plugging. At 12 months post-discharge two (17%) patients were dead; seven (58%) were not on any ventilatory support; three (25%) were continuing with tracheostomy ventilation.

Conclusion Respiratory weaning from tracheostomy ventilation represent a heterogeneous group which is complex with diverse aetiology and multiple comorbidities. There is a considerable variation in the LOS on ARCU and is often unpredictable. Although more than two third of patients wean successfully on our unit it carries a high one year mortality. LOS is influenced by the complexity of discharge planning. We are not a dedicated weaning unit and our unit is not staffed to look after more than two tracheostomy-ventilated patients at any one time which combined with prolonged stay slows down patient flow from ICU to ARCU and from ARCU to the wards. Multidisciplinary approach and dedicated weaning units are needed that is able to look after complex needs in hospital and coordinate complex discharges.

Abstract P131 Table 1

Age (mean $\pm$ SD, years)	56 $\pm$ 17
Males	n=8
Females	n=4
LOS in ICU pre tracheostomy	Median=8, Range=2–22 Mean= 9 $\pm$ 6
LOS in ICU post tracheostomy	Median=34, Range=7–96 Mean 41 $\pm$ 30
LOS in RCU post tracheostomy	Median=7, Range=1–93 Mean 21 $\pm$ 33
Primary Diagnosis (n=12)	
Pneumonia	6
Post-procedure/surgery	3
COPD	1
ARDS	1
Other (Cardio-respiratory arrest)	1

P132

THE ROLE OF VENTILATION IN PNEUMONIC EXACERBATIONS OF COPD

¹TM Hartley, ¹ND Lane, ¹J Steer, ²C Echevarria, ¹SC Bourke. ¹Northumbria Healthcare NHS Foundation Trust, North Shields, UK; ²The Newcastle upon Tyne Hospitals NHS Foundation Trust, Newcastle upon Tyne, UK

10.1136/thoraxjnl-2017-210983.274

Introduction In isolated pneumonia, most trials show that NIV does not improve outcome, and may delay more appropriate intubation. However in pneumonia complicating COPD with acidemic respiratory failure (AHRF), an RCT showed NIV reduced the need for intubation and conferred a survival benefit at 2 months.¹ UK NIV guidelines state NIV is not indicated in pneumonia; whether this was intended to apply when pneumonia complicates another condition associated with a favourable response to NIV is unclear and there is substantial variation in practice. In our institution, most patients with pneumonic exacerbation of COPD (pECOPD) and AHRF receive NIV; few decline ventilation or are immediately intubated.

Methods From a consecutive historical cohort of patients receiving assisted ventilation for spirometry confirmed ECOPD and AHRF, chest radiographs, electronic data and clinical notes were reviewed. The presence of consolidation was

determined in the following hierarchy: attending consultant physician interpretation (to mimic reality); radiologist report; or researcher interpretation. Analysis performed using IBM SPSS; significance identified using student's t-test, Mann Whitney U or chi-squared test for parametric, non-parametric and categorical data respectively.

Results Among patients surviving to discharge, 90 day and 6 month mortality was 12.8% and 20.3% respectively in those with consolidation, compared to 12.9% and 18.4% respectively in those without.

Discussion Compared to those without pneumonia, patients with pECOPD were older, had more comorbid illnesses, more severe acidemia and greater functional limitation. In addition, AHRF was more likely to have developed after admission, despite initial medical therapies (an adverse prognostic marker). Unsurprisingly, in-hospital mortality was significantly higher in those with pECOPD, but approximately 2/3 survive to hospital discharge and post-discharge outcomes between the two groups are comparable. Coexistent consolidation is a marker of adverse acute outcome and an indication for closer monitoring but should not preclude ventilation, especially when so few are considered eligible for intubation.

REFERENCE

- Confalonieri M, Potena A, Carbone G, *et al.* Acute respiratory failure in patients with severe community-acquired pneumonia: A prospective randomised evaluation of noninvasive ventilation. *Am J Respir Crit Care Med* 1999;160:1585–91.

Abstract P132 Table 1 Population Descriptors and in-hospital mortality by presence or absence of complicating pneumonia.

	Consolidation present n=231	No Consolidation n=258	P Value
Age	75.4 (9.2)	70.4 (10.2)	<0.001
FEV1 (% predicted)	41.0% (17.8)	35.2% (14.6)	0.001
Current Smoker	45.5%	55.7%	0.273
BMI	24.9 (7.3)	24.3 (7.2)	0.312
eMRCD	5 (4–5)	5 (4–5)	0.14
Proportion 5a or 5b	131 (56.7%)	133 (51.6%)	0.276
Proportion 5b	54 (23.4%)	46 (17.8%)	0.145
Charlson Index	2 (1–3)	1 (1–2)	0.042
For escalation to Invasive ventilation	75 32.5%	102 (39.5%)	0.1
Received IPPV (+/-NIV)	13 (5.6%)	14 (5.4%)	0.922
Acidaemic on 1 st ABG	186 (80.5%)	235 (91.1%)	0.001
pH at ventilation initiation	7.23 (0.08)	7.25 (0.09)	0.09
CO2 at ventilation initiation	10.2 (2.7)	10.7 (2.9)	0.06
CRP at NIV	76 (27–184)	31 (10–74)	<0.001
Peak Pressure (IPAP)	19 (17–20)	20 (18–22)	0.464
In Hospital Mortality	83/231 (35.9%)	41/258 (15.9%)	<0.001

P133

ACUTE HYPERCAPNIC RESPIRATORY FAILURE; APPLICATION OF A NOVEL HUMAN FACTORS APPROACH TO IMPROVE RECOGNITION AND MANAGEMENT

¹HJ Pick, ¹P Cull, ¹E Mullaney, ¹S Smith, ²N Taylor, ¹G Lowrey. ¹Royal Derby Hospital, Derby, UK; ²Hu-Tech Human Factors Ergonomics, London, UK

10.1136/thoraxjnl-2017-210983.275