

Category : **Respiratory: airway management/CPAP**

**A228 - Success rate in improving oxygenation of covid-19 patients outside intensive care unit (icu) using non-invasive ventilation (niv) in kfafh, jeddah**

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**Introduction:**

Non-invasive ventilation (NIV) including Continuous Positive Airway Pressure (CPAP) and Bi-Level Positive Airway Pressure (BiPAP) are the modes of ventilation that applied positive pressure to keep the airways continuously open by using a mask or interface. It is widely use in managing COVID-19 patients in COVID wards and in the Intensive Care Unit (ICU). The main challenges in managing the COVID-19 patients is how to improve oxygenation and to avoid deterioration leading to ICU admission, intubation and sometimes death.

**Methods:**

The data were collected precisely using Non-invasive Ventilation Flowsheet and Introduction-Situation-Background-Assessment-Recommendation (ISBAR) handover tool from the month of May 2020 to October 2020. Data collected includes the type of mask use, number of patients with improved oxygenation, number of patients without improvement, diagnosis of patients, comfortability of mask by applying skin barrier and arterial blood gas results.

**Results:**

Based on the patient’s data collected for the month of May up to October 2020, 82% of COVID patients who used CPAP therapy outside ICU improved their oxygenation, while about 18% of them showed no signs of improvement then later intubated. On the first three months of the study, success rate in improving oxygenation of patients after using CPAP were between 91-95%. The success rate eventually drops significantly on month of August and September due to surprising increase of COVID cases which overwhelms the number of RT staff assigned and also the supply of proper mask sizes became scarce. Not long enough, additional RT staff were trained and assigned to COVID patients and arrival of mask supplies late-month of September that causes rebound in success rate to 75% on month of October.

**Conclusion:**

Improvement of oxygenation in COVID-19 patients using Non-invasive ventilation is critical prior to patient deterioration and requires proper management of trained health care personnel and availability of resources.

**Image :**

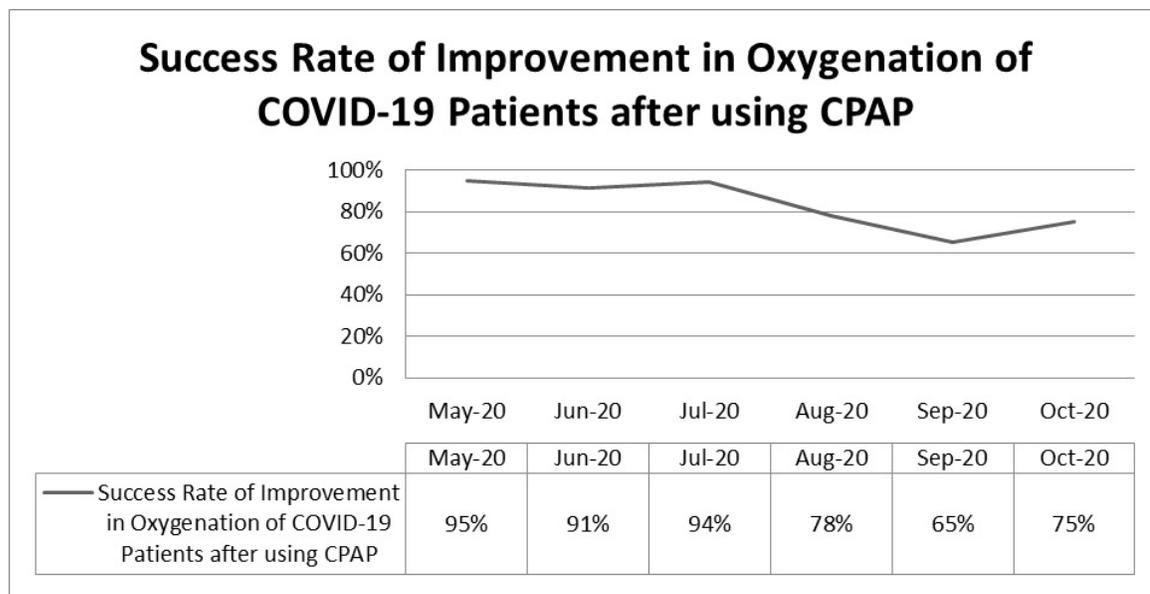


Figure 1