



1ST NATIONAL VACCINOLOGY WORKSHOP

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Sir

I had opportunity to attend 1st National Vaccinology Workshop organised by Department of Community Medicine, School of Public Health, PGIMER, Chandigarh from 27th to 31st July 2016. The workshop is first of its kind to be held in north India. Technical program was divided into five modules.

1. Introduction and History of Vaccine development
2. Immunology related to Vaccines
3. Regulations and Ethics and phases of Vaccine development
4. Introduction of vaccines in National Immunization Program
5. Update on Current and Newer Vaccines

Day 1- History of vaccines and vaccination was explained with a case study, it went onto explaining role of disease burden assessment in decision making process. strategies to control, eliminate and eradicate vaccine preventable diseases, challenges and solutions in making evidence based national vaccination policy and the role of vaccine industry in the development of vaccine.

Day 2- Started with basic aspects of immunology, innate, cell mediated and humoral immune response. Primary and secondary immune responses, vaccines affecting innate and humoral immune responses, special mention about vaccination in immunocompromised individuals including HIV positive and pregnant women. Vaccines affecting cell mediated immunity and special cases were explained.

Day 3- Regulations and ethical considerations related to vaccine trials, preclinical safety testing of vaccines, introduction to statistical aspects of clinical trial (defining sample size: practical approaches & example). Case study of development of a vaccine from laboratory to the community. Phase 1, 2

& 3 trial studies with example of Rotavirus vaccine trials.

Day 4- National Vaccine Policy: India, rationale for introducing new vaccine in the immunization program; and challenges in the implementation, assessing herd protection and vaccine effectiveness. Health economics as a tool in analyzing vaccine policy option. Ethical considerations regarding implementation of vaccine in organised program. Procurement of vaccines: role of GAVI, WHO, UNICEF.

Day 5- licensed vaccines: rotavirus vaccine, MMR/MR, IPV, Pentavalent, licensed vaccine: HPV FOR CERVICAL Cancer, pneumococcal vaccines for pneumonia Shancol for cholera, Hepatitis A vaccine, influenza vaccine, vaccine in development phase; HIV/AIDS, TB and malaria, dengue vaccines.

Besides didactic lectures from eminent names in the field of vaccinology, daily there were practical exercises practicing the leanings from theory. Vaccine efficacy and effectiveness became crystal clear while studying different papers published on the subject.

Participants enrolled were 44 in number. Nearly 1/4(12) were from various departments of PGIMER. Additional professors /junior & senior residents/ project co-ordinators /research associates from school of public health, paediatrics and department of microbiology all flocked with a keen gesture to learn.

The other states represented were Himachal Pradesh, Punjab, Haryana, Uttar Pradesh, Odisha, Gujarat, New Delhi and Manipal. Representation was varied from professors to junior residents & project and data co-ordinators. Given below are some of the excerpts that I felt useful to my discipline

Nine million routine immunization (RI) sessions are organized in India each year, routine immunization targets 26 million children and 30 million

pregnant women. The sessions are served through a massive 27,000 cold chain stores.¹

The national average for full immunization is 61 per cent, and for DPT-3 coverage, 72 per cent.^{2,3} The number of districts with less than 80 per cent DPT3 coverage: 403 out of 601, or 67 per cent, or two-thirds.³ India has biggest number of children not immunized with DPT-3: 7.4 million.³

Each National Immunization Day, 172 million children are immunized for polio.⁴ India's polio vaccination campaigns cover 800 million children a year.³

A three-year campaign to ensure children receive the second measles vaccination targeted almost 150 million children.¹

All these require trials; Vaccine against a disease not previously covered by immunization, New product formulation of a vaccine already in the programme (e.g., a liquid vaccine replacing a lyophilized vaccine), New combination vaccine (e.g., DTP-HepB-Hib replacing previous individual vaccines), Vaccine that uses a new route of administration in place of a currently-used vaccine (e.g., an injectable vaccine replacing an oral vaccine).

There are many issues in prioritizing investments. Challenge is to tackle key issues systematically, in order to provide the best available services in an appropriate, affordable, and cost-effective man-

ner.⁵ A strong country-led, evidence-based decision-making, planning and prioritization process that is accountable and coordinated with other components of the health system is needed.

Recommendations on specific vaccines or strategies made at the National Technical Advisory Group on Immunization (NTAGI). Decisions are made whether to accept the recommendations by the Ministry of Health and Family Welfare, which has to ensure that the funding is approved.

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