qualifications may have a greater awareness of the symptoms of an exacerbation, and therefore present to hospital at an earlier stage.

P153 STRATIFYING PNEUMONIC EPISODES AND ACUTE EXACERBATIONS IN COPD PATIENTS – A CONTINUUM OR DISCRETE PHENOMENA?

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10.1136/thoraxjnl-2014-206260.282

Background Acute exacerbations of chronic obstructive pulmonary disease (AECOPD) are characterised by an acute worsening of symptoms beyond the normal day-to-day variability. Pneumonic episodes, confirmed by new chest X-ray (CXR) infiltrates, are common in patients with COPD but are difficult to distinguish in primary care from non-pneumonic exacerbations. It is uncertain whether AECOPD and pneumonic episodes in COPD patients are distinct clinical events in terms of aetiology and/or response to oral therapy. We performed a longitudinal study to characterise these events and to determine clinically meaningful differences associated with CXR changes in the outpatient setting.

Methods The Acute Exacerbation and Respiratory Infections in COPD (AERIS) study is a longitudinal epidemiological study to assess how changes in the COPD airway microbiome contribute to the incidence and severity of AECOPD. Patients with moderate to very severe COPD aged 40–85 years were followed monthly for 2 years, and reviewed within 72 h of onset of symptoms of AECOPD. We compared markers of systemic and airway inflammation between pneumonic AECOPD characterised by new CXR infiltrates, and non-pneumonic AECOPD, in a subcohort of 36 patients.

Results In the first year of study participation 122 exacerbations were recognised of which 120 had a CXR performed. Of these, 20 (16.7%, n = 12 patients) were identified as having new radiographic infiltrates. Statistically significant differences occurred in mean white blood cell count, blood neutrophil count, C-reactive protein, fibrinogen and sputum percentage neutrophil count between those AECOPD with new CXR infiltrates and those without (Table 1). Furthermore, there was a trend towards more severe symptom scores with pneumonic episodes using the EXACT-PRO score (p = 0.057).

Abstract P153 Table 1 Values reported as mean ± standard deviation. NS = no significance

	AECOPD with no CXR infiltrate	AECOPD with new CXR infiltrate	p-value
WBC count (blood) 10*9/L	9.1 (2.8)	11.2 (3.6)	< 0.01
Neutrophils 10*9/L	6.4 (2.5)	8.5 (3.6)	< 0.01
Lymphocytes 10*9/L	1.7 (0.8)	1.4 (0.6)	NS
Eosinophils 10*9/L	0.20 (0.16)	0.33 (0.28)	NS
CRP mg/L	20.6 (28.7)	66.8 (77.0)	< 0.05
Procalcitonin µg/L	0.091 (0.120)	0.093 (0.049)	NS
Fibrinogen g/L	5.3 (1.2)	6.4 (1.2)	< 0.01
Sputum (%):			
Neutrophils	57.5 (35.0)	77.6 (25.6)	< 0.05
Lymphocytes	0.8 (2.6)	0.2 (0.3)	NS
Eosinophils	2.5 (4.7)	2.0 (2.5)	NS
Macrophages	19.0 (16.3)	11.3 (11.5)	NS
EXACT PRO score	41.4 (8.5)	45.3 (7.0)	NS

Conclusion Pneumonic episodes are common in the context of clinical events presenting as outpatient AECOPD. The profile of airway and systemic inflammation is greater during these events than those without CXR changes. Understanding whether the biology and clinical course of these events is distinct from other exacerbations is key, particularly as patients are encouraged to self-manage based on symptom changes alone. Further study of the AERIS cohort will investigate links between aetiology, outcomes and prognostic markers at exacerbation including radiological and clinical indices.

P154 THE IMPACT OF A DISCHARGE CARE BUNDLE ON THE 30-DAY READMISSION RATE FOLLOWING HOSPITALISATION FOR ACUTE COPD EXACERBATION

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10.1136/thoraxjnl-2014-206260.283

Introduction National audit reports high rates of early readmission following hospitalisation for chronic obstructive pulmonary disease (COPD) exacerbation. Discharge bundles aim to optimise care and reduce readmission. Frimley Park Hospital NHS Foundation Trust interacts with different community respiratory teams across three counties.

Aims We hypothesised that a novel COPD discharge bundle would reduce re-admission. We also wished to see if the bundle was effective across multiple community administrations, and in patients with a history of frequent exacerbation.

Methods Admissions with a primary COPD diagnostic code and cases referred to the COPD nurse were collated during Q4 2013/14. Patients were classified according to whether they were assessed by the COPD nurse using the discharge bundle. Readmissions within 30-days and 3-months were identified using a hospital clinical database. Readmissions with COPD exacerbation (infective or non-infective) were included, as well as COPD associated lower respiratory tract infection or pneumonia. The database identified frequent severe exacerbators (patients with >1 admission in the previous year), and recorded age and length of stay as surrogates of disease complexity.

Results 24 patients were excluded (18 had other diagnoses, 4 died, and 2 lived out of area). Table 1 shows the characteristics of the remaining 156 patients according to whether they completed the bundle. There was no overrepresentation of short (zero or one day) length of stay patients in the group not completing the bundle. 17.5% of patients completing the bundle were re-admitted within 30-days, compared to 34% who did not (p = 0.027). A similar trend was seen at 3-months. No difference was observed in the timing or duration of readmissions. Logistic regression using covariates of age, length of stay, history of frequent severe exacerbation and discharge bundle use, suggested the latter two variables were both independent predictors of re-admission at 30-days: OR 5.70 (95% CI 2.46 to 13.2, p < 0.001) and OR 0.33 (95% CI 0.14 to 0.79, p = 0.012) respectively. Different community teams exerted no significant effect when added to the model.

Corrections

NW Williams, KO Ostridge, VK Kim, *et al*. P153 Stratifying pneumonic episodes and acute exacerbations in COPD patients—a continuum or discrete phenomena? *Thorax* 2014;69 (Suppl 2):A141. doi: 10.1136/thoraxjnl-2014-206260.282

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Thorax 2015;**70**:182. doi:10.1136/thoraxjnl-2014-206260.28corr1