

parents of children with severe asthma (N=17). Discussion guides were initially structured around the revised health belief model (Rosenstock IM, Strecher VJ and Becker MH. Social Learning Theory and the Health Belief Model. *Health Educ Behav* 1988;**15**:175–183) which suggests that health behaviours are driven by perceptions in four areas: illness threat, costs and barriers to action, self-efficacy and value of reduced threat. A grounded theory approach was adopted, with concurrent data collection and analysis and adaptations made to the discussion guide in line with emerging themes (Charmaz K. *Constructing Grounded Theory*. London: Sage, 2006).

**Results** Many people felt relatively powerless to improve their ongoing health-related quality of life, because the perceived threats to it posed by their asthma were closely matched by perceived threats of treatment side-effects. Coping strategies to improve quality of life were therefore often targeted at social interactions, rather than improving asthma control. The revised health belief model appeared to be relevant to people affected by severe asthma.

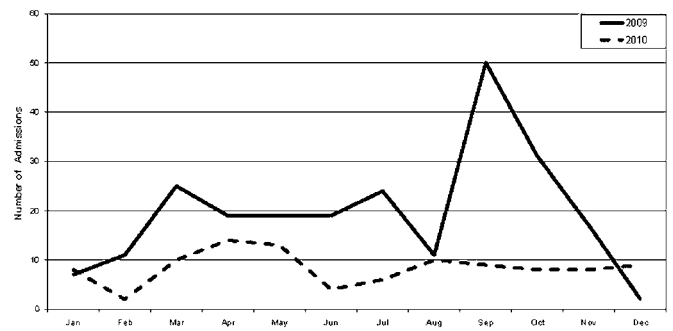
**Conclusions** Social support for people with severe asthma may facilitate improved quality of life and interventions that deliver this should be investigated.

**P81 THE EFFICACY OF A NURSE LED, PRIMARY CARE, ACUTE ASTHMA SERVICE IN REDUCING SHORT STAY HOSPITAL ADMISSIONS**

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Current interventions to decrease acute asthma admissions during childhood have achieved limited benefits. We hypothesised that a community asthma nurse service, providing rapid access consultations and an out of hours telephone service, might be an effective strategy in reducing potentially avoidable short stay hospital admissions (<24 h). We conducted a prospective observational study of the impact of such a service over a 1-year period (2010) using the previous 12 months as a historical control group (2009). There were 176 (64%) fewer short stay admissions during the intervention period compared with the previous year. The reduction in admissions resulted in gross savings to the NHS of approximately £125 000 based on the national payment by results tariff of £709 per asthma admission. There were 149 referrals to the asthma nurse service. 53% were self-referrals. 39 children with poorly controlled asthma were referred by the asthma nurse for hospital assessment. Of these 38 were subsequently admitted for in-patient treatment and 1 was discharged from the emergency department after 4 h. 21 children were judged to be relatively mild and would not have needed hospital admission if referred. 89 cases would either have been referred for hospital assessment or families would have self-referred to hospital if the service was not available. For this group it was judged by the attending nurse that their interventions had avoided hospital admission. The reduction in short stay admissions was impressive and greater than the number of patient episodes that were addressed by the service. We suspect that this was a knock on effect of good practices being repeated and disseminated within the community without necessarily re-engaging with the service. The number of non-elective short stay asthma admissions has continued to fall in 2011. From January to May 2011 there were just 29 short stay admissions which is 62% less than the 47 admissions during the same period in 2010. We suggest that this model of care is applicable to many other localities and could result in substantial cost savings to the NHS while providing appropriate care to patients in their homes.



Abstract P81 Figure 1 Number of non-elective asthma admissions with a length of stay <24 h by month.

**P82 EPISODIC VIRAL WHEEZE AND MULTITRIGGER WHEEZE: ARE THEY REALLY DIFFERENT PHENOTYPES?**

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**Introduction** Episodic viral wheeze (EVW) and multitrigger wheeze (MTW) are thought to be distinct recurrent wheezing phenotypes in preschool children. Here we tested the hypothesis that there are detectable physiological differences between children with EVW and MTW.

**Methods** Preschool children with and without a history of recurrent wheeze were recruited, those with symptoms were categorised as EVW or MTW. In a single assessment, the following were completed: questionnaire, respiratory resistance (Rint), bronchodilator response, nasal nitric oxide and skin prick reactivity. Exhaled breath condensate was collected and analysed for interleukin (IL) –10 concentration. A respiratory questionnaire was completed after 12 months.

**Results** There were 69 children recruited, mean age 3.8 years (range 2.1–5.3), of whom 34 had EVW, 19 had MTW and 16 were controls. Skin prick reactivity was determined in 57, Rint in 55, bronchodilator response in 43, nasal NO in 42, exhaled breath condensate in 24 and follow-up was achieved in 53 children. Compared with MTW, children with EVW had increased Rint (mean difference 0.21 kPa.s/L [95% CI 0.06 to 0.36]). Children with MTW were 4.0 times more likely [95% CI 1.1 to 14.7] to be atopic compared with those with EVW. Compared with controls, children with EVW and MTW had reduced IL-10 concentration in exhaled breath condensate (mean difference 1.35 pg/ml [95% CI 1.02 to 1.87]). After 12 months, wheeze had apparently resolved in 27% (12/44) children and of the 30 with ongoing wheeze, 27% (3/11) with MTW were categorised as EVW and 52% (10/19) with EVW had developed MTW.

**Conclusions** There are differences in lung function and atopy between children with EVW and MTW but with considerable overlap in values. The two phenotypes are not necessarily stable over time suggesting they are towards opposite ends of the same spectrum rather than different conditions.

**P83 IS A SINGLE INTRAMUSCULAR DOSE OF TRIAMCINOLONE AND ACUTE BRONCHODILATOR SUFFICIENT TO DETERMINE OPTIMAL LUNG FUNCTION IN CHILDREN WITH SEVERE THERAPY RESISTANT ASTHMA?**

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**Background** A small proportion of patients with long standing severe asthma develop irreversible airway obstruction (persistent

airflow limitation (PAL)). There is no agreed definition of PAL in children, but pragmatically, most would define it as post steroid, post-bronchodilator FEV<sub>1</sub> percent predicted <80% or Z score less than -1.96, with normative data from appropriate reference populations despite optimal therapy. However, there is no agreement on the dose, duration or route of administration of steroids to determine the optimal spirometry that a child can achieve.

**Hypothesis** A single intramuscular dose of triamcinolone and acute bronchodilator are insufficient to determine optimal lung function and reliably diagnose PAL. The aim of this study was to determine whether forced expired volume in 1 second (FEV<sub>1</sub>) 2–4 weeks after a single dose of triamcinolone and acute bronchodilator administration reflect the best obtained in the following year in patients with severe, therapy resistant asthma.

**Patients and Methods** 39 children age 5–16 received triamcinolone; the FEV<sub>1</sub> was measured before the treatment, after triamcinolone and during the 12-month period. The highest follow-up FEV<sub>1</sub> was compared with post-steroid post-post-bronchodilator FEV<sub>1</sub>.

**Results** In the year following the 1st dose of triamcinolone 25 (64%) of 39 patients exceeded their immediate post-steroid trial target lung function by >9% predicted. 13 out of 39 patients (33.3%) achieved FEV<sub>1</sub> of >80% predicted at the 1st follow-up. If the diagnosis of PAL had been made just on the steroid trial, 16 patients would have been wrongly given this label; only 10 children were ultimately diagnosed with PAL. 13 of 39 patients received multiple (2–4) doses in 4 weeks intervals and only in 9 of them only the data was analysable. In this small group, the median and interquartile range of FEV<sub>1</sub> were significantly higher (75 vs 68 and 38.75 vs 17) following the 3<sup>rd</sup> dose of triamcinolone than after the 1<sup>st</sup>.

**Conclusion** Reliance on a single dose of triamcinolone plus acute administration of  $\beta$ -2 agonist will lead to an overdiagnosis of PAL in children with severe asthma.

## ILD: from bench to bedside and back again

### P84 BTS NATIONAL INTERSTITIAL LUNG DISEASES (ILD) SURVEY 2010–2011

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**Aim** The aim of this survey was to capture the current “state of play” with regard to ILD services, with an emphasis on idiopathic pulmonary fibrosis (IPF), in the UK.

**Methods** The BTS Specialist Advisory Group emailed a survey to 260 clinicians. Respondents were advised to collect data prospectively for 1 month (late 2010/early 2011) before completing it.

**Results** 120 responses were obtained, (England-96, Scotland-16, Wales-6, Northern Ireland-2), total catchment population 37.3 million, number of full-time consultants 3 (1–15). \*50% of centres had a “lead” ILD consultant, 57% ran an ILD clinic and, of those centres currently without an ILD clinic, 70% anticipated setting one up in the next 5 years. For patients with all types of ILD the estimated number of new patients seen at clinic each month was 6 (1–75). \*The percentage of new patients with IPF (options “<25%”, “25–50%”, “50–75%” or “>75%”) was estimated at 18%, 36%, 27% and 18% respectively. For all ILD patients, the number of return patients seen at clinic in a month was 25 (1–300). \*Only 5% of respondents were “very confident” about these figures (based on audit/registry) with 62% expressing “low confidence”. HRCT reporting was performed by “Pulmonary radiologists”/“Pulmonary radiologists with a specific ILD interest” in 48% and 36% respectively. 47% of centres did not have an ILD-multidisciplinary meeting (MDM), and for those that did, 32% held them monthly. Access to

an ILD Specialist Nurse, ambulatory oxygen, pulmonary rehabilitation, palliative care and smoking cessation were 26% 93%, 81%, 93% and 97% respectively. 64% had not recruited into IPF clinical trials and 68% had no registry/database[n1]. “Triple” therapy continued to be prescribed “frequently”, prednisolone (55%), azathioprine (49%), N-acetylcysteine (45%). The reported preferred model of care for ILD patients was “local” (51%), “network” (45%) and “centre” (4%). \*Median/range.

**Conclusions** There is a wide variation in current practice, with almost half of all respondents not holding a MDM, despite BTS/ERS/ATS guidelines. Our survey has implications for the delivery of ILD care in the UK and should support the BTS in developing Quality of Care standards.

### P85 MORTALITY TRENDS IN ASBESTOSIS, EXTRINSIC ALLERGIC ALVEOLITIS AND SARCOIDOSIS IN ENGLAND AND WALES

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**Background** To ascertain the trends in mortality from Asbestosis, Extrinsic Allergic Alveolitis (EAA) and sarcoidosis in England and Wales, we analysed mortality data from the Office of National Statistics.

**Methods** We calculated age and stratum specific mortality rates between 1968 and 2008 and applied these to the 2008 population demographics to generate the standardised number of expected deaths per annum. Poisson regression was used to calculate annual mortality rate ratios.

**Results** From 1968 to 2008 there were 1958 registered deaths from Asbestosis, 878 deaths from EAA and 3544 deaths from sarcoidosis. The Asbestosis mortality rate increased from 0.04 (95% CI 0.03 to 0.05) in the 1968 to 1972 calendar period to 0.12 (95% CI 0.10 to 0.13) in the 2005 to 2008 period while the mortality from EAA increased marginally from 0.04 (95% CI 0.03 to 0.05) in the 1968 to 1972 calendar period to 0.08 (95% CI 0.07 to 0.09) in the 2005 to 2008 period. Mortality from sarcoidosis has increased by approximately 9% a year.

**Discussion** Our findings show that the mortality from Asbestosis continues to rise in the UK. Overall mortality rates from EAA have remained stable throughout the same period but they were higher in males and in older people. There was a slight increase in mortality from sarcoidosis over the study period which was greater in women.

### P86 THE ASSESSMENT OF HEALTH RELATED QUALITY OF LIFE IN SARCOIDOSIS WITH THE KING'S SARCOIDOSIS QUESTIONNAIRE (KSQ)

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**Introduction** The King's Sarcoidosis Questionnaire (KSQ) is a recently developed and validated sarcoidosis specific health related quality of life (HRQOL) tool comprising of 5 modules: general HRQOL (10 items), lung (6 items), medication/side-effects (3 items), skin (4 items), and eye (7 items). We set out to evaluate HRQOL in a large group of patients with wide ranging sarcoidosis and determine the factors that influence it.