8.06 An Audit of Non-Invasive Ventilation (NIV) Practice in a Level 3 Hospital

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Background: BTS guidelines state that NIV should be given in appropriate clinical areas by trained staff using optimal settings[1]. In our hospital, NIV is typically prescribed by non-specialist doctors on non-respiratory wards. This audit assessed adherence to BTS guidelines[2] and NIV quality.

Methods: Retrospective review of 13 patients, identified using HIPE coding, admitted to Wexford General Hospital with Type 2 respiratory failure(T2RF) and received NIV during January-July 2022.

R**ESULTS:** Average age was 67. 85% had COPD, 30% were on long term oxygen therapy(LTOT) and 38% had prior NIV use. All patients had T2RF on initial gas, with average pH 7.25, and pCO2 9.16. 92% had chest x-ray before NIV. 38% had escalation plans recorded. 68% were for full escalation. Escalation plans were absent in 75% of patients on LTOT.

Average initial pressures were IPAP 15 and EPAP 5 with average pressure support of 9.6. ABGs were repeated in all cases, with 61.5% within one hour. 53% had settings adjusted incorrectly (settings unchanged despite worsening acidosis, NIV removed despite ongoing acidosis or suboptimal IPAP/EPAP adjustments).

NIV was started by non-specialist registrars(38%) and senior house officers(30%). General Medical Teams started NIV(61.5%), followed by emergency medicine(30%) and Respiratory teams(7%).

Conclusion: BTS guidelines adherence was suboptimal. NIV optimisation and ceiling of care establishment were poor. Increased awareness on NIV management is needed. A new NIV pathway has been implemented and a re-audit is ongoing.

Keywords: Type 2 respiratory failure (T2RF), Non-Invasive ventilation (NIV).

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