showed subjective deterioration in symptom trajectory 4 days prior to exacerbation onset ($p < 0.01$), with re-exacerbators demonstrating a higher baseline symptom burden in the post-treatment period compared to single exacerbators ($p < 0.01$).

In conclusion, salivary biomarker levels can complement patient self-assessment to provide clinically useful cues to enable earlier identification of exacerbations in COPD; salivary CRP potentially offers additional information on re-exacerbation risk. These results support opportunities for patient-reported events and salivary biomarkers to be used synergistically in future near-patient COPD diagnostics for enhanced self-management and prompt exacerbation intervention.

S67 MORTALITY IN COPD PATIENTS FOLLOWING COMMUNITY ACQUIRED PNEUMONIA: A POPULATION DATABASE ANALYSIS OF LINKED HEALTHCARE RECORDS

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Introduction Community acquired pneumonia (CAP) is a common occurrence in patients with chronic obstructive pulmonary disease (COPD), yet controversy still remains about its affect on outcome. We therefore investigated the impact of CAP on mortality in a cohort of COPD patients identified from the Hampshire Health Record analytical database, a local NHS database containing linked, anonymised primary and secondary care records.

Methods Patients were defined as having COPD if they had a diagnostic Read code in their primary care record at any time prior to the 1st January 2010 and were aged ≥40 years at the start of the study. CAP episodes occurring over a 5-year period from 1st January 2010 were identified using Read and ICD-10 codes. The outcome measure was all-cause mortality following a CAP diagnosis. Cox proportional hazard modelling was used to estimate hazard ratios (HR) and confidence intervals (CI), adjusting for age, sex, GOLD stage, smoking status and inhaled corticosteroid use (ICS)).

Results The cohort comprised 14506 COPD patients. The mean age was 70.3 (±10.8) years and 53.6% were male. 1931 (13.3%) patients had at least one CAP and 2870 (19.8%) deaths occurred over the study period. 28.2% of patients diagnosed with CAP died compared to only 9.7% of those without a CAP diagnosis ($p < 0.001$). Logistic regression analysis, controlling for potential confounders identified CAP as an independent risk factor for future mortality (odds ratio 2.72; CI 2.37–3.12, $p < 0.001$). Compared to younger individuals (40–59 years) those aged 60–79 and >80 years had the highest mortality risk following CAP (HR 2.65; CI 1.61–4.34, HR 7.03; CI 4.27–11.57 respectively, both $p < 0.001$). Concurrent use of inhaled Fluticasone or Budesonide were associated with reduced mortality risk following CAP (HR 0.82; CI: 0.68–0.98 $p = 0.029$, HR 0.55; CI: 0.39–0.76 $p < 0.001$, respectively) (Figure 1).

Conclusion CAP in COPD is associated with increased risk of mortality, especially in older individuals. Although known to increase CAP risk, ICS use appears to reduce risk of mortality following CAP. Further research to understand the mechanisms underlying CAP risk in COPD and modulating effects of ICS is key, to guide development of future, targeted preventative strategies.

S68 COPD IN THE ED: EOSINOPHILS, TREATMENT AND OUTCOMES, DATA FROM THE PRE-AWARD STUDY

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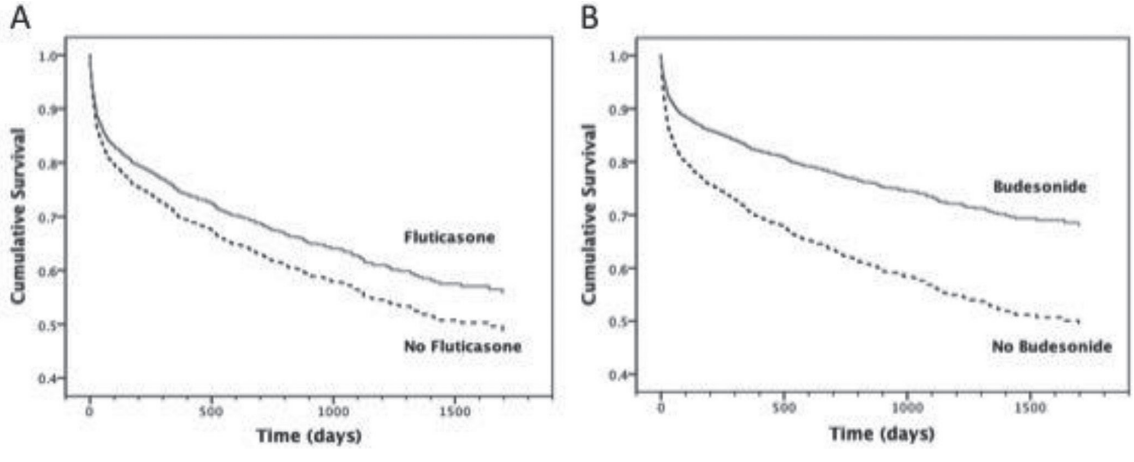
Rationale Acute exacerbations of COPD (AECOPD) are common. Peripheral blood eosinophil count (PBE) predicts outcomes in moderate and severe exacerbations, but little is known about PBE levels and outcomes of AECOPD in the emergency department (ED).

Methods Data for all attendances to ED of a large teaching hospital throughout a 12-month period for patients attending with AECOPD were studied. Anonymised data was cleaned to remove diagnostic and data errors and analysed using GraphPadPrism6 with statistical methods suitable for the data collected. Data is



Abstract S67 Figure 1 Survival comparisons following CAP in COPD patients, stratified by Fluticasone (A) or Budesonide (B) use