



**British Thoracic Society**  
2011 – 2012 BTS Paediatric Pneumonia Audit  
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The 2011-2012 paediatric pneumonia audit occurred shortly after the update of the British Thoracic Society Guidelines for the management of community acquired pneumonia in children were published (1). Encouragingly 101 institutions submitted data (up from 77 in 2011) reporting over 2800 cases (male 52.9%). The age distribution was very similar to that of previous years with 45% under the age of three years and 71% under the age of five. Duration of admission was short with 45% staying less than 48 hours (40% 2010-2011) and 85% less than five days.

On admission 99.1% of children had their oxygen saturation recorded in air and nearly 40% were hypoxic (oxygen saturation less than 92%). 30% of children had a fever greater than 39 degrees centigrade. Wheeze was noted in 40% of those under the age of five and 24% of older children.

Blood cultures are no longer mandated in the guidelines and the number of children having blood cultures decreased to 52% from 57% in 2010-2011. Further microbiological tests were done in 28% and overall a causative organism found in 13.5% of children. As always viruses predominated with RSV accounting for 46% of those where a cause was found. In keeping with a rather unusual winter season, flu accounted for only 6% as opposed to 32% in 2010-2011. *Streptococcus pneumoniae* was the commonest bacterial cause and found in 17%.

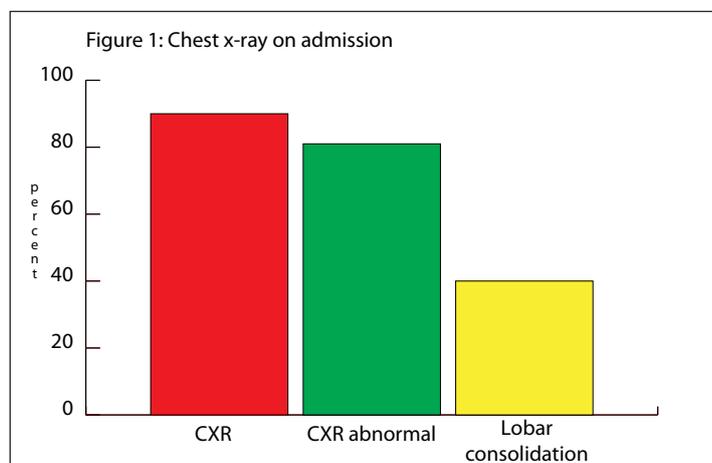
The 2011 guidelines emphasise that blood tests including white blood count and C reactive protein are not useful in helping define aetiology but despite this they were performed in 63% and 62% of children respectively. Chest X-rays were performed in 90%, were abnormal in 81% and showed lobar consolidation in 40% of children (Figure 1).

When it came to treatment 43% of children were given a bronchodilator, 28% had intravenous fluids and 52% had some intravenous antibiotics. The commonest intravenous antibiotic was Augmentin, then Cefuroxime both given for one to two days. Overall antibiotic choice did not change between 2010-2011 and 2011-2012 with Augmentin being the most popular antibiotic in both time periods. Despite macrolides being suggested as only second line antibiotics in the 2011 guidelines, macrolide use increased to 27.2% of antibiotics given in 2011-12 compared with 20% in 2010-2011.

Physiotherapy is not recommended in the management of pneumonia but 17% of children nevertheless received it (15% 2010-2011). Despite only three children in 2011-2012 having a significant complication, some 33% of children received an appointment for hospital follow-up and 11% had a chest X-ray repeated at follow-up. This would appear on an unnecessary high use of secondary care resources.

Twenty nine sites responded to a request for information on how they responded to the 2010-2011 audits. All but one had discussed the results of the audit with clinicians involved in the service, 18 had discussed the results with managers responsible for the service and 16 had made changes as a result of the audit. The main changes reported were decrease in the number of the chest X-rays requested, particularly at follow-up, decrease in the use of physiotherapy and using oral Amoxil as first-line antibiotic. All three of these changes are strongly supported by the 2011 guideline.

It is very encouraging that increasing numbers of paediatric centres are prepared to enter data for this audit and that there is evidence of change being made to local protocols as a result. The updated guidelines may not have reached all parts of the system in time for this audit round and it will be interesting to see if there has been further change in practice for the 2012-13 winter season.



1. BTS Guidelines for the management of community acquired pneumonia in children 2011. *Thorax*, Vol 66, Supplement 2, 2011