

Category : **Respiratory: mechanical ventilation**

A255 - Back to basics: Improving consistency of 6ml/kg PBW using the Model for Improvement

V Varley ; R Starba ; A Revall

Torbay Hospital, Intensive Care Unit, Torquay, United Kingdom

Introduction:

ICU staff are aware that hypoxic patients with ARDs should be ventilated at 6ml/kg. Hitting this target is difficult to achieve, even in protocolised research trials [1]. We have been monitoring the total time within the target 6ml/kg PBW for patients with a P/F ratio <200 for 18 months using this as an outcome measure to monitor iterative changes to improve adherence to this target. Here we report the results of a project determining whether heights are correctly measured and inputted into the ventilators.

Methods:

All patients who required ventilation for >12 hours were selected for this study during a five-week period in an ICU of a DGH. Data collected for each patient included: PBW, height on IntelliSpace Critical Care and Anaesthesia (ICCA), height in ventilator, measured height, tidal volume (ml/kg), P/F ratio and mode of ventilation.

Results:

Data were collected for 21 patients. 1 had no PBW inputted on the ventilator. 19.1% of patients (4/21, 95% CI 5.5-41.9%) had PBW inputted incorrectly. 14.3% had ventilation heights significantly different to their actual height on ICCA (2/14, 95% CI 1.8-42.8%). 36.8% (7/19, 95% CI 16.3-61.6%) had a time delay of >1 hour between ventilation and recording their height on the ventilator. 23.8% (6/21, 95% CI 11.3-52.2%) had a tidal volume of >6.0 ml/kg of PBW.

Conclusion:

The time we hit the 6ml/kg target varies weekly with performance worst in weeks with patients on ventilators with a P/F <200. This demonstrated that we are not consistently measuring patients correctly or inputting measurements promptly in the ventilator. This provides a great starting point for an education programme, the success of which can be monitored using the weekly outcome measure of % time <6ml/kg reported on the run chart above (Fig. 1).

References:

1. Young D et al. N Engl J Med 368:806-813, 2013

Image :

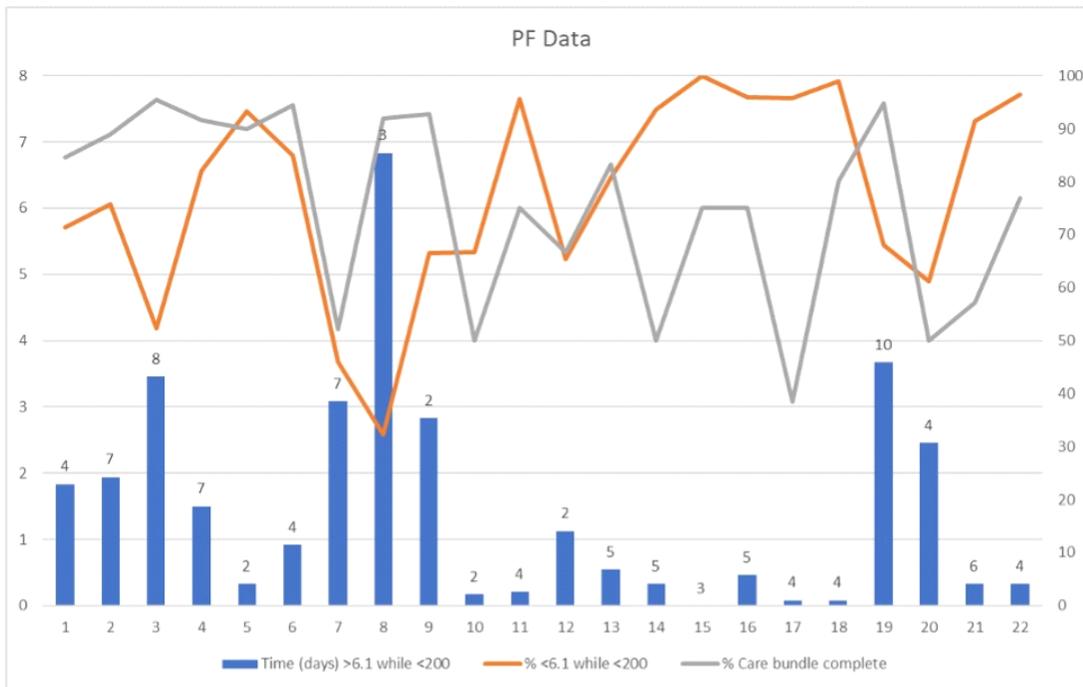


Fig 1: Run Chart of % of patients with a P/F < 200 who are ventilated at or below 6.1 ml/kg. Plotted with the total time in days when patients had a P/F <200