

# COVID-19 SENTINEL HOSPITAL SURVEILLANCE UPDATE

**SOUTH AFRICA** WEEK 36 2020

## OVERVIEW

**This report summarises data of COVID-19 cases admitted to sentinel hospital surveillance sites in all provinces. The report is based on data collected from 5 March to 5 September 2020.**

## HIGHLIGHTS

- As of 5 September, 64 705 COVID-19 admissions were reported from 438 facilities (194 public-sector and 244 private-sector) in all nine provinces of South Africa. There was an increase of 6 111 admissions reported since the last report, and 24 additional hospitals (21 public-sector and 3 private-sector) reporting COVID-19 admissions. There were 22 099 (34%) and 42 606 (66%) admissions reported in public and private sector respectively. The majority of COVID-19 admissions were reported from four provinces, 17 632 (27%) in Western Cape, 17 179 (27%) in Gauteng, 10 290 (16%) in KwaZulu-Natal and 8 735 (14%) in Eastern Cape. Admissions have decreased over the past six weeks.
- Of the 64 705 admissions, 4 656 (7%) patients were in hospital at the time of this report, 48 747 (75%) patients were discharged alive or transferred out and 11 302 (18%) patients had died. There were 1 510 additional deaths since the last report.
- Of the 59 317 COVID-19 patients who had recorded in-hospital outcome (died and discharged), the case fatality ratio (CFR) was 19%. On multivariable analysis, factors associated with in-hospital mortality were older age groups; male sex; Black African,

Coloured and Indian race; admission in the public sector; and having comorbid hypertension, diabetes, chronic cardiac disease, chronic renal disease, malignancy, HIV, current tuberculosis alone or both current and past tuberculosis, and obesity. Compared to the Western Cape province, individuals hospitalised in Eastern Cape, Free State, Gauteng, KwaZulu-Natal, Limpopo and North West provinces were more likely to die in-hospital.



DATCOV, sentinel hospital surveillance for COVID-19 admissions, was initiated on the 1 April 2020. 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. 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. An individual was defined as having severe disease if treated in high care or intensive care unit (ICU), or ventilated or diagnosed with acute respiratory distress syndrome (ARDS). 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.

Data are received from all private hospitals nationally. As new hospitals join the surveillance system, they have retrospectively captured all admissions recorded. As of 5 September 2020, a total of 438 facilities, 194 from public sector and 244 from private sector, submitted data on hospitalised COVID-19 cases (Table 1). There were 24 additional hospitals (21 public-sector and 3 private-sector) reporting COVID-19 admissions since the last report.

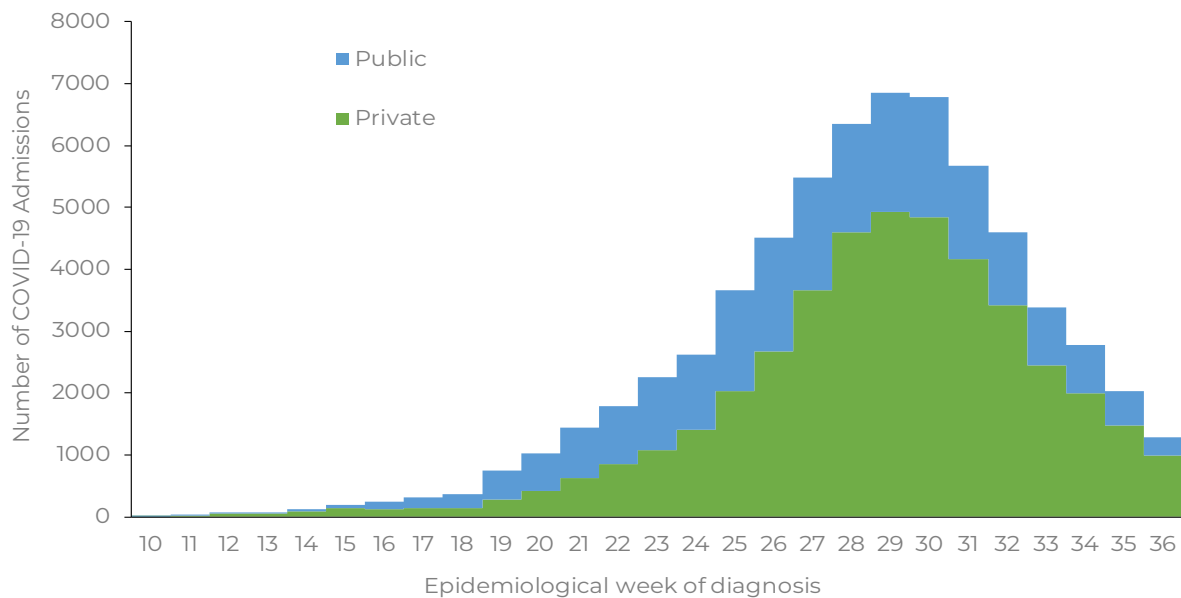
**Table 1:** Number of of hospitals reporting data on COVID-19 admissions by province and sector, South Africa, 5 March-5 September 2020

Facilities reporting	Public	Private
Eastern Cape	78	17
Free State	28	20
Gauteng	6	88
KwaZulu-Natal	8	45
Limpopo	3	6
Mpumalanga	12	9
North West	2	12
Northern Cape	1	7
Western Cape	56	40
South Africa	194	244

## RESULTS

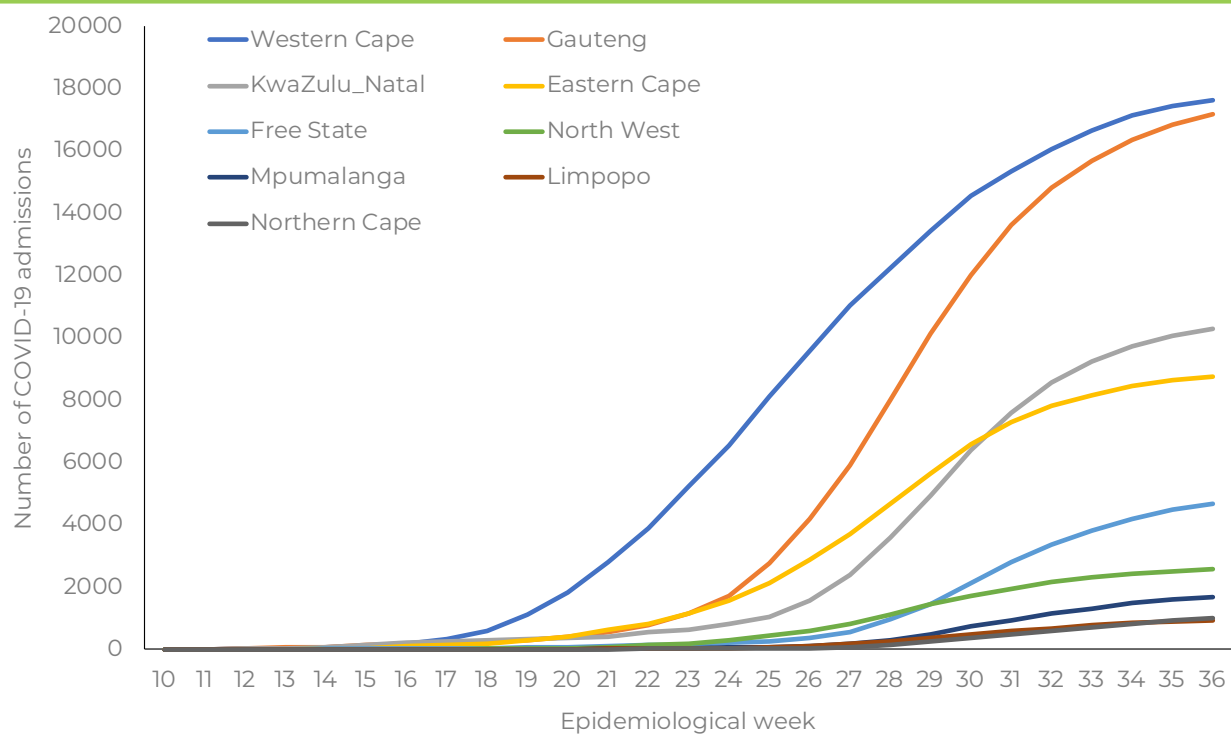
### Epidemiological and geographic trends in admissions

From 5 March to 5 September, a total of 64 705 COVID-19 admissions (6 111 additional from last report) were reported from 438 facilities in all nine provinces of South Africa. Of these admissions, 22 099 (34.2%) and 42 606 (65.8%) were reported in public and private sector, respectively. Initially, most admissions were reported in the private sector; from week 17 a higher proportion of total admissions was reported in the public sector; and since week 24 a higher proportion was reported in the private sector. There has been a decrease in reported COVID-19 admissions for the past six weeks following a peak in weeks 29 and 30 (Figure 1).



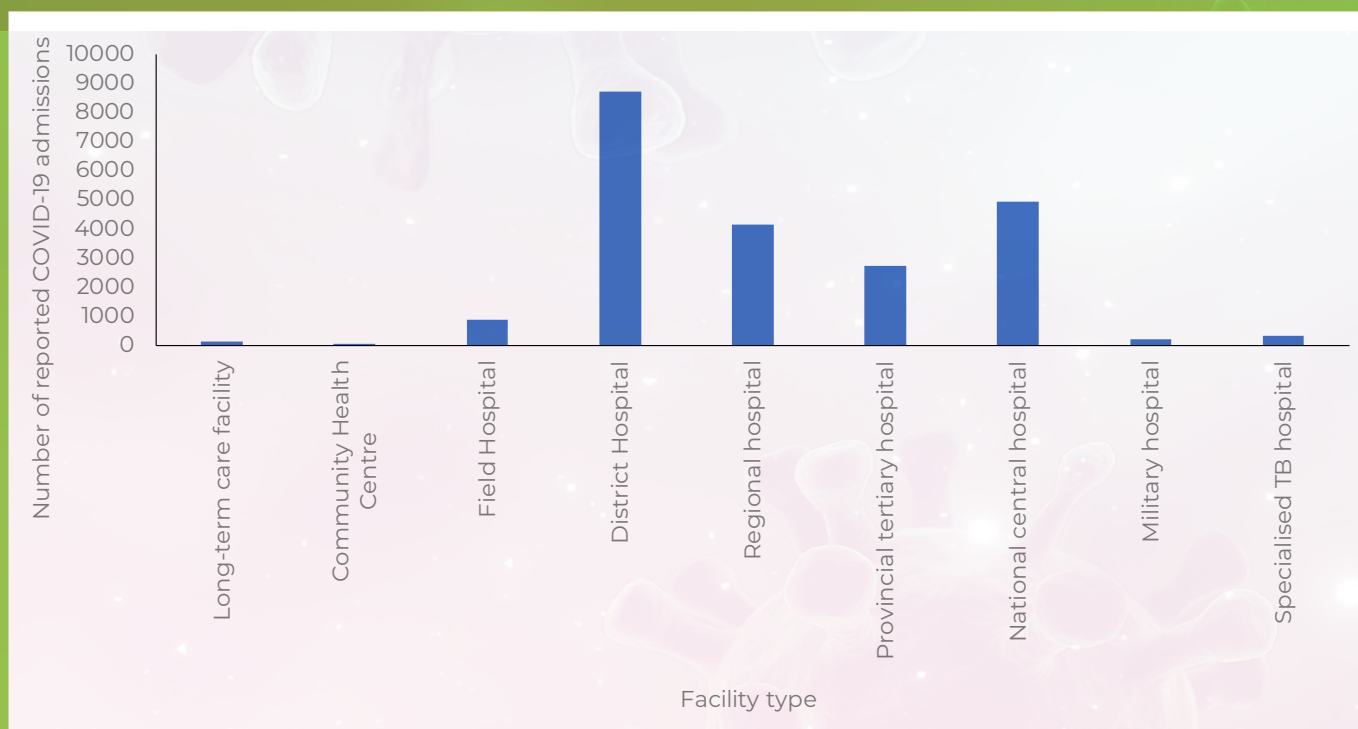
**Figure 1:** Number of reported COVID-19 admissions by health sector and epidemiologic week of diagnosis, 5 March-5 September 2020, n=64 705

The majority of admissions (53 836/64 705, 83.2%) were recorded in four provinces, with the highest number reported in Western Cape (17 632, 27.2%), followed by Gauteng (17 179, 26.5%), KwaZulu-Natal (10 290, 15.9%) and Eastern Cape (8 735, 13.5%) provinces (Figure 2).



**Figure 2:** Cumulative numbers of reported COVID-19 admissions, by province and epidemiological week of diagnosis, South Africa, 5 March-5 September 2020, n=64 705

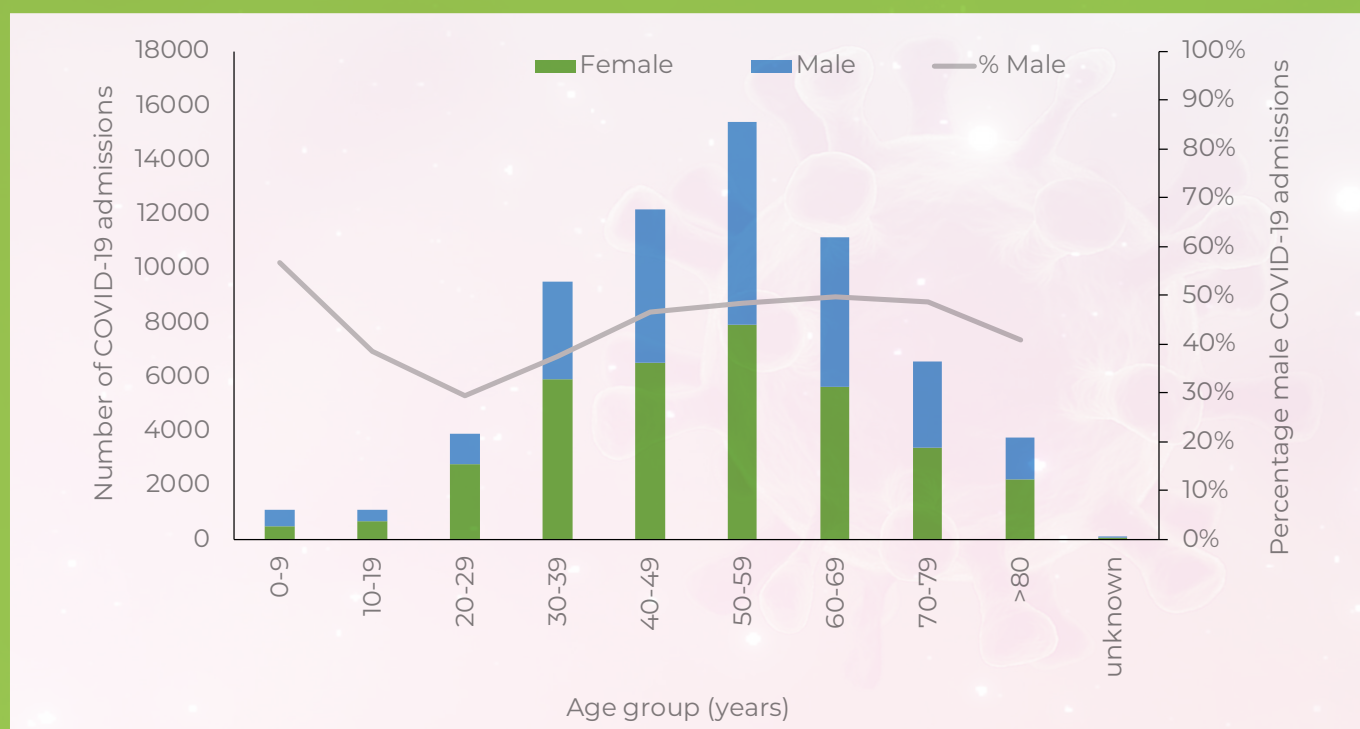
Most patients admitted in the public sector, were admitted to district hospitals (8 705, 39.4%), national central hospitals (4 954, 22.4%), regional hospitals (4 140, 18.7%) and provincial tertiary hospitals (2 750, 12.4%) (Figure 3).



**Figure 3:** Cumulative numbers of reported COVID-19 admissions, by facility type in public sector, South Africa, 5 March-5 September 2020, n=22 101

# DEMOGRAPHIC AND CLINICAL CHARACTERISTICS OF COVID-19 ADMISSIONS

The median age of COVID-19 admissions was 53 years (interquartile range [IQR] 40 – 64). There were 1 986 (3.1%) admissions in patients 18 years and younger and 10 325 (16.0%) in patients older than 70 years. Among admitted individuals with COVID-19, 35 508 (54.9%) were female. The sex ratio was equal in patients between 40 and 80 years; females were more common than males in patients between 10 and 40 years and over 80 years; and males more common in patients younger than 10 years (Figure 4).



**Figure 4:** Number of reported COVID-19 admissions by age, gender and percentage of males, South Africa, 5 March-5 September 2020, n=64 705



Of the 47 132 (72.8%) patients for whom race was known, 36 192 (76.8%) were Black African, 3 144 (6.7%) were Coloured, 3 132 (6.7%) were Indian, 4 593 (9.7%) were White and 71 (0.2%) were classified as Other race group. There were 2 798 (4.3%) health care workers (HCW) that were reported to be hospitalised. Among the 15 678 admissions in females of child-bearing age 15-50 years, there were 1 421 (9.1%) females admitted who were pregnant or within 6 weeks post-partum.

Among 54 935 (84.9%) patients for whom comorbid conditions were known, 28 083 (51.1%) had no comorbid condition reported, 1 4104 (25.7%) had one comorbid condition reported, 9 130 (16.6%) had two comorbid conditions and 3 618 (6.6%) had three or more comorbid conditions reported. Among the 26 852 (48.9%) patients who had reported a comorbid condition, the most commonly reported were hypertension (17 071, 63.6%) and diabetes (13 237, 49.3%); there were 4 331 (16.1%) patients who were HIV-infected, 765 (2.8%) patients with active tuberculosis (TB) and 1 390 (5.2%) patients with previous history of TB (Table 2). Obesity, defined by the subjective opinion of the attending HCW, while not consistently recorded for all reported COVID-19 admissions, was recorded as a risk factor in 1872 (2.9%) of all patients hospitalised.

**Table 2:** Reported comorbid conditions among COVID-19 admissions reporting at least one comorbid condition, South Africa, 5 March-5 September 2020 n=26 656\*

Comorbid disease**	n	%
Hypertension	17 071	63.6
Diabetes mellitus	13 237	49.3
Chronic cardiac disease	1 087	4.0
Chronic pulmonary disease/ Asthma	3 437	12.8
Chronic renal disease	1 390	5.2
Malignancy	417	1.6
HIV	4 331	16.1
Active tuberculosis	765	2.8
Previous history of tuberculosis	1 390	5.2

\* Multiple comorbid conditions are counted more than once so the total number may be more than the total number of individuals reporting comorbid conditions.

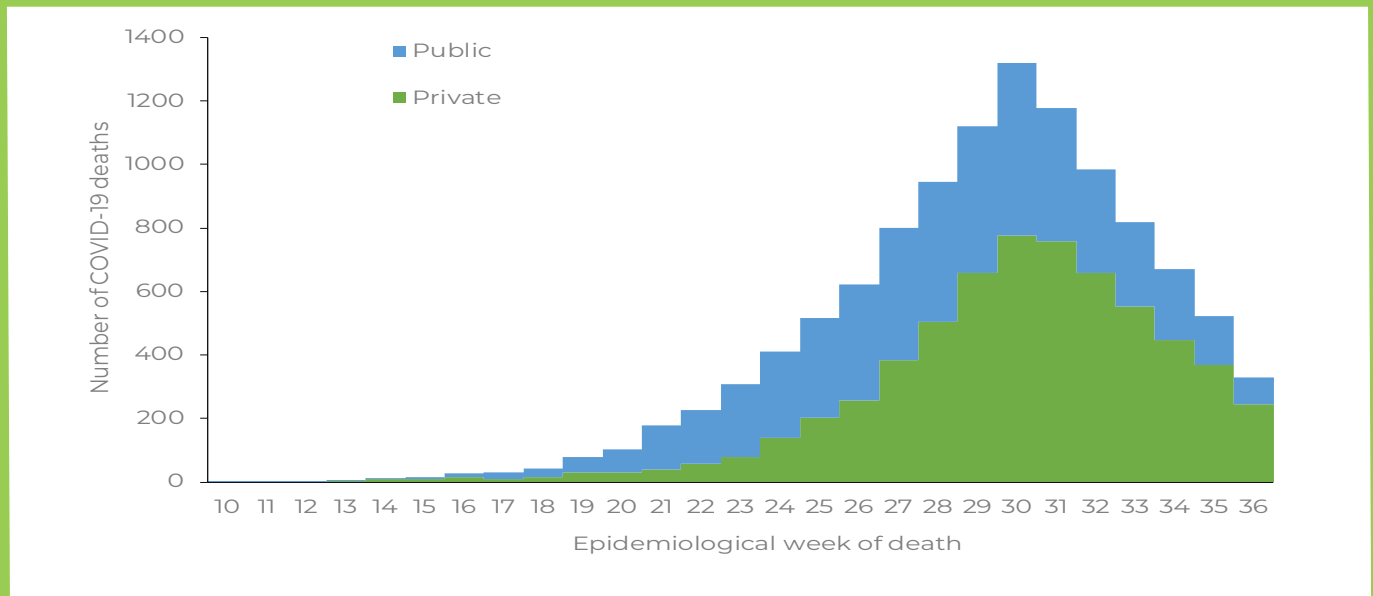
\*\* Presence of a comorbid condition includes only the conditions reported in the table; obesity is not included.

## OUTCOMES

Of the 64 705 admitted individuals, 4 656 (7.2%) were currently in hospital, 48 015 (74.2%) were discharged alive, 732 (1.1%) were transferred out to either higher level care or step-down facilities, 11 302 (17.5%) had died in hospital. There were 1 510 additional deaths since the last report. Of the 59 317 COVID-19 patients who had recorded in-hospital outcome (died and discharged), the case fatality ratio (CFR) was 19.1%.

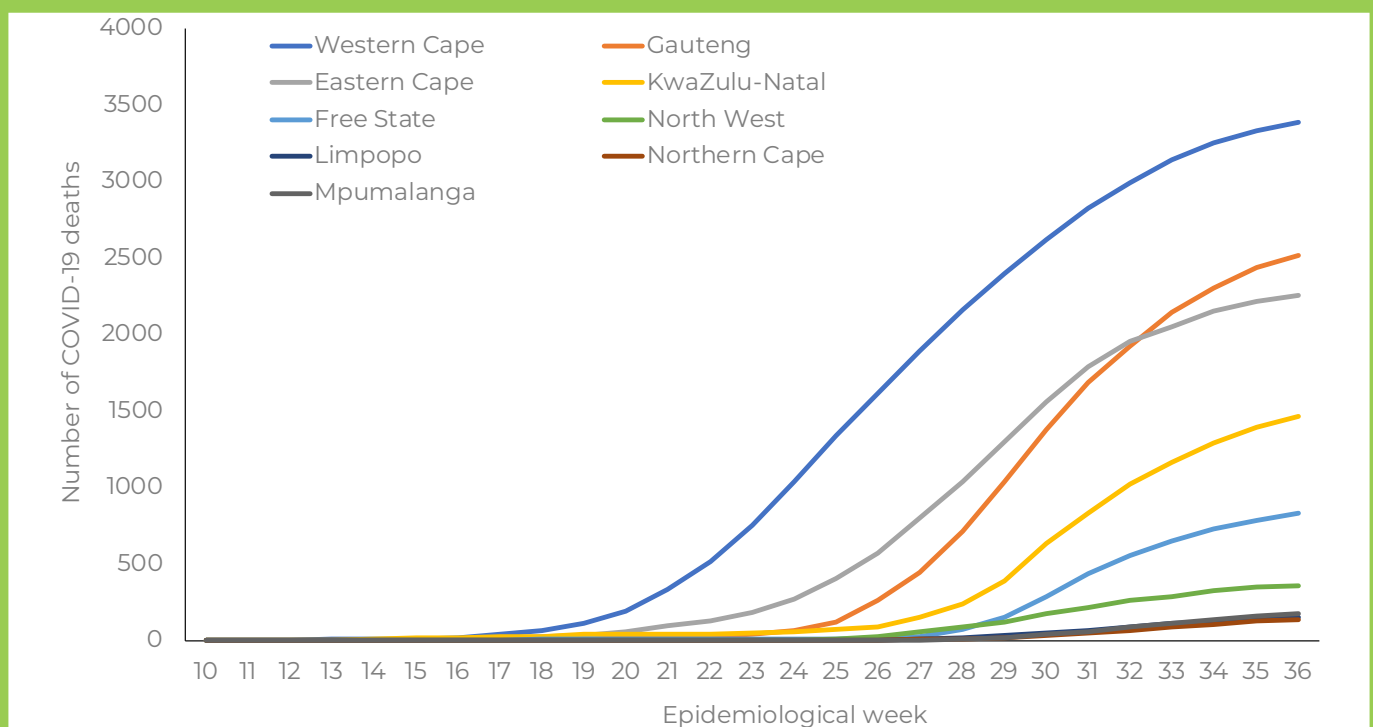
# EPIDEMIOLOGICAL AND GEOGRAPHIC TRENDS IN MORTALITY

In the first few weeks of the outbreak most deaths were reported in the private sector, since week 17 a higher proportion of reported deaths was in the public sector, and since week 28 again most deaths were reported in the private sector. The CFR was higher in the public health sector (25.4%) than in the private health sector (15.9%) ( $p < 0.001$ ). There has been a decrease in reported COVID-19 deaths since week 30 (Figure 5).



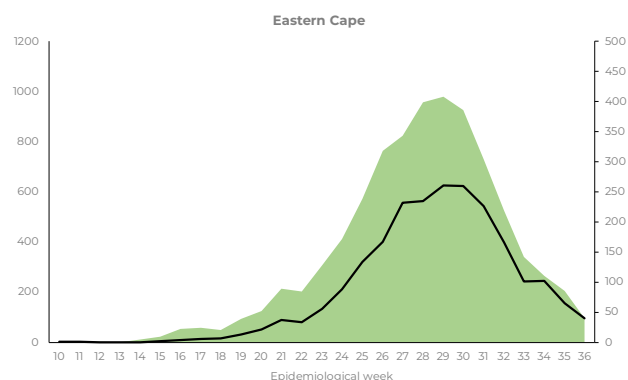
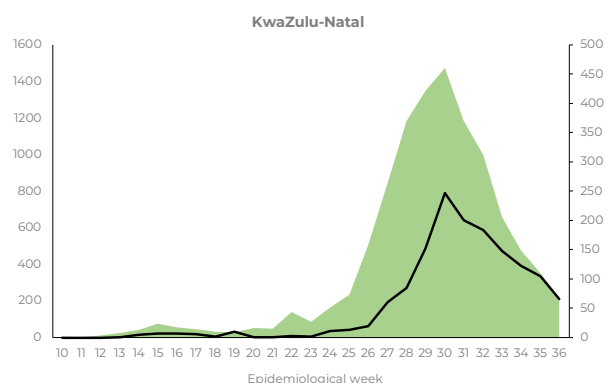
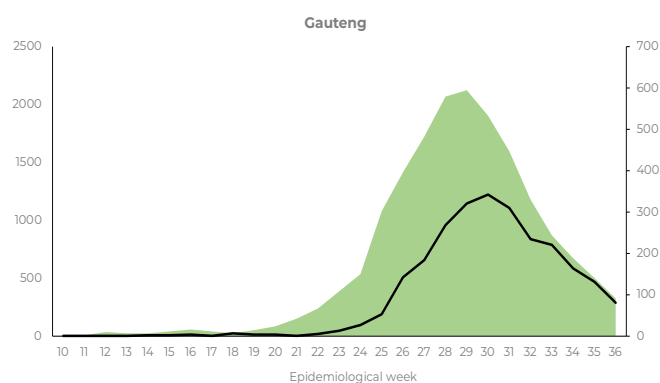
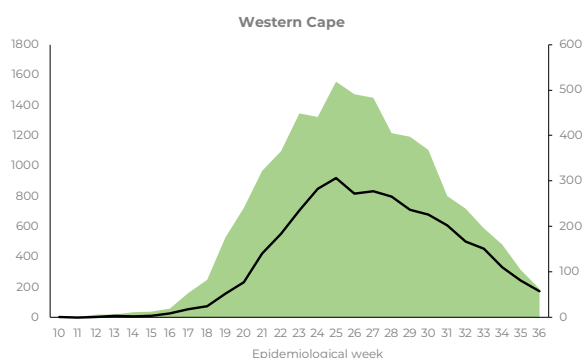
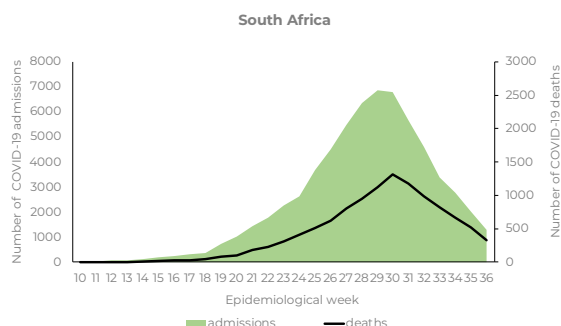
**Figure 5:** Number of COVID-19 deaths reported per week by health sector and epidemiologic week, South Africa, 5 March-5 September 2020,  $n=11\ 302$

Most deaths were reported in Western Cape (3 389, 30.0%), followed by Gauteng (2 523, 22.3%), Eastern Cape (2 260, 20.0%) and KwaZulu-Natal (1 474, 13.0%) (Figure 6).

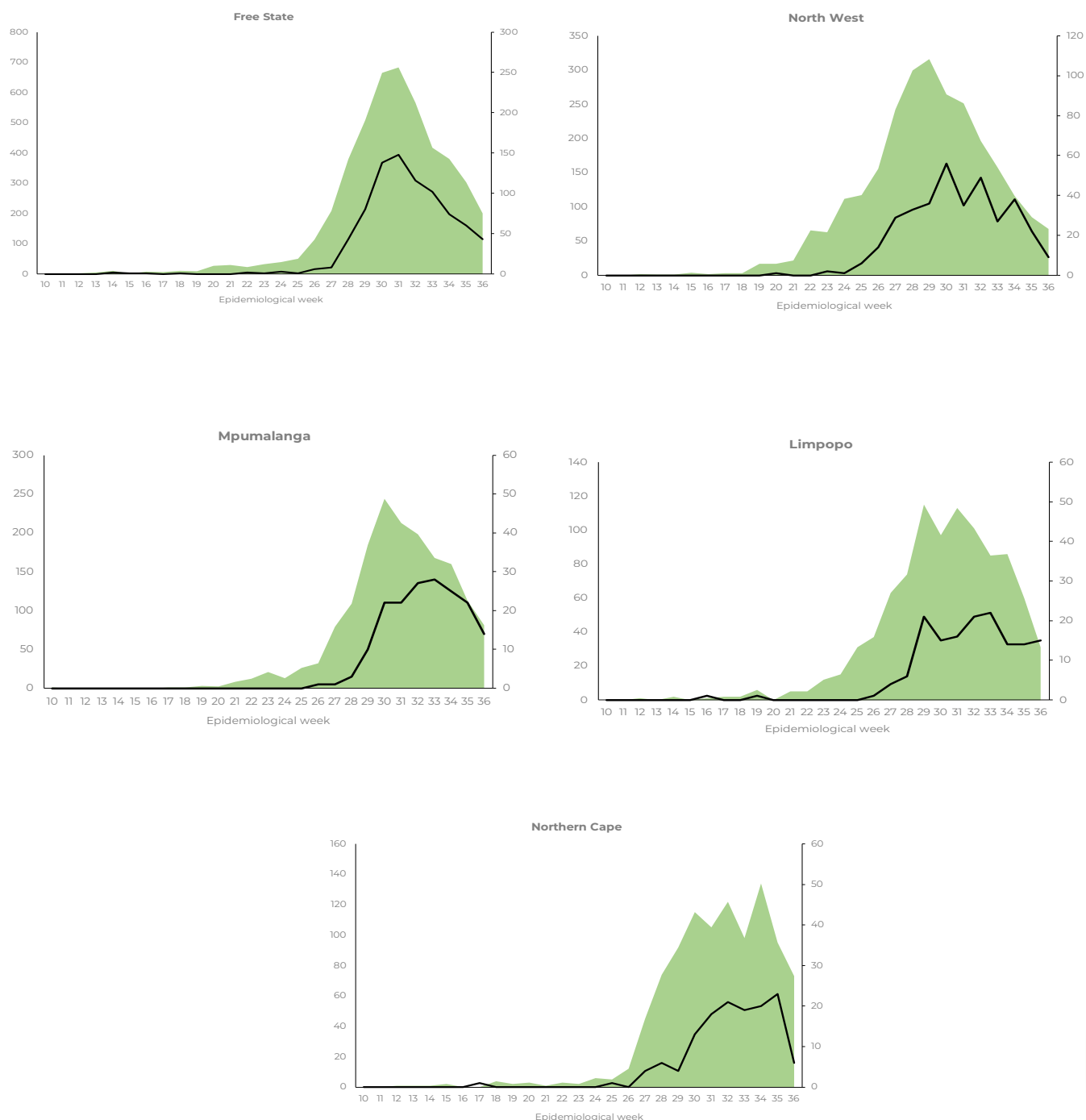


**Figure 6:** Cumulative of COVID-19 deaths reported per week by health sector and epidemiologic week, South Africa, 5 March-5 September 2020,  $n=11\ 302$

The panel of figures below demonstrate the numbers of reported COVID-19 admissions and deaths, per epidemiological week, across all provinces. It is evident that Western Cape experienced an earlier increase in admissions starting around week 19 and peaked in week 27; Gauteng, Eastern Cape and KwaZulu-Natal began the increase in week 23 and peaked in week 29; while the other provinces began the increase in weeks 24-26 and peaked in weeks 29-30.



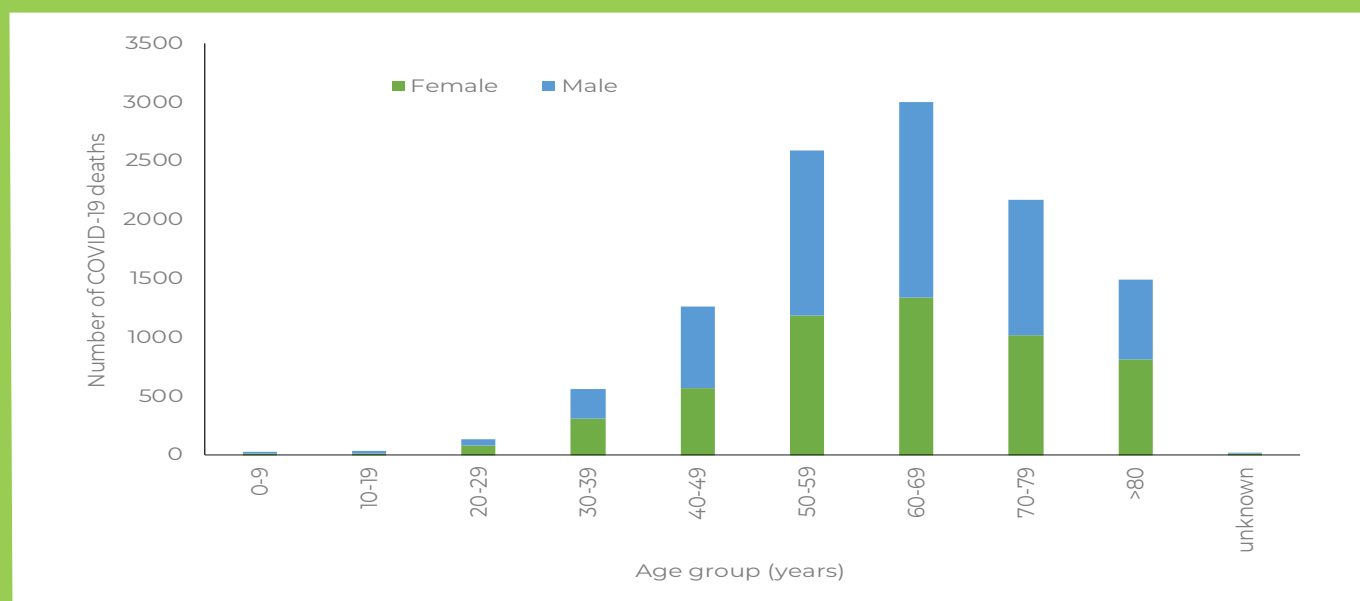




**Figure 7:** Panel of number of reported COVID-19 admissions and deaths, South Africa and individual provinces, 5 March-5 September 2020 020, n=11 302

## DEMOGRAPHIC CHARACTERISTICS OF DEATHS

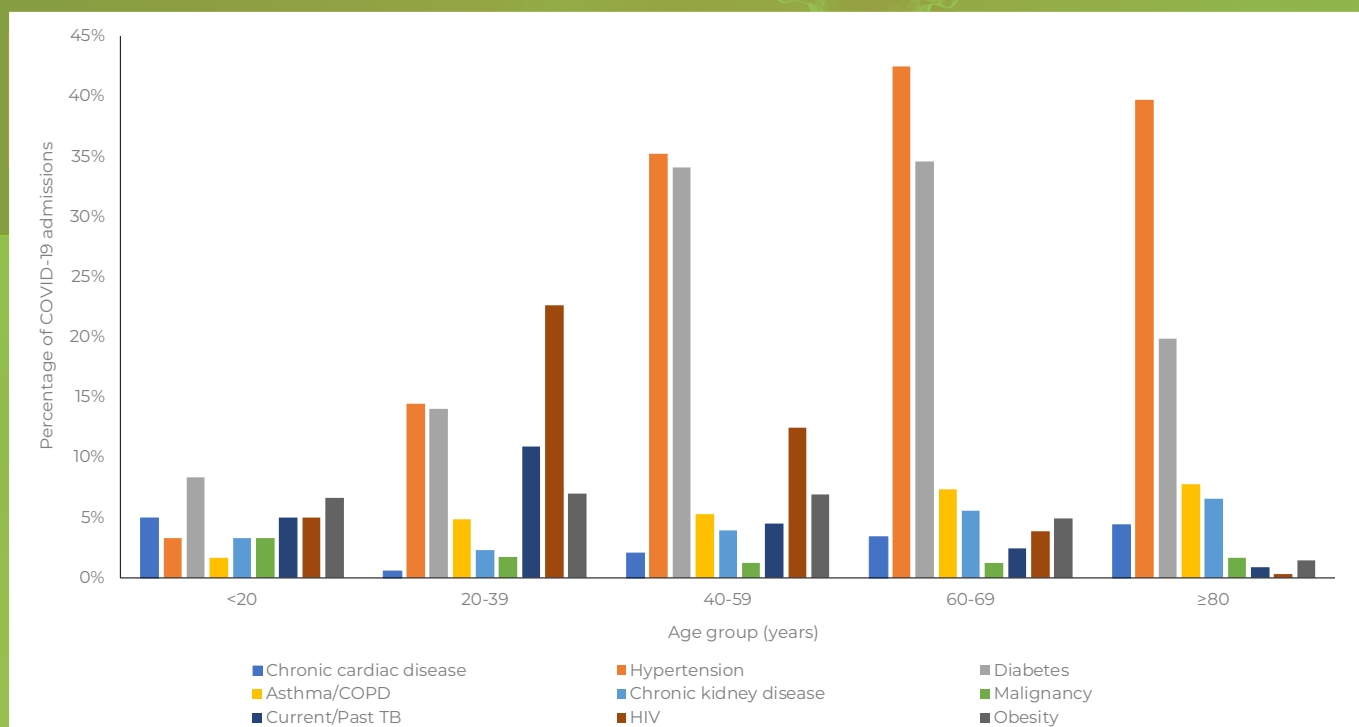
The median age of patients who died was 63 (IQR 53–73) years, and for those who were discharged alive was 50 (IQR 38–61) years. There were 56 (0.5%) deaths in children aged  $\leq 18$  years, most of these deaths in children with serious underlying comorbid conditions. There were 758 (6.7%) deaths in patients younger than 40 years (Figure 8). The CFR was higher in males (22.2%) than females (16.4%) ( $p < 0.001$ ).



**Figure 8:** Number of reported COVID-19 deaths by age and gender, South Africa, 5 March-5 September 2020,  $n=11\,302$

## COMMON COMORBIDITIES REPORTED AMONG DEATHS

In all age groups older than 40 years, hypertension and diabetes were most commonly reported comorbidities among patients who died. In patients between 20 and 60 years, HIV, tuberculosis and obesity were common (Figure 9).



**Figure 9:** Frequency of comorbid conditions for reported COVID-19 deaths by age group, South Africa, 5 March-5 September 2020, n=11 302

## FACTORS ASSOCIATED WITH IN-HOSPITAL MORTALITY

On multivariable analysis, factors associated with in-hospital mortality were older age groups; male sex; Black African, Coloured and Indian race; admission in the public sector; and having comorbid hypertension, diabetes, chronic cardiac disease, chronic renal disease, malignancy, HIV, current tuberculosis alone or both current and past tuberculosis, and obesity. Compared to the Western Cape province, individuals hospitalised in Eastern Cape, Free State, Gauteng, KwaZulu-Natal, Limpopo and North West provinces were more likely to die in-hospital (Table 3 and Figure 10).

**TABLE 3: UNIVARIATE AND MULTIVARIABLE ANALYSIS OF FACTORS ASSOCIATED WITH MORTALITY AMONG 48486**

INDIVIDUALS WITH IN-HOSPITAL OUTCOME (DISCHARGES AND DEATHS), SOUTH AFRICA, 5 MARCH-5 SEPTEMBER 2020

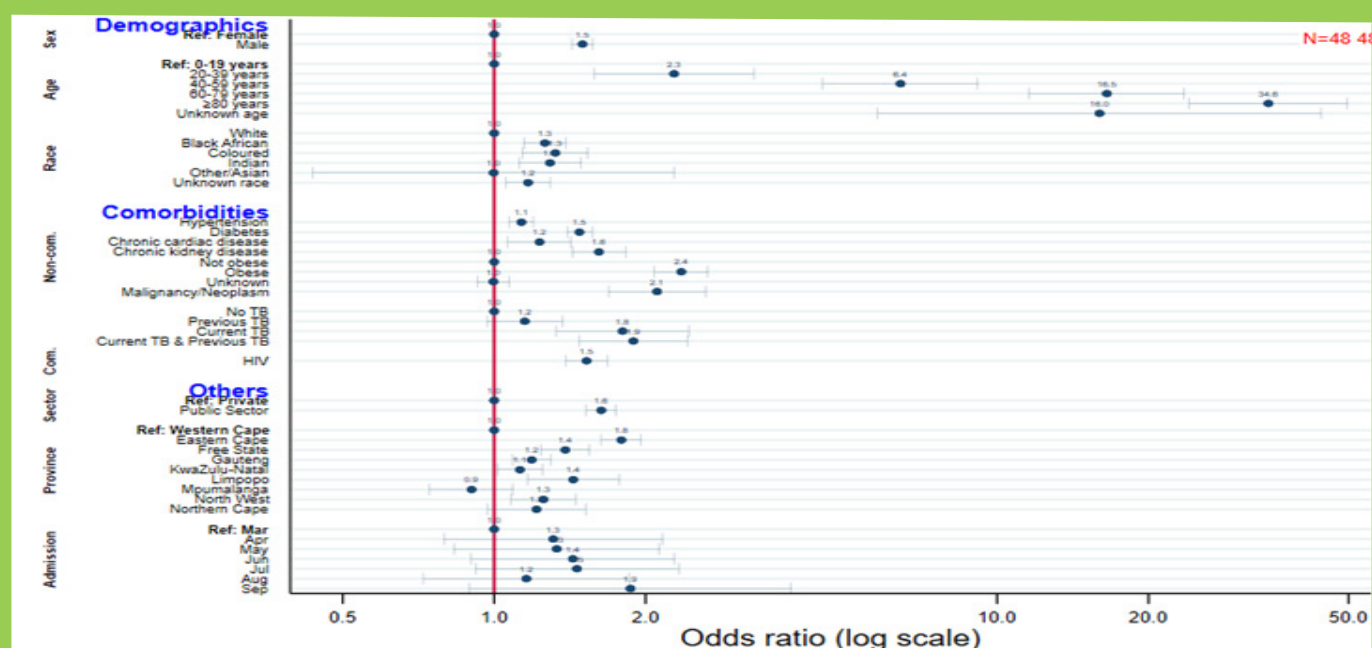
Characteristic	Case-fatality ratio n/N (%)	Unadjusted OR (95% CI)	p-value	Adjusted OR* (95% CI)	p-value
<b>Age group</b>					
<20 years	60/1 983 (3.0)	Reference		Reference	
20-39 years	698/12 314 (5.7)	1.9 (1.5-2.5)	<0.001	2.3 (1.6-3.3)	<0.001
40-59 years	3 853/25 414 (15.2)	5.7 (4.4-7.4)	<0.001	6.4 (4.5-9.2)	<0.001
60-79 years	5 176/16 091 (32.2)	15.2 (11.7-19.7)	<0.001	16.5 (11.6-23.6)	<0.001
≥80 years	1 494/3 465 (43.1)	24.3 (18.6-31.7)	<0.001	34.6 (24.1-49.7)	<0.001
Unknown age	21/50 (42.0)	23.2 (12.5-43.0)	<0.001	16.0 (5.8-44.1)	<0.001
<b>Sex</b>					
Female	5 359/32 589 (16.4)	Reference		Reference	
Male	5 943/26 727 (22.2)	1.5 (1.4-1.5)	<0.001	1.5 (1.4-1.6)	<0.001
<b>Race</b>					
White	860/4 228 (20.3)	Reference		Reference	
Black	6 189/33 275 (18.6)	0.9 (0.8-0.9)	0.006	1.3 (1.1-1.4)	<0.001
Coloured	565/2 904 (19.5)	0.9 (0.8-1.1)	0.359	1.3 (1.1-1.5)	<0.001
Indian	554/2 926 (18.9)	0.9 (0.8-1.0)	0.142	1.3 (1.1-1.5)	<0.001
Other	8/52 (15.4)	0.7 (0.3-1.5)	0.379	0.9 (0.4-2.3)	0.995
Unknown	3 126/15 932 (19.6)	1.0 (0.9-1.0)	0.296	1.2 (1.1-1.3)	0.002
<b>Healthcare worker</b>					
No	11 023/56 672 (19.5)	Reference			
Yes	279/2 645 (10.6)	0.5 (0.4-0.5)	<0.001		
<b>Peri-partum</b>					
No	943/13 063 (7.2)	Reference			
Yes	28/1 385 (2.0)	0.3 (0.2-0.4)	<0.001		
<b>Comorbid condition</b>					
No co-morbidity	3 792/25 488 (14.9)	Reference			
1 co-morbid condition	2 707/13 231 (20.5)	1.5 (1.4-1.6)	<0.001		
2 comorbid conditions	2 359/8 633 (27.3)	2.2 (2.0-2.3)	<0.001		
≥3 comorbid conditions	1 112/3 441 (32.3)	2.7 (2.5-3.0)	<0.001		
Unknown	1 332/8 524 (15.6)	1.1 (0.9-1.1)	<0.094		
<b>Hypertension</b>					
No	5 708/34 565 (16.4)	Reference		Reference	
Yes	4 256/16 172 (26.3)	1.8 (1.7-1.9)	<0.001	1.2 (1.1-1.2)	<0.001
<b>Diabetes mellitus</b>					
No	6 458/38 130 (16.9)	Reference		Reference	
Yes	3 507/12 609 (27.8)	1.9 (1.8-2.0)	<0.001	1.5 (1.4-1.6)	<0.001
<b>Chronic cardiac disease</b>					
No	9 632/49 697 (19.4)	Reference		Reference	
Yes	330/1 039 (31.8)	1.9 (1.7-2.2)	<0.001	1.2 (1.0-1.4)	0.005

Characteristic	Case-fatality ratio n/N (%)	Unadjusted OR (95% CI)	p-value	Adjusted OR* (95% CI)	p-value
<b>Chronic pulmonary disease/Asthma</b>					
No	9 224/47 450 (19.4)	Reference			
Yes	738/3 285 (22.5)	1.2 (1.1-1.3)	<0.001		
<b>Chronic renal disease</b>					
No	9 409/49 408 (19.0)	Reference		Reference	
Yes	554/1 328 (41.7)	3.0 (2.7-3.4)	<0.001	1.6 (1.4-1.8)	<0.001
<b>Malignancy</b>					
Yes	9 812/50 340 (19.5)	Reference		Reference	
No	151/396 (38.1)	2.5 (2.1-3.1)	<0.001	2.1 (1.7-2.6)	<0.001
<b>HIV</b>					
No	8 464/44 615 (19.0)	Reference		Reference	
Yes	847/3 924 (21.6)	1.2 (1.1-1.3)	<0.001	1.5 (1.4-1.7)	<0.001
<b>Tuberculosis</b>					
No	9568/49 183 (19.5)	Reference		Reference	
Previous	221/857 (25.8)	1.4 (1.2-1.7)	<0.001	1.2 (0.9-1.4)	0.113
Current	66/273 (24.2)	1.3 (0.9-1.7)	0.050	1.8 (1.3-2.4)	<0.001
Current and previous	107/422 (25.4)	1.4 (1.1-1.8)	0.002	1.9 (1.5-2.4)	<0.001
<b>Obesity</b>					
No	7 393/39 288 (18.8)	Reference		Reference	
Yes	598/1 564 (38.2)	2.7 (2.4-3.0)	<0.001	2.4 (2.1-2.7)	<0.001
Unknown	3 311/18 465 (17.9)	0.9 (0.9-0.9)	<0.001	1.0 (0.9-1.1)	0.554
<b>Month of admission</b>					
March	24/199 (12.1)	Reference		Reference	
April	172/1 039 (16.6)	1.4 (0.9-2.3)	0.113	1.3 (0.8-2.2)	0.290
May	956/5 141 (18.6)	1.7 (1.1-2.6)	0.021	1.3 (0.8-2.1)	0.234
June	2 859/14 252 (20.1)	1.8 (1.2-2.8)	0.006	1.4 (0.9-2.3)	0.130
July	5 363/26 988 (19.9)	1.8 (1.2-2.8)	0.007	1.5 (0.9-2.3)	0.110
August	1 903/11 547 (16.5)	1.4 (0.9-2.2)	0.097	1.2 (0.7-1.9)	0.540
September	25/151 (16.6)	1.4 (0.8-2.6)	0.232	1.9 (0.9-3.9)	0.097
<b>Health sector</b>					
Private sector	6 264/39 514 (15.9)	Reference		Reference	
Public sector	5 038/19 803 (25.4)	1.8 (1.7-1.9)	<0.001	1.6 (1.5-1.7)	<0.001
<b>Province</b>					
Western Cape	3 389/16 899 (20.1)	Reference		Reference	
Eastern Cape	2 260/8 072 (28.0)	1.6 (1.5-1.6)	<0.001	1.8 (1.6-2.0)	<0.001
Free State	832/4 048 (20.6)	1.0 (0.9-1.1)	0.477	1.4 (1.2-1.5)	<0.001
Gauteng	2 523/15 383 (16.4)	0.8 (0.7-0.8)	<0.001	1.2 (1.1-1.3)	<0.001
KwaZulu-Natal	1 474/9 412 (15.7)	0.7 (0.7-0.8)	<0.001	1.1 (1.0-1.2)	0.026
Limpopo	151/864 (17.5)	0.8 (0.7-1.0)	0.065	1.4 (1.2-1.8)	0.001
Mpumalanga	178/1 508 (11.8)	0.5 (0.5-0.6)	<0.001	0.9 (0.7-1.1)	0.289
North West	358/2 294 (15.6)	0.7 (0.7-0.8)	<0.001	1.3 (1.1-1.5)	0.003
Northern Cape	137/837 (16.4)	0.8 (0.6-0.9)	0.009	1.2 (0.9-1.5)	0.089



Characteristic	Case-fatality ratio n/N (%)	Unadjusted OR (95% CI)	p-value	Adjusted OR* (95% CI)	p-value
<b>Type of facility</b>					
National central	1124/4330 (26.0)	Reference			
Community Health	3/6 (50.0)	2.9 (0.6-14.2)	0.200		
District hospital	2 062/8 175 (25.2)	1.0 (0.8-1.0)	0.369		
Field hospital	59/788 (7.5)	0.2 (0.2-0.3)	<0.001		
Long-term facility	4/105 (3.8)	0.1 (0.0-0.3)	<0.001		
Military hospital	28/190 (14.7)	0.5 (0.3-0.7)	0.001		
Private general	6 262/39 521 (15.8)	0.5 (0.5-0.6)	<0.001		
Provincial tertiary	647/2 264 (28.6)	1.1 (1.0-1.3)	0.023		
Regional hospital	1 090/3 645 (29.9)	1.2 (1.1-1.3)	<0.001		
Specialised TB hospital	23/285 (8.1)	0.3 (0.2-0.4)	<0.001		
<b>Ever ICU</b>					
No	6 978/50 586 (13.8)	Reference			
Yes	4 324/8 731 (49.5)	6.1 (5.8-6.4)	<0.001		
<b>Ever High Care</b>					
No	9 850/53 634 (18.4)	Reference			
Yes	1 452/5 683 (25.6)	1.5 (1.4-1.6)	<0.001		
<b>Ever ventilated</b>					
No	8 704/55 519 (15.7)	Reference			
Yes	2 598/3 798 (68.4)	11.6 (10.8-12.5)	<0.001		
<b>Ever on oxygen</b>					
No	8 118/48 541 (16.7)	Reference			
Yes	3 184/10 776 (29.6)	2.1 (2.0-2.2)	<0.001		

\* MULTIVARIABLE MODEL EXCLUDED ALL INDIVIDUALS WITH UNKNOWN COMORBID CONDITIONS



**Figure 10:** Multivariable analysis of factors associated with mortality among 48 486 individuals with in-hospital outcome (discharges and deaths), South Africa, 5 March-5 September 2020

## DISCUSSION

DATCOV currently includes 64705 admissions from 438 public and private hospitals in all nine provinces in South Africa. It also includes 11302 deaths that have occurred to date.

The findings confirm factors associated with in-hospital mortality were older age groups; male sex; Black, Indian and Coloured race; and having comorbid hypertension, diabetes, chronic cardiac disease, chronic renal disease, malignancy, HIV, current tuberculosis alone or both current and previous tuberculosis, and obesity.

Increased risks for mortality have similarly been observed in non-white patients and in those from lower socio-economic groups (1)(2).

Trends in CFR over time and provincial differences may be affected by many factors such as hospital admission criteria, timeousness of closing cases, testing criteria in different provinces, and the severity of illness in admitted cases.

The availability of reliable surveillance data is of critical importance to gain a better understanding of the epidemiology of COVID-19 in South Africa, to monitor the COVID-19 epidemic and to respond with adequate control measures. It has been suggested that when local transmission is widespread and testing strategies change, hospital admission or mortality surveillance systems provide a more reliable picture of the epidemic progression than overall confirmed case numbers.

DATCOV provides real-time data and summary analyses, which inform modelling and reporting at a national level. It also addresses a knowledge gap, in the lack of data from low and middle income countries (LMIC), allowing for analysis of COVID-19 epidemiology in a country with a younger population, unique disease profile with epidemics of both infectious (HIV and tuberculosis) and non-communicable diseases, and an overburdened public health system.

## LIMITATIONS

DATCOV is a sentinel surveillance system and does not include all hospitals with COVID-19 admissions and therefore may not be truly representative of hospital admissions for COVID-19 throughout South Africa. 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.

In patients with non-communicable diseases, the current data collection platform is not able to distinguish between those that had pre-existing disease and those that were newly-diagnosed; and between those with well or poorly controlled disease. New variables are being introduced to allow for this analysis. For obesity, the platform currently only allows for capture of the subjective opinion of the attending HCW that the patient is obese. The platform will soon include fields to collect height and weight where available, to allow calculation of Body Mass Index (BMI).

Data on socioeconomic status are not collected. Data on treatment and medical interventions have not been analysed because the data were incomplete.

Efforts are ongoing to improve the quality and completeness of data on symptom of these data will be included in future reports.

## REFERENCES

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2. Pan D, Sze S, Minhas JS, Bangash MN, Pareek N, Divall P, et al. The impact of ethnicity on clinical outcomes in COVID-19: A systematic review. EClinicalMedicine. 2020;23

# ACKNOWLEDGEMENTS

Western Cape province: all public sector hospitals submitting data to DATCOV

Public hospitals using DATCOV surveillance online platform:

Eastern Cape	
Aberdeen Hospital	Adelaide Hospital
Aliwal North Hospital	All Saints Hospital
Andries Vosloo Hospital	Bambisana Hospital
Bedford Hospital	Bisho Hospital
Burgersdorp Hospital	Butterworth Hospital
Cala Hospital	Cathcart Hospital
Cecilia Makiwana Hospital	Cloete Joubert Hospital
Cofimvaba Hospital	Cradock Hospital
Dora Nginza Hospital	Dordrecht Hospital
Dr Malizo Mpehle Hospital	Elizabeth Donkin Hospital
Elliot Hospital	Empilisweni Hospital
Empilweni Hospital	Fort Beaufort Hospital
Fort England Hospital	Frere Hospital
Frontier Hospital	Glen Grey Hospital
Greenville Hospital	Grey Hospital
Hewu Hospital	Holy Cross Hospital
Humansdorp Hospital	Indwe Hospital
Isilimela Hospital	Jamestown Hospital
Kareedouw Hospital	Khotsong TB Hospital
Komani Hospital	Komga Hospital
Lade Grey Hospital	Livingstone Hospital
Maclear Hospital	Madwaleni Hospital
Madzikana ka Zulu Memorial Hospital	Midland Hospital
Mjanyana Hospital	Molteno Hospital
Mount Ayliff Hospital	Nelson Mandela Academic Hospital
Nkqubela Chest Hospital	Nompumelelo Hospital
Orsmond Hospital	Port Alfred Hospital
SS Gida Hospital	Rev Dr Elizabeth Mamisa Chabula-Nxiweni Field
Sawas Hospital	Settlers Hospital
Sipetu Hospital	St Barnabas Hospital
St Elizabeth Hospital	St Francis Hospital
St Patricks Hospital	Sterkstroom Hospital
Steynsburg Hospital	Stutterheim Hospital
Sundays Valley Hospital	Tafalofefe Hospital
Taylor Bequest Hospital (Matatiele)	Taylor Bequest Hospital (Mount Fletcher)
Tower Psychiatric Hospital	Uitenhage Hospital
Umlamli Hospital	Umtata General Hospital
Victoria Hospital	Wilhelm Stahl Hospital
Willowmore Hospital	Winterberg TB Hospital
Zithulele hospital	

# ACKNOWLEDGEMENTS

Free State	
3 Military Hospital,	Albert Nzula District Hospital
Boitumelo Hospital	Bongani Regional Hospital
Botshabelo Hospital	Diamant Hospital
Dihlabeng Hospital	Dr Js Moroka Hospital
Elizabeth Ross Hospital	Fezi Ngubentombi Provincial Hospital
Itemoheng Hospital	John Daniel Newsberry Hospital
Katleho Hospital	Manapo Hospital
Mohau Hospital	Nala Hospital
National District Hospital	Nketoana District Hospital
Parys Hospital	Pelonomie Hospital
Phekolong Hospital	Phumelela Hospital
Senorita Ntlabathi Hospital	Stoffel Coetzee Hospital
Thebe Hospital	Thusanong Hospital
Universitas Hospital	Winburg Hospital
House Idahlia Critical Care Surge Facility	
Gauteng	
Charlotte Maxeke Hospital	Chris Hani Baragwanath Hospital
Helen Joseph Hospital	Leratong Hospital
Steve Biko Academic Hospital	Tambo Memorial Hospital
KwaZulu-Natal	
Addington Hospital	Edendale Hospital
General Justice Gizenga Mpanza Hospital	Grey's Hospital
Inkosi Albert Luthuli Central Hospital	King Edward VIII Hospital
Ladysmith Hospital	Manguzi Hospital
Limpopo	
Kgapane Hospital	Polokwane Hospital
Siloam Hospital	
Mpumalanga	
Barberton Hospital	Belfast Hospital
Bethal Hospital	Carolina Hospital
Lydenburg Hospital	Mapulaneng Hospital
Matibidi Hospital	Matikwana Hospital
Middelburg Hospital	Rob Ferreira Hospital
Sabie Hospital	Shongwe Hospital
Barberton TB Specialised Hospital	Themba Hospital
Tonga Hospital	Waterval-Boven Hospital
North West	
Job Shimankana Tabane Hospital	Tshepong Hospital
Northern Cape	
Robert Mangaliso Sobukwe Hospital	
Western Cape	
Tygerberg Hospital	

# COVID-19 SENTINEL HOSPITAL SURVEILLANCE UPDATE

WEEK 36 2020

## ACKNOWLEDGEMENTS

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)

Private hospitals using DATCOV surveillance online platforms

Eastern Cape	
Aurura Hospital	Aurura Rehabilitation Hospital
Care Cure Queenstown	Matatiele Private Hospital
Nurture Queenstown	Nurture Sunnyside
Free State	
Busamed Bram Fischer Airport Hospital	Busamed Harrismith Private Hospital
Cairnhall Hospital	Corona Sub-Acute Hospital
Emoyamed Private Hospital	Hillandale Health Care centre
Nurture Woodlands	Riemland Clinic
St Helena GM Hospital	
Gauteng	
Arwyp Medical Centre	Busamed Modderfontein Private Hospital
Botshilu Private Hospital	Louis Pasteur Private Hospital
Lynnmed Clinic	Midvaal Private Hospital
Nurture Rynmed	Nurture Vereeniging
Pretoria Urology Hospital	RH Rand Hospital
Sunshine Hospital	Zuid Afrikaans Hospital
KwaZulu-Natal	
Aba Qulusi Private Hospital	Ahmed Al-Kadi Private Hospital
Busamed Gateway Private Hospital	Busamed Hillcrest Private Hospital
Capital hospital	Hibiscus Cato Ridge Hospital
Hibiscus Private Hospital	KwaDukuza Private Hospital
Midlands Medical Centre Private Hospital	Nurture Ilembe
	Shelly Beach Private Hospital



# COVID-19 SENTINEL HOSPITAL SURVEILLANCE UPDATE

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## ACKNOWLEDGEMENTS

Limpopo	
Zoutpansberg Private Hospital	
Mpumalanga	
Kiaat Private Hospital	RH Piet Retief Hospital
North West	
Medicare Private Hospital	Mooimed Private Hospital
Sunningdale Hospital	Vryburg private hospital
Wilmed Park Private Hospital	
Northern Cape	
Lenmed Royal Hospital and Heart Centre	
Western Cape	
Busamed - Paardevlei private hospital	Nurture Cape View
Nurture Newlands	

# COVID-19 SENTINEL HOSPITAL SURVEILLANCE UPDATE

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## APPENDIX

**TABLE 4:** NUMBER OF REPORTED COVID-19 ADMISSIONS AND DEATHS BY AGE AND GENDER, SOUTH AFRICA, 5 MARCH-5 SEPTEMBER 2020

Age (years)	ADMISSIONS				DEATHS			
	Female	Male	Unknown	Total	Female	Male	Unknown	Total
0-4	379	487	0	866	12	11	0	23
5-9	97	135	0	232	0	4	0	4
10-14	163	159	0	322	4	7	0	11
15-19	498	255	1	754	8	14	0	22
20-24	876	434	0	1310	18	22	0	40
25-29	1 878	715	0	2 593	63	31	0	94
30-34	2 748	1 453	0	4 201	124	74	0	198
35-39	3 177	2 111	0	5 288	190	176	0	366
40-44	3 051	2 519	0	5 570	235	280	0	515
45-49	3 450	3 151	1	6 602	333	417	0	750
50-54	3 976	3 616	0	7 592	488	565	0	1 053
55-59	3 956	3 834	0	7 790	698	837	0	1 535
60-64	3 162	3 215	0	6 377	675	922	0	1 597
65-69	2 446	2 334	0	4 780	668	741	0	1 409
70-74	1 881	1 862	0	3 743	531	641	0	1 172
75-79	1 485	1 321	0	2 806	487	511	0	998
80-84	1 121	843	1	1 965	371	342	0	713
85-89	707	467	0	1 174	270	221	0	491
90-94	335	198	0	533	139	104	0	243
>95	71	33	0	104	35	12	0	47
Unknown	51	50	2	103	10	11	0	21
	35 508	29 192	5	64 705	5 359	5 943	0	11 302