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 daytime 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.

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| 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 |

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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 (ISCRCTN55206395). Outcome measures include mean HADS-A (anxiety) and HADS-D (depression) score,[1] EuroQol - 5D Questionnaire,[2] COPD Clinical Assessment Tool[3] 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 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.

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# Education and training: from simulation to social media

| M25 | OXYGEN: TOO MUCH OF A GOOD THING? CAN SIMULATION IMPROVE EDUCATION? |

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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
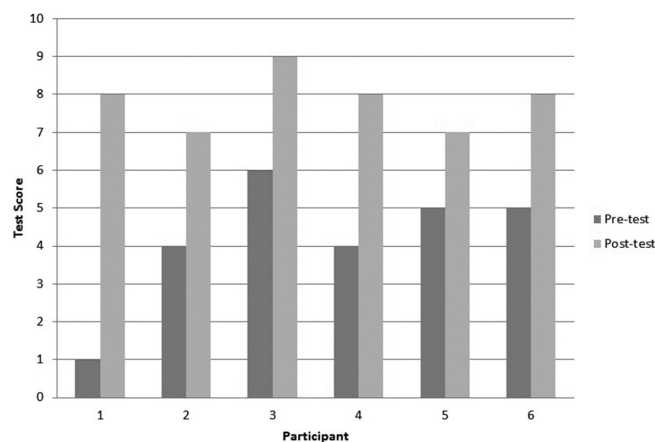
Abstract M25 Figure 1

(PaO_2 = 84.9 mmHg), caused mild hypercapnia ($PaCO_2$ = 49.6 mmHg) and the blood pH was normal (pH = 7.37). 100% oxygen enabled better arterial oxygenation (PaO_2 = 129.3 mmHg) but caused severe hypercapnia ($PaCO_2$ = 100.9 mmHg) and acidosis (pH = 6.98). Preclinical medical students were randomly allocated to simulation or lecture-based learning (the study has a crossover design) and were taught the correct use of oxygen administration. A greater proportion of students rated they had an excellent understanding of the key learning points after simulation (100%) compared to the lecture- based learning (33%) and it was sufficient to significantly improve test scores (p = 0.0135). Simulation could be used to educate future health professionals in using 28% oxygen to reduce the risk of hypercapnic respiratory acidosis in AECOPD.

M26   **TWEETING IS TEACHING - #RESPED: FREE, OPEN-ACCESS TWITTER EDUCATIONAL RESOURCE FOR TRAINEES AND SPECIALISTS IN RESPIRATORY MEDICINE**

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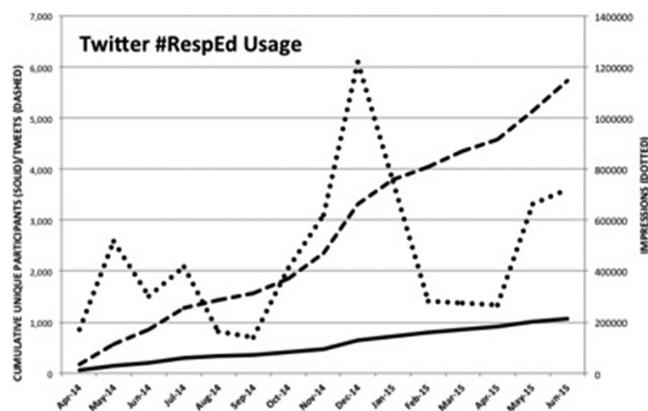
Introduction Social media use in medical education is expanding rapidly, bringing with it a novel means of learner engagement, feedback, collaboration and professional development.[1] A growing body of respiratory specialists and trainees are now engaging in such activities via Twitter.[2] We describe one of the commonest dedicated Respiratory 'Hashtags' ("#RespEd") where content related to evidence-based medicine (EBM), e-learning and collaboration is curated.

Methods "#RespEd" tweets were reviewed for usage statistics since 01/01/2013 using www. Symplur.com with more detailed review of monthly analytics since 01/04/2014. All "#RespEd" tweets were downloaded from Twitter and Symplur. Transcripts were reviewed for content using Microsoft Excel. A review of related hastags identified through Symplur was conducted to assess reach across Respiratory hashtags in a similar timeframe.

Results The "#RespEd hashtag" was first used in January 2013. Since this time, Symplur identified 1,099 participants and 5,973 tweets. Audience 'reach' was recorded as 7,384,722 impressions. A steady increase in users has evolved in the last 18 months with

clear peaks in activity around the BTS Summer and Winter meetings. Participants included a wide range of professionals including doctors, nursing staff, pharmacists, physiotherapists, patients and representatives of societies and mainstream respiratory journals. Users were from numerous countries. Common content included evidence-based medicine (e.g. recently published articles), e-learning resources and 'live-tweets' from training days, which were usually picture tweets of lecturers slides. Other established respiratory hashtags included (participants): #ATS2015 (2,812), #ERS2014 (2,179), #Pulmcc (1,927), #BTSWinter (487).

Conclusions Twitter represents an untapped respiratory educational resource, which is truly multi-disciplinary and breaks boundaries between professional groups. The BTS conferences have provided a clear platform to broaden this resource. There is an opportunity to reach out to trainees and others seeking continuing professional development and provide both reliable resources and a 'place' to foster debate and discourse on topical respiratory themes.

Abstract M26 Figure 1

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M27   **WHEEZES, COUGHS AND SPLUTTERS: HOW DO PAEDIATRIC TRAINEES MANAGE THEM?**

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Introduction and objectives Wheezy pre-school children frequently present to paediatric departments. There is a wide variation in how paediatric trainees investigate and manage these children, which can be associated with unnecessary costs to the NHS. Our aim was to assess this diversity in management options initiated by paediatric trainees.

Methods Web-based survey on how paediatric trainees approach scenarios of wheezy pre-school children. Trainees across the UK were asked to fill in a questionnaire consisting of four case scenarios involving wheezy children under the age of 5.

Results 194 trainees responded to the survey. There was a good representation amongst different training grades across UK deaneries. In the bronchiolitis scenario, 13% requested blood tests or