

COVID-19 SENTINEL HOSPITAL SURVEILLANCE UPDATE

SOUTH AFRICA WEEK 38 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 19 September 2020

HIGHLIGHTS

- As of 19 September, 70 592 COVID-19 admissions were reported from 513 facilities (269 public-sector and 244 private-sector) in all nine provinces of South Africa. There was an increase of 5 887 admissions reported since the last report, and 75 additional public hospitals reporting COVID-19 admissions. There were 25 717 (36%) and 44 875 (64%) admissions reported in public and private sector respectively. The majority of COVID-19 admissions were reported from four provinces, 18 238 (26%) in Western Cape, 17 930 (25%) in Gauteng, 11 306 (16%) in KwaZulu-Natal and 10 169 (14%) in Eastern Cape. Admissions peaked in week 29 and 30.
- Of the 70 592 admissions, 4 198 (6%) patients were in hospital at the time of this report, 53 779 (76%) patients were discharged alive or transferred out and 12 615 (18%) patients had died. There were 13 13 additional deaths since the last report.
- Of the 65 373 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 19 September 2020, a total of 513 facilities, 269 from public sector and 244 from private sector, submitted data on hospitalised COVID-19 cases (Table 1). There were 75 additional public hospitals reporting COVID-19 admissions since the last report

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

Facilities reporting	Public	Private
Eastern Cape	80	17
Free State	33	20
Gauteng	6	88
KwaZulu-Natal	25	45
Limpopo	31	6
Mpumalanga	24	9
North West	9	12
Northern Cape	5	7
Western Cape	56	40
South Africa	269	244

RESULTS

Epidemiological and geographic trends in admissions

From 5 March to 19 September, a total of 70 592 COVID-19 admissions (5 887 additional from last report) were reported from 513 facilities in all nine provinces of South Africa. Of these admissions, 25 717 (36.4%) and 44 875 (63.6%) 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 since the peak in weeks 29 and 30 (Figure 1).

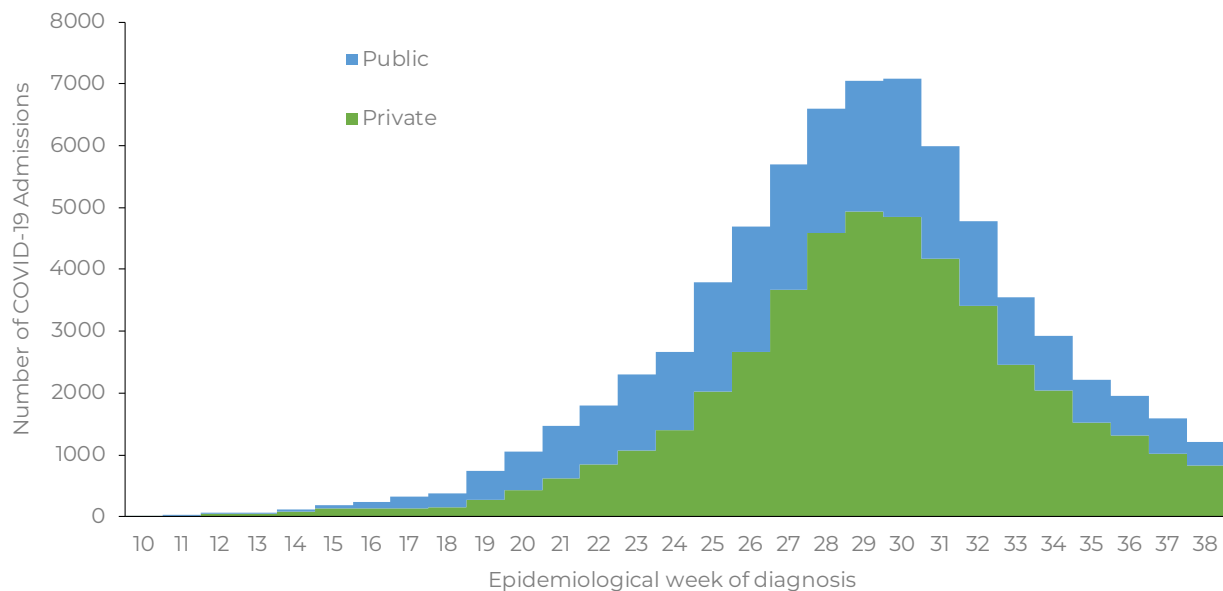


Figure 1: Number of reported COVID-19 admissions by health sector and epidemiologic week of diagnosis, 5 March-19 September 2020, n=70 592

The majority of admissions (57 643/70 592, 81.7%) were recorded in four provinces, with the highest number reported in Western Cape (18 238, 25.8%), followed by Gauteng (17 930, 25.4%), KwaZulu-Natal (11 306, 16.0%) and Eastern Cape (10 169, 14.4%) provinces (Figure 2).

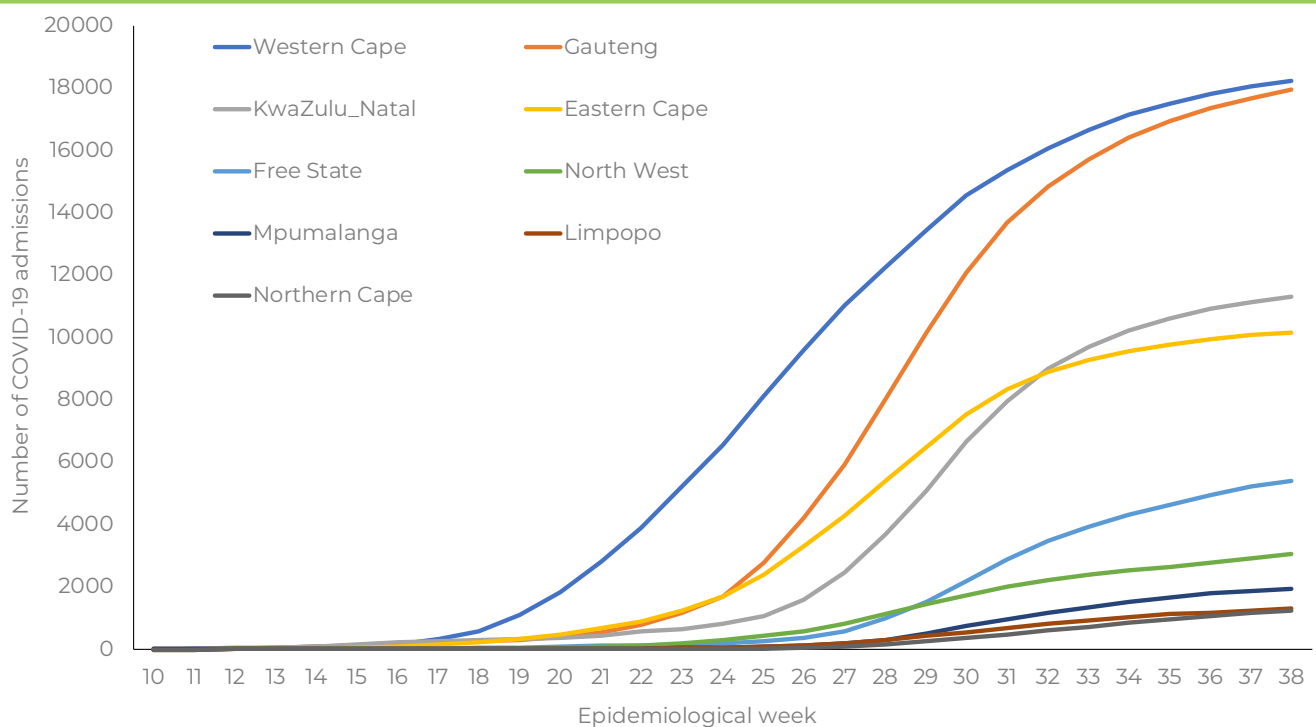


Figure 2: Cumulative numbers of reported COVID-19 admissions, by province and epidemiological week of diagnosis, South Africa, 5 March-19 September 2020, n=70 592

Most patients admitted in the public sector, were admitted to district hospitals (10 227, 39.9%), regional hospitals (5 289, 20.7%), national central hospitals (5 042, 19.7%), and provincial tertiary hospitals (3 319, 13.0%) (Figure 3).



Figure 3: Cumulative numbers of reported COVID-19 admissions, by facility type in public sector, South Africa, 5 March-19 September 2020, n=25 611

DEMOGRAPHIC AND CLINICAL CHARACTERISTICS OF COVID-19 ADMISSIONS

The median age of COVID-19 admissions was 52 years (interquartile range [IQR] 40 – 64). There were 2 247 (3.2%) admissions in patients 18 years and younger and 11 262 (16.0%) in patients older than 70 years. Among admitted individuals with COVID-19, 38 876 (55.1%) were female. Females were more common than males in all age groups except in individuals younger than 10 years (Figure 4).

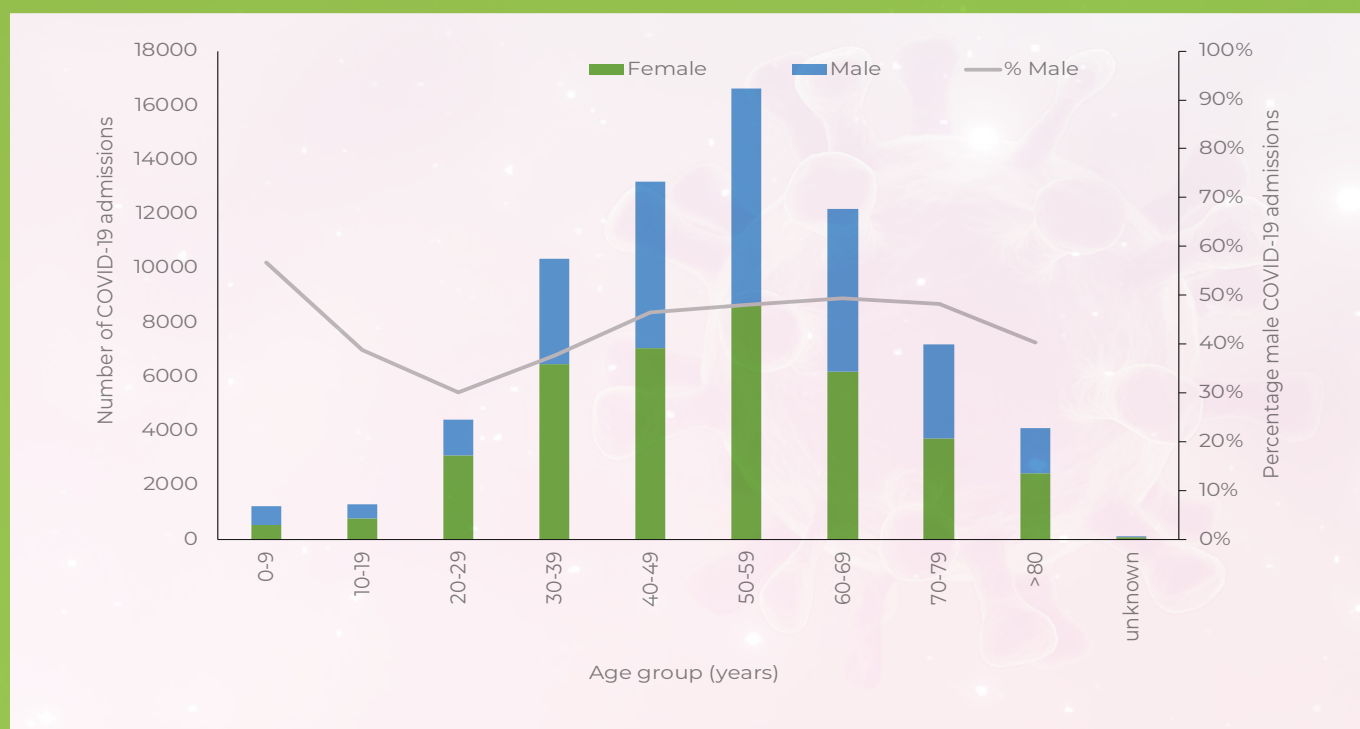


Figure 4: Number of reported COVID-19 admissions by age, gender and percentage of males, South Africa, 5 March-19 September 2020, n=70 592

Of the 51 465 (72.9%) patients for whom race was known, 39 786 (77.3%) were Black African, 3 371 (6.6%) were Coloured, 3 317 (6.5%) were Indian, 4 901 (9.5%) were White and 90 (0.2%) were classified as Other race group. There were 3036 (4.3%) health care workers (HCW) that were reported to be hospitalised. Among the 17 159 admissions in females of child-bearing age 15-50 years, there were 1 497 (8.7%) females admitted who were pregnant or within 6 weeks post-partum.

Among 60 092 (85.1%) patients for whom comorbid conditions were known, 32 185 (53.6%) had no comorbid condition reported, 14 871 (24.8%) had one comorbid condition reported, 9 339 (15.5%) had two comorbid conditions and 3 697 (6.2%) had three or more comorbid conditions reported. The most commonly reported comorbidities were hypertension (17 485, 29.1%) and diabetes (13 545, 22.5%); there were 4 779 (8.0%) patients who were HIV-infected, 792 (1.3%) patients with active tuberculosis (TB) and 1 433 (2.4%) patients with previous history of TB (Table 2). Obesity, defined by body mass index where available or 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 2224 (3.2%) of all patients hospitalised.

Table 2: Reported comorbid conditions among COVID-19 admissions with available data, South Africa, 5 March-19 September 2020, n=60 092*

Comorbid disease**	n	%
Hypertension	17 485	29.1
Diabetes mellitus	13 545	22.5
Chronic cardiac disease	1 099	1.8
Chronic pulmonary disease/ Asthma	3 544	5.9
Chronic renal disease	1 410	2.3
Malignancy	430	0.7
HIV	4 779	8.0
Active tuberculosis	792	1.3
Previous history of tuberculosis	1 433	2.4

* 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 70 592 admitted individuals, 4 198 (6.0%) were currently in hospital, 52 758 (74.7%) were discharged alive, 1 021 (1.5%) were transferred out to either higher level care or step-down facilities, 12 615 (17.9%) had died in hospital. There were 1 313 additional deaths since the last report. Of the 65 373 COVID-19 patients who had recorded in-hospital outcome (died and discharged), the case fatality ratio (CFR) was 19.3%.

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 29 again most deaths were reported in the private sector. The CFR was higher in the public health sector (25.9%) than in the private health sector (15.7%) ($p < 0.001$). There has been a decrease in reported COVID-19 deaths since week 30 (Figure 5).

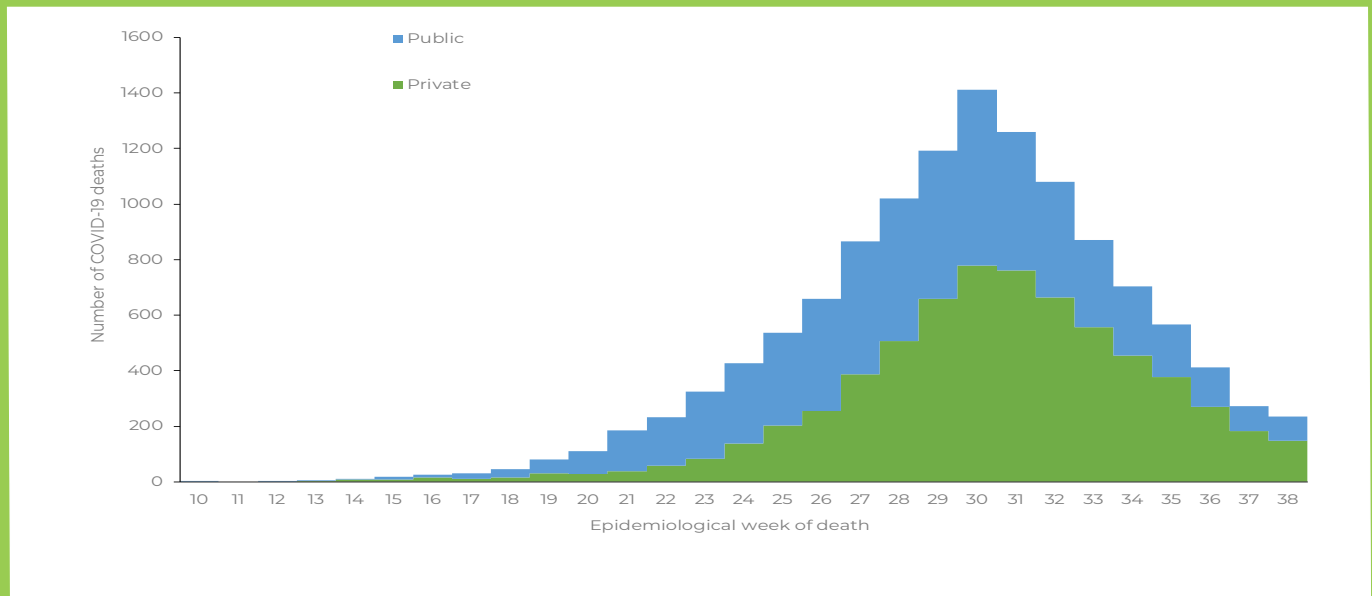


Figure 5: Number of COVID-19 deaths reported per week by health sector and epidemiologic week, South Africa, 5 March-19 September 2020, $n=12\ 615$

Most deaths were reported in Western Cape (3 500, 27.7%), followed by Eastern Cape (2 767, 21.9%) Gauteng (2 676, 21.2%), and KwaZulu-Natal (1 662, 13.2%) (Figure 6).

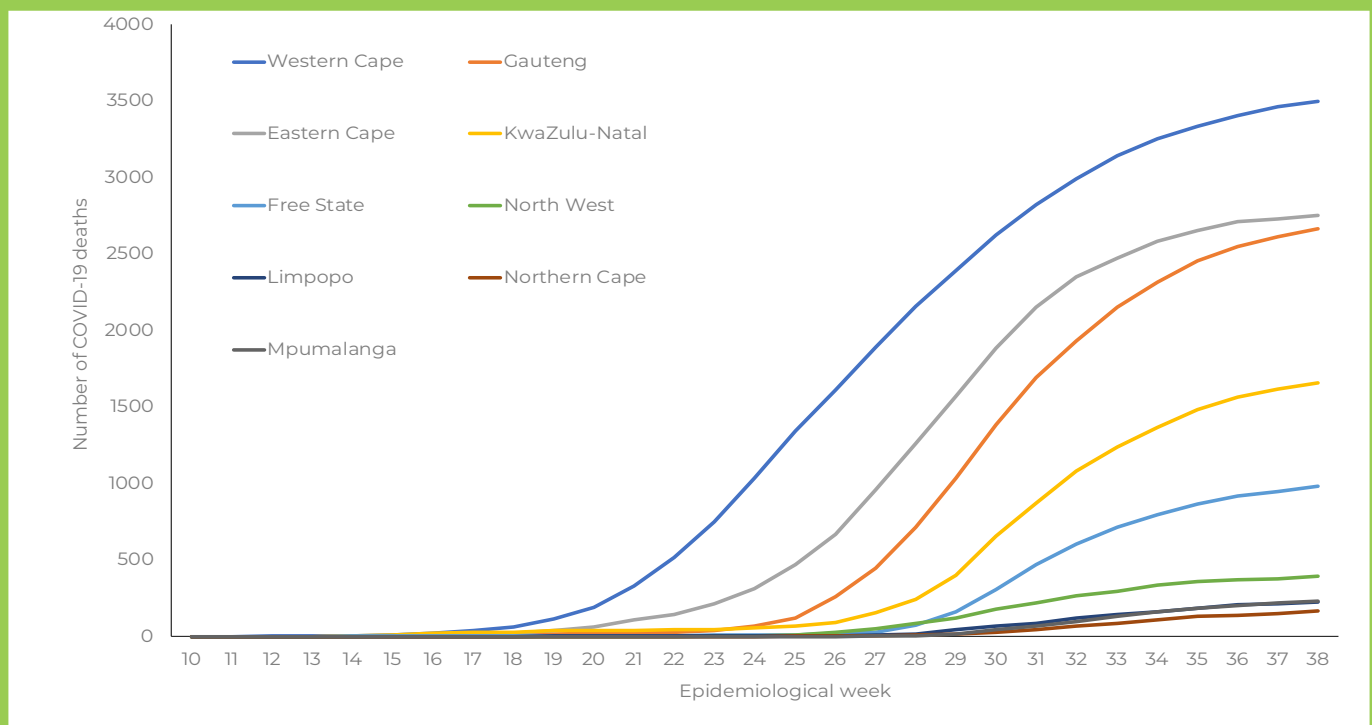
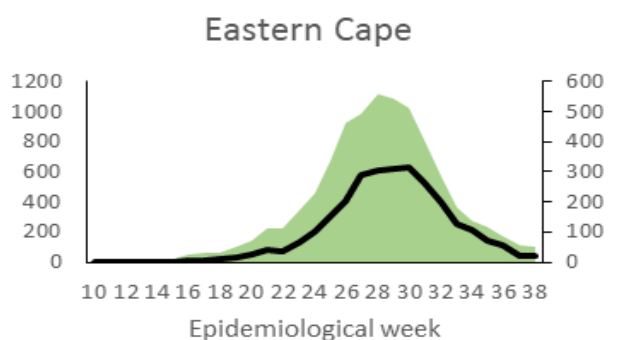
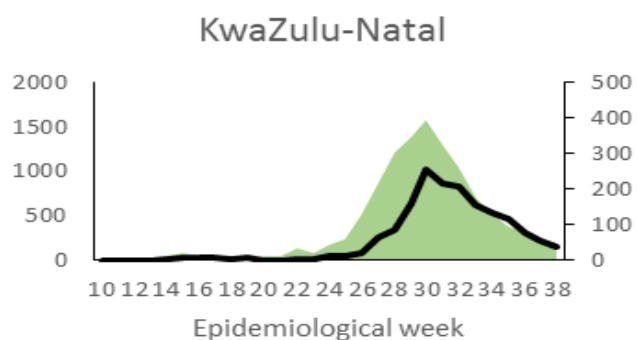
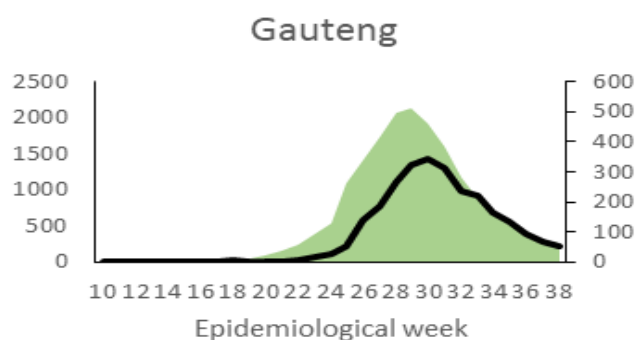
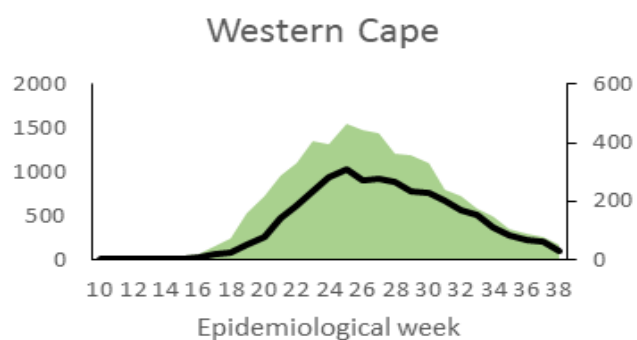
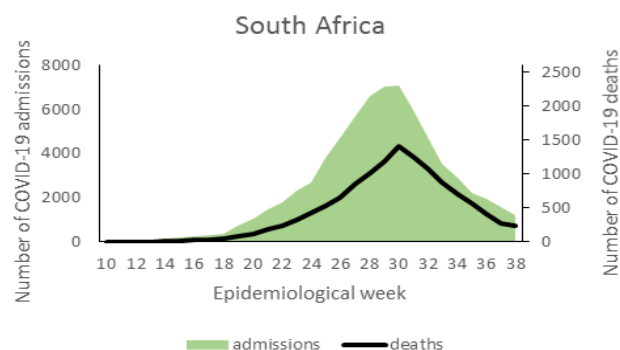


Figure 6: Cumulative numbers of reported COVID-19 deaths, by province and epidemiological week of death, South Africa, 5 March-19 September 2020, $n=12\ 615$

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 29-32.



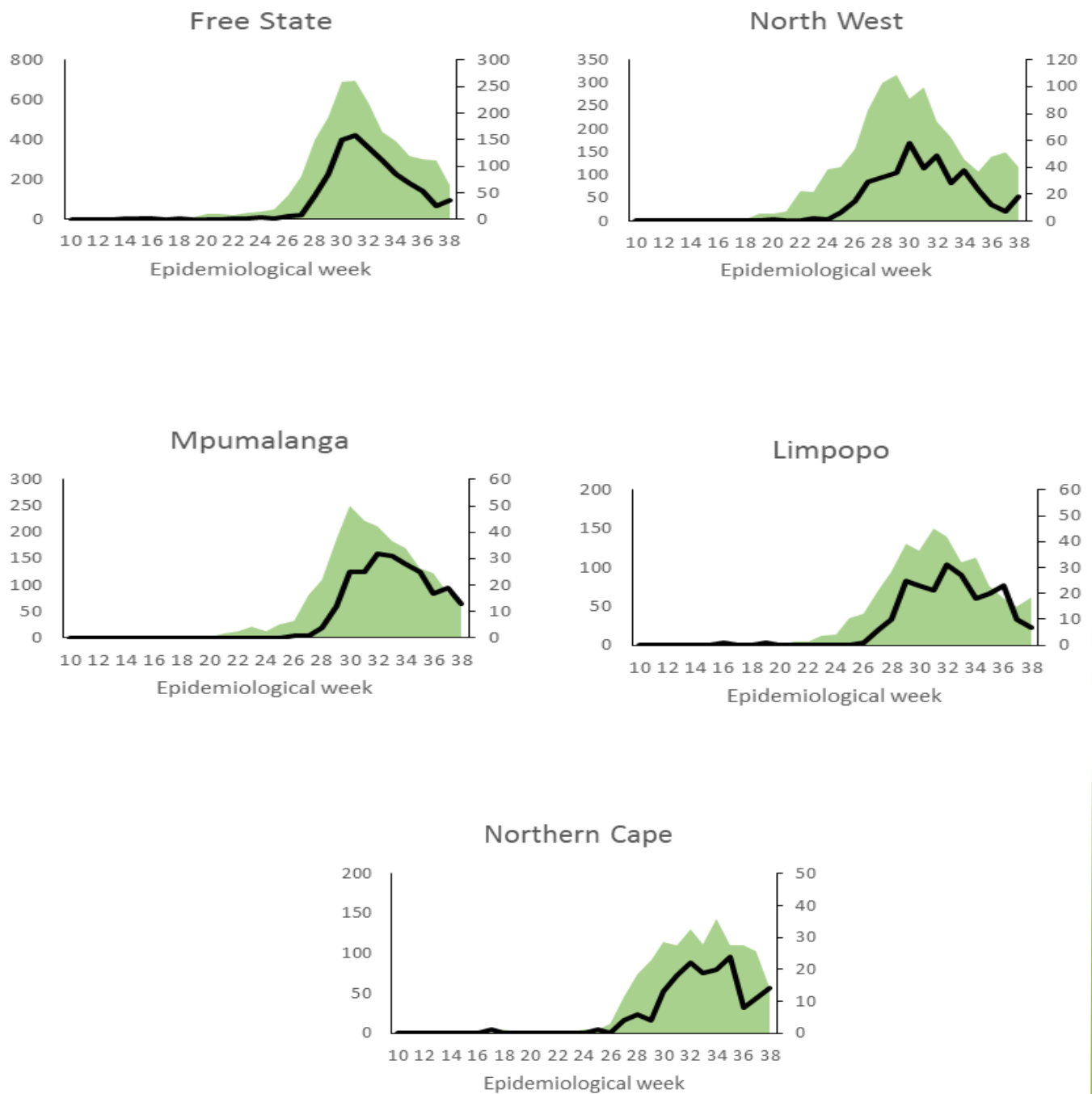


Figure 7: Panel number of reported COVID-19 admissions and deaths, South Africa and individual provinces, 5 March-19 September 2020

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 67 (0.5%) deaths in children aged ≤ 18 years, most of these deaths in children with serious underlying comorbid conditions. There were 859 (6.8%) deaths in patients younger than 40 years (Figure 8). The CFR was higher in males (22.3%) than females (16.8%) ($p < 0.001$).

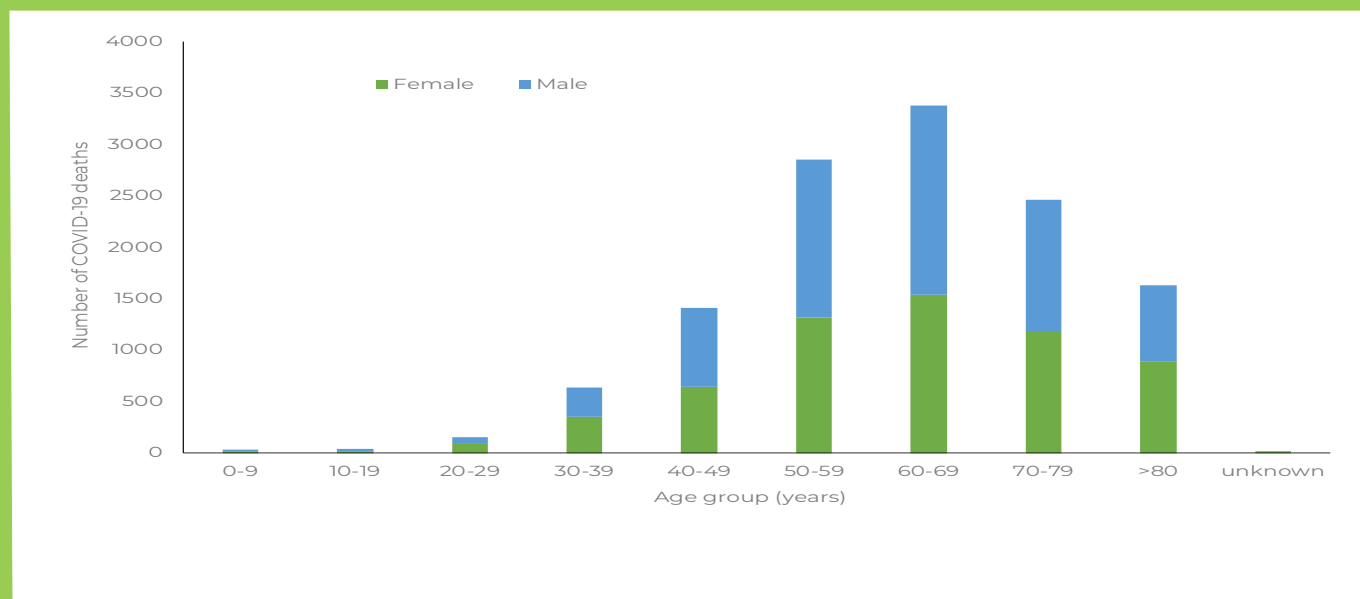


Figure 8: Number of reported COVID-19 deaths by age and gender, South Africa, 5 March-19 September 2020, $n=12\ 615$

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 commonly reported (Figure 9).

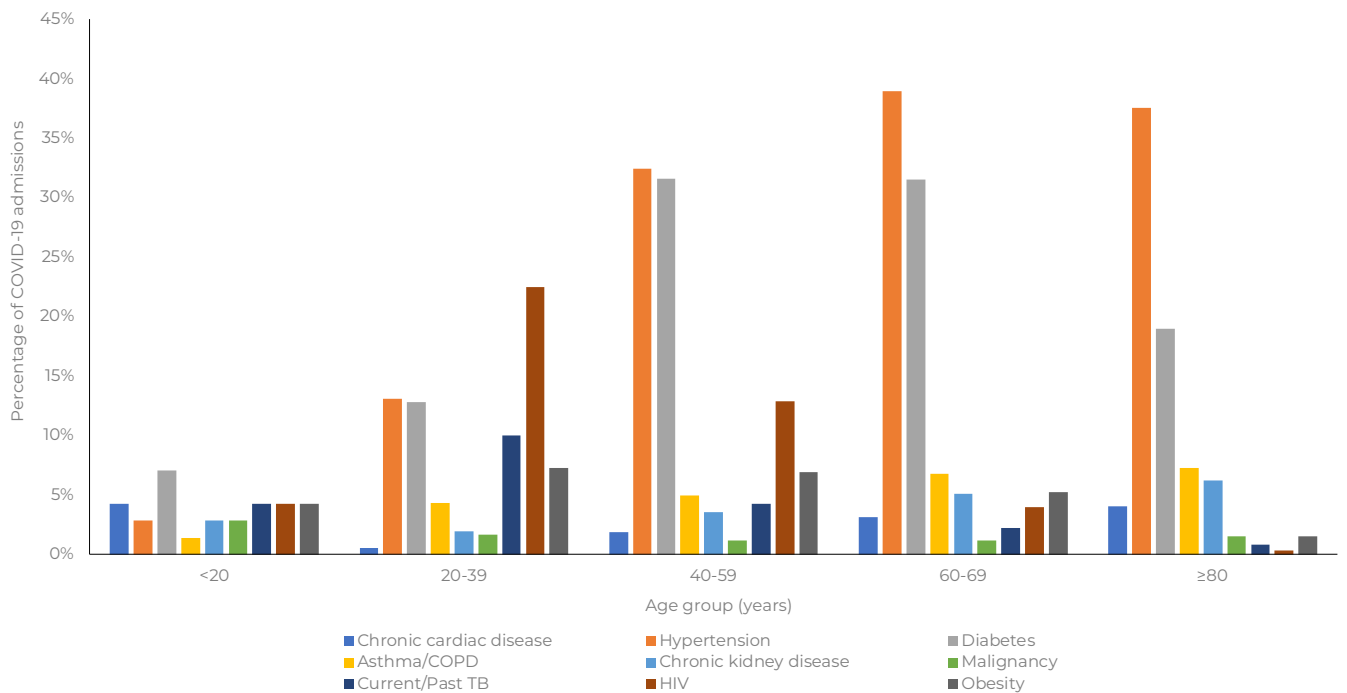


Figure 9: Frequency of comorbid conditions for reported COVID-19 deaths by age group, South Africa, 5 March-19 September 2020, n=12 615

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 52 359

INDIVIDUALS WITH IN-HOSPITAL OUTCOME (DISCHARGES AND DEATHS), SOUTH AFRICA, 5 MARCH-19 SEPTEMBER 2020

Characteristic	Case-fatality ratio n/N (%)	Unadjusted OR (95% CI)	p-value	Adjusted OR* (95% CI)	p-value
Age group					
<20 years	71/2 228 (3.2)	Reference		Reference	
20-39 years	788/13 601 (5.8)	1.9 (1.5-2.4)	<0.001	2.3 (1.6-3.3)	<0.001
40-59 years	4 263/27 767 (15.4)	5.5 (4.3-7.0)	<0.001	6.4 (4.5-9.2)	<0.001
60-79 years	5 842/17 898 (32.6)	14.7 (11.6-18.7)	<0.001	16.5 (11.6-23.6)	<0.001
≥80 years	1 629/3 806 (42.8)	22.7 (17.8-29.0)	<0.001	34.6 (24.1-49.7)	<0.001
Unknown age	22/73 (30.1)	13.1 (7.5-22.8)	<0.001	16.0 (5.8-44.1)	<0.001
Sex					
Female	6 051/35 964 (16.8)	Reference		Reference	
Male	6 564/29 405 (22.3)	1.4 (1.4-1.5)	<0.001	1.5 (1.4-1.6)	<0.001
Race					
White	934/4 608 (20.3)	Reference		Reference	
Black	7 069/36 718 (19.3)	0.9 (0.8-1.0)	0.100	1.3 (1.1-1.4)	<0.001
Coloured	615/3 121 (19.7)	0.9 (0.8-1.1)	0.543	1.3 (1.1-1.5)	<0.001
Indian	609/3 145 (19.4)	0.9 (0.8-1.1)	0.327	1.3 (1.1-1.5)	<0.001
Other	13/73 (17.8)	0.9 (0.5-1.6)	0.604	0.9 (0.4-2.3)	0.995
Unknown	3 375/17 708 (19.1)	0.9 (0.8-1.0)	0.064	1.2 (1.1-1.3)	0.002
Healthcare worker					
No	12 285/62 461 (19.7)	Reference			
Yes	330/2 912 (11.3)	0.5 (0.4-0.6)	<0.001		
Peri-partum					
No	1 070/14 415 (7.4)	Reference			
Yes	29/1 462 (2.0)	0.3 (0.2-0.4)	<0.001		
Comorbid condition					
No co-morbidity	4 731/29 597 (16.0)	Reference			
1 co-morbid condition	2 891/14 107 (20.5)	1.4 (1.3-1.4)	<0.001		
2 comorbid conditions	2 417/8 964 (27.0)	1.9 (1.8-2.1)	<0.001		
≥3 comorbid conditions	1 145/3 558 (32.2)	2.5 (2.3-2.7)	<0.001		
Unknown	1 431/9 147 (15.6)	1.0 (0.9-1.0)	0.437		
Hypertension					
No	6 797/39 355 (17.3)	Reference		Reference	
Yes	4 378/16 809 (26.1)	1.7 (1.6-1.8)	<0.001	1.2 (1.1-1.2)	<0.001
Diabetes mellitus					
No	7 572/43 070 (17.6)	Reference		Reference	
Yes	3 604/13 096 (27.5)	1.8 (1.7-1.9)	<0.001	1.5 (1.4-1.6)	<0.001
Chronic cardiac disease					
No	10 838/55 102 (19.7)	Reference		Reference	
Yes	335/1 061 (31.6)	1.9 (1.7-2.1)	<0.001	1.2 (1.1-1.4)	0.005

Characteristic	Case-fatality ratio n/N (%)	Unadjusted OR (95% CI)	p-value	Adjusted OR* (95% CI)	p-value
Chronic pulmonary disease/Asthma					
No	10 416/52 741 (19.8)	Reference			
Yes	757/3 421 (22.1)	1.2 (1.1-1.3)	<0.001		
Chronic renal disease					
No	10 608/54 802 (19.4)	Reference		Reference	
Yes	566/1 361 (41.6)	3.0 (2.7-3.3)	<0.001	1.6 (1.4-1.8)	<0.001
Malignancy					
Yes	1 101/755 757 (19.8)	Reference		Reference	
No	157/406 (38.7)	2.6 (2.1-3.1)	<0.001	2.1 (1.7-2.6)	<0.001
HIV					
No	9 025/46 068 (18.8)	Reference		Reference	
Yes	967/4 353 (22.2)	1.2 (1.1-1.3)	<0.001	1.5 (1.4-1.7)	<0.001
Tuberculosis					
No	10 766/54 528 (19.7)	Reference		Reference	
Previous	226/895 (25.3)	1.4 (1.2-1.6)	<0.001	1.2 (0.9-1.4)	0.113
Current	67/284 (23.6)	1.3 (0.9-1.7)	0.105	1.8 (1.3-2.4)	<0.001
Current and previous	114/455 (25.1)	1.4 (1.1-1.7)	0.005	1.9 (1.5-2.4)	<0.001
Obesity					
No	7 581/39 971 (19.0)	Reference		Reference	
Yes	685/1 893 (36.2)	2.4 (2.2-2.7)	<0.001	2.4 (2.1-2.7)	<0.001
Unknown	4 349/23 509 (18.5)	1.0 (0.9-1.0)	<0.146	1.0 (0.9-1.1)	0.923
Month of admission					
March	23/198 (11.6)	Reference		Reference	
April	177/1 053 (16.8)	1.5 (0.9-2.4)	0.069	1.3 (0.8-2.2)	0.290
May	989/5 215 (19.0)	1.8 (1.1-2.8)	0.010	1.3 (0.8-2.1)	0.234
June	2 991/14 815 (20.2)	1.9 (1.2-3.0)	0.003	1.4 (0.9-2.3)	0.130
July	5 776/28 229 (20.5)	2.0 (1.3-3.0)	0.003	1.5 (0.9-2.3)	0.110
August	2 317/13 361 (17.3)	1.6 (1.0-2.5)	0.036	1.2 (0.7-1.9)	0.540
September	242/2 502 (13.7)	1.2 (0.8-1.9)	0.417	1.9 (0.9-3.9)	0.097
Health sector					
Private sector	6 659/4 2412 (15.7)	Reference		Reference	
Public sector	5 956/22 961 (25.9)	1.9 (1.8-2.0)	<0.001	1.6 (1.5-1.7)	<0.001
Province					
Western Cape	3 500/17 579 (19.9)	Reference		Reference	
Eastern Cape	2 767/9 407 (29.4)	1.7 (1.6-1.8)	<0.001	1.8 (1.6-2.0)	<0.001
Free State	986/4 785 (20.6)	1.0 (0.9-1.1)	0.287	1.4 (1.2-1.5)	<0.001
Gauteng	2 676/16 475 (16.2)	0.8 (0.7-0.8)	<0.001	1.2 (1.1-1.3)	<0.001
KwaZulu-Natal	1 662/10 576 (15.7)	0.8 (0.7-0.8)	<0.001	1.1 (1.0-1.2)	0.026
Limpopo	224/1 146 (19.6)	1.0 (0.8-1.1)	0.765	1.4 (1.2-1.8)	0.001
Mpumalanga	234/1 776 (13.2)	0.6 (0.5-0.7)	<0.001	0.9 (0.7-1.1)	0.289
North West	395/2 561 (15.4)	0.7 (0.7-0.8)	<0.001	1.3 (1.1-1.5)	0.003
Northern Cape	171/1 068 (16.0)	0.8 (0.6-0.9)	0.002	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
Type of facility					
National central	1 146/4 455 (25.7)	Reference			
Community Health	3/6 (50.0)	2.9 (0.6-14.3)	0.194		
District hospital	2 334/9 230 (25.3)	1.0 (0.9-1.1)	0.582		
Field hospital	55/771 (7.1)	0.2 (0.2-0.3)	<0.001		
Long-term facility	4/109 (3.7)	0.1 (0.0-0.3)	<0.001		
Military hospital	28/209 (13.4)	0.4 (0.3-0.7)	<0.001		
Private general	6 657/42 413 (15.7)	0.5 (0.5-0.6)	<0.001		
Provincial tertiary	760/2 705 (28.1)	1.1 (1.0-1.3)	0.028		
Regional hospital	1 456/4 386 (33.2)	1.4 (1.3-1.6)	<0.001		
Specialised TB hospital	26/301 (8.6)	0.3 (0.2-0.4)	<0.001		
Ever ICU					
No	7 964/55 812 (14.3)	Reference			
Yes	4 651/9 561 (48.7)	5.7 (5.4-6.0)	<0.001		
Ever High Care					
No	11 000/59 084 (18.6)	Reference			
Yes	1 615/6 289 (25.7)	1.5 (1.4-1.6)	<0.001		
Ever ventilated					
No	9 815/61 181 (16.0)	Reference			
Yes	2 800/4 192 (66.8)	10.5 (9.8-11.3)	<0.001		
Ever on oxygen					
No	8 960/53 324 (16.8)	Reference			
Yes	3 655/12 049 (30.3)	2.1 (2.0-2.3)	<0.001		

* MULTIVARIABLE MODEL EXCLUDED ALL INDIVIDUALS WITH UNKNOWN COMORBID CONDITIONS

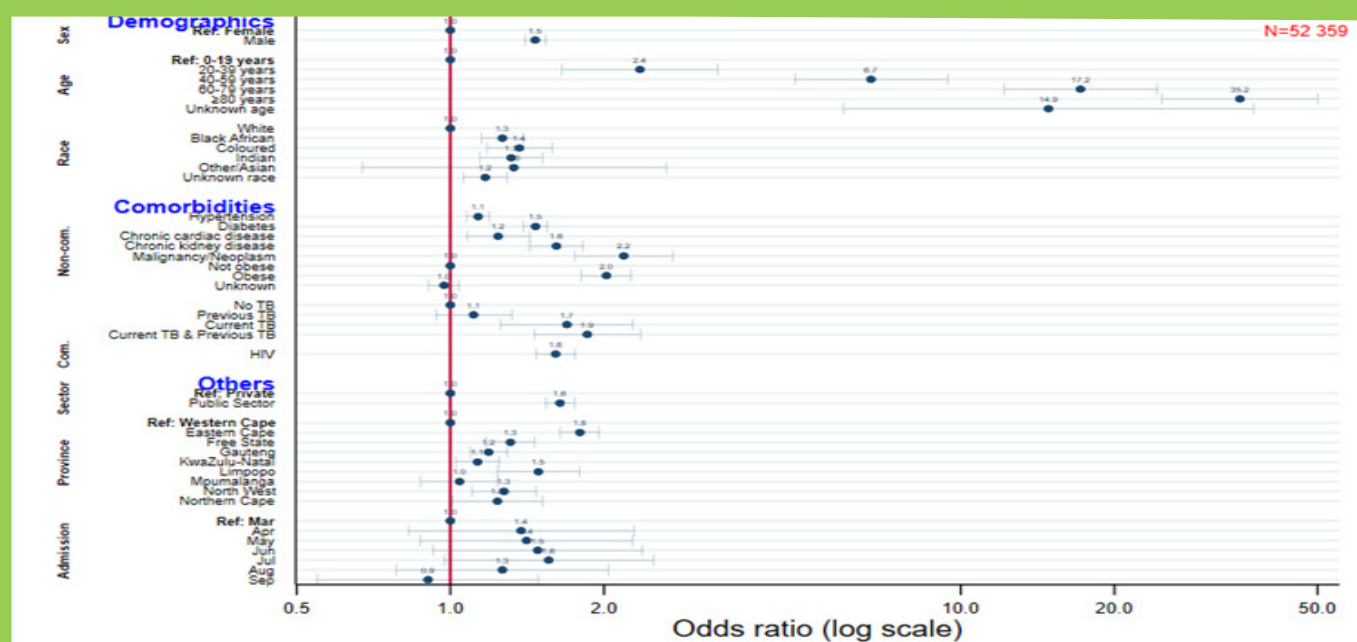


Figure 10: Multivariable analysis of factors associated with mortality among 52359 individuals with in-hospital outcome (discharges and deaths), South Africa, 5 March-19 September 2020

DISCUSSION

DATCOV currently includes 70592 admissions from 513 public and private hospitals in all nine provinces in South Africa. It also includes 12615 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, timeliness 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.

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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

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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

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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	

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APPENDIX

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

Age (years)	ADMISSIONS				DEATHS			
	Female	Male	Unknown	Total	Female	Male	Unknown	Total
0-4	411	527	0	938	11	16	0	27
5-9	112	156	0	268	1	4	0	5
10-14	190	178	0	368	5	8	0	13
15-19	588	316	1	905	9	17	0	26
20-24	980	501	0	1 481	24	24	0	48
25-29	2 100	829	0	2 929	70	33	0	103
30-34	3 004	1 603	0	4 607	142	84	0	226
35-39	3 442	2 280	0	5 722	211	200	0	411
40-44	3 336	2 735	0	6 071	259	305	0	564
45-49	3 709	3 397	1	7 107	384	460	0	844
50-54	4 315	3 882	0	8 197	548	625	0	1 173
55-59	4 310	4 110	0	8 420	771	911	0	1 682
60-64	3 472	3 470	2	6 944	775	1 004	0	1 779
65-69	2 697	2 550	0	5 247	761	842	0	1 603
70-74	2 073	2 016	0	4 089	625	709	0	1 334
75-79	1 639	1 445	0	3 084	549	577	0	1 126
80-84	1 219	915	1	2 135	410	380	0	790
85-89	775	492	0	1 267	293	232	0	525
90-94	369	204	0	573	156	109	0	265
>95	75	39	0	114	36	13	0	49
Unknown	60	64	2	126	11	11	0	22
	38 876	31 709	7	70 592	6 051	6 564	0	12 615