

## Supplementary material

### Data source

DATCOV was developed in March 2020 as a sentinel hospital surveillance system for COVID-19. Initially, public hospitals at provincial levels were reporting hospital admissions on DATCOV. As private hospitals began sharing their data on hospital admissions related to COVID-19, the National Department of Health (NDoH) decided to adopt DATCOV as a national hospital surveillance system for COVID-19 on July 15, 2020, and provided support and resources to roll it out to all public hospitals. All hospitals were reporting to DATCOV by October 2020. As DATCOV was now a national reporting tool for hospital admissions in SA, hospitals were expected to back capture all admissions since the start of the epidemic.

### Data management and data quality

DATCOV was developed as an online platform for direct data entry by data capturers. Since more hospitals had admission records already captured, the system was adapted to allow for data imports. Fields that were consistently checked for imported entry included patient identifiers, age, sex, race, pregnancy, HCW status, comorbidities, and details of the admission date, outcome status, and date of outcome. For outcome status, hospitals are contacted and required to update should the patient entered into the database have recorded outcomes (died, discharged, or transferred to another hospital).

*Measures put into place to improve the quality of the data included the following:*

- a. Drop-down menus or tick-boxes.
- b. Data validation checks for fields such as age and admission date.

- c. Routine audits of import files and the database to ensure all fields were correctly imported and updated.
- d. All patients reported into DATCOV as a SARS-COV-2-positive case were verified against a national SARS-CoV-2 laboratory case line list using a unique case identifier. Admitted patients on the DATCOV who were not found on the national laboratory line list for SARS-CoV-2-positive case were removed from the DATCOV database.

Table S1. Missing data and characteristics of hospitalised COVID-19 patients reported to DATCOV, South Africa, March 5, 2020 to April 30, 2021

<b>Characteristics</b>	<b>Missing data for HCWs, <i>n</i> (%)</b>	<b>Missing data for non-HCWs, <i>n</i> (%)</b>	<b>Total missing, <i>n</i> (%)</b>
<b>Sex</b>	2 (0.03)	259 (0.2)	261 (0.2)
<b>Age (years )</b>	<b>Complete variable</b>		
<b>Race</b>	91 (1.4)	796 (0.5)	887 (0.5)
<b>Wave</b>	<b>Complete variable</b>		
<b>Weekly national number</b>	<b>Complete variable</b>		
<b>Sector</b>	<b>Complete variable</b>		
<b>Province</b>	<b>Complete variable</b>		
<b>Chronic diseases</b>			
Obesity	4641 (72.9)	122 045 (74.7)	126 686 (74.7)
Hypertension	1315 (20.7)	44 678 (27.4)	45 993 (27.1)
Diabetes	1371 (21.5)	46 649 (28.6)	48 020 (28.3)
Asthma	1484 (23.3)	51 573 (31.6)	53 057 (31.3)
HIV	1557 (24.5)	51 583 (31.6)	53 140 (31.3)
TB (current/past)	1522 (23.9)	52 437 (32.1)	53 959 (31.8)
Chronic kidney disease	1577 (24.5)	54 478 (33.4)	56 035 (33.0)
Malignancy	1585 (24.9)	54 749 (33.5)	56 334 (33.2)
<b>Admission outcome</b>	<b>Complete variable</b>		
Discharged alive			
Died			