13.4 (range 2–40). 44 (38%) were still smoking and 17 of these accepted referral to cessation services. 27 of the other 125 smokers assessed but not thought to have COPD also accepted referral.

Case finding using this method in people already attending primary care clinics has a high yield (1 in 5) takes little time and deserves wider adoption.

REFERENCES

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M21 SPACE TO BREATHE: A NEW HOSPICE BASED PALLIATIVE CARE, RESPIRATORY AND PSYCHOLOGY PROGRAMME FOR PATIENTS WITH SEVERE COPD AND THEIR CARERS

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Background People with severe COPD have a burden of symptoms, often greater than those with lung cancer and have unmet need (Gore and Brophy 2000). A local palliative care needs analysis was conducted across primary and secondary care. Gaps were identified in the management of anxiety, breathlessness, social isolation, advance planning and carer support. Patients had high comparative admission rate and length of stay. A team, including a psychologist, OT, palliative and respiratory medicine and physiotherapy and a palliative care CNS, developed and delivered the programme.. The programmes focus was behavioural change through psycho-education, exercise and relaxation, underpinned by CBT.

Method Referral was from acute respiratory service for those with at least 2 acute admissions in the previous 6 months, FEV1 of <50% predicted and optimised medical management. They attended the hospice programme for 5 weeks with transport provided. Two programmes were completed with a total of 12 patients and 3 carers HADS and CATS were taken at week 1 and week 6. 6 month pre and post course admission data was collected.

Results Patients described; improvement in confidence and quality of life and improved management of their exacerbations. HADS and CATS remained unchanged. Initial data from programme 1 demonstrated reduction in total admissions from 7 to 4 and reduction in total bed days from 47 to 20, over a 6 month period.

Conclusions Patient evaluated improvement in function and quality of life and reduction in hospital bed days would suggested continuation of the programme with a change in quality of life measurement.

REFERENCE

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M22 THE CHRONIC OBSTRUCTIVE PULMONARY DISEASE ASSESSMENT TOOL (CAT) IN PATIENTS ADMITTED TO HOSPITAL FOR EXACERBATION

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Background The COPD assessment tool (CAT) measures health status[1] and is responsive to change with pulmonary rehabilitation[2] and out-patient exacerbations of COPD (AECOPD)[3]. This study established i) CAT score at AECOPD hospital admission, ii) change during recovery and iii) CAT in relation to other outcome measures of COPD severity at stability.

Methods Consenting patients presenting to hospital with a clinical diagnosis of AECOPD self-completed the CAT and answered detailed history. Length of stay (LOS) was recorded. At four week follow-up assessment, the CAT score, MRC dyspnoea score, spirometry and six-minute walking distance (6MWD) were measured.

Results Of 153 patients recruited at admission, there were 5 inpatient deaths, all with a high (>20) CAT on admission. Median LOS per admission CAT category was CAT10–20: 2.5 days; CAT21–30: 4 days; CAT31–40: 5 days.

89 subjects were reassessed at 4 weeks and 72 had a clinical diagnosis of COPD confirmed, Table 1. In these subjects, the mean (95%CI) change in CAT score from admission was -7(-9, -5), $p < 0.001$. Whilst 61/72 had a high CAT score on admission, there remained 39/72 with high score at follow-up. CAT score at follow-up was related to 6MWD, $r = 0.34$, $p < 0.01$ but not to age or forced expiratory volume in one second (FEV_1)% predicted.

Conclusion Despite marked improvement in CAT score with recovery from an AECOPD requiring hospital admission, a large proportion persist with high CAT scores at 4 weeks indicating poor health status. The CAT score offers prognostic information and adds another dimension to the COPD assessment.

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Abstract M22 Table 1. Results for the 72 patients with confirmed COPD.

Gender Male: Female (n)	49:23
Age (years) Median (range)	68 (48–86)
Length of Stay (days) Median (range)	3 (1–20)
6MWD (m) at 4 week follow-up Median (range)	140 (5–420)
FEV_1%pred at 4 week follow-up Mean (SD)	46 (16)
MRC score at 4 week follow-up Median (range)	4 (1–5)
Admission CAT score Mean (SD)	28(7)
Follow-up CAT score Mean (SD)	21 (8)

M23 COPD EXACERBATIONS OF LONGER DURATION WORSENS HEALTH RELATED QUALITY OF LIFE

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Introduction Patient's quality of life is related to the frequency of COPD exacerbations [Seemungal *et al* AJRCCM 1998: 157: 1418–1422]. There is increasing interest in reducing the duration of exacerbations but little evidence that this benefits patient's quality of life.

Methods We analysed data from 384 patients in the London COPD cohort collected between 1995 and 2012. Patients completed diary cards recording respiratory symptoms. Exacerbation onset was defined as the first of two days of 2 major symptoms (increased breathlessness, sputum volume or purulence) or 1 major and 1 minor symptom (cold, increased cough, increased wheeze, sore throat). Recovery was defined as the first of two symptom free days and exacerbation duration was defined as the period between onset and recovery..

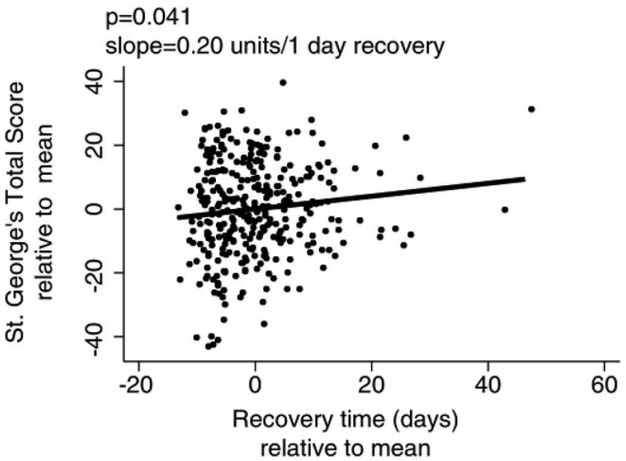
Patients completed the St. George's Respiratory Questionnaire (SGRQ) annually when clinically stable. To avoid bias with repeated measures, exacerbation recovery and SGRQ total scores were averaged. FEV_1% predicted was measured at recruitment.

Results The 384 COPD patients (246 male); mean age 68.6 years (SD8.4), FEV_1 % predicted 45.8% (16.6) and FEV_1/FVC 45.8% (12.2) with 122 patients (32.1%) still smoking at recruitment. There were 3498 exacerbations (median annual rate = 2.13 (IQR 1.0–3.2)).

The median exacerbation duration was 10 days (IQR 6–18). Exacerbation duration was not available for 350 (10.0%) exacerbations as no symptoms were recorded and for a further 109 (3.1%) where the patient continued to recorded symptoms post-exacerbation for 100 days or more.

In a multiple linear regression model, total SGRQ score increased by 0.20 units/1 day increase in exacerbation duration (95% CI 0.008–0.39; p = 0.041) after allowance for FEV_1% predicted and exacerbation frequency. The results suggest that halving the duration of 4 exacerbation events from 10 to 5 days will produce a 4 unit change in the total SGRQ score.

Concluison Shorter exacerbations are associated will improved quality of life. More research is needed on acute interventions designed to ameliorate exacerbations.



Abstract M23 Figure 1 shows the partial residual plot for SGRQ score against exacerbation duration, with allowance of lung function and exacerbation frequency.

M24 MORTALITY PREDICTION BY CURB65 IN PNEUMONIA WITH AND WITHOUT COMPLICATING COPD

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Introduction The CURB65 score was developed to predict mortality in community acquired pneumonia (CAP) but is often used in pneumonia complicating acute exacerbations of COPD (pAECOPD). We have previously shown that CURB65 underestimates in-hospital mortality in pAECOPD, particularly in low risk patients (observed mortality 11.2%, CURB65-predicted 1.5%). [1] Of importance, CURB65 was derived in a population with significant exclusions, notably admission from nursing home, and few patients with dementia were included, whereas in our DECAF AECOPD cohort [1] such patients were included. The higher than predicted mortality in pAECOPD may reflect additional risk conferred by co-existent COPD, a less selected population and/or clinical outcomes in participating hospitals. We have therefore investigated whether the mortality of an equivalent population with CAP, but without COPD, is similar to that found previously in pAECOPD.

Methods Patients admitted with a primary diagnosis of CAP were identified from coding records. Patients with confirmed or suspected COPD were excluded; selection criteria and time frame otherwise matched the DECAF cohort. Demographic, clinical and mortality data were gathered from clinical notes. Categorical variables were compared using Fisher's exact test.

Results 115 patients with CAP were included: mean (SD) age 72.1 (16.4) years, 29.6% were admitted from institutional care and 21.7% had dementia. Median (IQR) CURB65 score was 2 (1–3) and in-hospital mortality 16.5%. Compared to the earlier cohort with pAECOPD, mortality in patients with low or intermediate risk CURB65 scores was lower.

Abstract M24 Table 1.

	DECAF pAECOPD			CAP without COPD			
Curb65 risk score	N	died	%	n	died	%	P
Low	89	10	11.2	30	0	0	.06
Intermediate	98	16	16.3	29	0	0	.02
High	112	34	30.4	56	19	34	.73
Total	299	60	20.1	115	19	16.5	.49

In the present study, 74% of deaths occurred in patients admitted from institutional care (mortality 35%, non-institutional care 9% p = 0.002) and/or those with dementia (mortality 36%, without dementia 11% p = 0.006).

Conclusions Compared to the BTS national audit, the proportion of patients with severe pneumonia is higher (49% v 30%) and mortality lower (16.5% v 21.2%). Both dementia and admission from institutional care were associated with high mortality rates. Among patients with low or intermediate risk CURB65 scores the mortality of those with CAP without COPD was lower than we previously found in pAECOPD, confirming that the underestimation of mortality risk by CURB65 in pAECOPD was not attributable to less effective clinical care.

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M25 HAS THE NEW CONTRACT DELIVERED BETTER AMBULATORY OXYGEN DEVICES FOR PATIENTS? A LONDON PERSPECTIVE

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