

Humidified High Flow in the Emergency Department

Nerida Bell¹, Claire Hutchinson²

¹ Royal Prince Alfred Hospital, Missenden Road, Camperdown, Sydney 2050

² Canterbury Hospital, Thorncraft Parade, Campsie, Sydney 2194

Background: The use of High Flow Humidified Nasal Cannula (HFHNC) is now accepted practice within the acute medical setting. Studies have demonstrated its effective use in the neonatal intensive care, adult intensive care and in the post operative setting. However, although currently widely used in Emergency Departments (ED) there have not been any studies to support the use for patients who present to the ED with acute dyspnoea.

Aim: The study aims to define which patients will benefit most from the HFHNC and inform the development of clinical practice guidelines regarding its safe use in the adult ED setting. We hypothesize that the total number of patients with respiratory deterioration, requiring escalation to non invasive or invasive ventilation will be less on the HFHNC versus standardised oxygen therapy.

Design: A prospective randomised controlled trial

Method: The study aimed to recruit 100 adult patients from 2 Sydney metropolitan ED's. Inclusion criteria were: patients who presented with the complaint of dyspnoea and a respiratory rate ≥ 25 and oxygen saturations $\leq 93\%$ in room air. The patient was consented and randomised to either standard oxygen therapy or HFHNC. Both arms of treatment were then titrated according to the patient's clinical condition. Quantitative patient data was collected for the duration of the ED stay only with a 2 hour end point.

Results and Conclusion: Currently 47 patients have been recruited. The collated data will be statistically analysed and presented at the conference.