

**Meeting of National Technical Advisory Group on Immunization  
26<sup>th</sup> August 2010, R. No. 155A, Nirman Bhawan**

**Minutes of Meeting**

The meeting of National Technical Advisory Group on Immunization was held on 26<sup>th</sup> August 2010 chaired by Secretary (H&FW) and co-chaired by Secretary (DHR) & DG (ICMR). The list of participants is annexed.

The meeting started with welcome note by Secretary (H&FW) and highlighted the fact that NTAGI has been reconstituted with representation from the specialist from Paediatrics, Public Health, Researchers, program division etc to encourage healthy technical discussions in an open and transparent manner.

On suggestion for audio-recording of the proceedings, the house felt that NTAGI should be forum where the technical experts can provide inputs in an open and free manner; and such recording might preclude such open discussions.

Secretary (H&FW) also expressed concern at the recent incident of Adverse Event Following Immunization (AEFIs) in UP and its significance in view of the introduction of newer vaccines and therefore urged the NTAGI to consider such issues while recommending new vaccines under the National Program.

The key recommendations of last NTAGI meeting held on 3<sup>rd</sup> Aug'09 and action taken note was presented. Thereafter the meeting deliberated on the agenda items.

**Agenda Item1- Introduction of Pentavalent vaccine**

The house was informed that Hib vaccine has been introduced in 137 countries of the world and out of these the vaccine is part of the programme as Pentavalent vaccine in 56 countries and remaining countries use Hib vaccine in different combination. There are multiple studies providing data in support of Hib vaccination. The studies like Million Death Study by Dr Prabhat K Jha et al and on status of Millennium Development Goal (MDG) by Prof V. K. Paul et al have raised the concern on continued burden of lower respiratory illness as one of the major cause of child mortality and morbidity, thereby precluding achievement of the MDG goals. There have been various studies in

Lambok (Indonesia), Bangladesh, Sri Lanka, Myanmar and Pakistan on efficacy of Hib vaccine. Further Cochrane review also strengthens the fact that vaccine is efficacious in reducing morbidity and mortality burden due to Hib pneumonia and meningitis. Although, there was a difference of opinion in interpretation of findings of Lambok study, citing that the difference between those vaccinated and non-vaccinated is not significant.

The house also deliberated upon as to why some of the developed countries are not using Hib combination vaccine as Pentavalent vaccine while it is being used in developing countries. In response, various experts cited that the different situation in immunization delivery system in developed and developing countries as one of the reasons for adopting Pentavalent vaccine. As introduction of newer vaccine in developing countries is always a challenge to cold chain with weaker immunization delivery systems therefore Pentavalent vaccine is preferred which provides operational advantages - one vaccine conferring protection against five diseases, with no change in immunization schedule thus no needs for beneficiary to approach health facility at different time interval , saves cold-chain space and logistics. While in developed countries, the vaccine schedule is different based on local epidemiology, market dynamics and also influenced by Advisory Committees on Immunization. Also these developed countries are using DTaP, (having acellular Pertussis vaccine which is costlier as compared to DTP containing whole cell pertussis vaccine), where combination vaccine has reduced seroconversion. In addition these developed countries are using Hib and Hep-B vaccine. The pentavalent vaccine used in the developing countries are combination of Hepatitis B, Hib and DPT (having whole cell Pertussis vaccine).

In the ensuing discussion, concern was raised regarding the safety and efficacy of the Pentavalent vaccine in view of the AEFIs reported following usage of this vaccine in Sri Lanka, Bhutan and Pakistan. The vaccination in Sri Lanka and Bhutan was stopped following these incidents of AEFI, however, after investigation; Srilanka has resumed vaccination in 2010 and Bhutan have decided to resume the Pentavalent vaccination. The available reports published by WHO have concluded that these events are unlikely due to Pentavalent vaccine, some of the members felt that the complete report of these incidents should be accessed for analysis. Keeping in view the number of children

vaccinated in these countries, the background rate of these AEFI may not significant and the benefit gain may not to raise alarm to stop vaccination. As the vaccine has not been introduced in India, there is not enough data on vaccine safety therefore; vaccine should be initially used in the states with better AEFI management and surveillance systems to monitor the vaccine safety. It was pointed out that there may be some co-incidental deaths and morbidity in this age-group during the implementation of the Pentavalent vaccination which might be wrongly get implicated to vaccine. However, the house was of unanimous opinion on the use of Hib vaccine, but few members had reservations about using the formulation combination vaccine of Pentavalent vaccine. The house considered that lives saved by the Pentavalent vaccine far outnumber the few AEFI deaths reported in the neighbouring countries and therefore has favourable risk-benefit ratio.

The house also deliberated upon the immunogenicity of combination vaccines and it was felt that the available evidence based on Cochrane review reveals that although there is reduced immunogenicity of some of the components of vaccine when compared to given separately, this reduction in sero-conversion is not significant enough for protective levels of antibodies.

The Core Committee recommendations on Pentavalent Vaccines was discussed and base on the recommendations the committee members felt that vaccine should be introduced in selected few well performing states and further roll-out should be based on an impact assessment of vaccination. The house also discussed the selection of states for studying the impact of Pentavalent vaccine introduction. Some of the northern states are having high burden of Hib disease however, introduction in these states with poor coverage would not be able to demonstrate significant impact. Further, the introduction of newer vaccine requires good delivery systems and some of the states with high vaccination coverage like Tamil Nadu and Kerala may be selected. The house also considered the options of limited introduction of the vaccine in the hospitals (rather than in outreach sessions) or in selected districts; however it was felt that this would not provide the sufficient sample size to study the impact of the vaccine.

It was stressed that clinical trials for impact assessment is difficult in view of the large sample size that would be required and high cost that would be incurred for such study.

It was pointed out that data from Hib probe study by ICMR is available for some of the areas in Tamil Nadu which can be taken as baseline data and will facilitate the study of post-vaccination impact. In the ensuing discussion the house was informed that vaccine is already available in private sector in many parts of the country and has brought about decline in cases of Hib disease over a period as observed in PGI Chandigarh, though the private vaccination does not contribute much in the National scenario.

***Recommendations:***

- ***Pentavalent vaccine to be introduced in Immunization programme in the states of Tamil Nadu and Kerala.***
- ***Thereafter, data may be reviewed after 1 year of introduction before expanding the vaccine into other states.***
- ***A protocol will be prepared by the ICMR for impact study; this will be circulated to NCDC and others through email; once the protocol is finalized, the study would be carried out by ICMR.***
- ***Since AEFI is a concern hence same will be monitored and also system will be strengthened so as to ensure immediate management of AEFIs; NCDC to lead this activity.***
- ***There may be an insurance scheme for the beneficiaries against the AEFIs.***

**Agenda Item 2- Introduction of Hepatitis B vaccination**

The house was unanimous on expansion of Hepatitis B vaccine in the entire country under immunization programme. It was pointed out that even though safe, efficacious and cheap Hepatitis B vaccine is available and in spite of carrier rate of around 4% in India the vaccine is still not part of Universal Immunization programme although all the countries have been using this vaccine under the national programme. This vaccine is manufactured in the country and exported to many countries. There have been enough data showing impact of Hepatitis B vaccination on disease burden due to hepatitis B infection like acute hepatitis, as well as its long term sequel like chronic hepatitis, cirrhosis and liver cancer. Therefore it is high time that this vaccine is introduced all over the country at the earliest. Over the period the cost of the Hepatitis B vaccine has dropped and is one of the cheaper vaccine available in the market.

As the vaccinated cohort is only protected, any change in morbidity and mortality would take 10-15 years to be detected. However, the impact assessment on carrier rate may be carried out and the house was informed that ICMR has already initiated a study for the same. It was also brought to notice that there may be possibility of escape mutation of hepatitis B virus and this may also be monitored.

The experts also stressed that it is critical to give the vaccine at birth to cut down the vertical transmission and to impact the carrier rate. The house was informed that under the immunization programme of Hepatitis B in the selected States/Districts/Cities the Hepatitis B vaccine is given at birth (in institutional deliveries) and thereafter at 6<sup>th</sup>, 10<sup>th</sup> and 14<sup>th</sup> week of age of the child. The Janani Suraksha Yojana (JSY) has been launched to improve institutional delivery and this may further boost the coverage of Hepatitis B vaccination at birth.

### ***Recommendation***

- ***In view of the disease burden and availability of safe and efficacious vaccine, the expansion of Hepatitis B vaccine should be carried out all over the country as part of Universal Immunization Programme. Before rolling out in newer areas there should be a plan for trainings, microplanning etc.***
- ***Simultaneously, multi-centric impact study on carrier rate of hepatitis B will be conducted by ICMR.***

### **Agenda Item 3- Introduction of Rubella vaccination**

The house deliberated upon the risks and benefits of introduction of rubella vaccine in the immunization programme. If the vaccine is introduced in form of MR and targeting to vaccinate children at 16-24 months of age, then it is critical to ensure coverage above 80% failing which the rubella will shift to older age group of susceptible cohort and this may lead to paradoxical increase in congenital rubella syndrome (CRS). The manufacturing capacity and availability of MR and rubella vaccines are need to be considered before introducing the Rubella vaccination in the National programme.

In view of the above, the house felt that Rubella vaccine may be introduced in adolescent girls of 10-15 year old so that those who have not acquired the natural

immunity due to infection are also protected. This would reduce the risk of getting this infection during the pregnancy and thereby reduce CRS cases.

***Recommendation***

- ***The NTAGI recommended the introduction of rubella vaccination for 10-15 year old adolescent girls under the Universal Immunization Programme in the entire country.***

**Agenda Item 4- Draft Multi Year Strategic Plan 2010-17 for UIP**

The house was unanimous that there is need for a Multi-year strategic Plan 2010-17 for UIP. The document does not comprehensively address Vaccine preventable disease surveillance; some of the points at page 58 in the document for setting up a new body with development partner to review, utilized information for deciding introduction of new and under-utilized vaccine were found to be objectionable and house felt that this draft needs editorial corrections before any further discussion.

***Recommendation:***

- ***The draft MYP is to be revised for further discussion.***

**Agenda Item 5- National Vaccine Policy**

Secretary (H&FW) raised the need for a national vaccine policy and NTAGI unanimously agreed to the suggestion. There have been some attempts in drafting vaccine policy earlier, also a regional vaccine policy has been developed by WHO recently which may be used for developing this draft.

The need for a National Immunization Authority was also felt as the current technical structure of only 3 technical officers managing the immunization programme in the entire country like India is a daunting task. In this regard, the house was informed that IIM-Ahmedabad is conducting a study on the HR structure required for immunization programme in the country; it was felt that this study should be expedited.

***Recommendation***

- ***Dr. NK Ganguly, Ex-DG, ICMR would draft a National Vaccine policy; Dr. Jacob Puliyeel, will also provide his inputs in facilitating the drafting the policy***

*document. Thereafter the policy document will be circulated to all members for their inputs before the final draft is discussed in the NTAGI meeting.*

- *The policy would also suggest suitable structure for National Immunization Authority.*

Secretary (H&FW) also suggested members to prepare broad contours of composition of NTAGI so that the terms of reference for NTAGI may be suitable amended including memberships.

The meeting was concluded with vote of thanks and the NTAGI is to meet again after 1 month.

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**List of Participants**

1. Prof. (Dr.) M. K. Bhan, Secretary (Department Bio-technology)
2. Dr. R. K. Srivastava, Director General Health Services
3. Mr. P. K. Pradhan, Additional Secretary & Mission Director, NRHM
4. Mr. Amit Mohan Prasad, Joint Secretary, RCH programme
5. Dr. N.K. Ganguly - Ex DG, ICMR
6. Dr. Ajay Khera, Deputy Commissioner
7. Prof. (Dr.) V. K. Paul, Prof.& Head, Dept. of Pediatrics, AIIMS, New Delhi
8. Dr. N. K. Arora, Paediatrician, & ED, INCLIN
9. Prof. (Dr.) A. P. Dubey, Head, Dept of Pediatrics, MAMC
10. Prof. (Dr.) Rajesh Kumar, Head of Community Medicine, PGIMER, Chandigarh
11. Dr. J. Pulliyel, Head, Deptt. of Pediatrics, St. Stephen's Hospital, Delhi
12. Dr. Shahid Jameel, Prof. of Virology, ICGB, New Delhi
13. Dr. Sudhanshu Vrati, Dean, THSTI, Faridabad.
14. Dr. R. L. Ichhujani, Director, National Centre for Disease Control, Delhi
15. Dr V. G. Somani, Dy. Drugs Controller (India), CDSCO
16. Dr. A. C. Bannerjee, Staff Scientist, National Institute of Immunology
17. Dr Shyam Kukreja, Executive Director, Indian Academy of Pediatrics
18. Dr Henri van den Hombergh, Chief, Health, UNICEF, India office
19. Dr. Satish Gupta, Health Specialist(Immunization), UNICEF
20. Dr. Sangey Thinley, WHO Representative (Act), India office
21. Dr. Hamid Jafari, Project Manager, WHO-NPSP
22. Dr. Pradeep Haldar, Assistant Commissioner, (UIP)
23. Dr. N. K. Dhamija Assistant Commissioner,(I)
24. Dr. V. K. Mishra, SMO(Immunization)
25. Dr. Siddhartha Saha, Consultant, Immunization