

P33 THE IMPACT OF CERTAIN UNDERLYING CLINICAL CONDITIONS ON THE RISK OF DEVELOPING HOSPITALISED PNEUMONIA IN ENGLAND

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Introduction/background Specific risk groups are at increased risk of hospitalisation and death from non-invasive pneumococcal disease. Evidence showing the increased odds ratio in these risk groups for developing hospitalised pneumonia in England is missing.

Aim To quantify the odds of developing hospitalised pneumonia for 6 key risk groups as defined by The Green Book (UK vaccination policy guide) compared to 'healthy controls', with no risk group diagnosis, using the Hospital Episodes Statistics (HES) database.

Materials and methods We retrospectively analysed the Hospital Episodes Statistics database, which includes analysed data on the entire ≥ 18 years population of England for episodes of hospitalised pneumonia over a period of 3 years. Patients and controls were identified by ICD-10 codes. Healthy controls were in-patient admissions for tooth extraction. Odds ratios were calculated while simultaneously adjusting for gender, age, Charlson Comorbidity Index, ethnicity, geography and deprivation.

Results Odds ratio of developing hospitalised pneumonia for specific risk groups compared to healthy controls.

Abstract P33 Table 1

Risk Group	Odds ratio (95% CI)
Chronic Heart Disease (CHD)	1.87 (1.80–1.94)
Chronic Liver Disease (CLD)	3.43 (3.29–3.59)
Chronic Respiratory Disease (CRD)	5.47 (5.28–5.70)
Chronic Kidney Disease (CKD)	2.20 (2.13–2.32)
Diabetes	1.18 (1.13–1.23)
Bone Marrow Transplant recipients (BMT)	5.46 (5.05–5.90)

Conclusion This is the first study of an entire adult population quantifying the increased odds of hospitalised pneumonia among patients with these underlying risk factors. These individuals are at a significant increased risk of developing hospitalised pneumonia and that the odds are substantially higher for those with CRD, CLD and BMT. These data support the potential benefit of adopting a targeted prevention strategy among specific risk groups.

P34 RISK AND IMPACT OF RESPIRATORY HOSPITALISATION AMONG CHILDHOOD AND YOUNG ADULT CANCER SURVIVORS

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Background Respiratory diseases are one of the most common causes of late morbidity and mortality in childhood cancer survivors and results in an increased risk of hospitalisation.

There is presently no published data on the types of respiratory conditions which lead to this increase in disease burden. We used population-based cancer registry data linked to inpatient hospitals admissions to quantify incidence and cause of admissions for respiratory disease in long-term survivors of cancer in children and young people.

Methods Data from the Yorkshire Specialist Register for Cancer in Children and Young People (YSRCCYP) for cancers diagnoses between 1990 and 2011, diagnosed aged 0–29 years, were linked to inpatient Hospital Episode Statistics (HES) for admissions up to 2017 (n=4235). Admissions rates for any respiratory condition and specific conditions including asthma, pneumonia, lower respiratory diseases (including emphysema and COPD) and lung fibrosis in the cancer survivor cohort were compared to the general population in Yorkshire matched on age, sex and year using hospitalisation rate ratios (HRR). The cumulative incidence of respiratory disease was calculated with death as a competing risk and multivariable competing risk models were used to assess the association between respiratory admissions and treatment exposures.

Results By age 40, the cumulative incidence for an admission for any type of respiratory condition was 49%, asthma was 20%, pneumonia was 13% and lower respiratory disease was 3%. Respiratory admission rates were 86% higher in cancer survivors than in the general population (HRR=1.86 (95%CI 1.73–2.01)), and this varied by respiratory condition. Those treated with pulmonary toxic chemotherapy had an increased risk of admissions for all respiratory conditions (HR=1.26 (95%CI 1.03–1.53)) and pneumonia (HR=1.48 (95%CI 1.01, 2.17)).

Conclusions For survivors of childhood and young adult cancer, the risk of hospitalisation for respiratory disease increases with age and is significantly higher in cancer survivors compared to the general population.

Identifying groups at highest risk of hospitalisation is important for prevention, early detection and treatment.

P35 INHALED CORTICOSTEROIDS AND PNEUMONIA IN COPD AT PRIMARY CARE LEVEL

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Background Association between inhaled corticosteroids and pneumonia in COPD population is well known.¹ And the risk of pneumonia is greatest with the use of high dose inhaled corticosteroids (HD-ICS).² Hence, further work to reduce the prescription of HD-ICS should be informed by local practices.

Aim We aimed to assess the incidence of pneumonia in COPD patients based at primary practices in our region according to their HD-ICS prescriptions. And thereby develop methods to safely wean off HD-ICS in this population.

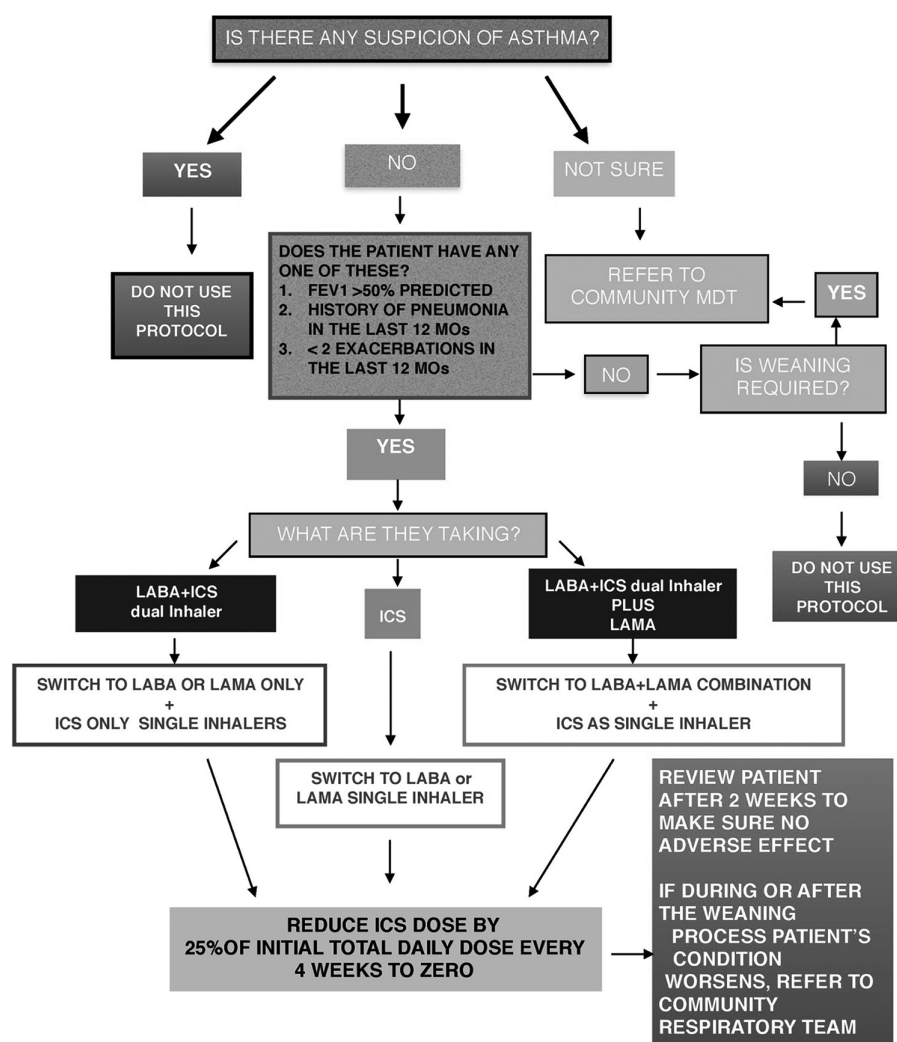
Methods Data was obtained on all hospital admissions for pneumonia between April–September 2017 with a secondary diagnosis code of J44 indicating COPD, from the head of information at our clinical commissioning group. We divided this data at a general practice level. We also obtained data on prescription of HD-ICS at each of the general practices till September 2017 from openprescribing.net. Statistical results were obtained from MS Excel and Vassar Stats.

Results There are 14 general practices in the region. There were 123 pneumonia admissions to hospital with a secondary diagnosis of COPD. This included 50% males (n=62) with a

Protocol for weaning COPD patients on Inhaled corticosteroids (Either as single or combination inhaler) to a single or dual bronchodilator treatment

Evidence considered

Samy Suissa and Andrea Rossi. Weaning from inhaled corticosteroids in COPD: the evidence. *European Respiratory Journal* 2015 46: 1232-1235



Abstract P35 Figure 1

mean age (SD) of 75 (9.7) years. There were 5 practices with >10 pneumonia admissions during this period and when compared with those with <10 pneumonia admissions, the median (IQR) COPD population was 107 patients (103–126) v 47 patients (32–69) [$p<0.05$] with a median (IQR) use of HD-ICS prescriptions 239 (170–290) v 108 (86–172) [$p<0.05$]. **Conclusion** Our data show an association between HD-ICS prescriptions and pneumonia in COPD population at a primary care level in our region. Having looked at the data including GP practices with higher prescriptions of HD-ICS, we have developed an algorithm (figure 1) to wean patients off HD-ICS while at the same time promoting awareness through local interest group meetings.

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Triggering and controlling asthma exacerbations

P36

EVALUATING THE EFFECT OF A 5-YEAR HISTORY OF ASTHMA EXACERBATIONS ON THE RISK OF FUTURE ASTHMA EXACERBATIONS USING ELECTRONIC HEALTH RECORDS

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Background Asthma exacerbations can lead to a reduction in quality of life. Many studies have explored risk factors for asthma exacerbations and have shown previous exacerbations to be a risk factor. However, few have explored how a history of exacerbations over a 5 year period can influence risk