



British Thoracic Society 2009 Paediatric Acute Asthma Audit Dr James Y. Paton

Some history

Most paediatricians are only too well aware that acute asthma exacerbations are the main acute medical condition leading to hospital admission in childhood. As an important clinical problem, auditing the management of exacerbations is clearly an important area to target.

The paediatric asthma audit under the auspices of the BTS started in 1998. Each year since, hospital units taking part have been asked to complete a simple dataset based on the BTS/SIGN asthma guidelines. The audit has previously been hosted in University of Glasgow but this year has moved to be part of the new BTS audit programme and is now entirely electronic.

The audit aims to collect data on every child over 1 year of age admitted to hospital during the month of November with wheezing or asthma. The data collected is grouped into 5 areas: basic demographic information such as age and sex; initial hospital assessment; initial hospital treatment; discharge treatment and asthma attack management planning; and plans for follow-up. Each unit is fed back data on their own admissions with a comparison with the aggregated national data, usually by the end of January. The experience of the first 8 years were reported in detail in 2008 (Arch Dis Child 2008;**93**: 952-958).

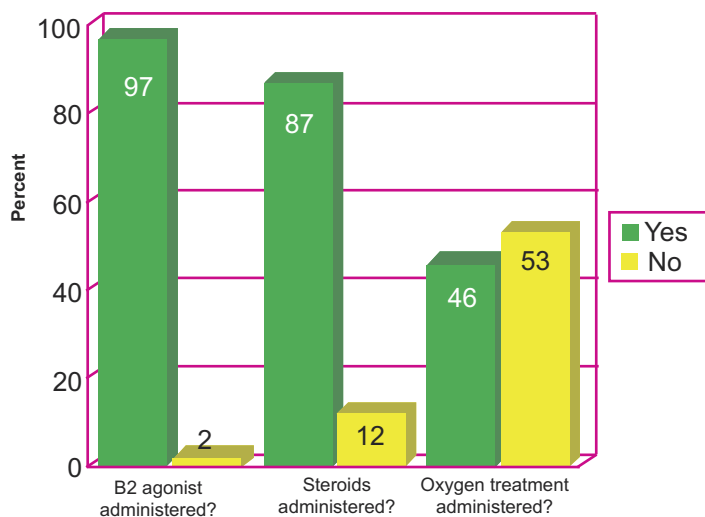
Since the winter months are peak times for asthma admissions, the November audits provide a snapshot of hospital paediatric acute asthma care at one of the busiest times of year.

This year's audit

This year information on 1,543 children was submitted from 57 hospitals throughout the UK, numbers broadly similar to previous years. Many of the key findings have remained stable from year to year. For example, the majority of children are under 5 and most stay in hospital for a very short time, most commonly 1 day. Over the years of the audit the degree of physiological disturbance of children admitted has remained surprisingly constant with essentially no change in the average heart rate, pulse or saturation levels at the time of admission. This suggests that there has been little change in the severity of exacerbations over time.

Some aspects of treatment are consistently well done. For example, most children receive bronchodilators and steroids as the guidelines recommend. About 38% of children are treated by spacer alone while 29% are treated with a combination of nebuliser and spacer.

National Data– 1,543 records

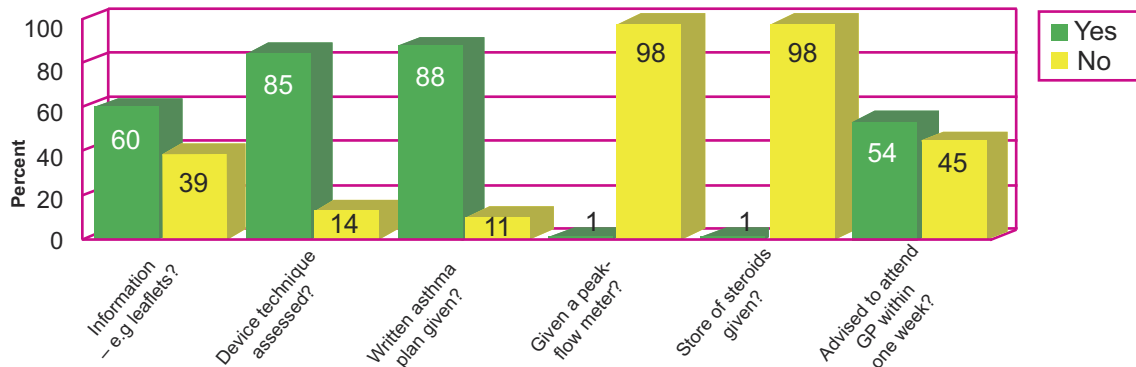


This treatment appears highly effective because only a few children require additional asthma treatments such as IV aminophylline (6%), IV magnesium (4%) or IV beta agonist (4%) and only 5.2% of children are recorded as being admitted to PICU.

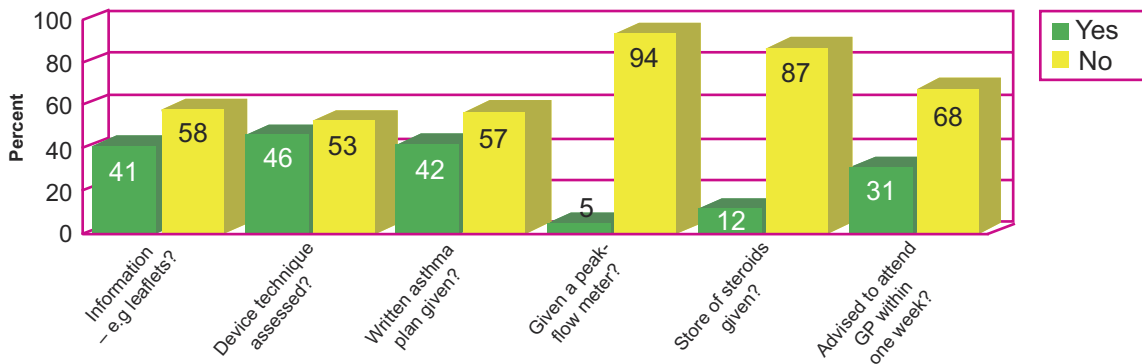
A surprisingly high number of children are x-rayed (33%) and are given antibiotics (24%). Best evidence suggests that x-rays are indicated in probably less than 10% of children with acute exacerbations and there is no evidence at present that antibiotics are useful in the management of acute asthma.

Some important areas of care continue to be less well done. This is particularly true in the area of discharge planning and asthma education. For example, nationally less than half of children go home with written discharge plan. Yet some units, even large and busy ones manage to do much better in delivering discharge planning.

Large Children's Hospital – 61 records



National Data– 1,543 records



Where next?

We are already thinking about the next round of audit in November 2010. We will make some small technical improvements and we have plans to improve both the layout of the report and the speed at which it becomes available.

We think it may be time to challenge units to improve their delivery of care so that an increasing proportion of children receive care in line with the guidelines. It is not clear how best to do this but perhaps year on year targets (e.g. greater percent receiving asthma plans or fewer percent having chest x-rays) might be one way forward. For those who are particularly keen, the opportunity to enter data and audit performance will remain available throughout the year via the BTS website.

Finally, I would like to thank everyone at the BTS for their hard work managing the successful transition to the BTS web-based system and to all of you who entered data. If you have comments or suggestions I would be very pleased to hear from you (j.y.paton@clinmed.gla.ac.uk).

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This report has been prepared by the British Thoracic Society to provide an overview of the 2009 National Paediatric Asthma Audit. The report also appears in the June 2010 issue of the BTS Audit Newsletter.