Asthma is a heterogeneous condition, with a variety of clusters of clinical presentations and courses, objective measures and treatment responses. A common feature of asthma is the under-reporting of poor symptom control by patients and under-recognition by clinicians. Poor asthma control in the preceding 12-months prior to admission has been linked to asthma related deaths. The significance of measuring asthma control independently from asthma severity has been demonstrated. However, considerable differences in perceived and actual control are apparent. There is a need to identify patient groups at risk of under-reporting symptoms and not recognising poor control.

Aim To establish which patient features are associated with over-estimation of disease control.

Setting Secondary care consultant led asthma clinic.

Population 108 patients recruited over 10 weeks.

Measures Objective measures of disease severity were mapped against perceived symptom control using the Asthma Control Test; age, gender, co-morbidities, medications, induced sputum, lung function, IgE, blood eosinophil, histamine challenge test, exhaled nitric oxide, ECG CXR, smoking status and BMI.

Analysis Significant associations between patient groups and perceptions of symptom control are described.

Results 61 (56.6%) of patients had difficult asthma according to BTS guidance. 95 (88.0%) had poorly controlled asthma, with 70 (64.8%) of these perceiving adequate control of symptoms.

All patients with good perceived and actual control of symptoms; 13 (12.0%), had never smoked. 85.5% of patients who did not recognise their symptoms prevalence were overweight, obese or morbidly obese.

All patients with raised IgE or blood eosinophillia had poorly controlled asthma; though 58.6% of this group perceived good control.

Conclusion This single centre cross-sectional study suggests smokers, overweight patients and those with inflammation predominant asthma are most likely to under-report severity. These findings are in keeping with the cluster analyses of Haldar and Moore. Further work is required to follow-up these patients to establish if poor perception of symptoms changes over time, or is associated with future asthma attack frequency.

P55 IS PRESCRIPTION UPTAKE AND MEDICATION ADHERENCE RATING SCALE (MARS) A USEFUL TOOL IN ASSESSING ASTHMA CONTROL IN CHILDREN WITH PROBLEMATIC SEVERE ASTHMA (PSA)?

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Introduction Sub-optimal adherence to medications results in poor asthma control, however objective measurement of adherence is challenging.

Aim To assess adherence to inhaled corticosteroids (ICS) in children with problematic severe asthma (PSA) using prescription uptake and the Medicines Adherence Rating Scale (MARS) (self-reported adherence) and relate them to measures of asthma control.

Methods 160 patients assessed as part of the established RBH difficult asthma protocol (2008–2013) were included [[Arch Dis Child 2009;94:780–4]. Adherence was assessed using prescription uptake data (GP and local hospital) and MARS. Sub-optimal adherence was defined as a prescription uptake of <80%. Spirometry (FEV_1 pre bronchodilator), bronchodilator reversibility (BDR), and exhaled nitric oxide (FENO) were measured. The Asthma Control Test (ACT), Paediatric Asthma Quality of Life Questionnaire (PAQLQ) was used to evaluate control. Number of courses of oral steroids and hospital admissions in the previous 12 months were recorded.

Abstract P55 Table 1 Comparison of prescription uptake and measures of asthma control

	>80% prescription uptake	<80% prescription uptake	p value
FEV_1 (%)	81.5	78.5	0.38
BDR %	5.3	8.7	0.81
FeNO(ppb)	22.5	28.8	0.20
ACT**	15	13	0.14
MARS*	24	22	0.10
PAQLQ	3.2	4.4	0.23
Oral steroids in past 12 months	7	7.5	0.80
Hospital admissions in past 12 months	1	2	0.98

Data presented as median. Mann-Whitney test used to compare the groups. P value <0.05 is taken as significant.*Max score 25 with higher scores indicating better self-reportedadherence.**Max score 25, with higher scores indicating better asthma control.

Results Median age was 11.6 yr (5–16). 66% were male. 52% had prescription uptake of <80%.

MARS score showed only a weak correlation with prescription uptake (n = 48, r^2 =0.03, p = 0.29), even in patients with prescription uptake of <50% (n = 23, r^2=0.09, p = 0.32). No relationship was found between prescription uptake and ACT, MARS, FEV_1, rescue courses of OCS, FeNO or BDR (Table 1).

Conclusion Poor prescription uptake was not related to any measure of asthma control, meaning that we could not differentiate the genuine therapy resistant from the non-adherent. But it is not possible to assess how much ICS was actually inhaled. Patterns of ICS use may be a more important determinant of control. Self-reported adherence, as measured by MARS was high even in those with very poor <50%) prescription uptake highlighting the limitations of this questionnaire. More objective means of assessing adherence should be incorporated into protocols for assessing severe asthma.

P56 IMPACT OF PHARMACIST-LED ASTHMA AND COPD REVIEWS IN GENERAL PRACTICE

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Introduction Asthma and chronic obstructive pulmonary disease (COPD) account for a significant burden of disease in the UK. In a local initiative, a respiratory pharmacist carried out structured asthma and COPD reviews aimed at improving clinical outcomes in a primary care setting.

Aims and objectives This study aims to assess the impact of asthma and COPD reviews in accordance with national guidelines and standards of care.

Methods The study was carried out prospectively, during one day a week basis, over a twelve month period across six GP surgeries. Patients were included based on use of high dose inhaled corticosteroid and bronchodilator preparations (ICS/LABA) and/or presence of previous exacerbations, accident and emergency (A&E) or hospital admissions.

Results 231 patients with asthma (n = 146, 63.2%) and COPD (n = 85, 36.8%) were reviewed, with 370 consultations carried

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