

## Routine Immunization in India: A Reappraisal of the System and its Performance!

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Approximately 2.5 million children under five years of age die every year as a result of diseases that can be prevented by vaccination using currently available or new vaccines(1). India houses a large chunk of these unimmunized children. According to 2006 estimates, around 12 million children were not immunized, Uttar Pradesh with more than 3.0 million unimmunized children tops this list(2).

### CURRENT STATUS OF ROUTINE IMMUNIZATION

The current status of routine immunization depends upon which survey's results are you referring to. If one follows the state-wise routine reporting system under RCH program (monthly reports submitted by the states to the Central government), the coverage against almost all antigens is nearly 90-100%. There are currently 4-5 nationwide surveys capturing data on immunization, which include National Family Health Survey (NFHS), District Level Household Survey (DLHS), Coverage Evaluation Survey (CES) of UNICEF, and Multi-Indicator Cluster Survey (UNICEF). They vary in their methodology and questionnaire used for data collection. There is wide variation in the reports of the surveys. However, according to most recent DLHS-3 data, the National fully immunized (FI) coverage against the six EPI vaccines in the age-group of 12-23 month old children is only 54.1%, whereas for similar age group NFHS-III (2005-06) cites only 47.3%. According to NFHS-III, only 14 states have >50% FI coverage while CES found >29 states achieved same status. Similarly, for DTP-3 coverage, NFHS-III

reports 55.3% coverage amongst 12-23 mo old with 21 states crossing >50% mark nation-wide, whereas CES reports figures of 68.4% and 31, respectively. As far as newer antigens are concerned, first dose coverage of Hep-B is reported as 66.0%, and 50.2% for the 3<sup>rd</sup> dose. These are the figures supplied by the 10 states to MOHFW, GOI where Hep-B vaccination is introduced in the RI. However, birth dose administration is still a challenge in these states. No cross evaluation was done. However, it can safely be stated that overall coverage have been stagnant over the years with recent marginal improvement in many states. Six states with high population contribute to 80% of 8.1 million unimmunized children in the country, 52% of the total unimmunized reside in Uttar Pradesh and Bihar alone. Other than UP and Bihar, states with <40% FI include Nagaland, Rajasthan, Arunachal Pradesh, Assam, Meghalaya, and Jharkhand(3).

### WHAT NEEDS TO BE DONE?

There are marked inter-regional disparities with very low achievement at many places. There is disarray of documentation with poor quality coverage data, falsification and inflation due to political pressure in some key states. According to a recent review of RI(2), there are many missed opportunities to review and provide feedback on reported data at monthly meetings by RI managers. At PHC/sub-center level, health workers are not using the standard tools to track, document, and report immunized children. Often registers are not provided and often incorrectly filled in by the

ANMs; practically never used to track children (leading to both left outs and dropouts) or monitor performance. One major lacuna of an effective RI system is failure to assess 'output' of the program, i.e. lack of vaccine preventable disease (VPD) surveillance system. In some cases, reporting of VPDs may have been suppressed due to fears of reprisals of higher-ups. And lastly, private physicians play little role in reporting their vaccination coverage, VPDs, and adverse events following immunization (AEFI).

On the positive side, immunization system is in place with adequate manpower at most places, cold chain equipments have adequate capacity and are well maintained, detailed micro-planning for RI sessions down to the level of immunization site do exist at almost all places, and effective coordination do exist between ANMs and AWWs in the field. Hence, the basic infrastructure for immunization to reach every child is in place in all the states. But, the system is largely failing to deliver. It appears that, the unsatisfactory performance of UIP is not due to technical problems or financial constraints, or due to the reluctance of parents to get their children immunized. It is, in fact, due to managerial, administrative and governance-related inadequacies(4).

#### WHAT IS NEEDED?

There is an urgent need to increase political and bureaucratic commitment, conduct refresher courses at all levels (injection safety, waste disposal, cold chain, VPD surveillance and AEFI), formulate operational guidelines to improve vaccine management, improve monitoring and supervision, and increase involvement of other community resources for providing immunization. The existing National level "Inter Agency Coordination Committee" (ICC) needs to increase its focus on routine immunization. A public-private partnership between GoI, NTAGI, Indian Academy of Pediatrics (IAP), Indian Medical Association (IMA), development partners, ICDS, Ministries of Railways, Education and Defence, and key NGOs involved with immunization and State

representation should be strengthened. The program managers need to ensure and monitor that funds are appropriately released in a timely way for operational costs. Ensure an uninterrupted supply of all antigens to state level through a vaccine stock management system that includes annual forecasting and wastage rates. Central level should provide technical support and resources for states to develop evidence based social mobilization plan. In specific low performing States, a district / block based operations research scheme could be considered and scaled up if successful. All hard-to-reach and urban slum areas should be reached at least four times per year with routine immunization or catch ups(2).

India has the resources and the potential to convert its RI delivery system in an efficient unit and to lead other LMI countries of this region. However, to accomplish this, we need to show urgency and commitment to put RI on the top of the health agenda of the states and the Nation.

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#### REFERENCES

1. Global Immunization Vision and Strategy (GIVS) 2006-2015. Available from: [http://www.who.int/vaccines-documents/DocsPDF05/GIVS\\_Final\\_EN.pdf](http://www.who.int/vaccines-documents/DocsPDF05/GIVS_Final_EN.pdf). Accessed on October 4, 2009.
2. Universal Immunization Programme (UIP) Review. World Health Organization. Available from: [http://www.whoindia.org/EN/Section6/Section284/Section286\\_507.htm](http://www.whoindia.org/EN/Section6/Section284/Section286_507.htm). Accessed on October 4, 2009.
3. National Family Health Survey (NFHS-3), 2005-06: India: Volume I, 2007. Available at: <http://www.nfhsindia.org/NFHS-3%20Data/VOL-1National%20Family%20Health%20Survey%202005-06%20India%20Report%20-%20Volume%20I%20.pdf>. Accessed on October 4, 2009.
4. Polio Eradication Committee: Indian Academy of Pediatrics; Vashishtha VM, John TJ, Agarwal RK, Kalra A. Universal immunization program and polio eradication in India. *Indian Pediatr* 2008; 45: 807-813.