

# COVID-19 SENTINEL HOSPITAL SURVEILLANCE UPDATE

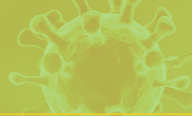
SOUTH AFRICA WEEK 48 2020

## 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 to 28 November 2020.

## HIGHLIGHTS

- As of 28 November, 106,931 COVID-19 admissions and 18 289 deaths were reported from 612 facilities (363 public-sector and 249 private-sector) in all nine provinces of South Africa. DATCOV coverage is now 99% of public and 100% of private hospitals that have had COVID-19 admissions. New hospitals that have enrolled need to capture historical admissions.
- There has been a resurgence in admissions in Eastern Cape for seven weeks with admissions seeming to have decreased in the past week, possibly related to reporting delays. The resurgence is located mainly in Nelson Mandela Metro district, in public and private hospitals. There has also been a corresponding increase in in-hospital deaths in Nelson Mandela Metro district during this time. There are increased admissions in other Eastern Cape districts also, including Sarah Baartman and Buffalo City districts.
- There is a resurgence in admissions in Western Cape for four weeks, with increased admissions in five out of six districts; and increases in admissions in KwaZulu-Natal for the past week, in five of 11 districts.



DATCOV, sentinel hospital surveillance for COVID-19 admissions, was 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 who was admitted to a DATCOV sentinel hospital. 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 rates, StatsSA mid-year population estimates for 2020 were utilised.

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 28 November 2020, a total of 612 facilities submitted data on hospitalised COVID-19 cases, 363 from public sector and 249 from private sector (Table 1). This reflects 99% and 100% coverage of all public and private hospitals respectively 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.

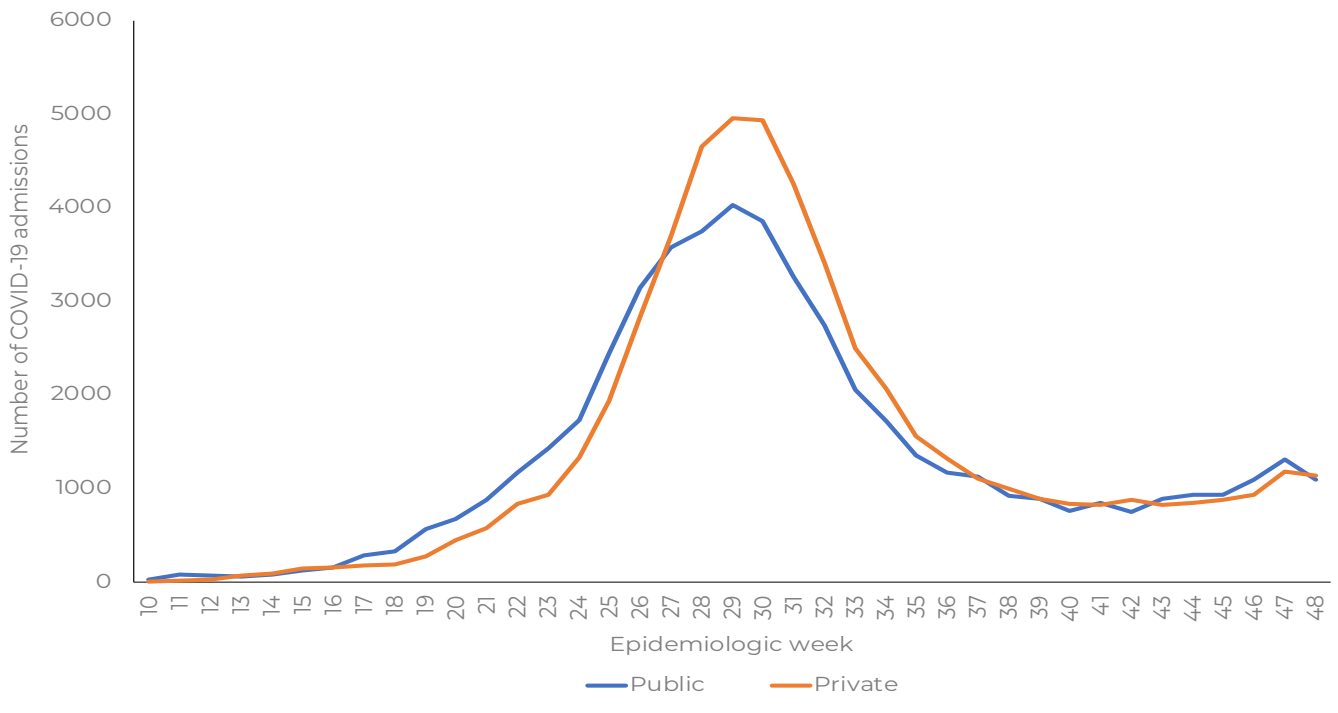
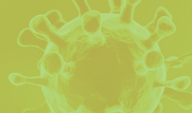
**Table 1:** Number of hospitals reporting data on COVID-19 admissions by province and sector, South Africa, 5 March-28 November 2020

Facilities reporting	Public	Private
Eastern Cape	84	17
Free State	35	20
Gauteng	38	90
KwaZulu-Natal	62	45
Limpopo	34	7
Mpumalanga	26	9
North West	13	12
Northern Cape	15	8
Western Cape	56	41
South Africa	363	249

## RESULTS

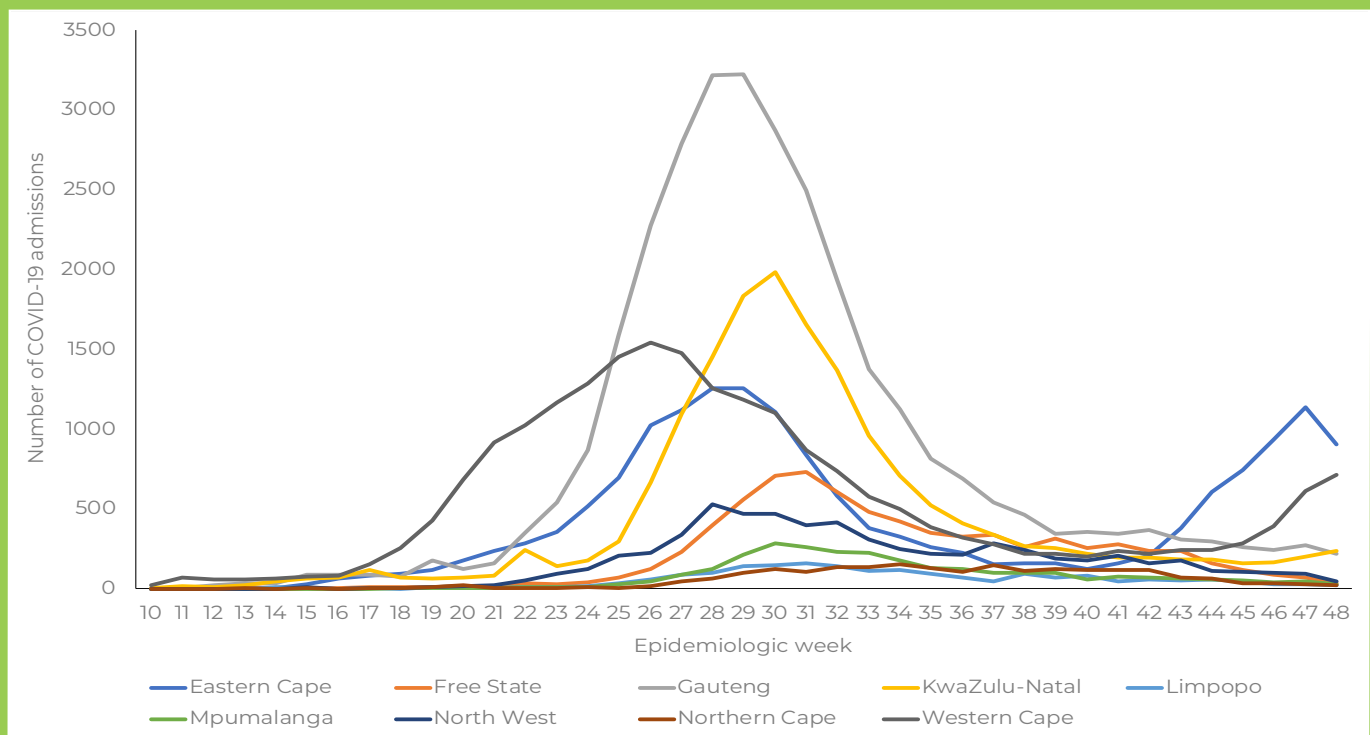
### Epidemiological and geographic trends in admissions

From 5 March to 28 November, a total of 106,931 COVID-19 admissions were reported from 612 facilities in all nine provinces of South Africa. Reported COVID-19 admissions decreased after the peak in weeks 29 and 30 but in the last seven weeks there has been an increase in admissions in both public and private sector (Figure 1). The decreases in the most recent week may reflect a real decrease or delays in data submission.



**Figure 1:** Number of reported COVID-19 admissions by health sector and epidemiologic week of diagnosis, 5 March-28 November 2020, n=106 931

The majority of admissions were recorded in four provinces, Gauteng (31 069; 29.1%), followed by Western Cape (21 609; 20.2%), KwaZulu-Natal (16 739; 15.7%) and Eastern Cape (16 729; 15.6%) provinces (Figure 2). Admissions have increased in Eastern Cape since week 41 and in Western Cape since week 43.

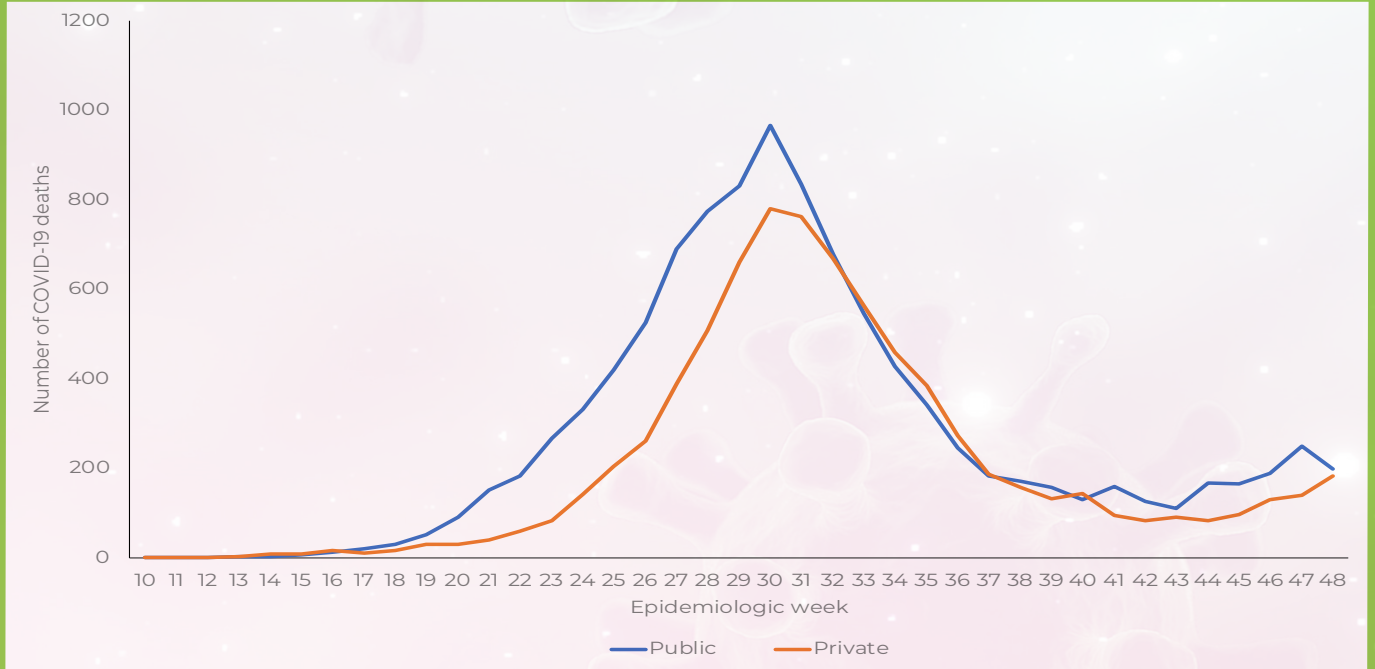


**Figure 2:** Number of reported COVID-19 admissions, by province and epidemiologic week of diagnosis, South Africa, 5 March-28 November 2020, n=106 931

### Epidemiological and geographic trends in in-hospital mortality

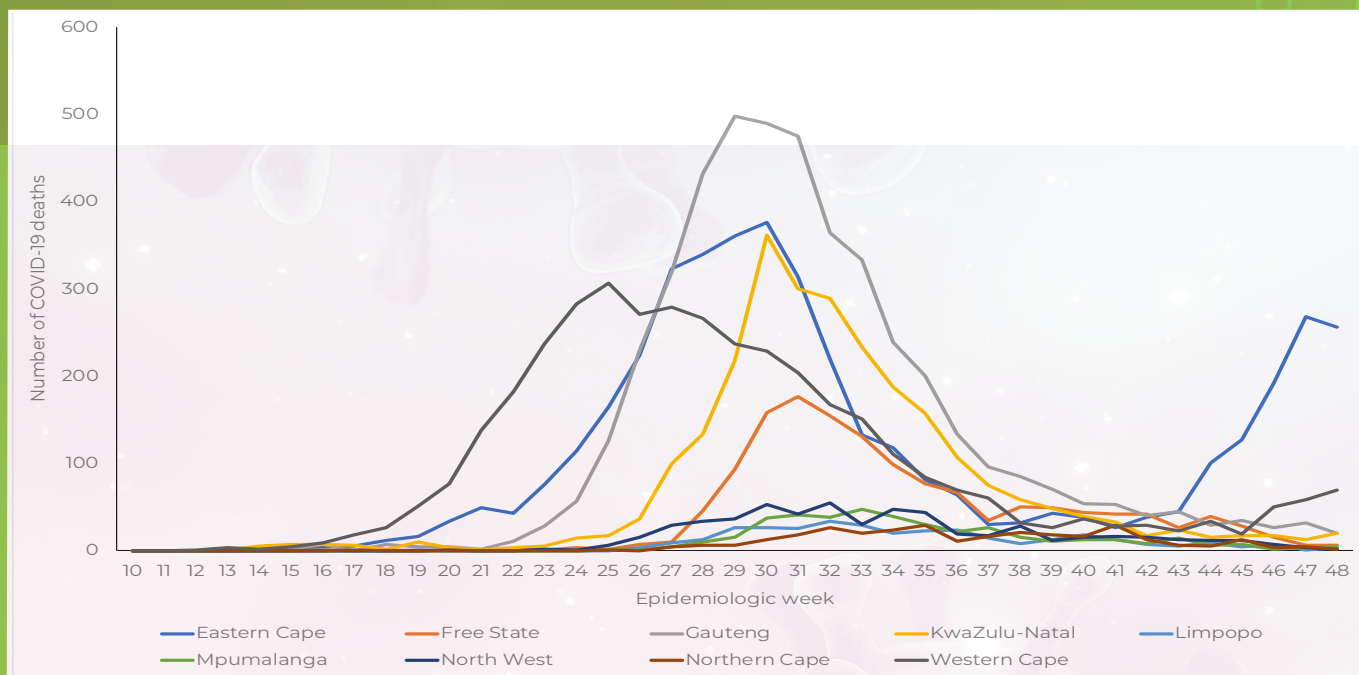
Of the 106,931 COVID-19 admissions, there were 18,289 in-hospital deaths. Among 99,053 individuals with in-hospital outcome (died or discharged), the case fatality ratio was 18.5%.

Most deaths have been reported in the public sector. Reported COVID-19 deaths decreased after the peak in week 30 but in the last five weeks there has been an increase in deaths in both public and private sector (Figure 3).



**Figure 3:** Number of COVID-19 deaths reported per week by health sector and epidemiologic week, South Africa, 5 March-28 November 2020, n=18 289

Most deaths were reported in Gauteng (4 550; 24.9%), followed by Eastern Cape (4 270; 23.3%), Western Cape (3 870; 21.1%), and KwaZulu-Natal (2 581; 14.1%) (Figure 4). An increase in deaths was reported in Eastern Cape since week 42 and in the Western Cape since week 45.



**Figure 4:** Number of reported COVID-19 deaths, by province and epidemiologic week of death, South Africa, 5 March-28 November 2020, n=18 289

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

**Table 2:** Number and cumulative incidence risk of COVID-19 hospitalisations and deaths per 100 000 persons by province, South Africa, 5 March-28 November 2020

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	6 734 001	16 729	248.4	4 270	63.4
Free State	2 928 903	7 597	259.4	1 416	48.3
Gauteng	15 488 137	31 069	200.6	4 547	29.4
KwaZulu-Natal	11 531 628	16 739	145.2	2 577	22.3
Limpopo	5 852 553	1 968	33.6	336	5.7
Mpumalanga	4 679 786	2 760	59.0	406	8.7
North West	4 108 816	6 278	152.8	566	13.8
Northern Cape	1 292 786	2 182	168.8	305	23.6
Western Cape	7 005 741	21 609	308.4	3 866	55.2
<b>South Africa</b>	<b>59 622 350</b>	<b>106 931</b>	<b>179.3</b>	<b>18 289</b>	<b>30.7</b>

\*StatsSA mid-year population estimates 2020

# MONITORING FOR RESURGENCE

The number of COVID-19 admissions increased in KwaZulu-Natal and Western Cape provinces from week 47 to week 48. The highest proportion of new admissions and the highest incidence risk of new admissions were in Eastern Cape and Western Cape (Table 3).

**Table 3:** Percentage change in COVID-19 admissions, epidemiological week 47 to week 48, by province, South Africa

Province	Provincial Population mid 2020*	Cumulative admissions	Cumulative Incidence Risk of Admissions / 100 000	Cumulative deaths	Cumulative Incidence Risk of Deaths / 100 000
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\*Reporting of new admissions in the most recent week may be delayed

Amongst the top ten districts, Nelson Mandela Metro has the highest cumulative incidence risk of COVID-19 admissions (Table 4).

**Table 4:** Number and cumulative incidence risk of COVID-19 hospitalisations per 100 000 persons by district, South Africa, 5 March-28 November 2020

Districts*	Province	Population Mid-2020	Cumulative hospital admissions	Cumulative Incidence Risk of Admissions/ 100 000
Nelson Mandela Bay Metro	Eastern Cape	1 213 060	7 408	610.7
Dr Kenneth Kaunda	North West	797 716	3 788	474.9
Buffalo City Metro	Eastern Cape	800 874	3 779	471.9
Mangaung Metro	Free State	870 920	4 050	465.0
Frances Baard	Northern Cape	414 911	1 465	353.1
City of Cape Town Metro	Western Cape	4 604 986	16 179	351.3
Garden Route	Western Cape	623 658	2 109	338.2
Lejweleputswa	Free State	653 601	1 766	270.2
West Rand	Gauteng	954 737	2 456	257.2
eThekwin Metro	KwaZulu-Natal	3 981 205	9 497	238.5

\* Location of hospital is used and not patient address

48 (Table 5), including five districts each from Western Cape and KwaZulu-Natal. In many of these districts the increases were small but the larger increases in COVID-19 admissions in West Coast, Ugu, Garden Route, eThekweni Metro and City of Cape Town are concerning

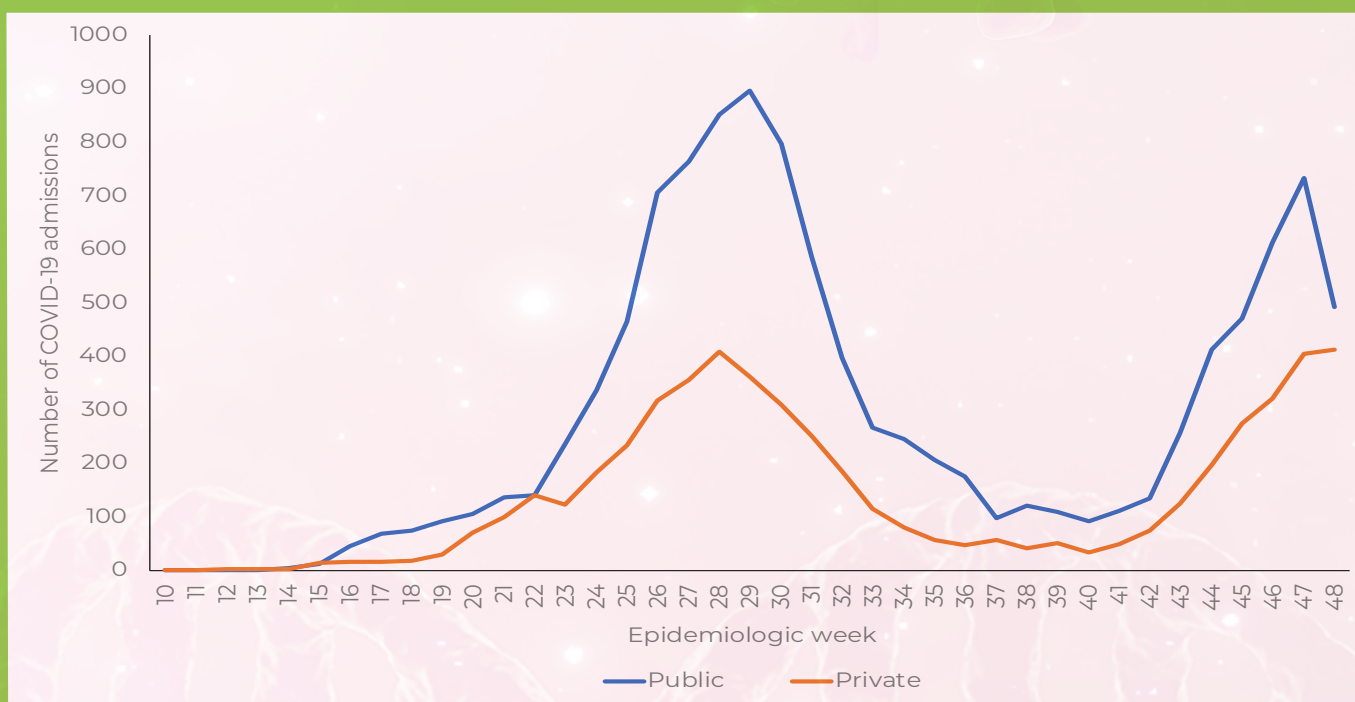
**Table 5:** Districts with positive increases in admissions, epidemiologic week 47 to week 48, South Africa

Districts*	Province	Cumulative hospital admissions	Hospital admissions		Percentage change in admissions
West Coast	Western Cape	440	4	16	300
Joe Gqabi	Eastern Cape	68	1	3	200
Ngaka Modiri Molema	North West	1 840	1	3	200
Harry Gwala	KwaZulu-Natal	968	5	13	160
Ugu	KwaZulu-Natal	3 587	14	33	136
Fezile Dabi	Free State	750	3	6	100
uMkhanyakude	KwaZulu-Natal	1 831	0	1	100
ZF Mgcau	Northern Cape	15 665	4	6	50
Garden Route	Western Cape	352	166	221	33
Ekurhuleni Metro	Gauteng	287	26	31	19
Central Karoo	Western Cape	792	7	8	14
Cape Winelands	Western Cape	2 086	44	49	11
eThekweni Metro	KwaZulu-Natal	984	128	141	10
West Rand	Gauteng	1 858	30	33	10
City of Cape Town Metro	Western Cape	9,260	376	405	8
iLembe	KwaZulu-Natal	1 062	14	15	7

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

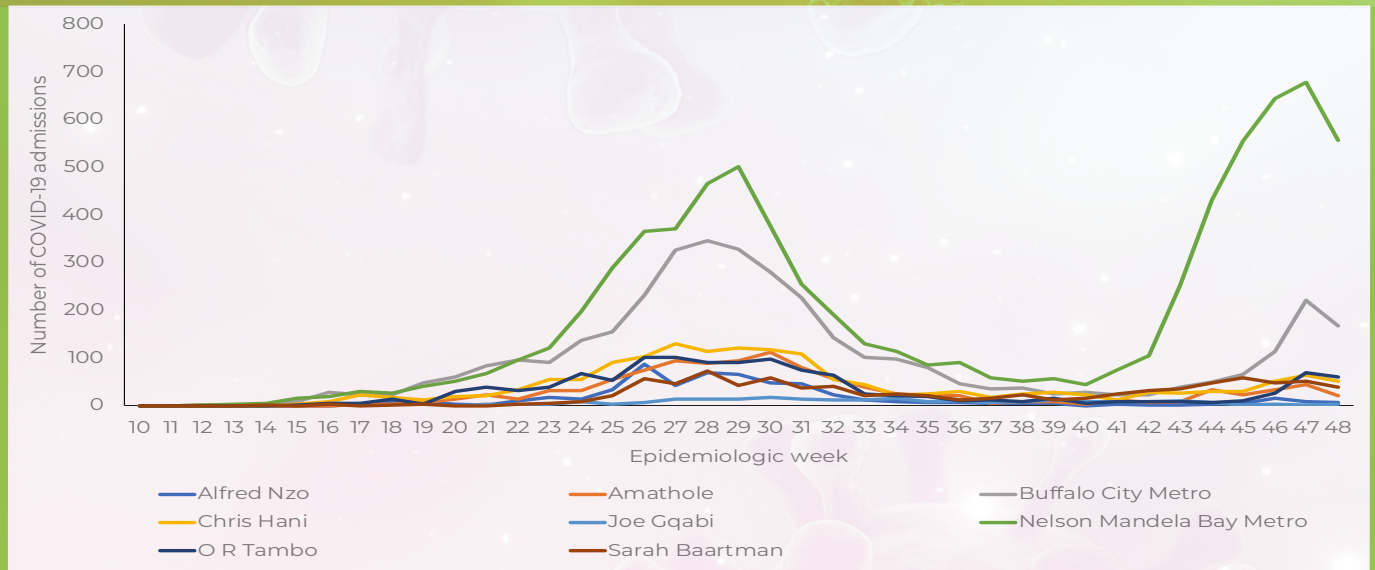
### Eastern Cape

Since week 40 there has been an increase in admissions reported in the Eastern Cape, seen across both public and private sectors (Figure 5). The decrease in the public sector the most recent week may reflect a real decrease or delays in data submission.



**Figure 5:** Number of reported COVID-19 admissions by health sector and epidemiologic week of diagnosis, Eastern Cape, 5 March-28 November 2020

The increase in admissions in Eastern Cape is driven predominantly by admissions in Nelson Mandela Metro which has exceeded the numbers of admissions at the previous peak (Figure 6). The decreases in the most recent week may reflect a real decrease or delays in data submission.



**Figure 6:** Number of reported COVID-19 admissions, by district and epidemiologic week, Eastern Cape, 5 March-28 November 2020

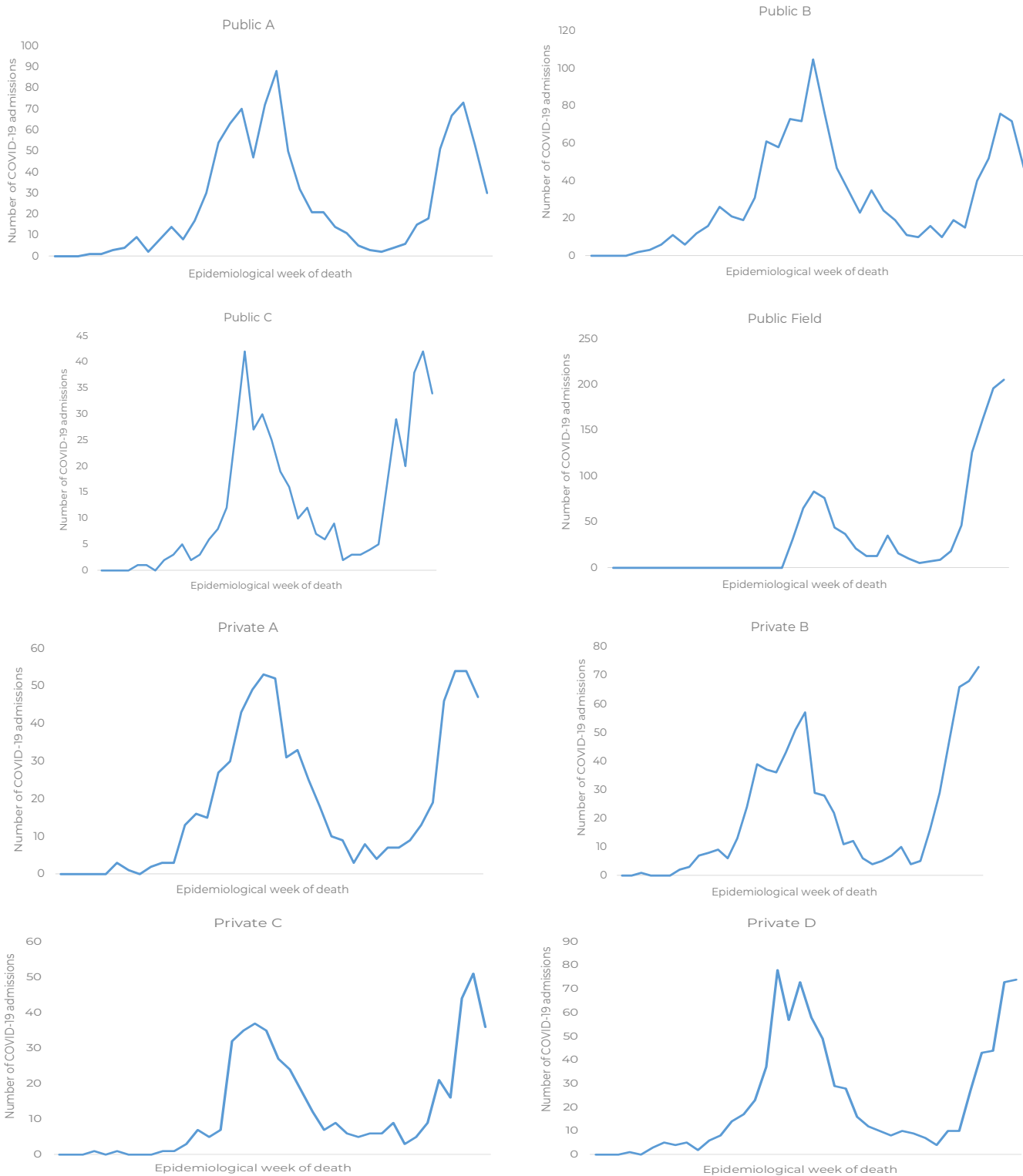
The only district with an increase in the number of COVID-19 admissions was Joe Gqabi district from week 47 to week 48. The highest proportion of new admissions and the highest incidence risk of new admissions was in Nelson Mandela Metro followed by Buffalo City (Table 6).

**Table 6:** Percentage change in COVID-19 admissions and deaths, epidemiologic week 47 to week 48, by district, Eastern Cape, 5 March-28 November 2020

District	Cumulative hospital admissions	Admissions Week 47	Admissions Week 48	Percentage change in admissions	Percentage of total new admissions	Incidence risk of new admissions /100 000 persons
Alfred Nzo	564	9	6	-33	0.7	0.1
Amathole	1 083	44	21	-52	2.3	0.3
Buffalo City Metro	3 779	221	167	-24	18.5	2.3
Chris Hani	1 589	64	52	-19	5.8	0.8
Joe Gqabi	221	1	3	200	0.3	0.1
Nelson Mandela Bay Metro	7 408	678	556	-18	61.5	5.1
O R Tambo	1 213	69	60	-13	6.6	0.4
Sarah Baartman	872	51	39	-24	4.3	0.9

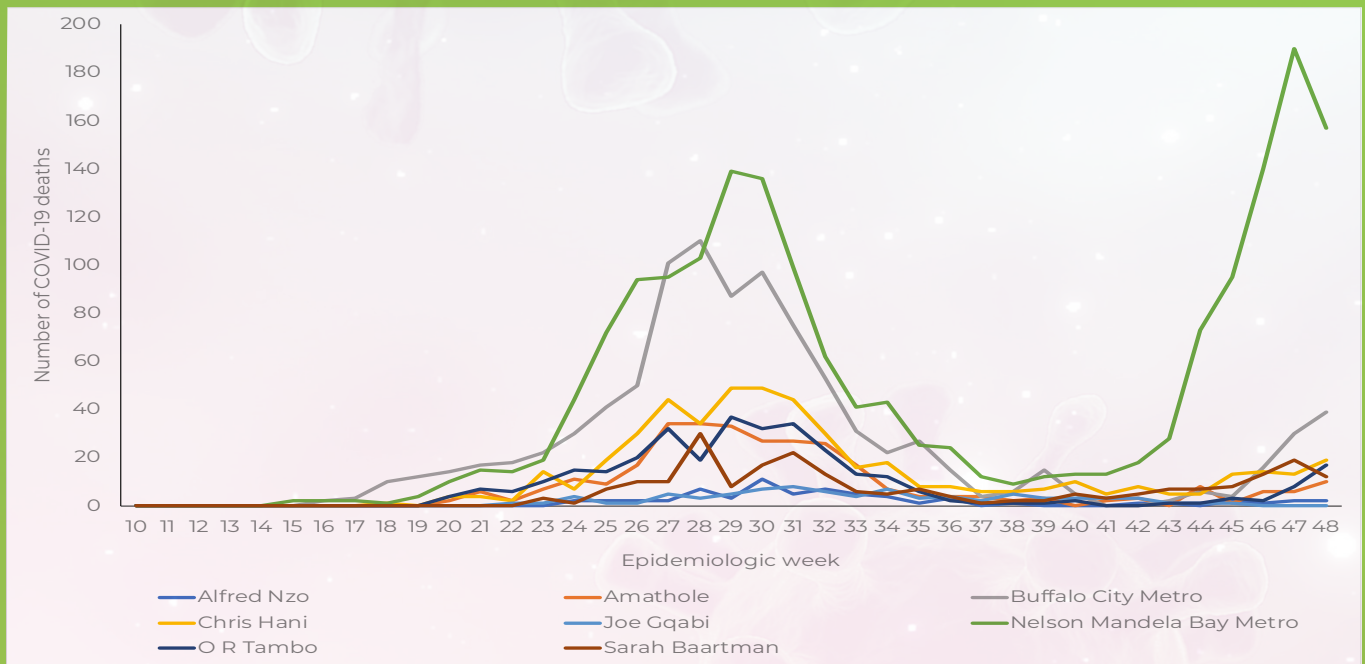
The increase in admissions is reported across most hospitals in Nelson Mandela Metro (Figure 7). The four public and four private hospitals are experiencing a surge close to or larger than the previous peak in admissions in July





**Figure 7:** Number of reported COVID-19 admissions, by hospital and epidemiologic week of diagnosis, Nelson Mandela Metro, 5 March-28 November 2020

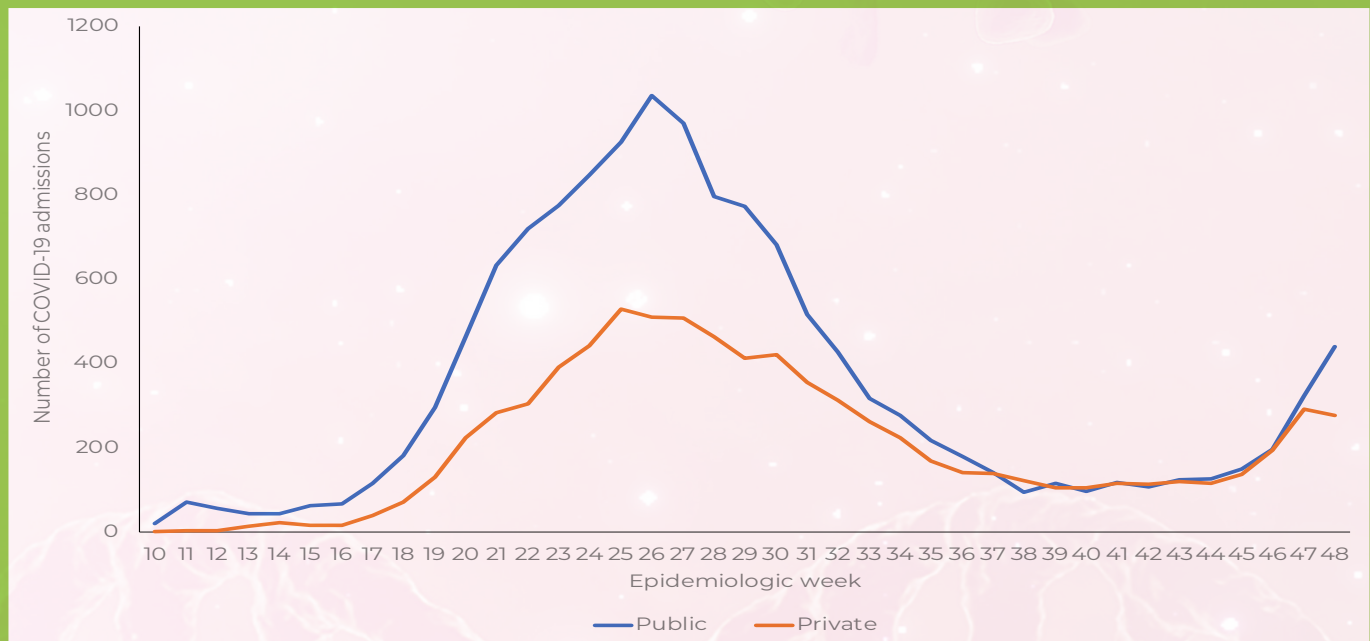
There has been an increase in deaths in Eastern Cape, driven predominantly by deaths in Nelson Mandela Metro which has exceeded the numbers of deaths at the previous peak (Figure 8). There are also increases in deaths in Buffalo City, Sarah Baartman and OR Tambo districts.



**Figure 8:** Number of reported COVID-19 deaths, by district and epidemiologic week, Eastern Cape, 5 March-28 November 2020

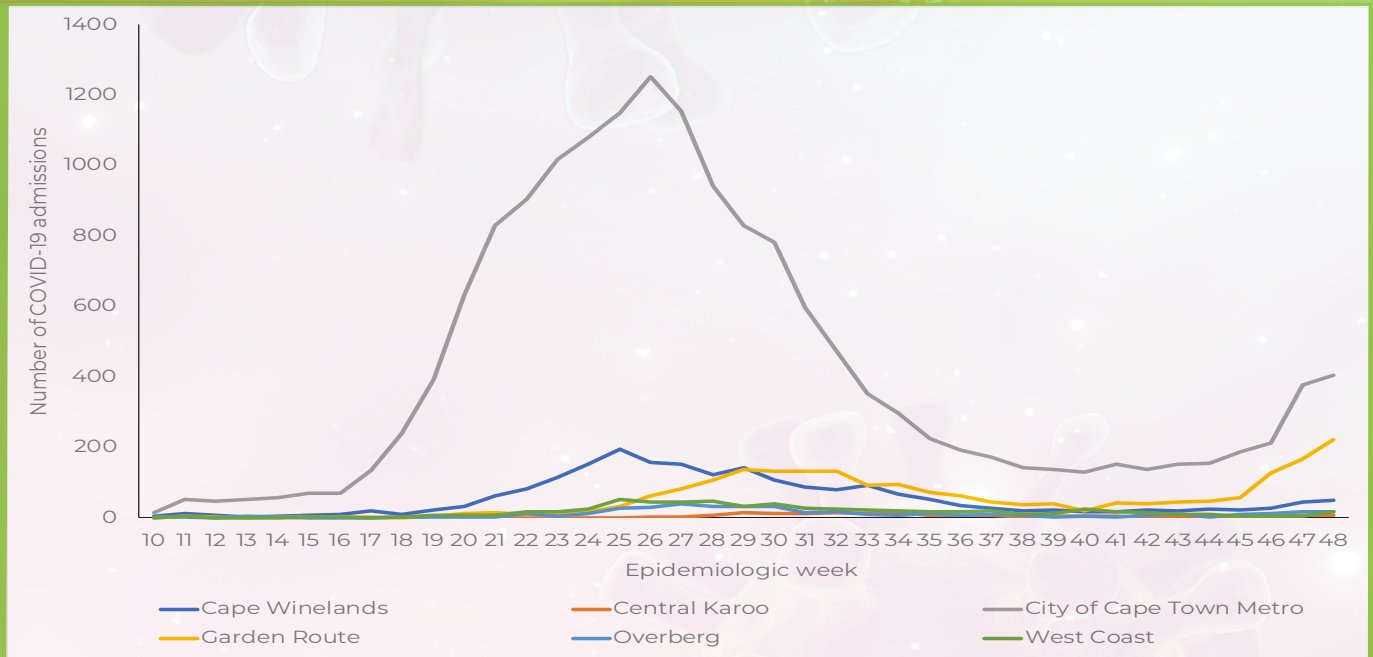
### Western Cape

Since week 43 there has been an increase in admissions reported in the Western Cape, seen across both public and private sectors (Figure 9).



**Figure 9:** Number of reported COVID-19 admissions by health sector and epidemiologic week of diagnosis, Western Cape, 5 March-28 November 2020

The increase in admissions in Western Cape is driven predominantly by admissions in Garden Route and City of Cape Town Metro (Figure 10).



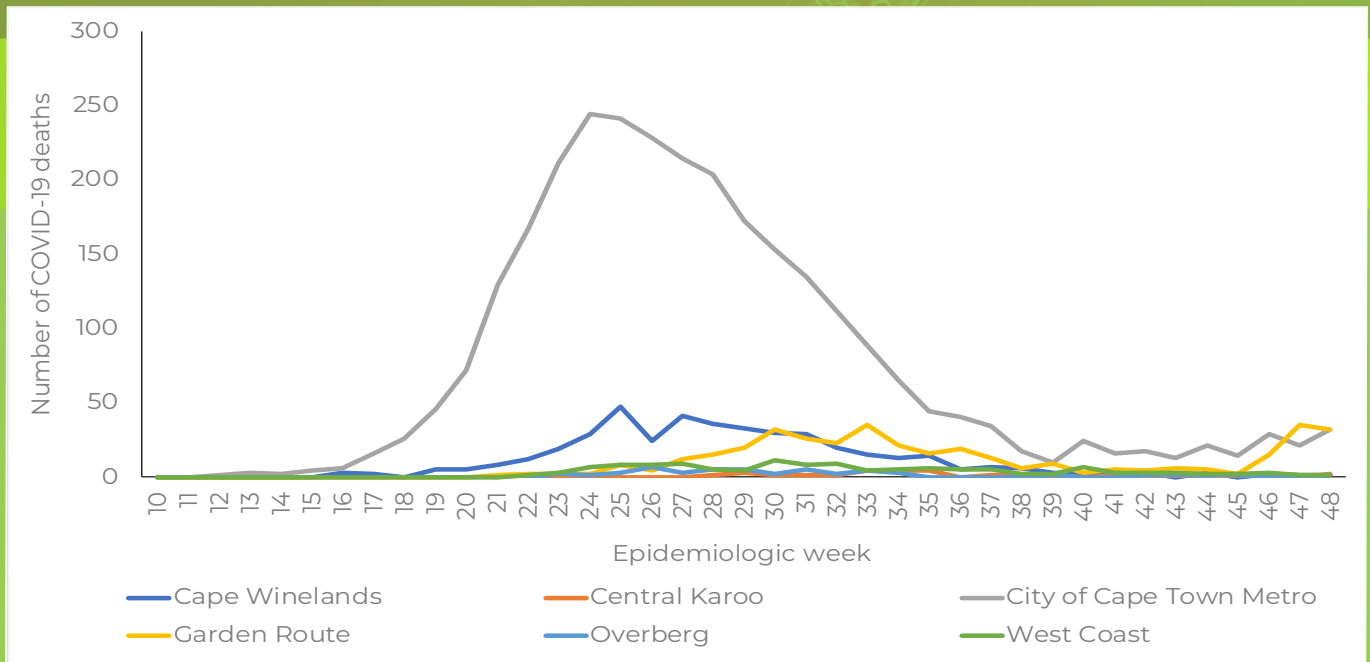
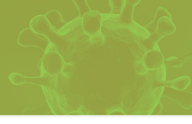
**Figure 10:** Number of reported COVID-19 admissions, by district and epidemiologic week, Western Cape, 5 March-28 November 2020

The number of COVID-19 admissions increased in five districts, Cape Winelands, Central Karoo, City of Cape Town, Garden Route and West Coast districts from week 47 to week 48. The highest proportion of new admissions and the highest incidence risk of new admissions were in City of Cape Town and Garden Route (Table 7).

**Table 7:** Percentage change in COVID-19 admissions and deaths, epidemiologic week 47 to week 48, by district, Western Cape

Districts	Cumulative hospital admissions	Admissions Week 47	Admissions Week 48	Percentage change in admissions	Percentage of total new admissions	Incidence risk of new admissions /100 000 persons
Cape Winelands	2,142	44	49	11	6.9	0.7
Central Karoo	153	7	8	14	1.1	1.5
City of Cape Town Metro	16,179	376	405	8	56.6	1.2
Garden Route	2,109	166	221	33	30.9	5.0
Overberg	412	17	16	-6	2.2	0.7
West Coast	614	4	16	300	2.2	0.5

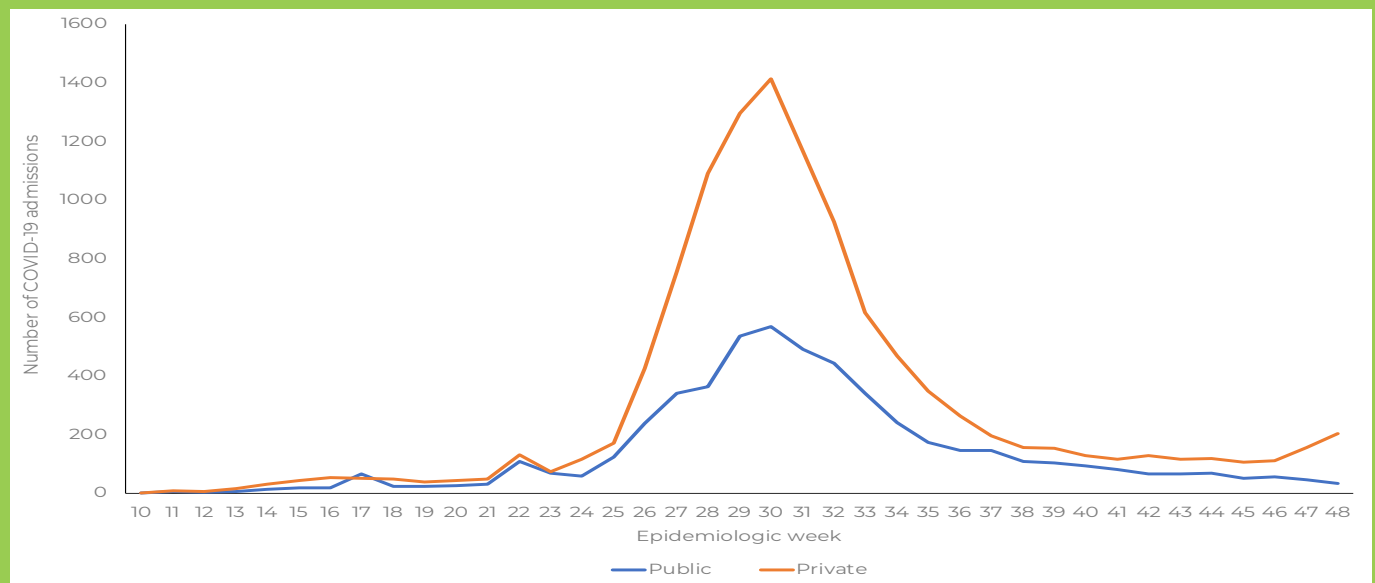
There has been an increase in deaths in Western Cape, predominantly in Garden Route and City of Cape Town (Figure 11).



**Figure 11:** Number of reported COVID-19 deaths, by district and epidemiologic week, Western Cape, 5 March-28 November 2020

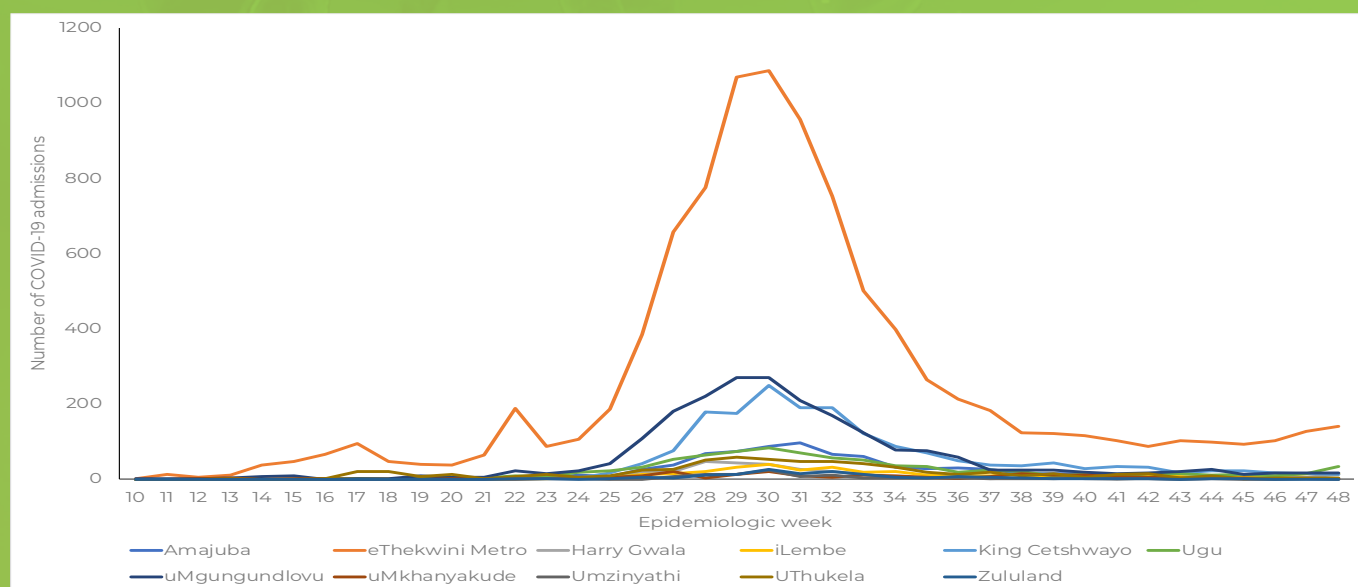
### KwaZulu-Natal

Since week 46 there has been an increase in admissions reported in the KwaZulu-Natal, in the private sector (Figure 12).



**Figure 12:** Number of reported COVID-19 admissions by health sector and epidemiologic week of diagnosis, KwaZulu-Natal, 5 March-28 November 2020

The increase in admissions in KwaZulu-Natal is driven predominantly by admissions in eThekweni Metro (Figure 13).



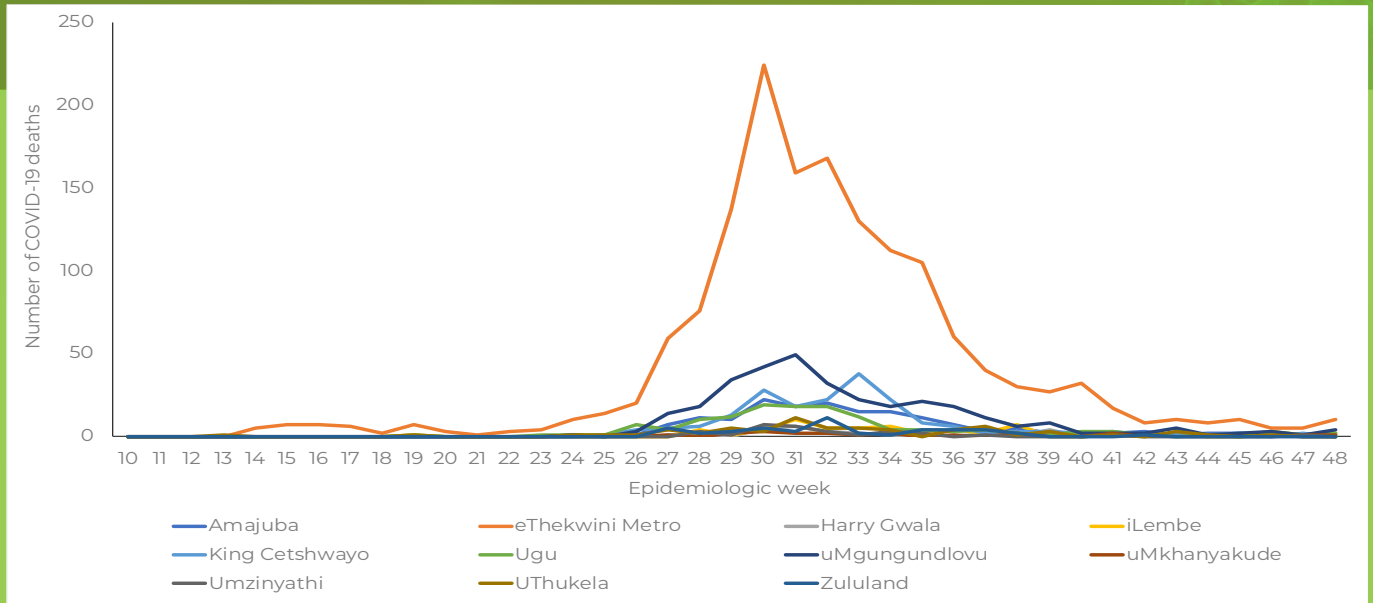
**Figure 13:** Number of reported COVID-19 admissions, by district and epidemiologic week, KwaZulu-Natal, 5 March-28 November 2020

The number of COVID-19 admissions increased in five districts, eThekweni, Harry Gwala, iLembe, Ugu and uMkhanyakhude districts from week 47 to week 48. The highest proportion of new admissions and the highest incidence risk of new admissions were in eThekweni and Ugu (Table 8).

**Table 8:** Percentage change in COVID-19 admissions and deaths, epidemiologic week 47 to week 48, by district, KwaZulu-Natal, 5 March-28 November 2020

Districts	Cumulative hospital admissions	Admissions Week 47	Admissions Week 48	Percentage change in admissions	Percentage of total new admissions	Incidence risk of new admissions /100 000 persons
Amajuba	751	4	2	-50	0.8	0.1
eThekweni Metro	9 497	128	141	10	59.5	1.5
Harry Gwala	301	5	13	160	5.5	1.1
iLembe	367	14	15	7	6.3	0.9
King Cetshwayo	1 783	14	12	-14	5.1	0.5
Ugu	827	14	33	136	13.9	1.7
uMgungundlovu	2 146	17	16	-6	6.8	0.6
uMkhanyakhude	198	0	1	100	0.4	0.1
Umzinyathi	104	1	0	-100	0.0	0.0
UThukela	616	4	4	0	1.7	0.2
Zululand	149	0	0	0	0.0	0.0

There has been a small increase in deaths in KwaZulu-Natal, predominantly in eThekweni (Figure 14).



**Figure 14:** Number of reported COVID-19 deaths, by district and epidemiologic week, KwaZulu-Natal, 5 March-28 November 2020

## LIMITATIONS

DATCOV now includes reporting from all hospitals with COVID-19 admissions but many hospitals are yet to reach complete submission of historic data. DATCOV only reports hospital-based admissions and deaths and therefore does not include deaths occurring outside hospitals. 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.

## 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 SENTINEL HOSPITAL SURVEILLANCE UPDATE

WEEK 48 2020

## APPENDIX

**TABLE 10:** NUMBER OF REPORTED COVID-19 ADMISSIONS AND DEATHS BY AGE AND GENDER, SOUTH AFRICA, 5 MARCH-28 NOVEMBER 2020

Age (years)	ADMISSIONS				DEATHS			
	Female	Male	Unknown	Total	Female	Male	Unknown	Total
0-4	644	804	2	1 450	19	14	0	33
5-9	190	259	0	449	2	7	0	9
10-14	384	339	0	723	6	8	0	14
15-19	1 132	606	1	1 739	20	28	0	48
20-24	1 856	970	3	2 829	46	43	0	89
25-29	3 467	1 583	2	5 052	118	66	1	185
30-34	4 704	2 643	0	7 347	215	145	0	360
35-39	5 163	3 461	0	8 624	306	282	0	588
40-44	4 974	4 080	1	9 055	382	432	0	814
45-49	5 486	4 816	2	10 304	558	613	0	1 171
50-54	6 175	5 450	0	11 625	788	869	0	1 657
55-59	6 305	5 542	1	11 848	1 103	1 195	0	2 298
60-64	5 262	4 930	0	10 192	1 178	1 404	0	2 582
65-69	4 092	3 739	2	7 833	1 170	1 218	0	2 388
70-74	3 246	2 929	2	6 177	960	1 027	1	1 988
75-79	2 349	2 058	0	4 407	782	801	0	1 583
80-84	1 755	1 258	1	3 014	597	518	0	1 115
85-89	1 075	646	0	1 721	393	298	0	691
90-94	484	258	1	743	209	142	0	351
>95	172	112	0	284	62	30	0	92
Unknown	774	631	110	1 515	111	121	1	233
	59 689	47 114	128	106 931	9 025	9 261	3	18 289