mopani	3231	272.69	51	4.30	-7.27
	Sekhukhune	1782	149.71	26	2.18	-59.38
	Vhembe	2520	176.57	67	4.69	15.52
	Waterberg	2923	393.82	44	5.93	0.00
Mpumalanga	Ehlanzeni	6705	366.65	104	5.69	14.29
	Gert Sibande	6737	542.36	121	9.74	-12.32
	Nkangala	5988	372.18	113	7.02	-28.93
North West	Bojanala Platinum	10442	541.55	144	7.47	-27.64
	Dr Kenneth Kaunda	15498	1942.80	299	37.48	-5.97
	Dr Ruth Segomotsi Mompoti	2060	435.45	13	2.75	-40.91
	Ngaka Modiri Molema	1983	217.95	10	1.10	400.00
Northern Cape	Frances Baard	4797	1156.15	76	18.32	1.33
	John Taolo Gaetsewe	1490	548.85	11	4.05	-42.11
	Namakwa	1080	934.15	10	8.65	900.00
	Pixley Ka Seme	830	393.58	6	2.85	50.00
	ZF Mgcawu	2049	732.04	9	3.22	-25.00
Western Cape	Cape Winelands	11338	1204.55	78	8.29	2.63
	Central Karoo	1148	1528.36	11	14.64	0.00
	City of Cape Town Metro	70851	1538.57	1068	23.19	11.95
	Garden Route	11353	1820.39	138	22.13	48.39
	Overberg	2689	896.61	20	6.67	122.22
	West Coast	3778	819.86	22	4.77	69.23

COVID-19 HOSPITAL SURVEILLANCE UPDATE

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APPENDIX

Table 14: Number of reported COVID-19 admissions and in-hospital deaths by age and gender, South Africa, 5 March 2020-18 December 2021.

Age (years)	ADMISSIONS				DEATHS			
	Female	Male	Unknown	Total	Female	Male	Unknown	Total
0-4	4217	5226	28	9471	144	146	2	292
5-9	1201	1544	7	2752	23	23	0	46
10-14	1909	1835	8	3752	58	47	0	105
15-19	5500	2943	3	8446	124	115	0	239
20-24	8724	4295	4	13023	283	219	1	503
25-29	14066	6302	12	20380	645	413	0	1058
30-34	18326	10391	7	28724	1103	913	1	2017
35-39	19479	14030	18	33527	1637	1510	4	3151
40-44	17948	15855	11	33814	2038	2096	0	4134
45-49	20243	19856	11	40110	3004	3143	1	6148
50-54	23782	22091	9	45882	4148	4253	1	8402
55-59	26513	23958	12	50483	5902	5889	5	11796
60-64	23261	21252	16	44529	6328	6504	4	12836
65-69	19960	17746	14	37720	6549	6075	6	12630
70-74	16740	14665	18	31423	5735	5551	4	11290
75-79	12359	10098	10	22467	4499	4162	3	8664
80-84	9314	6412	8	15734	3659	2800	3	6462
85-89	4934	3029	2	7965	1998	1445	0	3443
90-94	2131	1031	1	3163	969	535	0	1504
>=95	654	320	2	976	308	136	0	444
Unknown	1192	1186	44	2422	69	112	0	181
Total	252453	204065	245	456763	49223	46087	35	95345