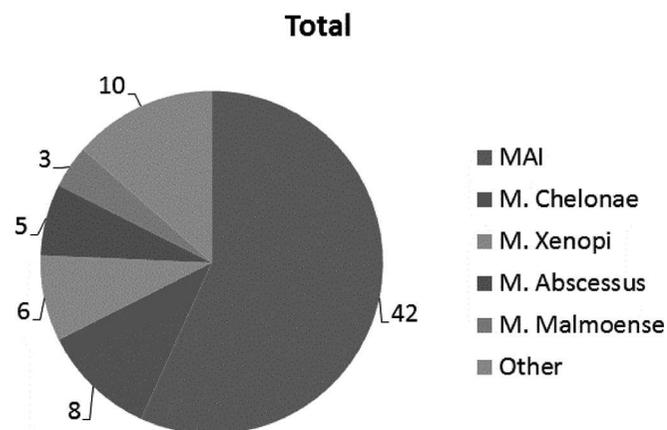


**Conclusion** In keeping with previous UK surveys, the majority of isolates in our population were pulmonary with MAI being the most frequently seen species of NTM. In those in whom treatment was indicated low eradication rates and significant relapse rates confirm complexity of managing this population of patients.

## NTM Species



Abstract P115 Figure 1

## COPD: Causes and Consequences

### P116 OBSERVATIONAL STUDY TO CHARACTERISE 24-HOUR COPD SYMPTOMS: CROSS-SECTIONAL RESULTS FROM THE ASSESS STUDY

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**Introduction and Objectives** Little is known about the 24-hour profile of COPD symptoms. This study assessed the frequency/severity of 24-hour symptoms and their impact on patients' well-being.

**Methods** This cross-sectional, observational study was conducted in patients with stable COPD. Baseline night-time, early-morning and day-time symptoms (symptom questionnaire), dyspnoea (modified Medical Research Council dyspnoea scale [mMRC]), health status (COPD Assessment Test [CAT]), anxiety/depression levels (Hospital Anxiety and Depression Scale [HADS]) and sleep quality (COPD and Asthma Sleep Impact Scale [CASIS]) were assessed. Primary endpoint: baseline frequency, severity and inter-relationship of night-time, early-morning and day-time symptoms; secondary endpoints: relationship between 24-hour symptoms and dyspnoea, health status, anxiety/depression and sleep quality.

**Results** 727 patients were recruited from eight countries: 65.8% male, mean  $\pm$  SD age  $67.2 \pm 8.8$  years, mean  $\pm$  SD% predicted

FEV<sub>1</sub>  $52.7 \pm 20.6\%$ . Early-morning/day-time symptoms were most frequent; however night-time symptoms were common (Table). Symptom severity was comparable during the night-time, early-morning and day-time. In the week prior to baseline, 56.7% patients had symptoms throughout the 24-hours (79.9% in 2 or 3 parts of the day). Breathlessness was most common (71.4% patients); its prevalence increased throughout the 24-hours (32.1% night-time, 51.6% early-morning, 65.2% day-time).

Dyspnoea, health status, anxiety/depression and sleep quality were worse in patients with night-time, early-morning or day-time symptoms versus patients without symptoms in each period (all  $p < 0.001$ ). Most patients with more severe dyspnoea (mMRC scale  $\geq 2$ ) had 24-hour symptoms (range 61.5–68.2%); patients with 24-hour symptoms had the worst health status (mean CAT score 20.0 vs range 8.1–14.9 in all other patients). Patients with any combination of night-time/early-morning symptoms had the highest anxiety (mean HADS scores 6.7–7.5 vs 3.6–5.8 in patients without this combination); depression levels were lowest in patients with no symptoms/only early-morning symptoms (mean HADS scores 4.2–5.4 vs 6.5–7.8 in all other patients). Patients with any night-time symptom had worse sleep quality than patients without night-time symptoms (mean CASIS scores 41.6–51.1 vs 31.6–35.5).

**Conclusions** Most patients had COPD symptoms throughout the 24-hours. Dyspnoea, health status, anxiety/depression levels and sleep quality were significantly worse in patients who had symptoms in any part of the day.

### Abstract P116 Table 1. Prevalence and severity of COPD symptomsthroughout the 24-hour day

N=727	Night-time	Early-morning	Day-time
Prevalence of COPD symptoms, n (%)			
$\geq 3$ times during the past week	312 (42.9)	455 (62.6)	427 (58.7)
$\geq 3$ times during a typical week <sup>a</sup>	378 (52.0)	488 (67.1)	468 (64.4)
$\geq 1$ COPD symptoms during the past week	458 (63.0)	592 (81.4)	601 (82.7)
Severity of COPD symptoms, <sup>b</sup> n (%)			
Mild	191 (46.7)	252 (44.1)	254 (43.1)
Moderate	175 (42.8)	250 (43.8)	272 (46.2)
Severe	39 (9.5)	61 (10.7)	59 (10.0)
Very severe	4 (1)	8 (1.4)	4 (0.7)

<sup>a</sup>A typical week refers to a week that the patient considers is most usual for them during the previous month

<sup>b</sup>During the previous week

<sup>c</sup>Percentage based on patients who reported symptoms in the previous week and provided data for symptom severity

### P117 COMPARISON OF RESPIRATORY-RELATED QUALITY OF LIFE PULMONARY REHABILITATION OUTCOMES AND DURATION OF TREATMENT IN ACUTE AND COMMUNITY SETTINGS

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**Introduction and Objectives** NICE guidance recommends that patients are offered between six and twelve weeks of pulmonary rehabilitation as effective treatment option for chronic obstructive pulmonary disease (NICE, 2010). While there is good

evidence for programme content, evidence is less on the optimum duration or comparative efficacy in different settings.

Two English NHS pulmonary rehabilitation services used different service models for COPD patients. An acute based service offered up to nine weekly sessions of pulmonary rehabilitation using a multi-disciplinary team. Another service based in a community gym offered up to ten sessions provided by respiratory nurses and a physical activity co-ordinator.

We hypothesised that outcomes would not improve after eight pulmonary rehabilitation sessions and would be similar for the two services.

**Methods** A pragmatic service evaluation with before-after design was used. Self-reported chronic respiratory questionnaires (CRQ) measuring four quality of life domains (dyspnoea, fatigue, emotional function, mastery) were completed by patients at baseline and again on completion of pulmonary rehabilitation. For each service, baseline scores were subtracted from completion scores to measure change in respiratory related quality of life outcomes and compared to minimum clinically important difference (MICD) of 0.5 (Williams *et al*, 2003).

The effect of number of sessions attended by patients on respiratory outcome scores was tested using linear regression.

**Results** Baseline and follow-up CRQ scores were available for 149 patients (89 in the acute based service).

In the community based service, improvements in dyspnoea and emotion were statistically significantly greater than the MCID whereas for the acute service, improvements in emotional function and mastery were significantly greater than MCID (Table 1). The overall proportion of patients experiencing CRQ increases greater than the MCID for both services were dyspnoea: 62.4%; fatigue: 57.7%; emotional function: 61.7%; mastery: 59.1% at follow up.

The effect of duration on CRQ outcomes will be reported.

**Conclusions** A community based pulmonary rehabilitation service obtained similar CRQ outcomes to an acute based service suggesting community based services may achieve equally good outcomes to acute based services.

**Abstract P117 Table 1. CRQ outcomes in a community based and acute based pulmonary rehabilitation service.**

Service	CRQ Dimension	Mean pre- score	Mean post- score	Difference	95% CI	Proportion >MCID (%)
Community	Dyspnoea	2.48	3.51	1.03	0.66 1.40	63.3
	Fatigue	3.23	4.05	0.82	0.47 1.17	51.7
	Emotion	3.88	4.79	0.91	0.59 1.24	61.7
	Mastery	4.06	4.74	0.68	0.29 1.07	55.0
Acute	Dyspnoea	2.79	3.61	0.83	0.60 1.06	61.8
	Fatigue	3.07	3.89	0.82	0.60 1.03	56.2
	Emotion	4.03	4.60	0.57	0.38 0.77	51.7
	Mastery	4.19	4.85	0.65	0.42 0.88	50.6

Minimum clinically important difference (MCID) (Williams EA, S J Singh, L Sewell, M D L Morgan. Health status measurement: sensitivity of the self-reported Chronic Respiratory Questionnaire (CRQ-SR) in pulmonary rehabilitation. *Thorax* 2003;58:515-518)

**P118 POST DISCHARGE PULMONARY REHABILITATION FOR ACUTE EXACERBATION COPD DOES NOT ALWAYS REDUCE RE-ADMISSION RATES**

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**Introduction** Post-discharge pulmonary rehabilitation (PR) within 7–10 days after discharge from hospital admission for acute exacerbation of COPD (AECOPD) has been shown not only to result in the well-described benefits of PR (reduced breathlessness, improved exercise performance and health-related quality of life), but also to reduce emergency department attendances over a 3 month period. We report the outcomes of a locally-provided post-exacerbation PR (PEPR) pilot study for patients admitted to hospital with AECOPD, and compares outcomes and subsequent 90-day re-admission rates with published RCT data showing re-admission reduction from 33 to 7%<sup>1</sup>.

**Methods** Patients were recruited during AECOPD admission to start PR within 10 days of discharge from hospital. Taxi transport was offered to all patients. Outcome measures chosen were change in: 6-Minute Walking Test (6MWT), Hospital Anxiety and Depression Score (HADS), Chronic Respiratory Disease Questionnaire (CRDQ), and 90-day re-admission rates.

**Results** 43 patients were offered PEPR, 32 started and 21/32 (66% of starters, 49% of all referrals) completed the course (>11/16 sessions). Mean (range) age was 67(40–86) years and mean (SD) %predicted FEV<sub>1</sub> 32(15)%. Median time (range) between discharge from hospital and starting PEPR was 8(0–17) days. There were clinically significant improvements in 6MWT median (range) 27%(-40- + 233) and CRDQ dyspnoea domain 0.79(-0.60- + 3.00). There was no clear effect on 90-day re-admission rate: 45% patients who started PEPR were re-admitted v 58% who were offered but declined PEPR. Local 90-day re-admission rate for all 2012 AECOPD admissions was 39%.

**Conclusion** This study failed to replicate published reductions in re-admission rates in a patient population that was more severe than the comparison study, mean %predicted FEV<sub>1</sub> 32% v 52%<sup>1</sup>. Value of PEPR programmes in reducing AECOPD re-admission rates needs further investigation across disease severity spectrum. An additional area that would benefit from further investigation is completion rate for PEPR<sup>2</sup>; completion rate from referral for PEPR at 49% compares to 43% for our standard PR programme.

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**P119 RESPONSIVENESS OF THE CAT (COPD ASSESSMENT TOOL) IN A STABLE AND POST EXACERBATION PULMONARY REHABILITATION POPULATION**

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**Introduction** The CAT is an eight item questionnaire used to assess health status. It has previously been used in stable COPD and non COPD patients (Kon *et al*, 2012) and as an outcome measure for pulmonary rehabilitation (PR) in the short term in a