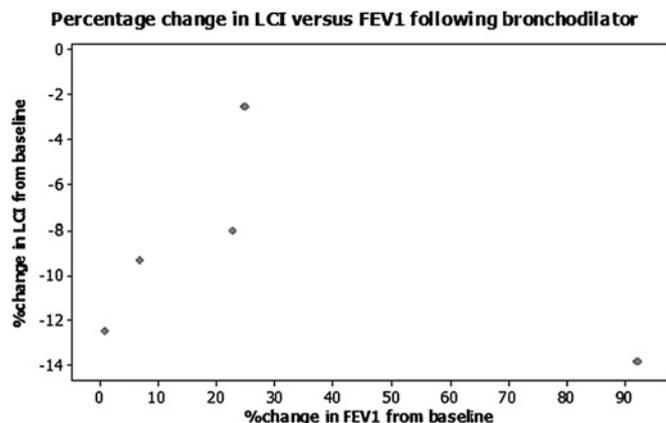


during acute exacerbation. We aimed to investigate LCI in asthmatic children requiring oral corticosteroids and admission to hospital.

**Methods** Children were recruited from acute medical wards. We tested children once they did not require oxygen or >2 hourly salbutamol. Admission details were extracted from medical notes. Multiple breath washout (MBW) was performed with sulphur hexafluoride and the Innocor photoacoustic gas analyser. Spirometry complied with ATS/ERS standards and was performed using the Easyone spirometer. MBW and spirometry were performed shortly before and 15 min after children's clinically prescribed salbutamol. Paired t tests and Pearson correlation coefficients were used in the analysis.

**Results** Nine children aged 6.4–13.6 years were recruited. Testing began on average 201 min after each child's last salbutamol. LCI was calculated for eight children, the ninth was excluded due to variable FRC. Pre bronchodilator mean (SD) LCI was 8.6 (1.8), but was only abnormal (=7.4) in 5/8 children; following bronchodilator mean (SD) LCI was 8.1 (1.2). Mean (SD) FEV<sub>1</sub> z-score was -3.5 (1.6) and was abnormal (<-1.96) in 6/8 children; post bronchodilator FEV<sub>1</sub> z-score was -2.9 (1.4). Mean LCI correlated with FEV<sub>1</sub> z-score before and after bronchodilator ( $r=-0.80$ ,  $p=0.017$  and  $r=-0.76$ ,  $p=0.030$ ). In patients with abnormal LCI there was a significant improvement after salbutamol; with a mean difference of -0.918,  $p=0.018$ . In this group FEV<sub>1</sub> z-score improved by a mean of 0.802,  $p=0.051$ . Although overall both measures improved, the degrees of improvement in LCI and FEV<sub>1</sub> did not correlate ( $r=-0.361$ ,  $p=0.550$ ). Two patients who both had abnormal pre bronchodilator LCI (mean 11.1) returned 8–10 weeks later, both had normal LCI (mean 6.9).

**Conclusions** LCI is abnormal in children during exacerbation of asthma. Abnormal LCI improves following bronchodilator, but changes do not correlate with changes in FEV<sub>1</sub>. This suggests variable bronchodilator response throughout the airway. Recruitment for this study is ongoing.



Abstract P78 Figure 1 Post bronchodilator change in FEV<sub>1</sub> and LCI in five patients with abnormal LCI.

**P79 DO CHILDREN DESCRIBE THE BENEFITS OF INHALED ASTHMA THERAPY IN THE SAME WAY AS ADULTS?**

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**Introduction** Although it is well reported in adults, there is relatively little data on how children with asthma and their parents describe their attitudes to the disease, expectations of therapy and perception of treatment benefit. Our aim was to investigate this and determine

if they differed from reports by adults with asthma. We plan to use the results to refine patient reported outcome measures for children with asthma.

**Methods** We recruited families with an asthmatic child (4–11 years) who had recently been prescribed a change in treatment (starting inhaled corticosteroid monotherapy (ICS) or changing from ICS to inhaled corticosteroid/long acting  $\beta_2$  agonist combination therapy (ICS/LABA). Semi-structured interviews were conducted with the parents and the children if aged 7–11 years. Transcripts were analysed using a combination of thematic and content analysis and recruitment discontinued in each group once data saturation was reached.

**Results** We undertook 41 interviews including 28 parents and 13 children. The numbers in each group can be seen in Abstract P79 table 1. All the children on ICS/LABA had been changed as their symptoms were not controlled on ICS monotherapy. The interviews highlighted the significant effects that paediatric asthma has on the whole family and the distress the symptoms cause to the child and their parents. Exacerbations led to frequent school absence and associated time off work for the parents. Both parents and children hoped that the new medication would lead to better symptom control, increased participation in physical activities and decreased visits to the GP or hospital. Positive effects of treatment change were identified, particularly in those changing from ICS to ICS/LABA. Benefits described included improvement in symptoms (especially cough and wheeze), increased participation in sport or play activities and reduced rescue medication use. These effects resulted in few visits to the GP/hospital and better attendance at school.

Abstract P79 Table 1 Number of patients in each group

	ICS	ICS/LABA
Children aged 7–11 years	6	7
Parents of children aged 7–11 years	6	7
Parents of children aged <7 years	8	7

**Conclusions** While asthma symptoms prevent adults and children from participating in different types of activities (eg, school not employment), children and their parents report the same concepts as adult patients with asthma.

**P80 A QUALITATIVE EXPLORATION OF THE NEEDS AND COPING STRATEGIES OF PEOPLE WITH SEVERE ASTHMA**

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**Introduction and Objectives** Many people with severe asthma experience frequent debilitating symptoms and treatment side effects, both of which can have a significant impact on their quality of life. While previous qualitative studies have investigated attitudes to healthcare usage among people with severe asthma symptoms, there is relatively little evidence about how people with ongoing severe asthma cope with its broader impact on their lives. This study sought to examine how people with severe asthma and their families view the impact of the condition and how this affects their approach to its management.

**Methods** Eight focus groups were held in five tertiary centres around the UK in 2010. Participants were grouped into young people with severe asthma (N=8), adults with severe asthma (N=26) and