S83 AN ECONOMIC EVALUATION OF DOMICILIARY NON-INVASIVE VENTILATION (NIV) IN PATIENTS WITH END-STAGE COPD IN THE UK

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Background NIV is an established treatment for the management of acute exacerbation of COPD but less is known about the effectiveness of NIV in the home setting. Many clinicians consider domiciliary NIV to be cost-effective in patients that have experienced three or more exacerbations however no economic evaluations, using decision modelling have been conducted.

Methods The findings of a systematic clinical review of the clinical effectiveness of domiciliary NIV in COPD were applied in a Markov model, to estimate cost-effectiveness, from a UK perspective, when compared to usual care. Outcomes were measured in Quality Adjust Life Years (QALYs). Two end-stage COPD populations were considered; patients that were stable for at least twelve weeks (stable population) and those recently discharged for exacerbation (post-admission population). Given the uncertainty around the effect of domiciliary NIV on admissions and mortality in both populations, extensive sensitivity analysis was conducted to quantify and likelihood of NIV being cost-effective at a thresholds of £30,000 per QALY and the model's sensitivity to key parameters.

Results This model indicated that domiciliary NIV is unlikely to be cost-effective in stable populations but is more likely to be cost-effective post-admission. However, there was considerable uncertainty around the results for both populations. The model was most sensitive to changes in the risk ratio for admission and the duration of the effect but was also sensitive to changes in baseline risk of admissions.

Conclusion This model indicates that domiciliary NIV is unlikely to be cost-effective in stable patients but maybe cost-effective in patients with a history of admissions. This speculative economic model describes the uncertainty around these conclusions.

S84 IS THERE A RELATIONSHIP BETWEEN ACCEPTANCE OF REFERRAL TO SMOKING CESSATION SERVICES OR PULMONARY REHABILITATION AND READMISSION RATES FOR PATIENTS WITH COPD?

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Introduction Readmission to hospital following an acute exacerbation of COPD is a significant burden to patients and health providers. Care bundles are increasingly used to support hospital discharges of patients admitted with an exacerbation of COPD. Referral to smoking cessation, nicotine replacement therapy and pulmonary rehabilitation services are key elements of COPD care bundles but it is not known if uptake to these interventions predicts readmission.

Methods This was a retrospective audit of patients who received a COPD discharge care bundle from April 2012 to March 2014. The care bundle was delivered by the nurse specialists in the Respiratory Discharge Service (REDS). The REDS team follow care bundle patients up for a period of 15 days after hospital discharge. Referral to smoking cessation, Nicotine Replacement Therapy (NRT) and pulmonary rehabilitation services was recorded, along with15 day readmission status as part of usual clinical outcomes. Between group-comparisons were analysed using chi-squared tests with the significance level set at $p < 0.05$.

Results 15 day readmission status, smoking cessation NRT and PR referral was recorded for 1891 patients (mean (SD) age 71.23 (10.32) yrs, 54.1% male, 40.5% current smokers) who received the care bundle prior to discharge. A total of 269 patients readmitted at 15 days (see table). There was a significant difference between smoking cessation uptake and readmission status ($p = 0.004$). There were no between-group differences in respect of readmission status and pulmonary rehabilitation or readmission status and NRT or ($p = 0.323$ and $p = 0.110$ respectively).

Conclusions Patients who accept a referral to smoking cessation services following an admission for an exacerbation of COPD may be less likely to readmit to hospital after 15 days but there is no relationship between acceptance of referral to pulmonary rehabilitation and NRT services and 15 day readmission status.

S85 EFFECTS OF POST EXACERBATION PULMONARY REHABILITATION (PEPR) ON EXERCISE TOLERANCE, QUALITY OF LIFE (QOL) AND HEALTH CARE UTILISATION

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Background PEPR has been shown to increase exercise tolerance, improve QoL and cut the cost of healthcare through reducing 30 day readmissions and A&E attendances (NICE 2010). Further research into the impact of PEPR on QoL and healthcare utilisation has been called for (NICE 2010). The feasibility of PEPR in practice has yet to be established (Jones *et al*

Abstract S84 Table 1

	Smoking cessation referral (n)			Pulmonary Rehabilitation Referral (n)			NRT Uptake (n)		
15 day readmission status	Yes	No	Non /Ex smoker	Yes	No	N/A	Yes	No	Non / Ex smoker
Readmitted	35	52	182	130	104	35	42	18	209
Did not readmit	331	328	944	770	640	193	317	118	1168
Died	0	6	13	6	12	1	0	2	17