

Introduction Non-invasive ventilation (NIV) may be used for a number of specific clinical indications in the context of acute type 2 respiratory failure. Prior to October 2013, any doctor at or above ST3 level could initiate NIV on a patient if it was deemed necessary. It was noted in a number of cases the use of NIV was inappropriate and not as per the clinical guidelines.¹ In October 2013 a new guideline was implemented within the Trust whereby all decisions to start patients on NIV must be discussed with and approved by the Respiratory Consultant on-call.

This study was conducted to evaluate the impact of the guideline implementation on the outcome for patients treated with NIV.

Methods Retrospective analysis of data from Inpatient NIV database of patients receiving acute NIV over a 2-year period (one year before and one year after the implementation of the new guidelines). Comparison was drawn between the data from two years for all-cause mortality and mortality specifically in those with COPD.

Results A total of 280 cases were identified over the 2-year period (140 male, 140 female). All-cause mortality was found to be lower overall in the post-intervention group (38.9% post-intervention compared to 48.3% pre-intervention). This was further analysed based on whether or not patients had COPD. Overall there was statistically significant higher mortality in non-COPD patients compared to COPD patients both before and after intervention with p values of 0.023 and 0.0096 respectively. There was significantly lower mortality in COPD patients post-intervention compared to pre-intervention (p = 0.0237). There was also lower mortality in non-COPD patients after intervention but this was not statistically significant.

Conclusion Mortality for NIV patients was considerably lower after strict implementation of the local guideline. It shows that Respiratory Consultant-led decisions enable more appropriate use of this treatment and better outcomes for patients. It also highlights the importance of education in NIV initiation for general medical doctors.

REFERENCE

- 1 The use of non-invasive ventilation in the management of patients with COPD admitted to hospital with acute type 2 respiratory failure. A joint BTS/RCP London/Intensive Care Society document, 2008

P41 OUTCOMES OF PATIENTS TRANSFERRED TO RESPIRATORY CARE UNIT (RCU) ON TRACHEOTOMY VENTILATION: A 4 YEAR EXPERIENCE

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Background RCU in Leeds admits patients who had tracheostomy in ICU as part of acute admission and are slow to wean from ventilation. We looked at the long-term outcomes of attempted weaning from ventilator support in terms of survival and level of support at discharge. We also looked at length of stay (LOS), underlying diagnosis and comorbidities.

Methods Thirty one patients admitted to RCU as a step-down from ICU between October 2011 and July 2014 were included. Patients were identified using database and data was collected from electronic records and inpatient notes. Patients were excluded if they had tracheostomy inserted on a previous admission.

Results The demographics, length of stay on RCU and primary diagnosis leading to respiratory failure and intubation are

described in Table 1. All except one patient had significant other comorbidities including muscular dystrophies, MND, COPD, IHD, etc. The average number of days spent in ICU after tracheostomy prior to step-down was 19 +/-15. Eight (26%) patients died in hospital. Seventeen patients (55%) were discharged without any ventilatory support after decanulation, 3 required overnight NIV and 3 were discharged with tracheostomy ventilation. At 12 months post-discharge 16 (52%) patients were dead; 11 (35%) were not on any ventilatory support; 3 were continuing to be ventilated via tracheostomy, 1 remained on NIV.

Abstract P41 Table 1

Mean age ± SD (Years)	61 ± 18
Males	19 (61%)
Mean length of stay on RCU ±SD (Days)	39 ± 17
Median length of stay on RCU (Days)	58
Range of length of stay (Days)	1–226
Primary diagnosis (n = 31)	n (%)
Pneumonia (CAP/HAP/Aspiration)	17 (55%)
Post-procedure/surgery	5 (16%)
Neuromuscular causes	5 (16%)
COPD	2 (0.6%)
Other	1 (0.3%)

Discussion and conclusion Patients coming for weaning from trachy-ventilation represent a complex group with diverse aetiology and have multiple comorbidities. Their stay in a high dependency area is unpredictable and the LOS varies considerably. While a third of patients remained successfully weaned at one year they carry a high in-hospital and 1 year mortality. LOS is influenced by the complexity of discharge planning often including patients from outside our catchment area. Our RCU like many others are not staffed to look after more than 2 trachy-ventilated patients at any one time which combined with prolonged stay slows down patient flow from ICU. This highlights the need for dedicated units for weaning with a team that is able to look after complex needs in hospital and coordinate complex discharges.

P42 FACTORS AFFECTING THE DURATION OF ACUTE NON INVASIVE VENTILATION REQUIRED IN PATIENTS WITH ACUTE HYPERCAPNIC RESPIRATORY FAILURE

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Introduction and objectives Factors predicting the likelihood of failure of NIV, i.e. requirement of intubation or death, have been well documented with low pH shown to be the most important factor. Factors affecting the duration of NIV required in those patients who receive ward base treatment without the need for intubation have not been established. This study aimed to identify factors which influence the duration of NIV required in acute hypercapnic respiratory failure.

Methods A retrospective analysis of 123 consecutive episodes of acute hypercapnic respiratory failure requiring NIV between June 2013 and June 2014 was carried out. Correlation between duration of NIV treatment and a number of variables, namely