3. Levine OS, Cherian T. Reply. Indian Pediatr 2007; 44: 791-792.

4. Invasive bacterial Infection Surveillance (IBIS) Group, International Clinical Epidemiology Net-work (INCLEN). Prospective multicentre hospital surveillance of *Streptococcus pneumoniae* disease in India. Lancet 1999; 353: 1216-1221.

5. Kanungo R, Rajalakshmi B. Serotype distribution and antimicrobial resistance in *Streptococcus pneumoniae* causing invasive and other infections in South India. Indian J Med Res 2001; 114: 127-132.

Universal Pneumococcal Vaccination in India: Is it a Priority?

It was exciting to read the editorial about pneumococcal vaccination for Indian children by Levine and Cherian(1). However, this editorial raises certain important issues concerning pneumococcal vaccination which require explanation.

The authors suggest early introduction of the heptavalent conjugate pneumococcal vaccine (PCV-7) into India. PCV-7 currently being used in the United States, includes approximately 80% of the serotypes that cause severe pneumococcal disease in the US. While, the serotypes contained in PCV-7 account for only 50% of severe pneumococcal disease in under-5-children in India(2). In the absence of population based studies about incidence of invasive pneumococcal disease (IPD) from India, the authors extrapolate data from neighboring countries to project the impact of PCV- 7 in reducing IPD in India(1).

In the present scenario, it appears more prudent to plan and execute, population based epidemiological studies of IPD in India along with pilot studies for evaluation of impact of PCV-7 on the reduction of IPD in India before prompting the introduction of PCV-7 in Universal Immunization Program. Simultaneously, Indian manufacturers should be sensitized to develop pneumococcal vaccine targeting Indian serotypes.

In India the prevalence of hepatitis B infection, ranges from 2%-7%, with very high chances of developing a life-long infection in perinatal transmission(3). This leads to significant morbidity as well as creates an infectious pool in the society. This is preventable by very cheap and effective hepatitis B (HB) vaccine, which fortunately is being included in the national immunization program of India, though in a phased manner. Majority of the Indian children do not receive HB vaccine at birth, which is mandatory to prevent vertical transmission, because HB vaccine in the government program is given at 6 weeks along with DPT. This facility is only available at larger districts and not in the far-flung villages. Ensuring that HB vaccine is given along with BCG and OPV at birth and to all Indian children appears a more ethical and economically viable priority in the context of India.

MMR vaccine given at fifteen months not only protects against mumps and rubella but also enhances protection against measles. This again being a reasonably priced and effective vaccine qualifies to be in the Indian UIP ahead of the PCV-7 vaccine. Indian Academy of Pediatrics Committee on Immunization (IAP-COI) recommends inclusion of HB vaccine, MMR vaccine, typhoid vaccine and Hib vaccine in the UIP. However, IAP-COI does not recommend use of PCV-7 for universal immunization in India at present. The current recommendation is to offer PCV-7 after explaining the parents on one to one "named child" basis and routinely in high risk group children upto 5 years of age(3).

The "Global Alliance for Vaccines and Immunization" (GAVI) has been instrumental in funding of HB vaccine for children in urban slums, promotion of safe injection practices and inclusion of auto-disabled syringes for childhood immunizations in India(3). GAVI alliance has intimated Government of India about their non-binding

expression of interest in introducing pneumococcal vaccines in India at subsidized rates(1). But, looking at the huge number of doses of PCV-7 (3 doses/ child) which will be required for universal childhood immunization in India, even these subsidized costs of PCV-7 might eat upon the financial resources which can be utilized for ensuring the supply of other cheaper and more cost-effective vaccines in India.

In a limited resource setting like India, prioritizing public health interventions is mandatory. The top priorities for UIP in India should be to improve the deteriorating routine immunization rates (BCG, DPT, measles) and inclusion of hepatitis B, MMR, Hib and typhoid vaccines in the national UIP as soon as possible. However, it appears from the editorial that the pneumococcal vaccine (PCV-7), although protective against only 50% of IPD in India, should be the top priority vaccine to be included in the UIP(1). This recommendation seems to be irrational and unfair. The authors need to address this concern by doing a head to head comparison of the projected impact and economics of above mentioned vaccines with that of the PCV-7. Universal pneumococcal vaccination should have a robust impact on childhood morbidity in India, provided it targets common Indian serotypes.

Priorites in the field of pneumococcal vaccination in India should be to estimate the incidence of IPD, develop vaccines against Indian serotypes and ensuring Indian production, rather than adopting PCV-7 into UIP as such. The remarkable number of doses of pneumococcal vaccines which will be required for universal immunization in India and the economics involved, puts the Government of India and the Indian Academy of Pediatrics in a strategic position to dictate terms and negotiate with the multinational companies producing pneumococcal vaccines to produce pneumococcal vaccines targeting Indian serotypes. Decision of universal pneumococcal immunization in India should be a judicious one, backed by sound economic analyses and financial allotments, so that other child survival interventions are not hampered.

Anamika Mishra,
***Rakesh Mishra,**
*District IMNCI Co-ordinator, Sehore (MP), and *Department of Pediatrics, Gandhi Medical College, Bhopal (MP), India.*
Email: nmkmishra@yahoo.co.in.

REFERENCES

1. Levine OS, Cherian T. Pneumococcal Vaccination for Indian Children. Indian Pediatr 2007; 44: 491-496.
2. Anonymous. Prospective multicentre hospital surveillance of Streptococcus pneumoniae disease in India. Invasive Bacterial Infection Surveillance (IBIS) Group, International Clinical Epidemiology Network (INCLEN). Lancet 1999; 353: 1216-1221.
3. Indian Academy of Pediatrics, Committee on Immunization. Vaccines recommended against diseases not covered under EPI. In: IAP Guidebook on Immunization. 4th edition. Mumbai: 2006.