To date, 15 interviews have been completed at Croydon Healthcare services Trust, and the Dutch interviews are underway.

Results The interview transcripts were thematically analysed using mostly framework analysis. Analysis was conducted using NVIVO 10. The following themes emerged from the data. 1) Acceptance of vest 2) willingness to wear the vest during day-time 3) Discomfort with sensor size and shape prohibiting night wear 4) Demonstrated capability of donning the vest and handling of the sensors 5) Safety concerns emphasising importance of patient education before use 6) Gender related concerns regarding vest design.

Conclusion The vests were well received by patients however the above results illustrate the importance of involving the end users in the design and development of any smart intervention. These results will be used for the final design and development of the vest.

REFERENCE

- 1 Chouvarda I, Philip NY, Natsiavas P, et al. WELCOME-innovative integrated care platform using wearable sensing and smart cloud computing for COPD patients for comorbidities. *Conf Proc IEEE Eng Med Biol Soc.* 2014;2014:3180–3. doi: 10.1109/EMBC.2014.6944298

M24

PREVALENCE OF ANXIETY AND PATIENT CHARACTERISTICS FROM A RANDOMISED CONTROLLED TRIAL (RCT) TO IDENTIFY IF COGNITIVE BEHAVIOURAL THERAPY (CBT) BY RESPIRATORY NURSES REDUCES ANXIETY IN COPD

¹K Heslop-Marshall, ²C Baker, ³D Carrick-Sen, ⁴SC Stenton, ⁴J Newton, ²GP Burns, ⁵A De Soya. ¹Newcastle Hospitals Foundation Trust/Institute of Cellular Medicine, Newcastle University, Newcastle, UK; ²Newcastle Upon Tyne NHS Hospitals Foundation Trust, Newcastle, UK; ³Birmingham University, Birmingham, UK; ⁴NIHR Biomedical Research Centre in Ageing and Chronic Disease, Newcastle, UK; ⁵Institute of Cellular Medicine, Newcastle University, Newcastle, UK

10.1136/thoraxjnl-2015-207770.451

Introduction Anxiety and depression are common co-morbidities in COPD. Anxiety is associated with increased breathlessness, lower levels of self-efficacy, impaired health status, poorer treatment outcomes and reduced survival, increased risk of hospitalisation, longer in-patient stay, readmissions and unhealthy behaviours such as smoking and lack of exercise. The aim of this abstract is to present prevalence data, engagement and baseline patient characteristics from the largest RCT on CBT in COPD.

Study design A multicentre RCT with follow up at 3, 6 and 12 months (ISRCTN55206395). Outcome measures include mean HADS-A (anxiety) and HADS-D (depression) score,¹ EuroQol - 5D Questionnaire,² COPD Clinical Assessment Tool³ and admission prevention at three, six and 12 months post intervention.

Approach 1,518 patients were screened for symptoms of anxiety using the Hospital Anxiety and Depression Scale (HADS). Two thirds, 705 (59%) patients scored ≥ 8 for anxiety and were approached.

Intervention Up to 6 CBT sessions provided by one of four respiratory nurses were offered. Self-help leaflets on anxiety and depression were provided as standard care.

Usual care Self-help leaflets only.

Results 42% of eligible patients consented to take part. Groups were well matched at baseline (Table 1) with no correlation between FEV1 and anxiety. A median of 4 CBT sessions (range 2–6) was delivered. Retention was high: 85% at 3 months and 72% at 6 months.

Abstract M24 Table 1 Baseline characteristics

	CBT Group (n = 139)	Control Group (n = 140)	p-value	(95% CI)
	Mean (SD)	Mean (SD)		
Age	66	67	66.5	
Gender				
Male	61 (44)	67 (48)	128 (46)	
Female	78 (56)	73 (52)	151 (54)	
Severity of COPD				
Mild	16 (11)	13 (9)	29 (10)	
Moderate	44 (32)	47 (34)	91 (33)	
Severe	50 (36)	49 (35)	99 (35)	
Very Severe	29 (21)	31 (22)	60 (22)	
Educational Level				
No educational qualifications	100 (75)	103 (77)	203 (73)	
HADS-Anxiety Score	12.3 (3.19)	12.0 (2.94)	0.47	(-0.456–0.988)
HADS-Depression Score	9.4 (4.01)	9.0 (3.68)	0.34	(-0.470–1.347)
CAT (Health Status)	28.2 (6.45)	28.7 (5.99)	0.52	(-1.944–0.990)
EQ5D	0.41 (0.29)	0.41 (0.30)	0.95	(-0.07–0.07)
Married or Co-habiting	68 (49)	63p (45)	132 (47)	
Current smoker	39 (28)	40 (29)	79 (28)	
Mean pack years	46	49	47	
BMI	26	27	26.5	

Conclusion The prevalence of anxiety and depression is high in patients with COPD and screening is therefore recommended. Affected patients were willing to engage in CBT in this large study. Results from 3, 6 and 12 months data will be available in November 2015 and will be reported. Results will include the cost effectiveness of CBT in COPD delivered by respiratory nurses.

Funding NIHR fellowship.

REFERENCES

- 1 Zigmond AS, Snaith RP. The hospital anxiety and depression scale. *Acta Psychiatr Scand.* 1983;67(6):361–370
- 2 EQ-5D. www.euroqol.org/about-eq5d/how-to-use-eq-5d.html. Accessed 11.4.2015
- 3 Jone PW, Harding G, Berry P, Wiklund I, Chen WH, Kline LN. Development and first validation of the COPD Assessment Test. *Eur Respir J.* 2009;34(3):648–654

Education and training: from simulation to social media

M25

OXYGEN: TOO MUCH OF A GOOD THING? CAN SIMULATION IMPROVE EDUCATION?

JL Parkin, E Lloyd. University of Bristol, Bristol, UK

10.1136/thoraxjnl-2015-207770.452

A cohort of chronic obstructive pulmonary disease patients experience acute exacerbations (AECOPD) presenting with worsening sputum production, cough and breathlessness. The recommended treatment for AECOPD involves using a 28% Venturi mask to achieve an arterial oxygen saturation of 88–92%. These guidelines have been poorly adhered to with many health professionals still administering high flow oxygen. An AECOPD model, created on the human patient simulator, was administered with 28% or 100% oxygen. 28% oxygen relieved hypoxia