Ensuring Health through Immunization

70 years of Independence

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Ensuring Health through Immunization

Mission Indradhanush to accelerate the coverage



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It was only after the successful eradication of small pox in the 1970s that systematic immunization on a global scale was recognised as a practical possibility. Today it is considered key to protect children from life threatening diseases and conditions and the most cost effective intervention for child survival.

In India, Immunization programme, the largest in the world in terms of quantity of vaccine used, number of beneficiaries and Immunisation session organised, geographical spread and diversity of areas covered, was initiated in 1978 and then expanded to Universal Immunization Programme in 1985. From six antigens in 1985, the National Immunization programmes presently includes 12 vaccines, four of which were included in UIP by the present government.

All these vaccines are available free of cost under UIP. India is free from the crippling disease of Polio. Immunization and other health interventions has helped in reducing infant mortality rate in the country which is down to 39 per 1000 live births as per the latest government data and the country has achieved millennium development goal in infant mortality. India's current under five mortality rate is 45 per 1000 live births against the MDG target of 42

The immunization programme has been put on the fast track under mission Indradhanush to increase its coverage to 90 per cent by 2018 with the commitment to reach a situation where no child died from Vaccine Preventable Diseases.

To begin with Expanded Programme of Immunization (EPI) was launched in 1978 with the introduction BCG, OPV, DPT and typhoid-paratyphoid vaccines. Typhoid-paratyphoid vaccine was dropped from EPI in 1981. Tetanus toxoid vaccine for pregnant women was added in EPI in 1983. But as the vaccination under the programme was offered through major hospitals and largely restricted to the urban areas its coverage was understandably very low.

The Immunization programme got a major push with the launch of Universal Immunisation programme in 1985. The programme began six antigens, measles vaccine was added in the same year and in 1990 Vitamin A supplementation was included in the programme. The programme was initiated with the objective of increasing immunization coverage, reducing mortality and morbidity due to six vaccine preventable diseases (VPDs), improving the quality of service, establishing a reliable cold chain system, a district-wise system for monitoring and evaluation, and achieving self-sufficiency in vaccine production and manufacturing of cold chain equipment. The immunization received additional importance when it was added to the Prime Minister's 20 point programme.

It was in year 1995 that Polio programme was put in eradication mode with the adoption of special strategy and innovative methods to rid India of this crippling disease. The success of polio eradication programme in India is attributed to strong commitment and political will, partnership with WHO, UNICEF and Rotary International the dedication of frontline workers and volunteers, and the unequivocal support of all sections of the society. A need based strategy was adopted to reach maximum children during each polio immunization campaign. Heightened surveillance for poliovirus has been the backbone of the polio eradication initiative in India. One of the major challenges was overcoming the physical and social barriers, coverage of the most vulnerable new born babies and migrant population. No wild polio virus was reported after January 2011 and India was declared Polio free in 2014.

Mission Indradhanush Accelerating the coverage

There was just a four per cent increase from 61 per cent to 65 per cent in immunization coverage from 2009 to 2013. In order to accelerate the rate the NDA government launched Mission Indradhanush on 25th December 2014. The objective was to extend immunization coverage to all children across India by year 2020. The target date has since been preponed to 2018. Mission Indradhanush, depicting seven colours of the rainbow, targets to immunize all children against seven vaccine preventable diseases namely Diphtheria, Pertussis, Tetanus, Childhood Tuberculosis, Polio, Hepatitis B and Measles. 247 lakh children and 67 lakh pregnant women have been covered in 528 districts across the country under the programme in four phases The programme has helped India attain nearly seven per cent increase in immunisation coverage .

The NDA government has also included four more vaccines to the Immunization programme. The newly included vaccines in the Universal Immunisation Programme (UIP) are Rotavirus vaccine, Injectable Polio vaccine (IPV), Rubella vaccine, and Japanese Encephalitis (JE) 1 vaccine (for adults). The indigenously developed rotavirus vaccine is aimed at preventing deaths from diarrhoea in children under five. Rotavirus is one of the leading causes of severe diarrhoea and death among children less than five years of age.

While measles is a viral infection that can be fatal, congenital rubella syndrome is responsible for irreversible birth defects. The Union health ministry's campaign against the two diseases intends to cover approximately 41 crore children in a phased manner, making it the largest-ever worldwide. The first phase of the campaign was launched across five states Tamil Nadu, Karnataka, Goa, Lakshadweep and Puducherry— in February this year. More than 3.3 crore children were vaccinated, reaching out to 97% of the intended age group. The drive was carried out at schools, community centres and medical institutes, covering children between the ages of nine months and 15 years. In the second phase which started early this month nearly 3.4 crore children across eight states and union territories Andhra Pradesh, Chandigarh, Himachal Pradesh, Kerala, Telangana, Uttarakhand, Dadra and Nagar Haveli and Daman and Diu will be covered.

PCV which launched in May this year protects children against severe forms of pneumococcal disease, such as pneumonia and meningitis. Currently, the vaccine is being rolled out to

approximately 21 lakh children in Himachal Pradesh and parts of Bihar and Uttar Pradesh in the first phase. This will be followed by introduction in Madhya Pradesh and Rajasthan next year, and eventually be expanded to the country in a phased manner.

The Injectable Inactivated Polio Vaccine (IPV) in India was launched in 2015 as part of its commitment to the "Global Polio Endgame Strategy". New evidences now clearly show that IPV and OPV together will further strengthen the children's immune system and will provide double protection against polio.

An adult vaccine against Japanese encephalitis (JE), is being introduced in 179 endemic districts in nine states. Most human infections are asymptomatic or result in mild symptoms, however, a small percentage of infected persons develop inflammation of the brain with symptoms including sudden headache, high fever, disorientation, coma, tremors and convulsions.

"The introduction of four new life-saving vaccines will play a key role in reducing the childhood and infant mortality and morbidity in the country. The government will now ensure that the benefits of vaccination reach all sections of the society, regardless of social and economic status," the Prime Minister said while introducing the vaccines.

These vaccines could prevent the deaths of at least 100,000 infants, and of people in the working age group.

The Universal Immunization Programme in India now provides free vaccines against 13 life threatening diseases to 27 million children annually.

The Government has initiated a SMS based electronic vaccine intelligence network (e- VIN) to enable real time monitoring of vaccine stocks eVIN (Electronic Vaccine Intelligence Network) is an indigenously developed technology system in India that digitizes vaccine stocks and monitors the temperature of the cold chain through a smartphone application. The innovative eVIN is presently being implemented across twelve states in India. eVIN aims to support the Government's Universal Immunization Programme by providing real-time information on vaccine stocks and flows, and storage temperatures across all cold chain points in these states. The technological innovation is implemented by the United Nations Development Programme (UNDP).eVIN aims to strengthen the evidence base for improved policy-making in vaccine delivery, procurement and planning for new antigens in India.

However, despite all the efforts, there are still some gaps in the immunisation programme. There is a need for raising the awareness levels so that the target of 90 percent immunisation coverage is achieved within the stipulated time frame.

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