Abstract P216 Table 1 Eligibility rates and reasons for exclusion identified in two COPD inpatient studies

	Frequency (%)	
	Clinical trial (n=71*)	Observational study (n=172)
Eligible for inclusion	8 (11)	48 (29)
Reasons for exclusion		
Cardiovascular	8 (11)	13 (8)
Respiratory	8 (11)	18 (10)
Neurological (incl. dementia, delirium)	7 (10)	28 (16)
Renal	8 (11)	0 (0)
Gastrointestinal and nutrition	6 (8)	0 (0)
Endocrine and metabolic (incl. diabetes)	10 (14)	NC
Malignancy	NC	23 (13)
Frailty	NC	19 (11)
Drug / alcohol misuse	1 (1)	13 (8)
Language / literacy	NC	10 (6)

*Some patients had more than one reason for exclusion.
NC, not collected.

Conclusion Patients hospitalised for COPD exacerbations are heterogeneous and have significant and diverse co-morbidities which may limit their eligibility for research studies. In view of this, broad entry criteria are necessary to ensure that studies in this population are feasible. With careful design, such studies will be pivotal in driving improved treatment and outcomes among these patients who, despite their poor prognosis, presently receive disproportionately little research attention.

P217 FACTORS AFFECTING PATIENT SATISFACTION IN A COPD RESEARCH COHORT

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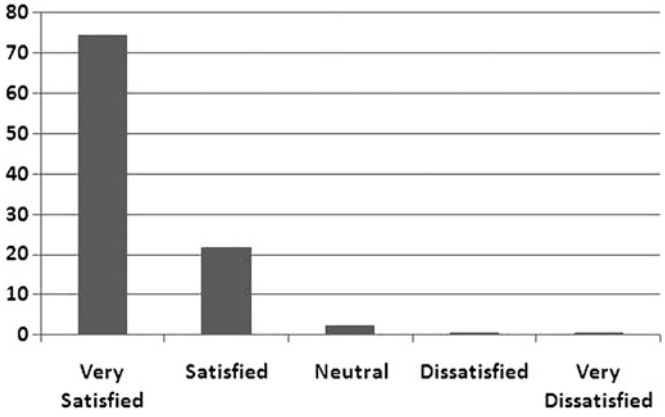
Background Measures of patient satisfaction have become increasingly important in modern healthcare and clinical research. We aimed to assess and quantify factors relating to patient satisfaction in the London COPD cohort.

Methods Questionnaires were posted to patients in the London COPD cohort (anonymised to clinic staff) including categorical items (Likert scale or Yes/No) and freetext boxes. Data were analysed from the last stable state visit before October 2010 including demographics, spirometry, MRC dyspnoea, and St George's Respiratory Questionnaire (SGRQ) scores. Data were analysed using Spearman's rank correlation, Mann–Whitney U and χ^2 tests.

Results 130 respondents (response rate 68%) had a mean (±SD) age of 73.4 (±8.8) years and mean FEV_1 50.6% (±19.3%) predicted. 55% were male, 26% were current smokers with median (IQR) pack year history of 47 (26–73). There were no significant differences between respondents and non-respondents. 96% of respondents reported that they were very satisfied (74%) or satisfied (22%) with the COPD research (Abstract P217 figure 1). Satisfaction correlated with providing prompt and appropriate treatment at exacerbation onset ($r=0.419$, $p<0.001$) and during routine visits ($r=0.577$, $p<0.001$). Satisfaction also correlated with several staff-related factors: courteousness ($r=0.545$, $p<0.001$), being easy to contact ($r=0.498$, $p<0.001$), providing advice on symptom diaries ($r=0.553$, $p<0.001$), explaining exacerbation recognition ($r=0.507$, $p<0.001$), explaining research investigations ($r=0.622$, $p<0.001$), feeding back individual results ($r=0.476$, $p<0.001$), and overall research findings ($r=0.409$, $p<0.001$). It also correlated with patients feeling more confident managing their COPD and exacerbations ($r=0.465$, $p<0.001$). Patients who were in the cohort for longer were more likely to be more satisfied ($r=0.289$, $p=0.001$). There was no correlation between satisfaction and age, gender, spirometry, smoking, BMI, SGRQ or MRC dyspnoea scores. 94% reported less anxiety knowing they could call the doctors at any time, 77% felt they attended A&E less since joining the cohort, 80% were less likely to visit their GP at exacerbation.



Abstract P217 Figure 1 Percentage of respondents satisfied with research in the London COPD Cohort.

Conclusions Patient satisfaction is very high in the London COPD cohort and was associated with positive staff interactions, prompt exacerbation treatment and detailed explanations. Involvement in the cohort also led most patients to feel less anxious, reportedly attending A&E and GP services less frequently.

P218 RECORDING OF COPD MORTALITY MUST IMPROVE IF IT IS TO BE A ROBUST OUTCOME MEASURE

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Statistics for chronic obstructive pulmonary disease (COPD) are dependant on local data collection and have an impact on understanding the morbidity and mortality. This can steer the resources and ought to be robust. Inaccuracies in coding can affect the hospital standardised mortality ratio. The Coalition government's "Outline Strategy for COPD and Asthma in England" published in 2011, emphasises the focus on outcomes. We examined in-patient mortality of COPD at Southend University Hospital to confirm the accuracy of the data. The coding department provided a list of patients coded with COPD who died in the hospital during the study period of 1 year (1 April 2009 and 31 March 2010). All death certificates for the same period were reviewed and those with cause of death recorded as COPD identified. The two lists were compared. Five consultant respiratory physicians reviewed the notes, independently recorded the cause of death and compared to death certificates. According to death certificates 77 patients died of COPD, whereas a total of 55 COPD related deaths were identified by the coding department. The later was compared with actual death certificates for corroboration: COPD as a disease directly leading to death (Ia) was recorded in 21, as a disease leading to 1a (Ib) in 11, as a disease leading to 1b (Ic) in none and as another significant condition contributing to death (II) in 8. Two were referred to the coroner, no data available for two and no COPD was recorded in the remaining 11. Of the available 41 notes (from the coding department's list) reviewed by respiratory consultants, COPD as a cause of death in their view was Ia in 13, Ib in 5, Ic in none and II in 10 cases and it was not the cause in the rest. Mortality data from coding, death certification and opinion of

auditing senior clinicians exhibited multiple discrepancies. This raises doubts as to the robustness of mortality data. We have identified a need to review the practice including the accurate completion of death certificates.

P219 TEN YEAR MORTALITY IN A PRIMARY CARE COPD COHORT: MULTIDIMENSIONAL INDEX BOD MORE DISCRIMINANT THAN GOLD STAGING

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Of potential prognostic variables for COPD to use in a multidimensional staging tool, BMI, severity of airflow obstruction (FEV_1% predicted) and the MRC Dyspnoea Score (BOD) have been shown to be useful for a more complete assessment of the impact of the disease.[1] In 1999–2002 we identified 431 patients (208 women) with COPD in primary care surgeries and recorded their BOD scores (maximum 7). For men and women (mean±SD): age was 66±10 and 64±10; pack/years 34±19 and 34±18; BMI 27±5 and 25±6; FEV_1% predicted 55±15 and 57±16; and MRC Dyspnoea Score 2.6±1.0 and 2.6±1.0; with BOD scores 1.9±1.5 and 2.0±1.6 respectively. The low mean BOD scores indicate the mainly moderate severity for this primary care cohort (only one subject had an MRC score of 5). Because of the similarities in these variables for men and women further analysis is of the whole cohort. Mortality was assessed in October 2010 and a Kaplan–Meier analysis for those with BOD scores 0 and 1 shows 80% and 75% probability of survival, whereas for a BOD score of >4 the 10-year survival was <20%. By way of contrast GOLD stages 1 and 2 had a 75% and 60% survival with Stage 4 showing a 60% survival. The Cox regression model (Abstract P219 table 1) demonstrated that BOD was a better predictor of survival than age and that smoking history was a significant covariate. Ten year survival was <10% when smoking history (with age and co-morbidity score) was added to a BOD score of >4 in a Kaplan–Meier plot.

Abstract P219 Table 1 Cox regression model with covariates influencing COPD mortality. (BOD quartiles: 0, 1, 2–4 and >4)

	B	SE	Wald (df=1)	p Value	Exp (B) (95% CI)
BOD quartiles	0.627	0.126	24.889	<0.001	1.873 (1.464 to 2.396)
Age	0.055	0.012	21.818	<0.001	1.057 (1.033 to 1.082)
Pack/years	0.024	0.006	15.695	<0.001	1.024 (1.012 to 1.037)

Conclusion BOD, a multidimensional index of the clinical impact of COPD is valid for a 10-year prognosis and outperforms GOLD staging over that period.

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P220 TRANSFER FACTOR AND ARTERIAL OXYGEN PARTIAL PRESSURE ARE PREDICTORS OF SURVIVAL IN HOSPITAL OUTPATIENTS WITH COPD

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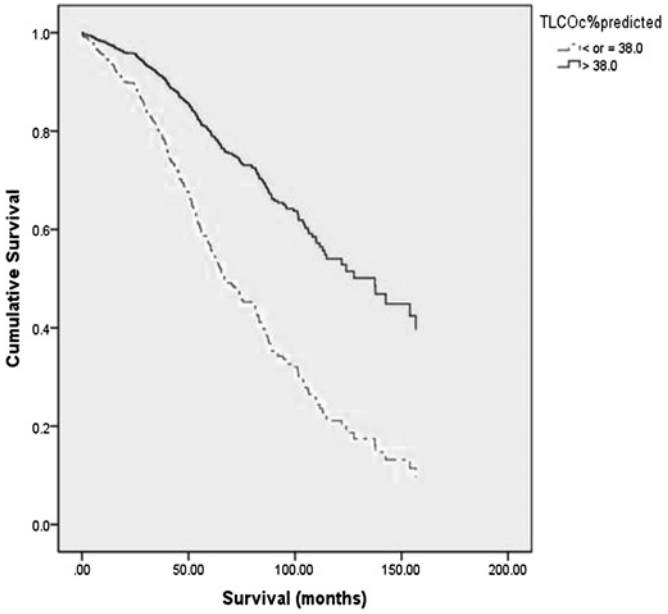
Introduction COPD is a disorder characterised by high morbidity and mortality. Although several parameters have been used to predict survival among COPD patients, most of the information on the prognostic value of pulmonary function comes from studies, either conducted in selected COPD populations or where only simple spirometry was measured. Few studies have comprehensively assessed lung function parameters and investigated their impact on survival; a prior smaller study from our group suggested carbon monoxide gas transfer may have prognostic value.[1]

Objective The study aimed to identify potential predictors of survival in a cohort of stable COPD outpatients.

Methods Data from patients, who had their first full lung function tests including blood gas analysis between February 1996 and May 2010 were extracted from the hospital's clinical COPD database. Patients with major co morbidities, such as malignancy, chronic renal failure and chronic heart failure were excluded. Survival data were available for all patients, until May 2011. Demographic data, PaO_2 and $PaCO_2$, transfer factor, and plethysmographic lung volumes were initially entered in a univariate regression model. Age, Body Mass Index (BMI), FEV_1% predicted, FEV_1/FVC, TLC% predicted, TLCOc% predicted, KCOc% predicted, RV% predicted, IC/TLC, $PaCO_2$ and PaO_2, were found to be univariately associated with survival and then entered in a stepwise Cox regression analysis model. Corresponding HRs and 95% CI were calculated for each independent predictor.

Results Data were available for 641 patients (62.2% male); mean age 61.9±10.2 years, FEV_1 38.4±19.7% and BMI 24.3±5.3 kg/m^2. Median survival was 92.9 months. Survival rates at 3 and 5 years (all cause mortality) were 0.88 and 0.62. In the total population, age (HR 1.05, 95% CI 1.03 to 1.07), PaO_2 (HR 0.843, 95% CI 0.76 to 0.934) and TLCOc% (HR 0.975, 95%CI to 0.965 to 0.986) independently predicted survival. Abstract P220 Figure 1 presents the Kaplan–Meier survival curves, adjusted for age and PO_2, for the two population groups, separated using the TLCOc% median value as a cut-off point (>38.0 and =38.0% predicted).



Abstract P220 Figure 1 Survival curves adjusted for PO_2 and age for the two patient groups, separated according to TLCOc% predicted value.

Conclusions Gas transfer measurement provides additional prognostic information compared to spirometry.

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