

Category :**Respiratory: mechanical ventilation**

**A214 - Outcomes of patients with covid-19 acute respiratory distress syndrome requiring invasive mechanical ventilation admitted to an intensive care unit in south africa.**

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### **Introduction:**

Up to 32% of patients with COVID-19 pneumonia may require ICU admission or mechanical ventilation[1,2]. Data from low- and middle-income countries for COVID-19 ARDS are limited. Groote Schuur Hospital in Cape Town, South Africa expanded its ICU service to support patients with COVID-19 ARDS requiring invasive mechanical ventilation (IMV). We report on patients' characteristics and outcomes from two pandemic waves.

### **Methods:**

All adult patients with COVID-19 ARDS admitted to ICU for IMV were included in this prospective cohort study. Data were collected from 5<sup>th</sup> April 2020 to 5<sup>th</sup> April 2021. Ethical approval was granted (HREC: 362/2020). Consent was obtained for survivors and waived for patients who died.

### **Results:**

Over the 12-month study period 461 patients were admitted to the designated COVID-19 ICU. Three-hundred-and-eighty patients met study criteria and 377 had confirmed hospital discharge outcomes. The median age of patients was 51 years (range 17-71), 50.5% were female and the median BMI was 32kg/m<sup>2</sup> (IQR 28-38). The median P/F ratio was 97 (IQR 71.5-127.5) after IMV was initiated. Co-morbidities included diabetes (47.6%), hypertension (46.3%) and HIV infection (10.5%). Of the patients admitted, 30.8% survived to hospital discharge with a median ICU length of stay of 19.5 days (IQR 9-36). Predictors of mortality after multivariate analysis were: male (OR:1.79), increasing age (OR:1.04), higher SOFA score (OR:1.29).

### **Conclusion:**

In a resource limited environment, escalation of ICU IMV support achieved a 30.8% hospital survival in patients with COVID-19 ARDS. The ability to predict survival remains difficult given this complex disease.

### **References:**

1. Huang C, Wang Y, Li X, et al (2020) Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. *Lancet* 395:497–506. [https://doi.org/10.1016/s0140-6736\(20\)30183-5](https://doi.org/10.1016/s0140-6736(20)30183-5)
2. Guan W-J, Ni Z-Y, Hu Y, et al (2020) Clinical Characteristics of Coronavirus Disease 2019 in China. *New Engl J Med* 382:1708–1720. <https://doi.org/10.1056/nejmoa2002032>