

**Abstract P78 Table 1. Results of the Asthma and COPD Reviews**

| Exacerbations in previous 12 months                                      | Asthma  | COPD            |                 |
|--|---|-----------------|-----------------|
|  | Oral antibiotics and/or oral steroids per patient | 2.2 per patient | 3.1 per patient |
| Number of A&E attendances (n)  | 14  | 33              |                 |
| Number of hospital admissions (n)  | 5   | 31              |                 |
| Inhaler technique  | Good technique (n)                                | 21% (11)        | 42% (13)        |
|  | Moderate technique                                | 19% (10)        | 29% (9)         |
|  | Poor technique                                    | 60% (31)        | 29% (9)         |
| Beclomethasone dipropionate equivalence                                  | pre review  | 1656.6mcg       | NA              |
|  | post review                                       | 1000.0mcg       | NA              |
| Smoking history (n)  | Current   | 26.4% (14)      | 29.0% (9)       |
|  | Agreed to stop following review                   | 78.6% (11)      | 77.8% (7)       |
|  | Ex smoker   | 17.0% (9)       | 71.0% (22)      |
|  | Mean pack year history                            | 29.4            | 37.4            |
|  |   |                 |                 |
| Adherence to medicines in previous 12 months (mean)                      | Maintenance ICS/LABA or ICS                       | 6.4 inhalers    | 10.3 inhalers   |
|  | LAMA  | NA              | 10.8 inhalers   |
|  | Reliever inhaler                                  | 8.3 inhalers    | 8.7 inhalers    |
|  |   | 26.9% (14)      | 45.2% (14)      |
| On correct therapy based on symptoms, diagnosis and disease severity (n) |   |                 |                 |
|  |   |                 |                 |
| If not on correct therapy, intervention made (n)                         | Step down   | 59.6% (31)      | NA              |
|  | Stopping a part of treatment                      | 3.8% (2)        | 25.8% (8)       |
|  | Querying the correct diagnosis                    | 5.8% (3)        | 22.6% (7)       |
|  | Change drug class                                 | NA              | 9.7% (3)        |
| FEV1 % of predicted mean   |   | NA              | 52.2%           |
| ACT score mean   |   | 16.9            |                 |
| CAT score mean   |   | 21.5            |                 |

had asthma (n = 53) with 37% COPD (n = 31), with a mean age 56.3 and 67.0 years respectively.

Table 1 shows a significant proportion of patients had uncontrolled disease based on their quality of life scores (QoL), use of reliever inhalers and frequency of exacerbations. Despite use of high dose medicines, this was likely to be due to poor adherence to maintenance inhalers and poor inhaler technique in a large proportion of patients. Interventions were made in most patients, including reducing the beclomethasone dipropionate (BDP) equivalence in the asthma group by 60.4%. Follow up showed that despite a reduction in inhaler therapy, QoL, peak flow measurements and reliever use all improved.

**Conclusions** Tailored reviews by the pharmacist resulted in significant interventions that improved QoL, adherence to therapy, reduced unnecessary over prescribing of high dose medicines and resulted in a large proportion of patients to successfully stop smoking.

## From screening to treatment of children with chronic lung disease

**P79 THE IMPACT OF SOCIAL DEPRIVATION ON CLINICAL OUTCOMES IN CHILDREN WITH CYSTIC FIBROSIS (CF) IN A DEPRIVED AREA OF SCOTLAND**

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**Introduction** Lung function tests and BMI are widely-used outcome measures in children with CF, and their preservation requires adherence to exacting treatment regimens.

We hypothesised that deprivation might affect the adherence to therapy of children in a deprived area of Scotland, thus reducing BMI and FEV<sub>1</sub> scores and increasing clinical input required.

Schechter (2003) demonstrated a link between deprivation and mortality in children with CF, although the mechanism remained unclear, and the study has not been repeated elsewhere. In an adult CF population in an affluent area of England, Jarad (2005) found no correlation between deprivation and FEV<sub>1</sub>. This question has not previously been examined in a deprived paediatric population.

**Method** In February 2013, RHSC Glasgow had 95 children (4946) with CF under its care. All children over 2 years had their BMI centile calculated. In all children over four years, mean FEV1% predicted was calculated. The number of outpatient clinics and inpatient admissions over a three year period was noted for all children over three years old.

The Scottish Index of Multiple Deprivation (SIMD) ranks the 6505 postcode districts in Scotland in order of deprivation, and a rank was obtained for each child's postcode.

SMID rank was plotted against BMI, mean FEV1% predicted, outpatient appointments and inpatient admissions, with any correlations noted.

**Result** 83 children had BMI centile recorded (mean 45.4, range 0.4–98), 66 children had FEV1 % predicted calculated (mean 92.4%, range 50.4–146%). Mean SMID ranking was 2763 (range 33–6499.). The mean number of respiratory outpatient clinics attended was 23.1 (range 18–33), total outpatient clinics attended was 25.8 (range 18–48) and inpatient admissions was 4.3 (range 0–20) over three years.

No correlation was shown between SMID rank and BMI centile ( $r^2 = 0.0025$ ), mean FEV1% predicted ( $r^2 = 0.0025$ ), respiratory clinics attended ( $r^2 = 0.0121$ ), total outpatients attended ( $r^2 = 0.0263$ ) and inpatient admissions ( $r^2 = 0.0078$ ).

**Conclusion** Relative deprivation does not correlate with BMI centile or FEV1% predicted in this population of CF children and is not associated with the level of clinical input required.

## **P80 ANTIBIOTIC USAGE AS A RISK FACTOR FOR NON-TUBERCULOUS MYCOBACTERIUM INFECTION IN CHILDREN WITH CYSTIC FIBROSIS**

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**Background** There is a growing incidence of Non-Tuberculous Mycobacterium (NTM) in children with Cystic Fibrosis. This audit aimed to determine relevant risk factors for NTM acquisition in paediatric cystic fibrosis patients.

**Methods** Data was obtained from clinical notes for 66 patients aged 5–18 years old in a North-East CF clinic who had sputum or bronchoalveolar lavage screened for NTM between 2011 and 2012.