Characteristics and outcomes of patients hospitalized with the new coronavirus in Cabo Verde in the semester after the country's first case

Janilza Silveira Silva[1,2], Ngibo Mubeta Fernandes[1,2*], Maria da Luz Lima Mendonça[1,2], Veruska Maia[3], Luciano Pamplona Cavalcanti[3]
[1]National Public Health Institute, Cabo Verde, [2]Programa de Epidemiologia de Campo, Cabo Verde (EpiCV), [3]Associação Brasileira de Profissionais de Epidemiologia de Campo (ProEpi)
*Presenting author: Ngibo Mubeta Fernandes
ngibo.fernandes@insp.gov.cv
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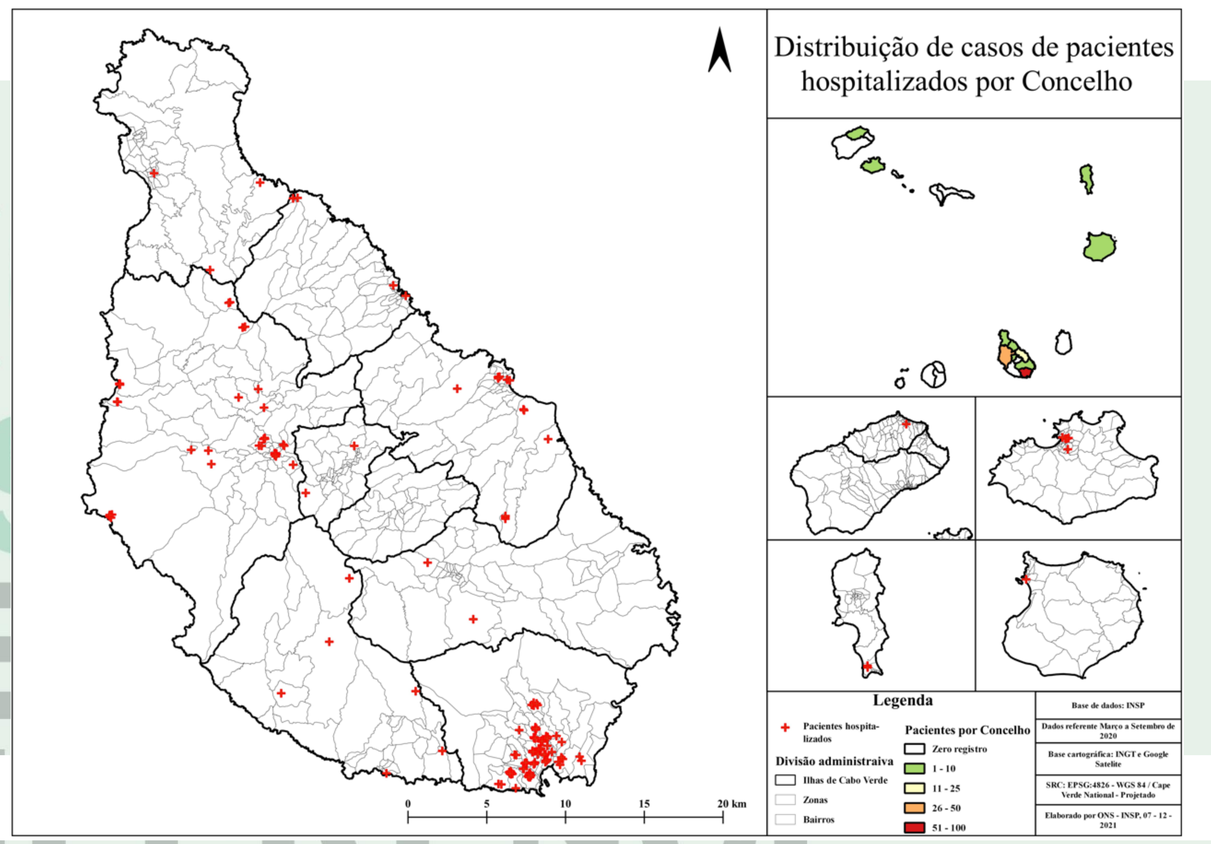
Background

COVID-19 is a significant emerging infectious disease, characterized by rapid transmission, high morbidity and mortality, and severe impact on vulnerable populations, exposing gaps in public health preparedness and underscoring the need for effective surveillance, response, and global coordination. The first COVID-19 case in Cabo Verde was reported on March 19, 2020, on the island of Boavista. The country experienced one of the highest attack rates in Africa, but early implementation of contact tracing and free mass testing enabled high case detection, while the overall fatality rate remained below 1%. This study aimed to describe the clinical and sociodemographic characteristics, as well as the outcomes, of patients hospitalized with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection from March 19 to September 30, 2020.

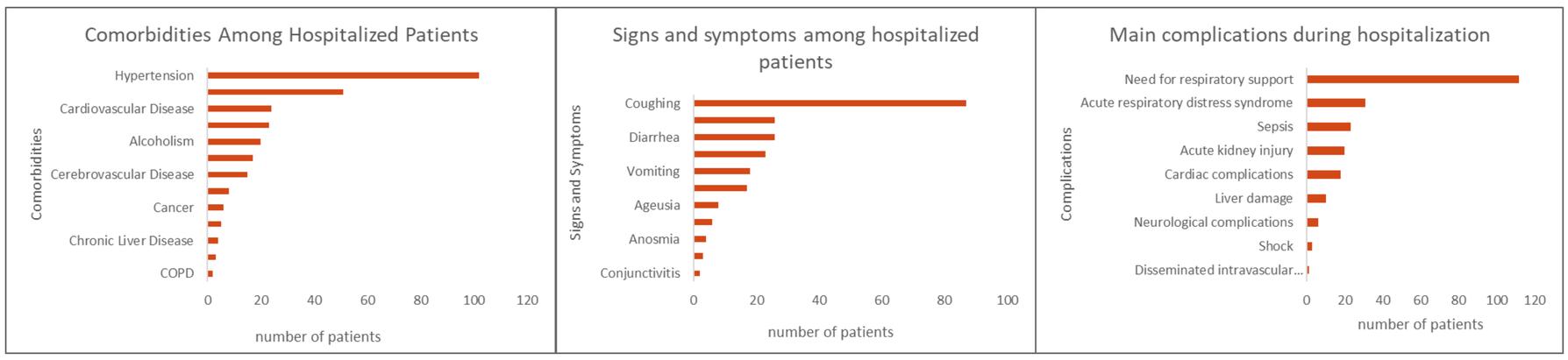
Methods

Study design: A retrospective descriptive study was conducted using data from the medical records of patients admitted with SARS-CoV-2 infection.
Study population and period: Was comprised of patients admitted to hospitals in Santiago, São Vicente, and Boavista between March 19th, and September 30th, 2020.
Inclusion criteria: Included were patients with a confirmed COVID-19 diagnosis by PCR detection of SARS-CoV-2 nucleic acid and hospitalization based on clinical criteria.
Exclusion criteria: Excluded were suspected cases without PCR confirmation and patients with incomplete data in sample collection forms or clinical records.
Data analysis: Frequencies, measures of central tendency, and relative measures were calculated using Excel and Epi Info 7, while spatial analyses and mapping were performed with QGIS version 3.34.3
Ethics statement: The study was approved by the National Ethics Committees and National Data Protection Commission.



Results

The study included 179 patients. Their average age was 57 (DP=23.5), and 51% (n=92) were female. At admission to the infirmary, 67% (n=120) had a respiratory rate over 20 breaths/minutes, 49% (n=87) had a cough, and 7% (n=12) presented axillar temperature ≥38°C. The median hospital stay was seven days (Range: 0-72), and 15% (n=26) of patients required hospitalization at a Special Care Unit. Acute Respiratory Distress Syndrome (18%; n=31), sepsis (13%; n=23) and acute kidney injury (11%; n=20) were the most frequent complications. Of the 108 patients needing ventilation support at some point, 14% (15) received invasive mechanical ventilation. At the endpoint, 79% (142) of individuals had been discharged, 19% (33) had died, and 2% (4) were non-residents transferred to hospitals abroad upon request. Among those who died, 32 presented with respiratory rate over 20 breaths/minute (p=0.000), 17 had diabetes (p=0.001), 8 had obesity (p=0.036) and 24 had hypertension (p=0.045).



Conclusions and Recommendations

Mortality was highest among older patients and those with underlying comorbidities, underscoring the importance of prioritizing vulnerable populations in COVID-19 response strategies in Cabo Verde. Addressing gaps in data access and standardization across hospitals is essential to improve surveillance and inform targeted interventions. Enhancing healthcare preparedness, resource allocation, and systematic data collection will be key to reducing severe outcomes and guiding evidence-based public health policies.

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Contact: ngibo.fernandes@insp.gov.cv