

COVID-19 Sentinel Hospital Surveillance Weekly Update on Hospitalized HCWs

Update: Week 32, 2020



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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 on the DATCOV platform.

HIGHLIGHTS

- As of 8 August 2020, 965 (2.0%) of the 49106 COVID-19 hospital admissions recorded on the DATCOV surveillance database, were health care workers (HCWs), reported from 161 facilities (47 public-sector and 114 private-sector) in all nine provinces of South Africa. Among 565/965 (58.5%) HCWs with available data on type of work, 262/565 (46.4%) were nurses, 175/565 (31.0%) were categorized as other HCWs, 30/565 (5.3%) porters or administrators, 29/565 (5.1%) allied HCWs, 24/565 (4.2%) doctors, 13/565 (2.3%) paramedics, and 6/565 (1.1%) laboratory scientists.
 - There was an increase of 82 new HCW admissions since week 31.
 - There were 214 (22.2%) and 751 (77.8%) admissions reported in the public and private sector, respectively.
 - The majority of HCW admissions were reported in Gauteng (289, 29.9%), KwaZulu-Natal (267, 27.7%), Western Cape (115, 11.9%), Free State (99, 10.3%) and Eastern Cape (93, 9.6%).
 - The median age of COVID-19 HCW admissions was 45 years, there were 92 (9.5%) admissions in HCWs aged 60 years and older. A total of 765 (79.3%) were female.
 - Among 900 (93.3%) HCW admissions with data on comorbid conditions, 414/965 (42.9%) had at least one comorbid condition and 150/414 (36.2%) had more than one comorbidity reported. The most commonly reported comorbid conditions were hypertension (229/414; 55.3%) and diabetes (188/414; 45.4%). There were 93 (22.5%) HCWs who were HIV positive, eight (1.9%) with active tuberculosis (TB) and four (1.0%) with a previous history of TB.
 - A total of 80 (8.3%) HCWs had severe disease defined as receiving treatment in high care or intensive care unit (ICU) or ventilated or diagnosed with acute respiratory distress syndrome (ARDS).
 - Of the 965 HCW admissions, 109 (11.3%) were in hospital at the time of this report, 776 (80.4%) were discharged alive, 29 (3.0%) transferred out and 51 (5.3%) HCWs had died. Fourteen of the 51 deaths (27.5%) were reported in the Gauteng, 13 (25.5%) from KwaZulu-Natal, ten (19.6%) from the Eastern Cape, , six (11.8%) from the Free State, five (9.8%) from the Western Cape and three (5.8%) from the North West provinces. Of those that died, 21 (41.2%) had more than one comorbidity and 19 (37.3%) were aged 60 or older.
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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 (Table 1). 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. All hospitalized patients who were noted to be doctors, nurses, allied health care workers, laboratory staff, porters and administrative staff were captured as health care workers (HCWs). 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).

Data on all COVID-19 admissions are received from all private hospitals nationally, and a subset of public hospitals in all nine provinces (data are received from all public hospitals in the Western Cape (WC) Province). As new hospitals join the surveillance system, they 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 hospitalized patients with COVID-19 (Table 1). There were 40 additional hospitals reporting COVID-19 admissions since the last report. Data on hospitalized HCWs who were diagnosed with COVID-19 from 5 March to 8 August 2020 were collected from 161 hospitals (47 public and 114 private) of the 380 participating sentinel hospitals.

Table 1: Number of hospitals reporting data on COVID-19 admissions by province and health-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

Results

From 5 March to 8 August 2020, there was a total of 965/49106 (2.0%) COVID-19 admissions among HCWs (82 additional from the last report) reported from 161 facilities in all nine provinces of South Africa. Of these admissions, 214 (22.2%) and 751 (77.8%) were reported in the public and private sector, respectively (Figure 1). The majority of HCW admissions (865/967; 89.6%) were recorded in five provinces, with the highest number 289/965 (29.9%) reported in Gauteng, followed by 267/965 (27.7%) in KwaZulu-Natal, 115/965 (11.9%) in Western Cape, 99/965 (10.3%) in Free State, and 93/965 (9.6%) in Eastern Cape provinces (Figure 1).

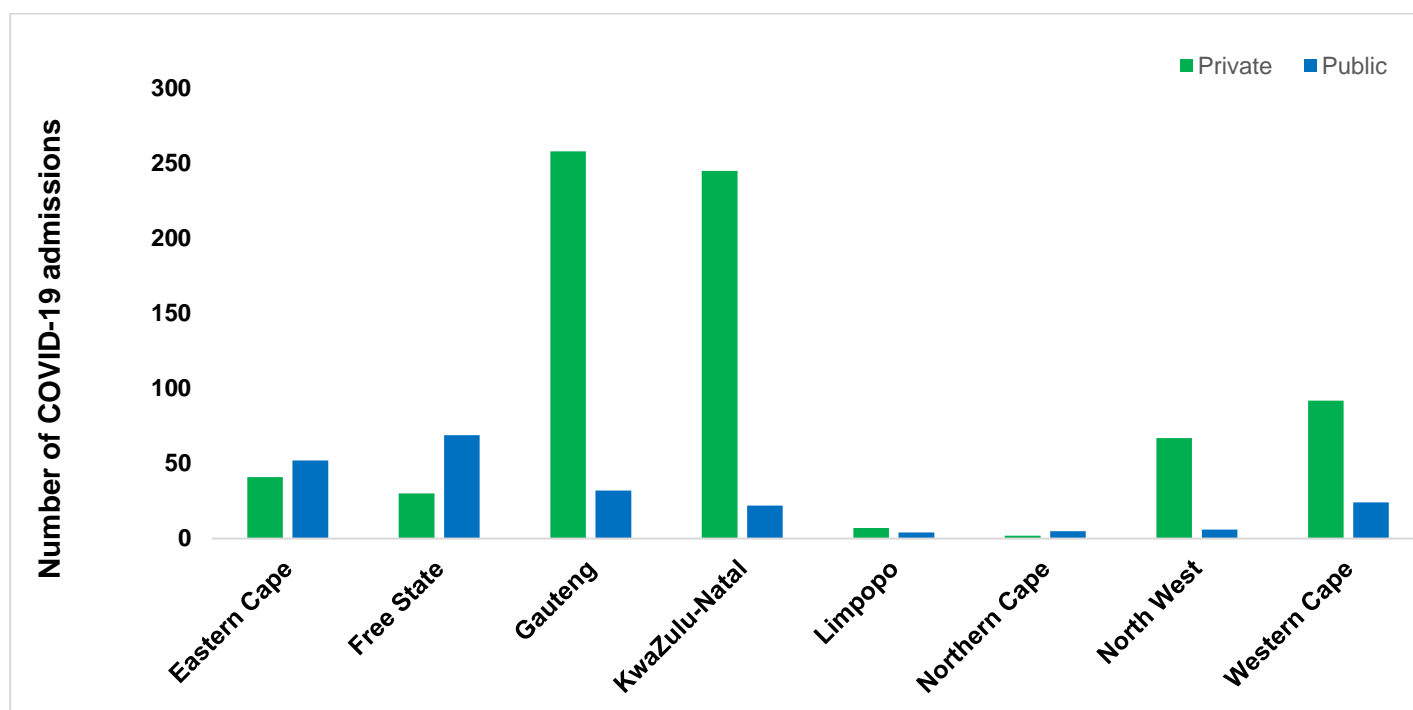


Figure 1: Number of reported COVID-19 admissions among HCWs by province and health-sector, South Africa, 5 March – 8 August 2020 (n=965)

The majority of HCW admissions were reported in the private sector (77.8%) (Figure 2). There appears to be a decreasing number of admissions since week 28.

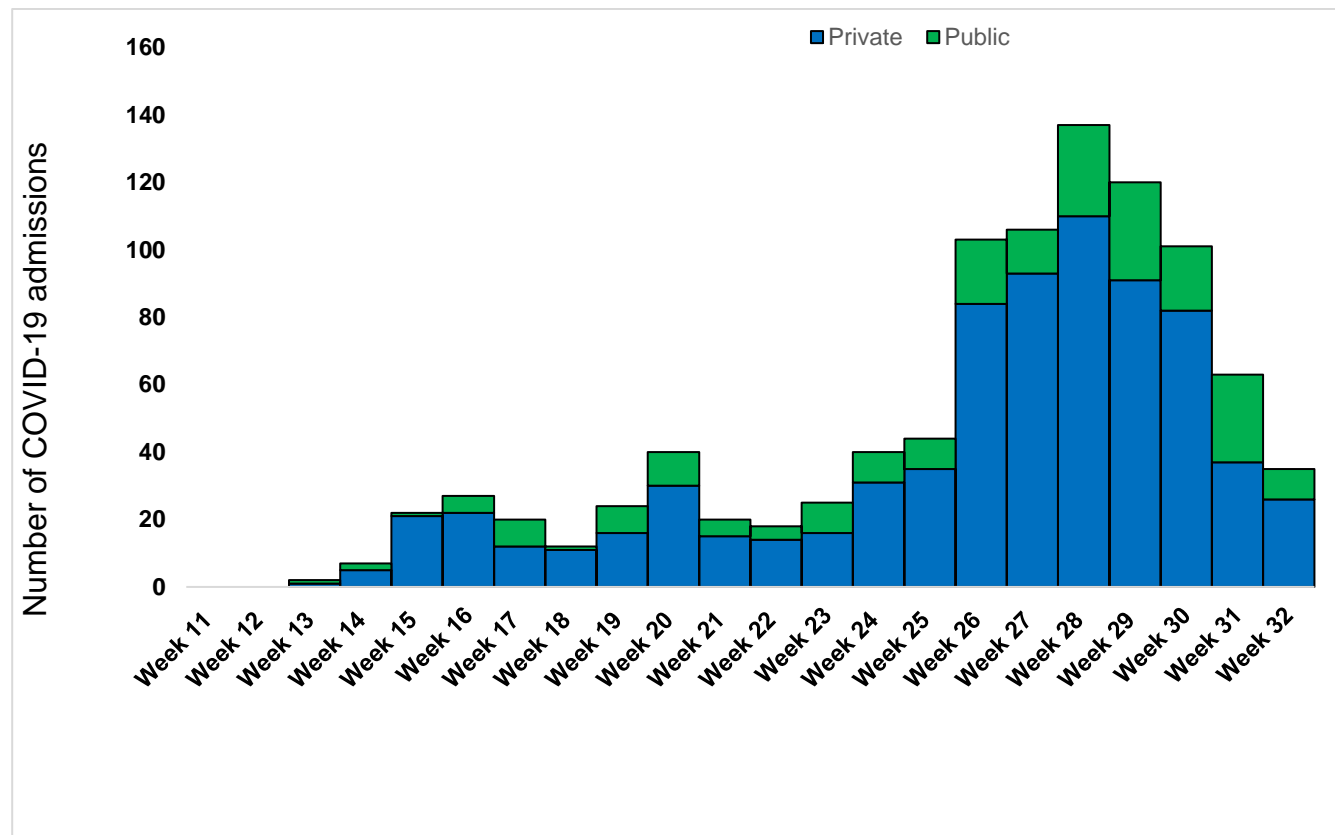


Figure 2: Number of reported COVID-19 admissions among HCWs by epidemiologic week of diagnosis and health-sector, South Africa, 5 March– 8 August 2020 (n=965)

Demographic and clinical characteristics of COVID-19 admissions among HCWs, South Africa, 5 March– 8 August 2020

The median age of COVID-19 admissions among HCWs was 45 years (interquartile range [IQR] 37–55). There were 93 (9.6%) admissions in patients 60 years and older (Figure 3). Among admitted HCWs with COVID-19, 765 (79.3%) were female. The sex ratio varied by age group with females more common than males in all age groups (Figure 3). Among the 765 female admissions, 16 (1.7%) were pregnant.

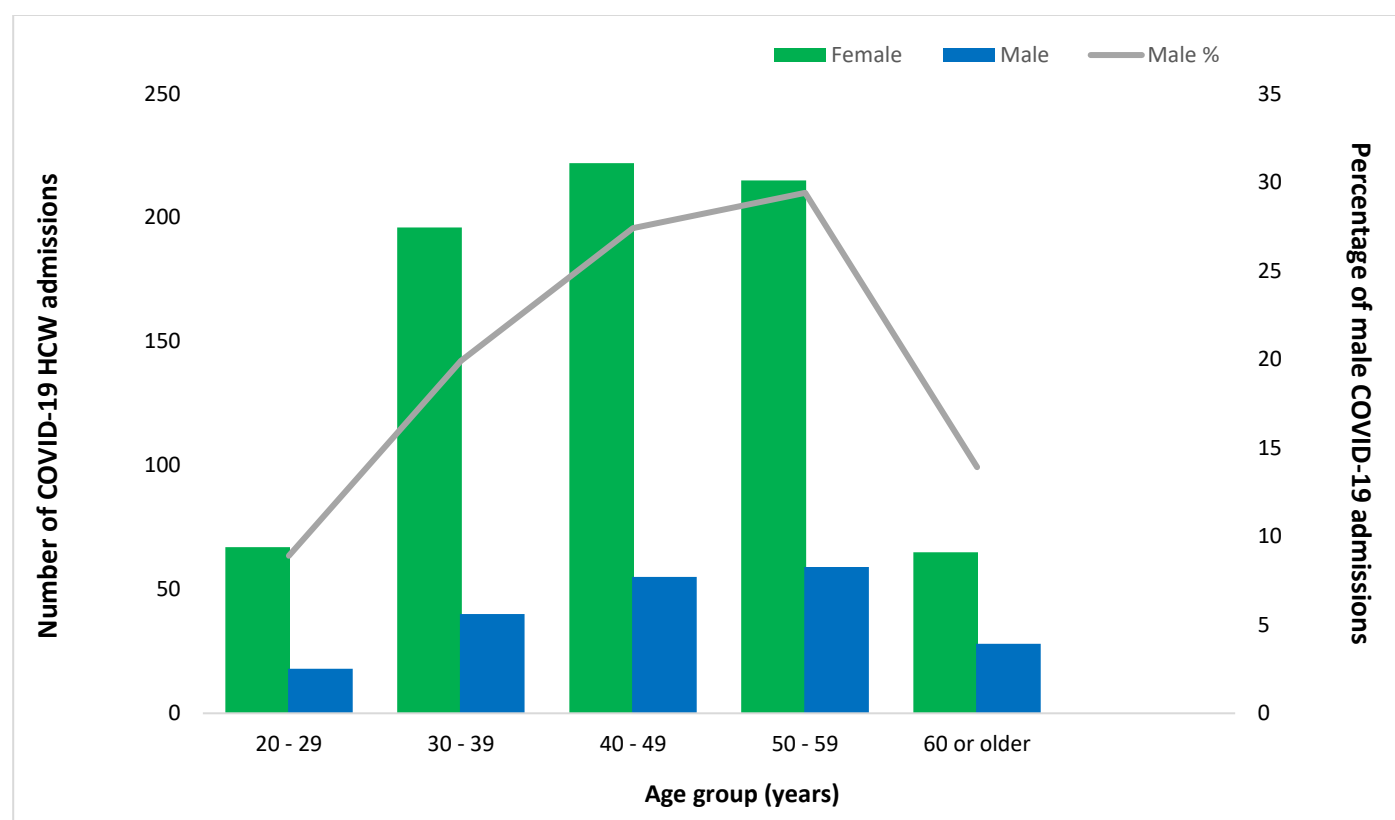


Figure 3: Number of reported COVID-19 HCW admissions by age, gender and percentage of males, South Africa, 5 March– 8 August 2020 (n=965)

Note there were 2 HCWs whose age was unknown at the time of this report's dissemination.

Of the 900 (93.3%) HCWs for whom comorbid disease was known, 414/965 (42.9%) had at least one comorbid disease and 150/414 (36.2%) had more than one comorbidity reported. Among the 414 HCWs who had reported a comorbid condition, the most commonly reported comorbid conditions were hypertension (229/414; 55.3%) and diabetes (188/414; 45.4%). There were 93 (22.5%) HCWs who were HIV positive, eight (1.9%) with active tuberculosis (TB) and four (1.0%) with a previous history of TB (Table 2).

Table 2: Reported comorbid diseases in COVID-19 admissions among HCWs reporting at least one comorbid disease, South Africa, 5 March– 8 August 2020 (n=414)

Comorbid disease*	Frequency (n)	Percentage (%)
Hypertension	229	55.3
Diabetes mellitus	188	45.4
Chronic cardiac disease	21	5.1
Chronic pulmonary disease	4	1.0
Asthma	67	16.1
Chronic renal disease	4	1.0
Malignancy	9	2.2
HIV	93	22.5
Active tuberculosis	8	1.9
Previous history of tuberculosis	4	1.0

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

Severity

- Of the 967 COVID-19 HCW admissions to date, 80 (8.3%) met the criteria for severe disease defined as receiving treatment in high care or intensive care unit (ICU) or ventilated or diagnosed with acute respiratory distress syndrome (ARDS). The mean age of patients who had severe disease (52 years) was significantly different from those who did not have severe disease (45 years) ($p < 0.001$). Of the 80 with severe disease, 58 (72.5%) had at least one comorbid disease ($p < 0.001$).

Outcomes

Of the 965 admitted HCWs, 776 (80.4%) were discharged alive, 29 (3.0%) were transferred out to either higher level care or step-down facilities, 51 (5.3%) died, and 109 (11.3%) were currently in hospital. The case fatality ratio (CFR) of 6.2% (51/827) among HCWs with known in-hospital outcome was lower than the CFR among non-HCW admissions reported to DATCOV (18.4%, 7700/41854).

The majority of HCW deaths, 14 (27.5%), were reported in the Gauteng, followed by 13 (25.5%) from KwaZulu-Natal, ten (19.6%) from the Eastern Cape, , six (11.8%) from the Free State, five (9.8%) from the Western Cape and three (5.8%) from the North West provinces. Nineteen (37.3%) deaths recorded were among HCWs aged 60 years and older. The median age of those who died was 57 (IQR 48 – 62) years compared to 45 (IQR 37 – 54) years for those who were still alive. Forty-one (80.4%) of the deaths were female and 10 (19.6%) were male HCWs. One (2.0%) deceased HCW was pregnant. Eighteen (35.3%) of the deceased were admitted in ICU, 22 (43.1%) were ventilated, and 42 (82.3%) were given supplemental oxygen. The median length of stay for the HCWs who died was 8 days [IQR 4 – 16] compared to 6 days [3 – 10] for those discharged alive. Thirty-six of the 51 (70.6%) HCWs that died had at least one comorbid disease reported. Twenty-one (41.2%) had more than one reported comorbidity. Hypertension (29/51; 56.9%) and diabetes (23/51; 45.1%) were the common reported comorbid diseases.

Please note that the mortality data presented was based on available information from sentinel hospitals as of 8 August 2020, thus not all deaths that occurred during the reporting period nationally are included. Deaths that were subsequently confirmed not be of a HCW were removed from the data set.

Conclusion

Admissions among HCW are declining in keeping with the national trend. We continue to observe a high percentage of deaths amongst HCWs older than 60 years of age. Healthcare workers with comorbid medical conditions also have a higher proportion of deaths.

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
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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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
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	
Western Cape	
Busamed - Paardevlei private hospital	Nurture Cape View
Nurture Newlands	

