

COVID-19 SENTINEL HOSPITAL SURVEILLANCE UPDATE



NATIONAL INSTITUTE FOR
COMMUNICABLE DISEASES

Division of the National Health Laboratory Service

SOUTH AFRICA WEEK 32 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 8 August 2020.

HIGHLIGHTS

- As of 8 August, 49218 COVID-19 admissions were reported from 380 facilities (144 public-sector and 236 private-sector) in all nine provinces of South Africa. There was an increase of 5177 new admissions since the last report, and 40 additional hospitals (35 public-sector and 5 private-sector) reporting COVID-19 admissions. There were 15503 (32%) and 33625 (68%) admissions reported in public and private sector respectively. The majority of COVID-19 admissions were reported from four provinces, 15782 (32%) in Western Cape, 14122 (29%) in Gauteng, 7824 (16%) in KwaZulu-Natal and 4306 (9%) in Eastern Cape. Admissions in the Western Cape, Eastern Cape and Gauteng have decreased and there are indications of slowing of the rate of increase in admissions in the other provinces over the past three weeks.
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- Of the 49128 admissions, 6723 (14%) patients were in hospital at the time of this report, 34667 (71%) patients were discharged alive or transferred out and 7655 (16%) patients had died. There were 1028 additional deaths since the last report.
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- Of the 41841 COVID-19 patients who had recorded in-hospital outcome (died and discharged), the case fatality ratio (CFR) was 18%. On multivariable analysis, factors associated with in-hospital mortality were older age groups; male sex; Black African and Coloured 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 and Free State provinces were more likely to die in-hospital while individuals in Mpumalanga province were less likely to die.
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METHODS

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, from all public hospitals in the Western Cape (WC) Province and 58 public hospitals in the other eight provinces. As new hospitals join the surveillance system, they have retrospectively captured all admissions recorded. As of 8 August 2020, a total of 380 facilities, 144 from public sector and 236 from private sector, submitted data on hospitalised COVID-19 cases (Table 1). There were 40 additional hospitals (35 public-sector and 5 private-sector) 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 - 8 August 2020

Facilities reporting	Public	Private
Eastern Cape	50	15
Free State	24	20
Gauteng	6	86
KwaZulu-Natal	8	42
Limpopo	1	6
Mpumalanga	0	9
North West	2	12
Northern Cape	1	7
Western Cape	52	39
South Africa	144	236

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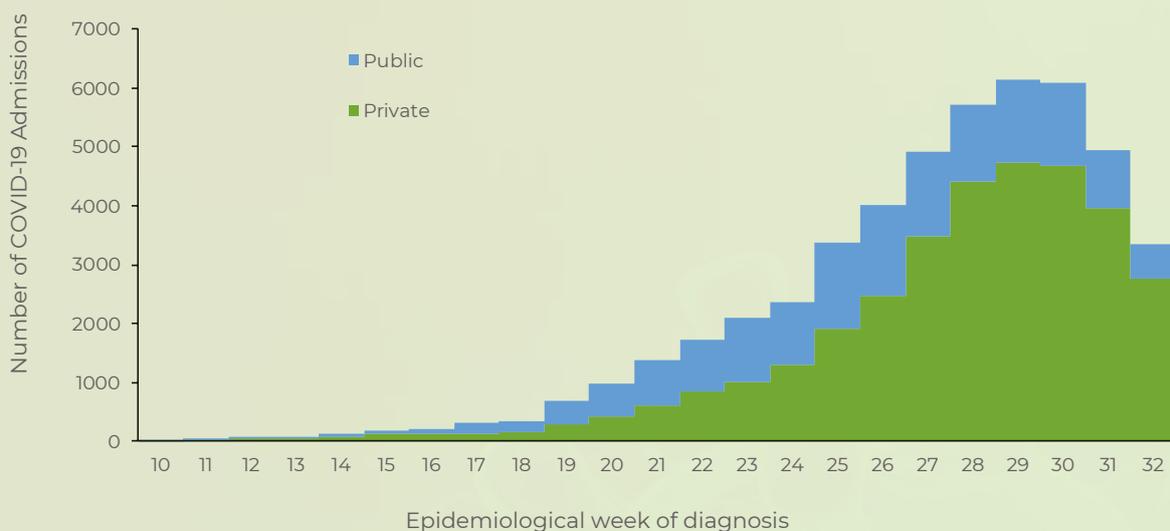
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RESULTS

Epidemiological and geographic trends in admissions

From 5 March to 8 August, a total of 49128 COVID-19 admissions (5177 additional from last report) were reported from 380 facilities in all nine provinces of South Africa. Of these admissions, 15503 (31.6%) and 33625 (68.4%) 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. The shift is most likely due to underreporting in the public sector in other provinces besides Western Cape in recent weeks. There has been a decrease in reported COVID-19 admissions for the past three weeks (Figure 1).

Figure 1. Number of reported COVID-19 admissions by health sector and epidemiologic week of diagnosis, 5 March-9 August 2020, n=49128



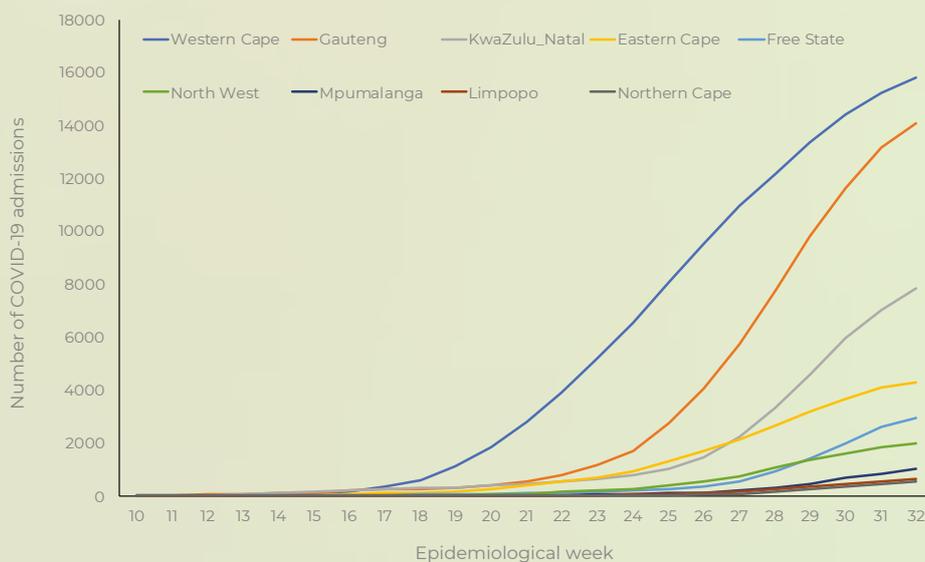
The majority of admissions (42034/49128, 85.6%) were recorded in four provinces, with the highest number reported in Western Cape (15782, 32.1%), followed by Gauteng (14122, 28.7%), KwaZulu-Natal (7824, 15.9%) and Eastern Cape (4306, 8.8%) provinces. Western Cape experienced an increase in admissions from week 19 and in the past five weeks the rate of increase has decreased; the increase in Gauteng and Eastern Cape began in week 23 and in KwaZulu-Natal in week 26, and there are indications of reduced rates of increase in admissions in these provinces over the past three weeks (Figure 2).

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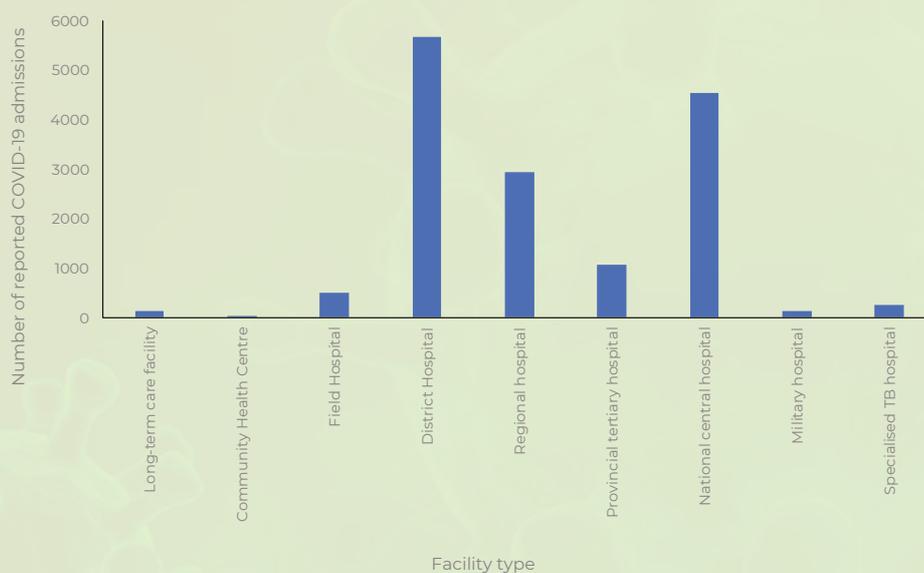
RESULTS (CONTINUED)

Figure 2. Cumulative numbers of reported COVID-19 admissions, by province and epidemiological week of diagnosis, South Africa, 5 March-8 August 2020, n=49128



Most patients admitted in the public sector, were admitted to district hospitals (5657, 37.1%), national central hospitals (4539, 29.8%), regional hospitals (2941, 19.3%) and provincial tertiary hospitals (1077, 7.1%) (Figure 3).

Figure 3. Cumulative numbers of reported COVID-19 admissions, by facility type in public sector, South Africa, 5 March-8 August 2020, n=15256



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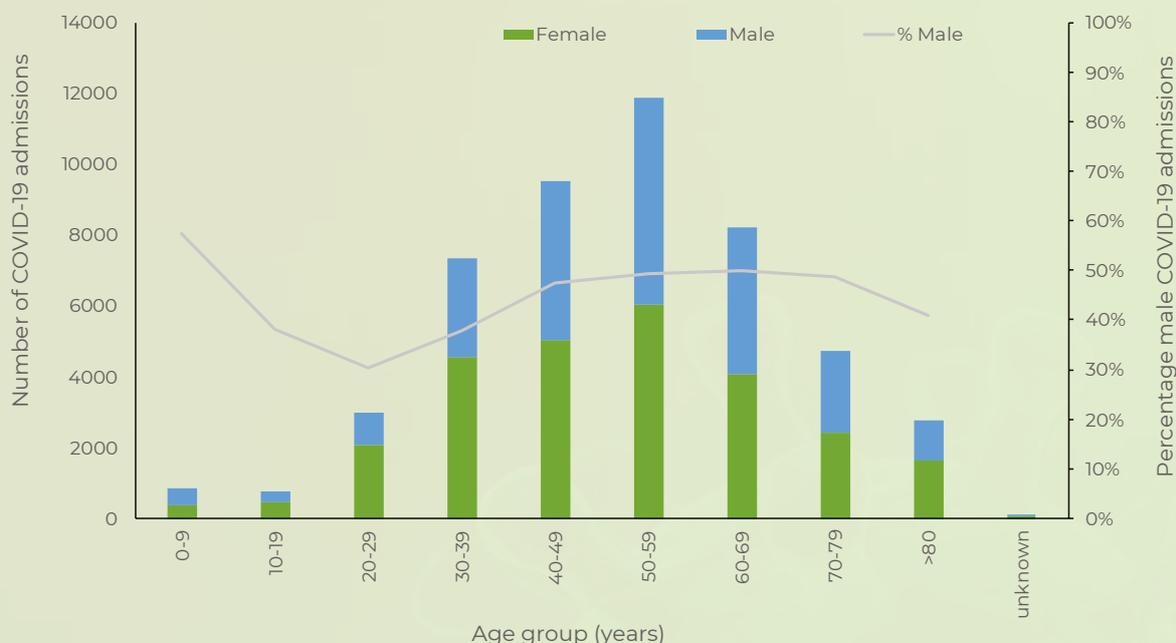
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RESULTS (CONTINUED)

Demographic and clinical characteristics of admissions

The median age of COVID-19 admissions was 52 years (interquartile range [IQR] 40 – 63). There were 1473 (3.0%) admissions in patients 18 years and younger and 7491 (15.2%) in patients older than 70 years. Among admitted individuals with COVID-19, 26702 (54.4%) 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-8 August 2020, n=49128



Of the 23876 (48.6%) patients for whom race was known, 16504 (69.1%) were Black African, 2354 (9.9%) were Coloured, 1636 (6.9%) were Indian, 3293 (13.8%) were White and 89 (0.4%) were classified as Other race group. There were 982 (2.0%) health care workers (HCW) that were reported to be hospitalised. Among the 11991 admissions in females of child-bearing age 15-50 years, there were 1239 (10.3%) females admitted who were pregnant or within 6 weeks post-partum.

Among 41758 (85.0%) patients for whom comorbid conditions were known, 18197 (43.6%) had no comorbid condition reported, 12149 (29.1%) had one comorbid condition reported, 8088 (19.4%) had two comorbid conditions and 3324 (8.0%) had three or more comorbid conditions reported. Among the 23561 (48.0%) patients who had reported a comorbid condition, the most commonly reported were hypertension (14920, 63.3%) and diabetes (12073, 51.2%); there were 3577 (15.2%) patients who were HIV-infected, 672 (2.9%) patients with active tuberculosis (TB) and 1243 (5.3%) 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 1356 (2.8%) of all patients hospitalised.

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RESULTS (CONTINUED)

Table 2. Reported comorbid conditions among COVID-19 admissions reporting at least one comorbid condition, South Africa, 5 March-8 August 2020, n=23561*

Comorbid disease**	N	%
Hypertension	14920	63.3%
Diabetes mellitus	12073	51.2%
Chronic cardiac disease	1042	4.4%
Chronic pulmonary disease/ Asthma	7416	31.5%
Chronic renal disease	1292	5.5%
Malignancy	386	1.6%
HIV	3577	15.2%
Active tuberculosis	672	2.9%
Previous history of tuberculosis	1243	5.3%

* 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 49128 admitted individuals, 6723 (13.7%) were currently in hospital, 34186 (69.6%) were discharged alive, 481 (1.0%) were transferred out to either higher level care or step-down facilities, 7655 (15.6%) had died in hospital and 83 (0.2%) died after discharge from hospital. There were 1028 additional deaths since the last report. Of the 41841 COVID-19 patients who had recorded in-hospital outcome (died and discharged), the case fatality ratio (CFR) was 18.3%.

Epidemiological and geographic trends in mortality

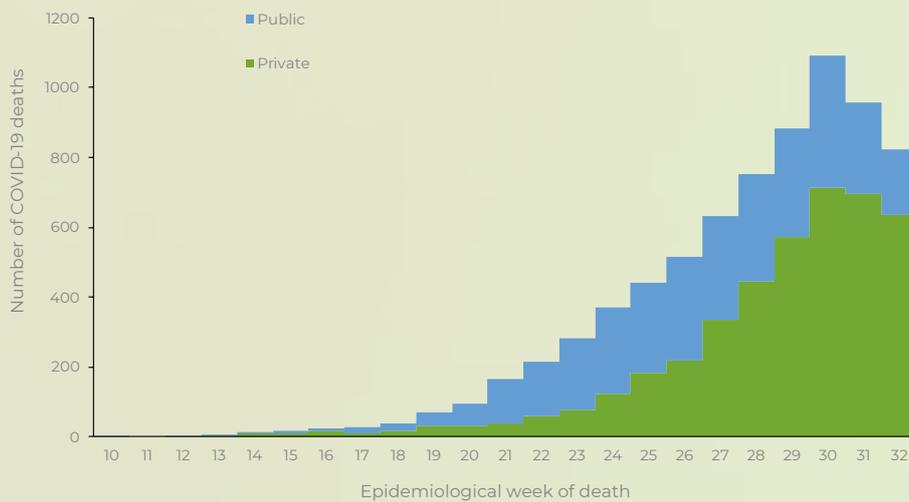
There has been an increasing trend in reported number of deaths and the CFR among hospitalised individuals increased with each month of admission until July (March 11.3%, April 17.1%, May 18.5%, June 19.4%, July 17.9% and August 15.9%), with in-hospital case-fatality ratios being significantly higher in June ($p=0.036$) and July ($p=0.049$) compared to March. 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 27 again most deaths were reported in the private sector. The CFR was higher in the public health sector (24.5%) than in the private health sector (15.5%) ($p<0.001$). There has been a decrease in reported COVID-19 deaths for the past two weeks (Figure 5).

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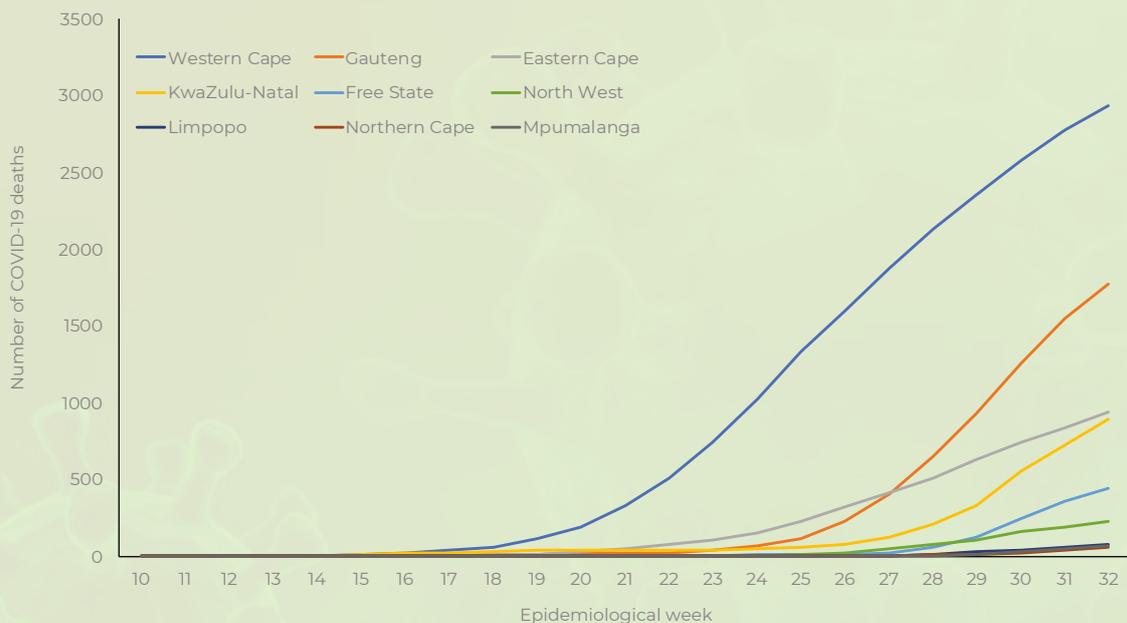
RESULTS (CONTINUED)

Figure 5: Number of COVID-19 deaths reported per week by health sector and epidemiological week, South Africa, 5 March- 8 August 2020, n=7655



Most deaths were reported in Western Cape (2972, 38.8%), followed by Gauteng (1848, 24.1%), Eastern Cape (969, 12.7%) and KwaZulu-Natal (938, 12.3%). The number of reported COVID-19 deaths has decreased in Western Cape for 7 weeks, and has decreased in Eastern Cape and Gauteng for the past two weeks (Figure 6).

Figure 6: Cumulative numbers of reported COVID-19 deaths, by province and epidemiological week of death, South Africa, 5 March- 8 August 2020, n=7655



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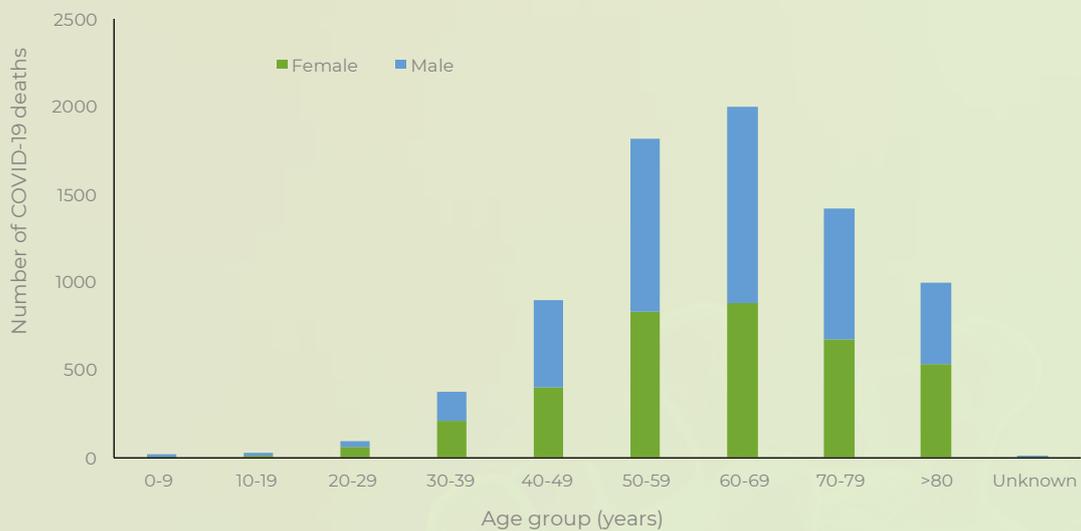
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RESULTS (CONTINUED)

Demographic characteristics of deaths

The median age of patients who died was 62 (IQR 53 – 73) years, and for those who were discharged alive was 49 (IQR 37 – 60) years. There were 39 (0.5%) deaths in children aged ≤ 18 years, most of these deaths in children with serious underlying comorbid conditions. There were 511 (6.7%) deaths in patients younger than 40 years (Figure 7). The CFR was higher in males (21.2%) than females (15.9%) ($p < 0.001$).

Figure 7: Number of reported COVID-19 deaths by age and gender, South Africa, 5 March-8 August 2020, n=7655



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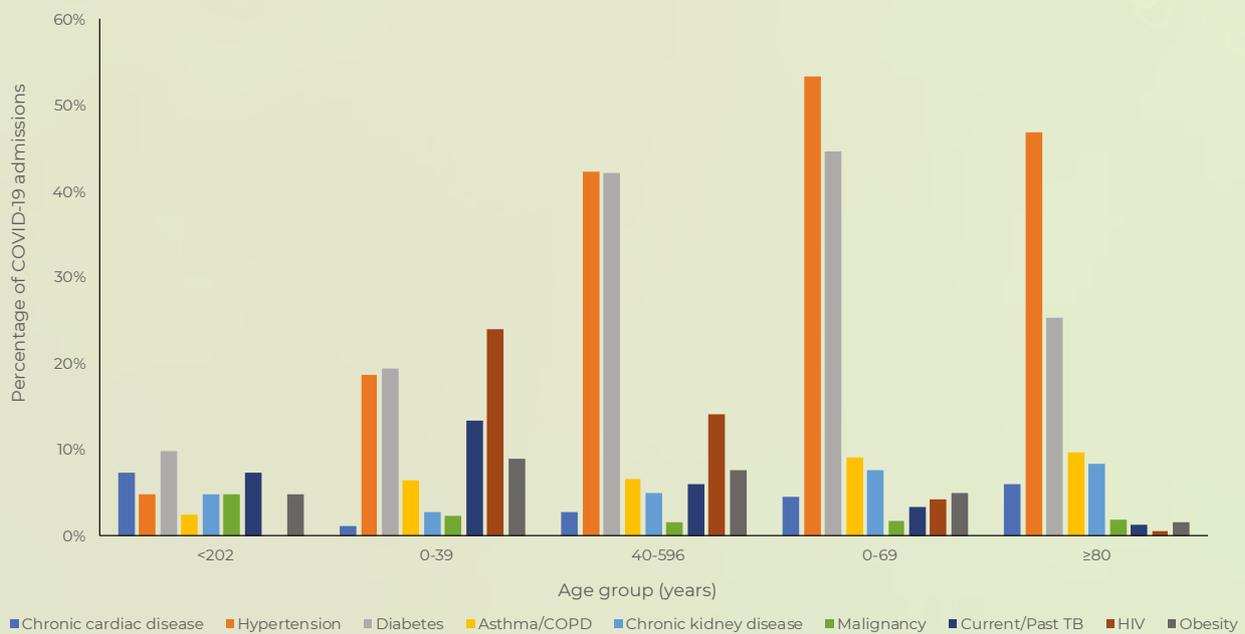
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RESULTS (CONTINUED)

Common comorbidities reported among deaths

In all age groups except <20 years, hypertension and diabetes were most commonly reported comorbidities among patients who died. In addition, in patients younger than 60 years, HIV, tuberculosis and obesity were common while in those older than 60 years, asthma/chronic pulmonary disease and chronic renal disease were common comorbidities (Figure 8).

Figure 8: Frequency of comorbid conditions for reported COVID-19 deaths by age group, South Africa, 5 March-8 August 2020, n=7655



Factors associated with in-hospital mortality

On multivariable analysis, factors associated with in-hospital mortality were older age groups; male sex; Black African and Coloured 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 and Free State provinces were more likely to die in-hospital while individuals in Mpumalanga province were less likely to die (Table 3 and Figure 9).

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RESULTS (CONTINUED)

Table 3: Univariate and multivariable analysis of factors associated with mortality among 35448 individuals with in-hospital outcome (discharges and deaths), South Africa, 5 March-8 August 2020

Characteristic	Case-fatality ratio n/N (%)	Unadjusted OR (95% CI)	p-value	Adjusted OR* (95% CI)	p-value
Age group					
<20 years	41/1420 (2.9)	Reference		Reference	
20-39 years	470/9052 (5.2)	1.8 (1.3-2.5)	<0.001	1.9 (1.2-2.8)	0.002
40-59 years	2713/18345 (14.8)	5.8 (4.3-8.0)	<0.001	5.4 (3.6-8.0)	<0.001
60-79 years	3422/10712 (32.0)	15.8 (11.5-21.6)	<0.001	13.6 (9.1-20.2)	<0.001
≥80 years	994/2277 (43.7)	26.1 (18.9-35.9)	<0.001	28.8 (19.2-43.2)	<0.001
Unknown age	15/35 (42.9)	25.2 (12.1-52.8)	<0.001	11.6 (3.7-36.9)	<0.001
Sex					
Female	3607/22719 (15.9)	Reference		Reference	
Male	4047/19107 (21.2)	1.4 (1.4-1.5)	<0.001	1.2 (1.1-1.4)	0.001
Race					
White	547/2767 (19.8)	Reference		Reference	
Black	2331/13420 (17.4)	0.9 (0.8-0.9)	0.003	1.3 (1.2-1.5)	<0.001
Coloured	412/2082 (19.8)	1.0 (0.9-1.2)	0.986	1.4 (1.2-1.7)	<0.001
Indian	248/1410 (17.6)	0.9 (0.7-1.0)	0.090	1.2 (1.0-1.4)	0.127
Other	10/65 (15.4)	0.7 (0.4-1.5)	0.381	1.4 (0.7-2.8)	0.373
Unknown	4107/22097 (18.6)	0.9 (0.8-1.0)	0.133	1.4 (1.2-1.6)	<0.001
Healthcare worker					
No	7593/40998 (18.5)	Reference			
Yes	62/843 (7.4)	0.3 (0.3-0.5)	<0.001		
Peri-partum					
No	651/9273 (7.0)	Reference			
Yes	22/1155 (1.9)	0.3 (0.2-0.4)	<0.001		
Comorbid condition					
No co-morbidity	1718/15123 (11.4)	Reference			
1 co-morbid condition	2144/10565 (20.3)	2.0 (1.9-2.1)	<0.001		
2 comorbid conditions	1960/7067 (27.7)	3.0 (2.8-3.2)	<0.001		
≥3 comorbid conditions	997/3008 (33.1)	3.9 (3.5-4.2)	<0.001		
Unknown	836/6078 (13.8)	1.2 (1.1-1.4)	<0.001		
Hypertension					
No	3291/22566 (14.6)	Reference		Reference	
Yes	3525/13155 (26.8)	2.1 (2.0-2.3)	<0.001	1.2 (1.1-1.2)	<0.001
Diabetes mellitus					
No					
Yes	3803/25161 (15.1)	Reference		Reference	
	3014/10561 (28.5)	2.2 (2.1-2.4)	<0.001	1.5 (1.4-1.6)	<0.001
Chronic cardiac disease					
No	6520/34767 (18.8)	Reference		Reference	
Yes	296/954 (31.0)	1.9 (1.7-2.2)	<0.001	1.2 (1.1-1.4)	0.008

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RESULTS (CONTINUED)

Table 3: Univariate and multivariable analysis of factors associated with mortality among 35448 individuals with in-hospital outcome (discharges and deaths), South Africa, 5 March-8 August 2020 (continued)

Characteristic	Case-fatality ratio n/N (%)	Unadjusted OR (95% CI)	p-value	Adjusted OR* (95% CI)	p-value
Chronic pulmonary disease/Asthma					
No	6198/32997 (18.8)	Reference		Reference	
Yes	618/2724 (22.7)	1.3 (1.2-1.4)	<0.001	1.0 (0.9-1.1)	0.605
Chronic renal disease					
No	6322/34543 (18.3)	Reference		Reference	
Yes	494/1178 (41.9)	3.2 (2.9-3.6)	<0.001	1.6 (1.4-1.8)	<0.001
Malignancy					
No	6682/35369 (18.9)	Reference		Reference	
Yes	134/352 (38.1)	2.6 (2.1-3.3)	<0.001	2.2 (1.7-2.8)	<0.001
HIV					
No	6117/32414 (18.9)	Reference		Reference	
Yes	645/3076 (21.0)	1.1 (1.0-1.2)	0.005	1.5 (1.4-1.7)	<0.001
Tuberculosis					
No	6463/34399 (18.8)	Reference		Reference	
Previous	202/740 (27.3)	1.6 (1.4-1.9)	<0.001	1.2 (1.0-1.5)	0.025
Current	59/237 (24.9)	1.4 (1.1-1.9)	0.017	1.9 (1.3-2.6)	<0.001
Current and previous	92/345 (26.7)	1.6 (1.2-2.0)	<0.001	2.1 (1.6-2.7)	<0.001
Obesity					
No	964/4227 (22.8)	Reference		Reference	
Yes	435/1036 (42.0)	2.4 (2.1-2.8)	<0.001	2.3 (2.0-2.7)	<0.001
Unknown	6256/36578 (17.1)	0.7 (0.6-0.8)	<0.001	0.8 (0.7-0.9)	<0.001
Month of admission					
March	22/194 (11.3)	Reference		Reference	
April	164/962 (17.1)	1.6 (1.0-2.6)	0.050	1.5 (0.9-2.6)	0.106
May	897/4846 (18.5)	1.8 (1.1-2.8)	0.012	1.6 (1.0-2.7)	0.054
June	2432/12519 (19.4)	1.9 (1.2-2.9)	0.005	1.7 (1.0-2.7)	0.036
July	3882/21692 (17.9)	1.7 (1.1-2.7)	0.019	1.6 (1.0-2.6)	0.049
August	258/1627 (15.9)	1.5 (0.9-2.3)	0.101	1.6 (1.0-2.7)	0.066
Health sector					
Private sector	4423/28625 (15.5)	Reference		Reference	
Public sector	3232/13216 (24.5)	1.8 (1.7-1.9)	<0.001	1.6 (1.5-1.7)	<0.001

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RESULTS (CONTINUED)

Table 3: Univariate and multivariable analysis of factors associated with mortality among 35448 individuals with in-hospital outcome (discharges and deaths), South Africa, 5 March-8 August 2020 (continued)

Characteristic	Case-fatality ratio n/N (%)	Unadjusted OR (95% CI)	p-value	Adjusted OR* (95% CI)	p-value
Province					
Western Cape	2972/14522 (20.5)	Reference		Reference	
Eastern Cape	969/3524 (27.5)	1.5 (1.4-1.6)	<0.001	1.7 (1.5-2.0)	<0.001
Free State	468/2281 (20.5)	1.0 (0.9-1.1)	0.955	1.4 (1.2-1.6)	<0.001
Gauteng	1848/11563 (16.0)	0.7 (0.7-0.8)	<0.001	1.2 (1.0-1.3)	0.005
KwaZulu-Natal	938/6493 (14.5)	0.7 (0.6-0.7)	<0.001	1.1 (1.0-1.3)	0.091
Limpopo	85/535 (15.9)	0.7 (0.6-0.9)	0.010	1.2 (0.9-1.6)	0.153
Mpumalanga	77/843 (9.1)	0.4 (0.3-0.5)	<0.001	0.7 (0.5-0.9)	0.008
North West	237/1663 (14.3)	0.6 (0.6-0.7)	<0.001	1.2 (1.0-1.4)	0.126
Northern Cape	61/417 (14.6)	0.7 (0.5-0.9)	0.004	1.1 (0.8-1.5)	0.624
Type of facility					
National central	1003/3863 (26.0)	Reference			
Community Health	3/6 (50.0)	2.9 (0.6-14.2)	0.200		
District hospital	1194/5048 (23.7)	0.9 (0.8-0.97)	0.012		
Field hospital	39/457 (8.5)	0.3 (0.2-0.4)	<0.001		
Long-term facility	3/84 (3.6)	0.1 (0.0-0.3)	<0.001		
Military hospital	19/132 (14.4)	0.5 (0.3-0.8)	0.003		
Private general	4420/28614 (15.5)	0.5 (0.5-0.6)	<0.001		
Provincial tertiary	227/787 (28.8)	1.2 (1.0-1.4)	0.095		
Regional hospital	667/2462 (27.1)	1.1 (0.9-1.2)	0.321		
Specialised TB hospital	18/206 (8.7)	0.3 (0.2-0.4)	<0.001		
Ever ICU					
No	4806/35992 (13.4)	Reference			
Yes	2849/5849 (48.7)	6.2 (5.8-6.5)	<0.001		
Ever High Care					
No	6723/37975 (17.7)	Reference			
Yes	932/3866 (24.1)	1.5 (1.4-1.6)	<0.001		
Ever ventilated					
No	5907/39294 (15.0)	Reference			
Yes	1748/2547 (68.6)	12.4 (11.3-13.5)	<0.001		
Ever on oxygen					
No	5790/35270 (16.4)	Reference			
Yes	1865/6571 (28.4)	2.0 (1.9-2.1)	<0.001		

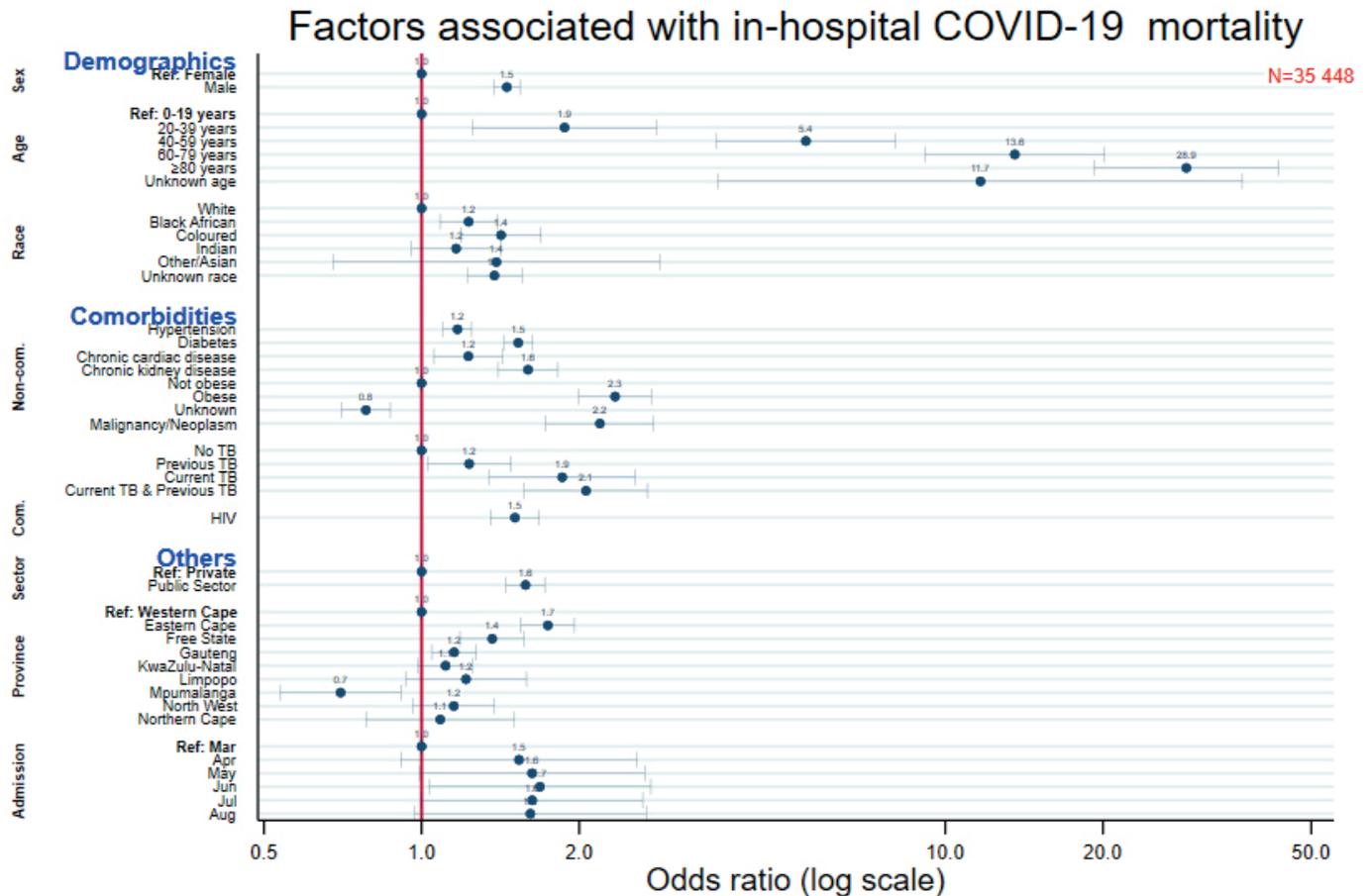
* Multivariable model excluded all individuals with unknown comorbid conditions

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RESULTS (CONTINUED)

Figure 9: Multivariable analysis of factors associated with mortality among 35448 individuals with in-hospital outcome (discharges and deaths), South Africa, 5 March - 8 August 2020



Data source: NICD-DATCOV19

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DISCUSSION

DATCOV currently includes 49128 admissions from 380 public and private hospitals in all nine provinces in South Africa. It also includes 7655 deaths that have occurred to date.

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

Race is for the first time reported to have association with in-hospital mortality, with higher risk of mortality in individuals who were Black African or Coloured compared to White individuals. The increased risk of mortality in Blacks and Hispanics were described in studies in the United States. Increased risks for mortality have been observed in COVID-19 cases with lower socio-economic status.

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.

COVID-19 SENTINEL HOSPITAL SURVEILLANCE UPDATE

WEEK 32 2020 | REPORTING PERIOD 5 MARCH 2020 TO 8 AUGUST 2020

ACKNOWLEDGEMENTS

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

Public hospitals using DATCOV surveillance online platform:

Eastern Cape

Adelaide Hospital	Aliwal North Hospital
All Saints Hospital	Bedford Hospital
Bisho Hospital	Butterworth Hospital
Cala Hospital	Cathcart Hospital
Cecilia Makiwana Hospital	Cloete Joubert Hospital
Cofimvaba Hospital	Cradock Hospital
Dora Nginza Hospital	Empilweni Hospital
Fort Beaufort Hospital	Frere Hospital
Frontier Hospital	Glen Grey Hospital
Grey Hospital	Holy Cross Hospital
Indwe Hospital	Isilimela Hospital
Jamestown Hospital	Kareedouw Hospital
Khotsong TB Hospital	Komani Hospital
Komga Hospital	Livingstone Hospital
Maclear Hospital	Madwaleni Hospital
Midland Hospital	Mjanyana Hospital
Mount Ayliff Hospital	Nelson Mandela Academic Hospital
Nkqubela Chest Hospital	Nompumelelo Hospital
Sawas Hospital	Sipetu Hospital
SS Gida Hospital	St Barnabas Hospital
St Elizabeth Hospital	St Patricks Hospital
Stutterheim Hospital	Tafalofefe Hospital
Taylor Bequest Hospital	Tower Psychiatric Hospital
Uitenhage Hospital	Umtata General Hospital
Winterberg TB Hospital	Zithulele hospital

Free State

3 Military Hospital,	Albert Nzula District Hospital
Boitumelo Hospital	Bongani Regional Hospital
Botshabelo Hospital	Dihlabeng Hospital
Dr Js Moroka Hospital	Elizabeth Ross Hospital
Fezi Ngubentombi Provincial Hospital	Katleho Hospital
Manapo Hospital	Mohau Hospital
Nala Hospital	National District Hospital
Nketoana District Hospital	Parys Hospital

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ACKNOWLEDGEMENTS (CONTINUED)

Pelonomie Hospital	Phekolong Hospital
Phumelela Hospital	Senorita Ntlabathi Hospital
Stoffel Coetzee Hospital	Thebe Hospital
Universitas Hospital	Winburg Hospital
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	
Polokwane Hospital	
North West	
Job Shimankana Tabane Hospital	Tshepong Hospital
Northern Cape	
Robert Mangaliso Sobukwe Hospital	
Western Cape	
Tygerberg Hospital	

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)

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ACKNOWLEDGEMENTS (CONTINUED)

Private hospitals using DATCOV surveillance online platform:

Eastern Cape

Aurura Rehabilitation Hospital	Care Cure Queenstown
Matatiele Private Hospital	Nurture Queenstown

Free State

Busamed Bram Fischer Airport Hospital	Busamed Harrismith Private Hospital
Corona Sub-Acute Hospital	Emoyamed Private Hospital
Nurture Woodlands	Riemland Clinic
St Helena GM Hospital	

Gauteng

Arwyp Medical Centre	Busamed Modderfontein Private Hospital Orthopaedic and Oncology Centre
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

Ahmed Al-Kadi Private Hospital	Busamed Gateway Private Hospital
Busamed Hillcrest Private Hospital	Capital hospital
KwaDukuza Private Hospital	Midlands Medical Centre Private Hospital
Nurture Ilembe	Shelly Beach Private Hospital

Mpumalanga

Kiaat Private Hospital	RH Piet Retief Hospital
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Limpopo

Zoutpansberg Private 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
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Western Cape

Busamed - Paardevelei 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 - 8 August 2020

Age (years)	ADMISSIONS				DEATHS			
	Female	Male	Unknown	Total	Female	Male	Unknown	Total
0-4	291	386	0	677	6	9	0	15
5-9	73	102	0	175	0	2	0	2
10-14	121	109	0	230	3	5	0	8
15-19	352	181	0	533	6	10	0	16
20-24	642	327	0	969	13	17	0	30
25-29	1429	569	0	1998	46	21	0	67
30-34	2114	1126	1	3241	75	49	0	124
35-39	2442	1661	2	4105	133	116	0	249
40-44	2358	2033	1	4392	165	201	0	366
45-49	2654	2473	4	5131	235	293	0	528
50-54	3039	2861	2	5902	352	404	0	756
55-59	3001	2988	2	5991	481	582	0	1063
60-64	2348	2380	1	4729	442	615	0	1057
65-69	1741	1721	2	3464	440	504	1	945
70-74	1347	1338	1	2686	349	404	0	753
75-79	1082	975	0	2057	323	344	0	667
80-84	824	613	1	1438	238	229	0	467
85-89	501	344	1	846	172	154	0	326
90-94	248	147	0	395	98	74	0	172
>95	46	23	0	69	23	6	0	29
Unknown	49	49	3	101	7	8	0	15
	26702	22406	21	49129	3607	4047	1	7655