

## "Early diagnosis is the key to successful treatment"

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**About Author:** Dr Siddarth Ramji is an eminent pediatrician and neonatologist, academic and researcher. He has been on several task forces and committees that have been involved in formulating child health policy in India. He is currently the Executive Editor of "Indian Pediatrics" and has to his credit almost 100 Research publications.

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Pneumonia and diarrhea continue to be important contributors to child mortality in India. According to **the Lancet**, in 2013 there were 388,000 pneumonia and 206,000 diarrhea deaths in India alone. Preventing pneumonia is, therefore, a key strategy in child mortality reduction endeavors in the country. Prevention of pneumonia can be achieved by multiple interventions, important amongst them being immunization and environmental pollution control. There are a number of vaccines which are available for targeting respiratory infections, some already introduced into the public health system and some awaiting introduction.

Early diagnosis of pneumonia is key to successful treatment. The challenge lies in educating families to identify symptoms and seeking health care early, and training primary care health care providers in early detection, treatment and referral. The

figures tell the story. Pneumonia and diarrhoea account for nearly 4 out of 10 under-five deaths. There are 35 million episodes of pneumonia each year, of which four million are severe pneumonia. There are 312 million episodes of diarrhoea each year, of which 6.74 million episodes are severe diarrhoea.

The Integrated Management of Neonatal and Childhood Illness (IMNCI) which is the Indian adaptation of the WHO-UNICEF generic Integrated Management of Childhood Illness (IMCI) strategy was developed to enable early diagnosis, identify symptoms and seek health care. However, a decade since the introduction of IMNCI into India, the strategy has not evolved beyond the training stage, and the systems changes that were needed have not taken place.

To support the public health system to facilitate early pneumonia detection and treatment and empower communities in seeking health care early, the Government of India has recently adopted the Global Action Plan for Pneumonia and Diarrhea. Four States in India Uttar Pradesh, Bihar, Madhya Pradesh and Rajasthan account for more than half of Under-5 Deaths and the India Action Plan for Pneumonia and Diarrhea could help with some critical issues that India currently faces. Transfer of clinical skills for pneumonia identification and treatment, and ensuring their retention and practice at the primary health care level is a daunting task. It is important for the Government to address standards required for pneumonia detection and treatment.

Severe pneumonia which needs institutional care is challenged by issues such as access to facilities with adequate infrastructure to treat such children which includes availability of appropriate injectable antibiotics, oxygen delivery systems, and trained health care providers. Besides, one has to reckon with the fact that a large proportion these children are also undernourished which complicates their management and increases the risk of an adverse outcome.

Reduction in pneumonia related child death is not as easily amenable to simple interventions as some other diseases. Sufficient robust epidemiological data for the introduction of preventive vaccines, health systems strengthening and active participation of civil society should move in tandem in our efforts to reduce pneumonia related child deaths.

As work on these important issues hopefully pick up momentum policy makers also need to take cognizance of the implications of any new intervention and at scale - issues of training, logistics of procurement storage, disposal, and awareness campaigns for health care providers and the public at large. On the other hand, the likelihood of greater and sustained impact is expected with reduction in environment pollution; the task however is very daunting and needs a concerted effort by several agencies and civil society.