

# ENSURING THAT OUR CHILDREN BREATHE WELL: AN ODYSSEY WRAPPED IN PROVIDENCE

By professor A. G. Falade

## Abstract

Pneumonia is common among severely malnourished children and is a major cause of mortality. The WHO simple clinical signs such as tachypnoea and lower chest indrawing that predict pneumonia in well-nourished children are not as sensitive in malnourished children. Previous aetiological studies of pneumonia in severely malnourished children had shown that *Staphylococcus aureus* and Klebsiella species are the predominant aetiological agents. Fastidious organisms such as *Streptococcus pneumoniae* and *Haemophilus influenzae* type b (Hib) are important causes of community-acquired pneumonia in severely malnourished children. For the first time, we showed that blood culture may not always provide reliable information to guide antibiotic management of severe pneumonia. These findings taken together had improved the management of pneumonia in children.

In a multi-centre study of Invasive Pneumococcal Diseases in the under-5s in Ibadan, Nigeria, pneumococcal disease was an important cause of morbidity and mortality in Nigerian children, a fact that was not hitherto recognized.

We have shown for the first time that there was dramatic improvement in oxygen access to children by introducing pulse oximetry leading to reduction of case fatality rate by 50% in under-5s pneumonia deaths in southwest, Nigeria.

A situational analysis of paediatric pneumonia in Ikorodu LGA (Lagos State) and Kiyawa LGA (Jigawa State), showed that care-seeking for children with pneumonia was poor in both states. However, vaccine coverage with PCV-10 was high in Lagos, but low in Jigawa; and environmental risks (e.g. solid fuel for cooking) were low in Lagos, but high in Jigawa. Overall the published evidence was based predominantly on large national surveys, which have several limitations. Therefore, there are still major evidence gaps regarding the epidemiology of paediatric pneumonia in Nigeria.

We have defined the time trend in symptoms of asthma among school children in Ibadan, Nigeria using a cross sectional data from two International Study of Asthma and Allergies in Childhood questionnaire-based surveys conducted 6 years apart in 1995 and in 2001/2002. The rate of current wheeze increased significantly in 13-14-year age group (10.7% to 13.0%). This finding supports the notion that the "epidemic" of asthma is beginning in Nigeria.

The interactions between atopy, environmental exposure, and helminthic infections in modulating asthma in rural and urban communities of Nigeria were studied in children. In the 13 – 14-year olds, there was no correlation between house dust allergen content, stool parasitism and skin test reactivity. Atopy is not an important driver of asthma in children in this cohort.

Our Global Asthma Network Phase 1 study revealed numerous challenges in the management of childhood bronchial asthma in Nigeria, which may include poverty, inadequate resources, weak health systems, and poor infrastructure.

Using a picture pill, majority of 120 Nigerian and Ghanaian paediatric asthmatics were exposed to triclosan (TCS), a mild antibacterial and antifungal present in home care products, which has been banned in the US and European Union countries. Exposure to TCS might impart negatively the control of asthma.