

## Editorial

### Childhood Asthma - The State of Play in 2010

Asthma remains one of the most common chronic childhood conditions in the Western world and is becoming more prevalent in the developing world. Mercifully, asthma deaths are rare in children but the burden of morbidity remains high. Thirty eight percent of children with asthma report symptoms at least once a week by day and 28% report symptoms at least once a week by night and 30% have symptoms on exercising [1].

There are several implications for childhood asthma symptoms. Children with asthma are at increased risk for developmental, emotional, and behavioral problems [2]. Nocturnal asthma symptoms in children have been linked to increased absenteeism from school for the child and from work for the parent [3]. There are concerns that children with asthma fail to attain their educational potential [3] despite historical evidence that children with asthma have a higher than average IQ [4]. The financial implications to the nation of childhood asthma have been quantified and it is estimated that the healthcare costs for a child with asthma are approximately three times greater than those for a child without asthma [5]. The heavy burden that asthma symptoms place on the individual, their family and the wider community clearly needs to be addressed but at present there is no prospect of a cure for childhood asthma.

Fortunately, chronic asthma symptoms are responsive to treatment with inhaled corticosteroids in the vast majority of children and this treatment is known to be safe. Guidelines have been developed to assist clinicians in the diagnosis and management of childhood asthma [6, 7] and goals for acceptable symptoms control have been set [7].

Despite the guidelines and goals, childhood asthma still remains a clinical challenge for a number of reasons. First, there is no diagnostic test nor is there consensus on a definition of childhood asthma. Second, currently there is no reliable biomarker against which to titrate treatment. Third, asthma remains an unpredictable condition which can spontaneously remit or relapse over periods of weeks, months or even years. Whilst clinicians caring for children with many chronic conditions including cancer, diabetes, renal failure and hypertension can apply objectivity to many of their clinical decisions, the diagnosis and management of childhood asthma remains a subjective question of balancing the probabilities.

The present series has been compiled to provide the reader with an up-to-date review to assist in the decision-making process. The authors of the articles have been tasked to answer the following questions:

1. Why do some children develop asthma?
2. How do I diagnose childhood asthma?
3. How do I treat a child with asthma?
4. How should I monitor a child with asthma?
5. What should be my approach to the adolescent with asthma?
6. What should be my approach to the child with troublesome asthma?

**Steve Turner**

Child Health, University of Aberdeen  
Royal Aberdeen Children's Hospital  
Foresterhill, Aberdeen  
AB25 2ZG, UK  
Tel: +44 1224 552471  
Fax: +44 1224 551919  
E-mail: s.w.turner@abdn.ac.uk

**REFERENCES**

- [1] Rabe KF, Vermeire PA, Soriano JB, Maier WC. Clinical management of asthma in 1999: the Asthma Insights and Reality in Europe (AIRE) study. *Eur Respir J* 2000; 16: 802-7.
- [2] Blackman JA, Gurka MJ. Developmental and behavioral comorbidities of asthma in children. *J Dev Behav Pediatr* 2007; 28: 92-9.
- [3] Diette GB, Markson L, Skinner EA, Nguyen TT, Algatt-Bergstrom P, Wu AW. Nocturnal asthma in children affects school attendance, school performance, and parents' work attendance. *Arch Pediatr Adolesc Med* 2000; 154: 923-8.
- [4] Mitchell RG, Dawson B. Educational and social characteristics of children with asthma. *Arch Dis Child* 1973; 48: 467-71.
- [5] Lozano P, Sullivan SD, Smith DH, Weiss KB. The economic burden of asthma in US children: estimates from the National Medical Expenditure Survey. *J Allergy Clin Immunol* 1999; 104: 957-63.
- [6] BTS/SIGN. British guideline on the management of asthma. <http://www.sign.ac.uk/guidelines/fulltext/101/index.html> 2008.
- [7] Global Initiative for Asthma. <http://www.ginasthma.com/>.