adults using the Prescribing Information System (PIS), a national prescribing and dispensing database for Scotland.

**Methods** For more than 95% of the dispensed prescriptions in primary care between December 2009 and November 2011 a valid patient identifier was available and the database includes some socio-demographic characteristics (age-group, sex, SIMD) of the patients. Data were also linked to hospital admission data. The analysis was limited to patients aged up to 44 years to reduce contamination by COPD.

Data

We identified 358,804 patients with 2,809,563 dispensed prescriptions for inhaled therapies used for asthma; equating to a prevalence of 11.4% of the 3,139,356 people aged 0–44 registered with a GP in Scotland. The age specific prevalence rates are detailed in the table. However, 95,207 patients had only one or two dispensed prescriptions for short-acting beta2-agonists (SABA) and no other inhaled therapies in the two years; we consider these patients to be unlikely to have active asthma (table). Additionally, 1,041 cases on inhaled therapy had hospital admission(s) with a diagnosis of COPD (ICD10: J40-J44) and are excluded from further analysis. 6,056 (2.3%) of people collecting inhaled therapy (>2 SABA) had at least one hospital admission with a primary diagnosis of asthma.

18.4% of patients collected SABA only, 46.8% collected SABA + inhaled corticosteroids (ICS), 0.1% (371) collected SABA +long acting beta2 agonist (LABA) only, 13.6% collected SABA +combined ICS/LABA preparation, 2.1% collected SABA + ICS +LABA, 1.7% collected ICS/LABA only, leukotriene receptor antagonists (LTRA) were collected by 8.1% and long acting antimuscarinic agents (LAMA) were collected by 1.0%.

**Conclusion** This current and whole population database indicates that the prevalence of asthma is approximately 10% in young adults and 15% in children living in Scotland but prevalence of active asthma is approximately 8% in adults and 10% in children.

Abstract P275 Table 1   Dispensed inhaled therapy and hospital admission data from the Scottish NHS databases

| Age groups | Population | Inhaled therapy(n) | Prevalence % | >2 SABA and/or other (n) | Prevalence of active asthma |
|---|---|---|---|---|---|
| 0–4 | 289,464 | 45,223 | 15.6 | 25,041 | 8.7% |
| 5–14 | 572,289 | 76,018 | 13.3 | 56,223 | 9.8% |
| 15–24 | 713,676 | 73,446 | 10.3 | 53,985 | 7.6% |
| 25–44 | 1,563,926 | 164,117 | 10.5 | 128,348 | 8.2% |
| Total | 3,139,356 | 358,804 | 11.4 | 263,597 | 8.4% |

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| P276 | **THE IMPACT OF THE OPTIMUM PATIENT CARE SERVICE ON OUTCOMES FOR ADULT ASTHMATIC PATIENTS** |
|---|---|

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**Introduction and Objectives** The Optimum Patient Care (OPC) service provides a comprehensive asthma assessment, analysing both GP-recorded and patient-reported outcomes to generate patient-specific management recommendations (based on British guidelines) for considerations by practise staff. This study evaluates the effect of the OPC asthma service evaluation on real-life asthma control outcomes in a UK primary care adult asthma population compared with a control population.

**Methods** Routine and patient-reported questionnaire data were collected for 2952 patients with clinician-diagnosed asthma and 1 year outcome data managed in practises across Surrey and Leicester County and Rutland Primary Care Trusts. The effect of the OPC service was evaluated by assessing change in markers of asthma control between initiation and re-assessment: exacerbation frequency (Read code defined acute exacerbations and number of courses of acute oral steroids in previous 12 months) and risk status (high risk: $\geq 2$ annual exacerbations). The number of OPC management suggestions implemented by each practise was also considered. Change in exacerbations over the 12 month period was compared with a control group of patients from UK practises who did not receive OPC management recommendations. Exacerbation rate ratios (RR) for treatment group were produced (relative to control), adjusted for baseline confounders (95%CI).

**Results** There were 2952 patients in the study from 22 practises. At time of re-assessment 10% of OPC management suggestions had been implemented and 22% of patients managed at British Thoracic Society (BTS) steps 4/5 had improved their risk status. 17.1% of patients in the control group (n=22,952) suffered from $\geq 1$ exacerbation during the baseline year, increasing to 17.3% of patients after 12 months. For patients receiving the OPC management review, 24.8% had $\geq 1$ exacerbation during baseline, decreasing to 15.3% following review.

**Conclusions** OPC's combined patient-reported and practise data assessment allowed thorough patient assessment and the generation of tailored management recommendations. Although only 10% of recommendations were implemented at 12 months, the OPC service appeared to have a beneficial effect on risk status and exacerbation rates.

Abstract P276 Table 1   Rate Ratios for treatment group exacerbations, compared to control of patients not receiving the OPC management review service.

| Exacerbations | Control | Management review service |
|---|---|---|
| RR adjusted for age, baseline exacerbations | 1.00 | 0.74 (0.66, 0.83) |
| RR adjusted for age, asthma management stage | 1.00 | 0.76 (0.68, 0.85) |

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| P277 | **STATE OF THE UNION - AN ASSESSMENT OF CURRENT ADULT ASTHMATICS, THEIR DEMOGRAPHICS, TREATMENT AND OUTCOMES IN 210 PRACTISES ACROSS THE UK** |
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Abstract P277 Table 1   Asthma control and number of exacerbations per patient by BTS asthma management step

| | | Asthma Control n(%) | | | Total | Exacerbations | | Total (≥1 exac.) |
|---|---|---|---|---|---|---|---|---|
| | | Controlled | Partially Controlled | Uncontrolled | | 1 | 2+ | |
| BTS stage | 1 | 4081(27.1) | 9202(61.2) | 1754(11.7) | 15037(100) | 1166(7.8) | 453(3) | 1619(10.8) |
| | 2 | 4221(18.8) | 13888(61.9) | 4329(19.3) | 22438(100) | 2299(10.2) | 706(3.1) | 3005(13.4) |
| | 3 | 4136(17) | 14665(60.1) | 5589(22.9) | 24390(100) | 3357(13.8) | 1826(7.5) | 5183(21.3) |
| | 4 | 1849(10.8) | 9841(57.5) | 5432(31.7) | 17122(100) | 2868(16.8) | 2729(15.9) | 5597(32.7) |
| | 5 | 110(10) | 614(56) | 373(34) | 1097(100) | 80(7.3) | 168(15.3) | 248(22.6) |

**Introduction and Objectives** Previous studies have shown that overall asthma care can vary greatly between practises. In this study we evaluate the recorded asthma prevalence and characterize asthma control and risk profiles of real-life asthma patients from 210 practises managed within UK primary care.

**Methods** Electronic practise data was extracted from patients with asthma from 210 practises across the UK Patients included in the analysis were ≥18 years, had clinician-diagnosed asthma (defined as a diagnostic Read code compatible with the UK Quality and Outcomes Framework [QoF] for asthma) and were receiving current asthma therapy (≥1 asthma prescriptions within the last 2 years). Eligible patients were sent asthma management questionnaires to capture patient-reported outcomes. Pooled practise and patient data were used to characterize patients in terms of their control status (as classified by the Global INitiative for Asthma [GINA] and Royal College of Physician three questions [RCP3]) and risk status (stratified according to exacerbation frequency [Read code defined acute exacerbations and number of courses of acute oral steroids in previous 12 months], with high risk defined as ≥2 exacerbations annually).

**Results** From 210 practises across the UK there was an asthma prevalence of 5.9%, comprising 80280 adult patients and comparing to a UK QoF-assessed prevalence of 5.8%. The percentage of patients per practise with uncontrolled asthma (Median [IQR]) was 18.8% (9.1, 26.7) while the percentage per practise with no recorded RCP3 data was 18.9 (12.4, 45.9). 3.2% (n=2594) of the patients were classified as being high risk.

**Conclusions** A high proportion of patients managed in routine UK primary care have sub-optimal asthma control. More patients at BTS management stages 4 and 5 have uncontrolled asthma and suffer from a greater number of exacerbations. RCP3 recording varies between practises, and can be poorly recorded.

| P278 | **REASONS PROFFERED FOR NON-ATTENDANCE AT A DIFFICULT ASTHMA CLINIC** |

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**Background** Our weekly difficult asthma clinic consistently has a higher 'did not attend' (DNA) rate compared to the general respiratory clinics (32.6% v 23.7%). There is some evidence that DNA rates are particularly high for primary care asthma reviews[1]. Demand for our weekly difficult asthma clinic appointments is increasing such that routine appointments are at a premium. To explore reasons for non-attendance, our asthma specialist nurses attempted to interview patients that DNA over the telephone within a week of their scheduled appointment. The cause for non-attendance was ascertained in a non-confrontational manner and asthma control gauged.

**Aim** To determine reasons preferred for non-attendance at a difficult asthma clinic and to ascertain whether these differed between new and follow-up patients.

**Methods** Review of database generated from contacting patients that DNA asthma clinic between April 2011 and March 2012.

**Results** There were a total of 153 missed appointments. We attempted to contact the patient following their missed appointment in 101 cases and were able to succesfully complete a telephone interview in 51 cases. Of the DNA appointments, 8 were new-patient appointments and 43 were follow-up.

See Table 1. Reasons for non-attendance.

**Conclusions** Forgetfulness ('wrong day' and 'forgot') was the commonest reason for non-attendance amongst both new and follow-up patients. This is in keeping with work done in the general outpatient population.[2] One in 5 patients claimed not to have recieved their appointment. Attempts to telephone patients a week prior to their scheduled appointment may help to reduce DNA rates and/or make more appoinments available to patients that need them.

**References**
1. van Baar et al, Understanding reasons for asthma outpatient (non)-attendance and exploring the role of telephone and e-consulting in facilitating access to care: exploratory qualitative study Qual Saf Health Care 2006; 15:191–195
2. Pal et al, Why do outpatients fail to keep their clinic appointments? Results from a survey and recommended remedial actions. Int J Clin Pract.1998 Sep; 52(6):436–7.

**Abstract P278 Table 1**

| Reason | Overall (n=51) | New (n=8) | Follow-up (n=43) |
|---|---|---|---|
| Didn't receive | 10 (19.6%) | 2 (25%) | 8 (18.1%) |
| Forgot | 12 (23.5%) | 1 (12.5%) | 11 (25.6%) |
| Wrong day | 12 (23.5%) | 3 (37.5%) | 9 (20.9%) |
| Unwell | 5 (9.8%) | 0 | 5 (11.6%) |
| Family problems | 2 (3.9%) | 1 (12.5%) | 1 (2.3%) |
| Pt says cancelled appointment | 5 (9.8%) | 1 (12.5%) | 4 (9.3%) |
| No data | 2 (3.9%) | 0 | 2 (4.7%) |
| Inpatient | 2(3.9%) | 0 | 2 (4.7%) |
| Moved out of area | 1(2.0%) | 0 | 1 (2.3%) |

| P279 | **EVALUATION OF TREATMENT WITH FIXED DOSE COMBINATIONS IN ASTHMA PATIENTS IN PRIMARY CARE IN SWEDEN BY USING MANNITOL CHALLENGE TEST** |

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**Background** The mannitol challenge test is an indirect bronchial challenge test suitable for use in a primary-care setting. The test is most often used to diagnose asthma. In this pilot study the test was used to evaluate the effectiveness of ongoing treatment with ICS/LABA combination therapy in patients with asthma.

**Objectives** To explore the prevalence of optimal treated asthma patients in primary care in Sweden. The hypothesis was that not all patients are optimal treated.

**Methods** Male and female subjects, age 18–65 years with asthma, who were treated with a fixed dose combination (budesonide/formoterol or fluticasone/salmeterol) were included in the study. The subjects performed a mannitol challenge test (direct fall) followed by an inhalation of a $\beta_2$-agonist. A new spirometry (reversibility test) was performed 15 minutes later. The main explorative end-point was positive or negative response of mannitol challenge test and/or a reversibility of ≥15%.

**Results** The preliminary result of this pilot study (100 subjects) shows that an unexpected, surprisingly high proportion of the asthma patients had a positive response, either as a direct fall of $FEV_1$ ≥15% in the mannitol challenge test and/or a reversibility of ≥15%.

**Conclusion** The result of this study indicates that a large proportion of asthma patients in primary care, who are currently treated with fixed dose combination therapy, may not be optimally treated. Further research is needed to support these findings and to understand the reasons.

| P280 | **REDUCING NON-ATTENDANCE AT A DIFFICULT ASTHMA CLINIC – ARE PHONE CALLS FUTILE?** |

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**Background** Missed outpatient appointment cost NHS hospitals in the region of £600 million per year.[1] There is some evidence that