**Objective** To determine if specific clinical questions could reliably predict the ultimate inflammatory phenotype of patients attending a severe asthma service. The severe asthma clinic at University Hospital of South Manchester now routinely ask the desert island question (DIQ).... “If you were on a desert island and could only have steroids or antibiotics which would you choose?”

**Background** It is widely accepted that asthma is the result of complex pathological processes giving rise to a variety of different phenotypes, including eosinophilic and non-eosinophilic inflammatory patterns. Phenotype is determined by investigations e.g. baseline blood/sputum eosinophil level and clinical response to treatments including steroid augmentation/withdrawal. Investigations include antibody status to Haemophilus Influenza and Streptococcus Pneumonia.

**Methods** New patients referred to the severe asthma service were asked the DIQ during their first appointment, prior to any investigations. We collected data from first clinic letters and case notes. Data collected included DIQ answer, phenotype, additional diagnoses, historical steroid and antibiotic use, sputum data and all asthma treatments trialed.

**Results** A total of 59 patients were identified. 71% answered steroids and 29% answered antibiotics. Of those that answered steroids, 83% had eosinophilic asthma, 14% had non-eosinophilic asthma. The breakdown of the different phenotypes within the different answer groups is illustrated in Figure 1. The positive predictive value (PPV) of the answer “steroids” was 86% and “antibiotics” 47% ($\chi^2 = 7.182$ p < 0.01). 67% of the “antibiotic” answers and 38% of the “steroid” answers were found to be antibody deficient (Haemophilus Influenza and/or Streptococcus Pneumonia). 30% who answered “antibiotics” were on maintenance steroids compared to 41% of patients who answered “steroids”.

**Conclusion** This small pragmatic study has shown that the answer “steroids” to the DIQ has a high PPV for eosinophilic airway inflammation. The “antibiotic” response is much less useful in predicting inflammatory phenotype, but it does identify a high likelihood of antibody deficiency.
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 eosinophilia 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 findings are in keeping with the cluster analyses of Haldar and Moore. 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.

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

<table>
<thead>
<tr>
<th></th>
<th>&gt;80% prescription uptake</th>
<th>&lt;80% prescription uptake</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>FEV1 (%)</td>
<td>81.5</td>
<td>78.5</td>
<td>0.38</td>
</tr>
<tr>
<td>BDR %</td>
<td>5.3</td>
<td>8.7</td>
<td>0.01</td>
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<tr>
<td>Feno(pbb)</td>
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<td>28.8</td>
<td>0.20</td>
</tr>
<tr>
<td>ACT**</td>
<td>15</td>
<td>13</td>
<td>0.14</td>
</tr>
<tr>
<td>MARS*</td>
<td>24</td>
<td>22</td>
<td>0.10</td>
</tr>
<tr>
<td>PaQLQ</td>
<td>3.2</td>
<td>4.4</td>
<td>0.23</td>
</tr>
<tr>
<td>Oral steroids in past 12 months</td>
<td>7</td>
<td>7.5</td>
<td>0.80</td>
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<tr>
<td>Hospital admissions in past 12 months</td>
<td>1</td>
<td>2.0</td>
<td>0.98</td>
</tr>
</tbody>
</table>

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-reported adherence. *Max score 25, with higher scores indicating better asthma control.