

Prehospital Ventilator Use for Post-Cardiac Arrest and Rapid Sequenced Intubated Patients

Background and Significance

- El Sayed et al. (2018) report prehospital ventilators help to achieve normoxia (oxygen tensions between 10-21%) which reduces the mortality rate for post-cardiac arrest and RSI patients.
- Ventilators help post-cardiac arrest patients achieve and sustain a 94%-100% oxyhemoglobin saturation level (Kang, 2019).
- Patients placed on a ventilator in the battlefield with related traumatic brain injury and changes in cerebral perfusion pressure (CPP) showed a 25% better outcome (Barnard et al., 2016).
- In 2005, the average cost for day 1 with mechanical ventilation was approximately \$10,794, with days two and three costing approximately \$4,769 and \$3,968, respectively (Dasta et al., 2005).

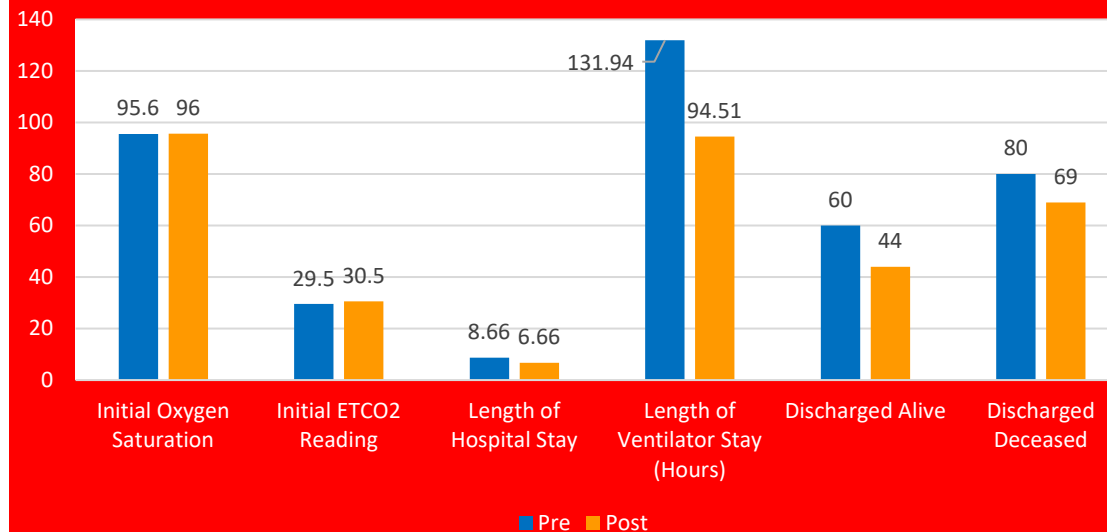
Limitations

- Multiple Charting Systems
- Small Sample Group
- World-Wide Pandemic
- Short Transport Times



If placed on a ventilator in the prehospital setting, there is a decrease in hospital stay and stay on a ventilator in the hospital.

Mean Comparisons



Contact Information, Full results description, Discussion, Theoretical Framework & References



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Methods

Design:

- Retrospective, quantitative quality improvement project

Setting:

- Health system in suburban northern NJ with a mobile health division

Sample:

- 140 patient encounters requiring mechanical ventilation via bag valve mask
- 113 patient encounters requiring mechanical ventilation via ventilator

Measures:

- The number of mobile health division encounters
- Length of stay in the hospital
- Length of time on ventilator

Other data points

- Patient's initial oxygen saturation
- End-tidal CO2 upon arrival to the ED
- Pre and post ventilator placement on the paramedic vehicles

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