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NEWSLETTER

AEFI TECHNICAL COLLABORATION CENTRE
MAULANA AZAD MEDICAL COLLEGE

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Issue 1

A Year in Review: AEFI TCC Highlights

State Level Trainings Conducted : 05
Total Participants Trained in Investigation and Reporting of AEFI and basics of Causality Assessment: 100
Cadre trained. District Immunization Officers, Medical Officers, Public and Private Hospital AEFI Nodal Officers

India completed its 12 polio free years on 13th January 2023.

Polio Free India

It seemed impossible until done

India's journey from the world's epicenter of a highly infectious viral disease to turning polio-free was like walking on eggshells: Every step we took mattered. - *Dr Hamid Jafari, Director of Polio for the WHO's Eastern Mediterranean Region*

On 13 January 2023, India completed 12 polio-free years – a remarkable achievement that was made as a result of consistent, determined efforts and genuine commitment at all levels.

There were several factors contributing to the monumental success of ending polio in India. The first fundamental factor was government commitment that consistently translated into diligent administrative action at the operational level. Even the district administrators were fully aligned with and committed to taking corrective measures based on evidence: accepting programmatic gaps and challenges and then committing to addressing them urgently. The second, was the effective multi-actor system that allowed various partners to provide technical assistance needed at the implementation level. We had the evidence: real-time data, including monitoring data, at the operational level that guided timely corrective actions. This data was put to good use – to recommend changes that the government took on board.

The biggest learning of all of this would be that when entire countries and their leadership are working in unison, towards a shared vision of a healthier future for our children, a sense of mutual accountability is automatically established. All parties feel responsible for their own roles. There is still more to be done if we want to prevent the virus from paralyzing any other child. The persistent threat of the virus spreading and paralyzing children far across the globe is a warning that we must heed. It shows us that polioviruses are tenacious and thrive when children are under-immunized. It also serves as a reminder that we still need to constantly refine the programme in our relentless pursuit for children we have missed. This simply must continue, even more so when we have a high level of control over the virus, so that complacency doesn't steer us away from our path.

Source: https://www.emro.who.int/polio-eradication/news/polio-free-india-it-seemed-impossible-until-it-was-done.html

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The role of Routine Immunization Services in attaining Sustainable Development Goals

Sustainable Development Goals (SDGs) were adopted in 2015 by all United Nation Member States under the "2030 Agenda for Sustainable Development", which served as a way forward and roadmap to the earlier Millennium Development Goals (MDGs). The 17 SDGs, with their 169 defined targets, envisioned to address a range of social needs and cover multitude of factors which may directly or indirectly influence the overall path of an individual, community, society, and the country's progress, towards achieving the SDGs.

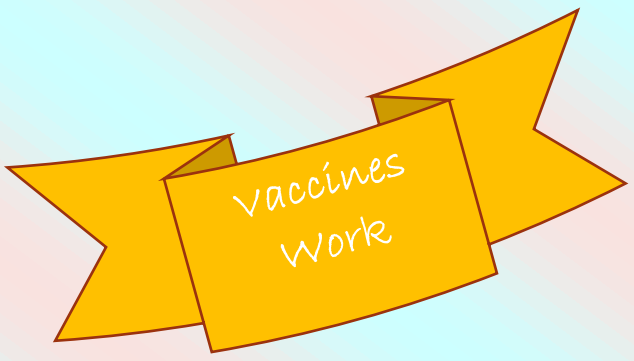
Though all the 17 SDGs have a direct or indirect bearing on the various aspects of health, be it varying from physical, mental, or spiritual spectrum, however, the Goal 3: "Good Health and Well Being" relates directly to health and focusses on sustainable development by ensuring healthy lives and promoting well-being at all ages. To achieve Goal 3 of SDGs, 9 targets and 4 sub-targets have been defined, wherein the activities / policies / programmes being conducted or implemented under the Routine Immunization Programme are directly or indirectly catering to and influencing majorly the targets 3.1, 3.2 and 3.8, pertaining to maternal mortality reduction, neonatal / children / under-5 mortality reduction and achieving Universal Health Coverage (UHC), respectively.

Routine Immunization Services provide a blanket protection to Under-5 Children, against the targeted Vaccine Preventable Diseases (VPDs), which overall are considered a major contributor to neonatal / children / under-5 morbidity and mortality. Further, ensuring Td immunization of all pregnant women ensures protection of the duo against maternal and neonatal tetanus (MNT). Due to the sustained efforts in this regard, India was declared free of MNT in 2015. Intensified Pulse Polio Immunization Programme (IPPIP), which is done as a part and parcel of the Immunization Services, can be considered the perfect example of targeted action with sustainable output, which led to India receiving it's "Polio Free Certification" from the World Health Organization (WHO) on 27th March 2014.

Immunization is considered the one of the largest public health programme and is deemed to be one of the most cost effective public health Intervention, by providing protection against 12 VPDs. The intervention is considered to be largely responsible for reduction in the under-5 mortality in the country, by providing specific protection to deadly diseases, in the ambit of primary prevention of diseases. Introduction and substitution of newer vaccines in the NIS gradually, is expanding the spectrum of protection, with further contribution to morbidity and mortality reduction, amongst the targeted populations. Hence, the Routine Immunization Services being provided under the renewed RMNCHAH+N (Reproductive, Maternal, New-born, Child, Adolescent Health plus Nutrition) approach under the National Health Mission (NHM) in India, are a major attributor to the reduction in maternal mortality and neonatal / children / under-5 mortality, as envisioned under Target 3.1 and Target 3.2 of SDG-3.

Further, all health-related activities and interventions are part and parcel of the broad spectrum of the NATIONAL HEALTH POLICY (NHP). The National Health Policy was last revised in 2017 (NHP 2017), and the policy envisaged a goal of attaining highest possible level of health and well-being for all at all ages. It targets Universal Health Coverage (UHC) for all, in order to achieve this defined goal. The policy recognizes the pivotal importance of SDGs in health at the National level. The NHP 2017 defines key policy principles, with the objective to improve overall health status, by defining policies and services of various spectrums and in multiple sectors. Hence, Routine Immunization Services under RMNCHAH+N approach under NHM, are aligned with the goal and targets of the NHP 2017, and thus, are a branch in the fishbone network of healthcare services, required to achieve UHC as per Target 3.8 of SDG-3.

Photo Credit: WHO SEARO Report



The allied activities conducted under the ambit of Routine Immunization services viz. AEFI Surveillance, Outbreak Surveillance, Campaign Mode Vaccination, and other special / targeted vaccination drives etc., supplement the achievement of UHC. These activities are also influencing the achievement of sub-target 3.D of SDG-3, which targets to strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks. Further, the research and development of vaccines for expanding and improving the protection spectrum are a part and parcel of the targets defined under sub-target 3.B of the SDG-3.

Hence, Routine Immunization Services play a key role in attaining the SDGs, specifically SDG-3, and require the programme delivery mechanisms to be regularly reviewed and accelerated, as per routine assessment, thus ensuring optimal Immunization Service delivery from individual, societal as-well-as provider perspective, to achieve defined targets focused on the common goal. Continued interventions are required to bridge the coverage gap in achieving Universal Immunization Coverage. Targeted Approaches, like Intensified Mission Indradhanush (IMI) ensure accelerated coverage of the left-out and drop-out children and other eligible beneficiaries. All healthcare service implementing agencies need to be on board in all planning, implementation and review activities being planned and conducted at all levels. Further, the overall programmatic arrangements need to involve all the allied ministries / departments / local bodies and strengthen the partnership with all Implementation Agencies involved, to ensure smooth and timely implementation of the all the activities and interventions defined in the ambit of Routine Immunization Programme.

iNCOVACC – World's First Nasal Vaccine for COVID-19

Considering the rising COVID-19 cases worldwide, the Indian government approved world's first intra-nasal COVID vaccine, iNCOVACC developed by Bharat Biotech. This vaccine was approved on 1st December by the Central Drugs Standard Control Organization (CDSCO) for restricted use in emergency situations in the age group of 18 and above.[1]

According to Bharat Biotech, phase 3 trials for iNCOVACC were conducted in 3160 subjects across 14 trial sites in India. Heterologous booster dose studies were conducted for safety and immunogenicity in approximately 875 subjects, where a booster dose (3rd dose) of BBV154 intranasal vaccine was administered to study participants who were previously vaccinated with licensed COVID vaccines. The clinical trials were conducted in 9 trial sites across India.[2] The product development and clinical trials were funded in part by the Indian government through the Department of Biotechnology's Covid Suraksha Programme.

The trials reported the vaccine to have satisfactory immune response against several variants of COVID virus such as Delta, Beta and Omicron including the recent variant BA.5. Cell mediated immune response, both T and B cell phenotype distribution was evaluated against SARS-CoV-2 variants including omicron variants and it was found that the response was persistent across all variants. Common local adverse events seen in BBV154 vaccine were running nose, sneezing, nasal congestion, nasal pain and sore throat and systemic events reported were fever, nausea and vomiting. No cases of Covid-19, Thrombocytopenia, Guillian Barre syndrome, Myocarditis were reported in the study.

iNCOVACC is an Adenoviral vector-based SARS CoV-2 vaccine for nasal administration only. It is a freeze sensitive vaccine and needs to be stored at +2° to +8 °C.

It should be discarded at the end of immunization session or within 6 hours of opening the multi dose vial, whichever comes first. The vaccination course consists of two separate doses of 0.5 ml (4 drops in each nostril). The second dose should be administered after 28 days. The vaccine is likely to prevent infection, disease and even transmission owing to the intra nasal route of administration which helps in generating local mucosal IgA antibodies in addition to the neutralizing IgG antibodies and the T cell responses.[2]

The vaccine is contraindicated in people allergic to the constituents of the vaccine – glycerol, or polysorbate-80. It should be postponed in people with concurrent illness and should be given with caution in individuals with thrombocytopenia, coagulation disorder or to persons on anticoagulation therapy. It is currently not approved for the paediatric population.

iNCOVACC will be priced (excluding GST) at Rs 800 per dose for the private markets and Rs 325 per dose for central and state governments. The vaccine, which has already made its debut on CoWin application, will be rolled out in the fourth week of January as a booster dose for people above 18 years of age who have previously received any two approve COVID vaccines.

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The Latest on HPV Vaccination

Get Informed Get Screened Get Vaccinated

Cervical cancer ranks as the 2nd most prevalent cancers in India and accounts for nearly one-fourth of the world's cervical cancer deaths despite being largely preventable. The current estimates indicate that every year approximately 1.25 lakhs women are diagnosed with cervical cancer, and over 75 thousand dies from the disease in India, and 83 % of invasive cervical cancers are attributed to HPVs 16 or 18 in India. There is no cure for the virus itself but can be prevented by getting vaccinated.

The HPV vaccine stimulates the body's production of antibodies against HPV. When a person is exposed to the real virus, these antibodies can prevent it from causing an infection. The first vaccine for the prevention of HPV-related disease was licensed in 2006. Currently 6 prophylactic HPV vaccines are licensed. All are intended to be administered, if possible, before the onset of sexual activity, i.e. before exposure to HPV. All vaccines are prepared, using recombinant DNA and cell-culture technology, from the purified L1 structural protein, which self-assembles to form HPV type-specific empty shells, termed virus-like particles (VLPs). HPV vaccines do not contain live biological products or viral DNA and are therefore non-infectious. HPV vaccines use different expression systems, contain adjuvants and do not contain antibiotics or preservative agents. All HPV vaccines contain VLPs against high-risk HPV types 16 and 18; the nonavalent vaccine also contains VLPs against high-risk HPV types 31, 33, 45, 52 and 58; and the quadrivalent and nonavalent vaccines contain VLPs to protect against anogenital warts causally related to HPV types 6 and 11. To date, 125 countries (64%) have introduced HPV vaccine in their national immunization programme for girls, and 47 countries (24%) also for boys.

Out of the six internationally approved HPV vaccines, Gardasil and Cervarix are already available in India. On September 1, 2022, the union minister of science and technology announced the successful completion of India's first indigenously made HPV vaccine, **Cervavac**, to prevent cervical cancer. The Indian vaccine will be a game changer in bringing down the rate of cervical cancer because of its reduced price. The new cervical cancer vaccine price in India is comparatively low than the imported vaccine. Cervavac acts against four different strains of HPV, hence it is a quadrivalent vaccine. However, the vaccine is most effective during pre-adolescent age. This vaccine can be administered from the age of 9 to 45. In the age range of 9 to 14 years, two doses spaced at six months are sufficient, whereas in the age range of 15 to 45 years require a three-dosage regimen (0, 1-2, 6 months). People with low immunity also require a three-dose regimen. The vaccine is contraindicated among pregnant women and those who have allergy to yeast or a previous reaction to the HPV vaccine dose.

The National Technical Advisory Group on Immunization (NTAGI) has recently announced that India would roll out the Cervavac immunization program for girls aged 9-14 to prevent cervical cancer under a national vaccination program. The nationwide vaccination drive is expected to be launched in May 2023. Currently, pilot is being done in few places across India, including Delhi. This cost effective prevention strategy is an outcome of partnership of DBT and BIRAC with the Bill and Melinda Gates Foundation, supported by Serum Institute of India Private Limited for the indigenous development of quadrivalent vaccine through its partnership programme 'Grand Challenges India'. (*Source: PTI News, WHO position paper on HPV vaccine 2022, Multiple sources Google)*

Measles: The Disease that keeps making a comeback

Measles is a highly infectious viral disease in childhood associated with high morbidity and mortality. The cyclical occurrence of measles epidemics worldwide was substantially reduced by the introduction of the measles vaccine in 1963.[1] Despite, increased vaccination coverage there is a global resurgence of the disease since 2017.[2] With the advent of the Global vaccine action plan tremendous progress was made in reducing the incidence of measles and reducing deaths by 73%, estimated to be 23.2 million, between 2000-2018. [1,3]

In September 2019, the 11 countries in WHO South-East Asia Region including India, resolved to eliminate measles and rubella by 2023. [4] As of December 2021, 5 countries, Bhutan, DPR Korea, Maldives, Sri Lanka, and Timor-Leste, have achieved measles elimination.[5] Additionally, 2 countries, Maldives and Sri Lanka have eliminated rubella in 2021.[5]

India was making significant progress towards measles and rubella elimination through Intensified Mission Indradhanush and National Strategic Plan for Achieving and Sustaining MR elimination, however, the global COVID-19 pandemic put a spanner in the works [4]. Even though it led to a drop in the number of cases, 5,604 cases in 2020 and 5,700 in 2021, it disrupted routine immunization, thereby reducing the immunity of children during a future outbreak.[6] The recent measles outbreak in various parts of India, in the aftermath of the pandemic, calls for robust measures to strengthen our vaccination drives. Recognizing the urgent need for intervention, the India Expert Advisory Group meeting for Measles and Rubella (IEAG-MR), developed the "Roadmap to Measles and Rubella Elimination in India by 2023" in May 2022.[7] According to WHO, India is said to have the highest number of cases as of December 2022.[8]

To mitigate future outbreaks, our country needs to implement the following strategies: routine immunization with a focus on measles and rubella-containing vaccines, strengthening surveillance, active case searches, and a revised MR campaign [9,10]. Elimination of this vaccine-preventable disease is the need of the hour and can be only achieved with sustained vaccination coverage.

Region sets 2023 as target year to eliminate Measles and Rubella.

- World Health Organization

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ADULT VACCINATION

The immunization of an adult depends on the previous immunization received in childhood. They need to be vaccinated since immunity from childhood vaccines wear off over time. The Centers for Disease Control and Prevention (CDC) recommends vaccines for adults based on age, prior vaccinations, health, lifestyle, occupation, travel destinations and sexual activity.

Vaccines recommended for heathy adults are DPT, MMR, Influenza (> 50 years), Pneumococcal (>65 years), Human Papillomavirus (9 to 26 years), Zoster (> 60 years). Health care personnel born before 1957 with no evidence of immunity to measles, mumps, or rubella: consider 2-dose series at least 4 weeks apart for measles or mumps or 1 dose for rubella. Those born in 1957 or later with no evidence of immunity to measles, mumps, or rubella: 2-dose series at least 4 weeks apart for measles or mumps or at least 1 dose for rubella. For chicken pox vaccination in adults 2-dose series 4–8 weeks apart if previously did not receive varicella-containing vaccine Var or MMRV [measles-mumps-rubella-varicella vaccine] for children or if previously received 1 dose varicella containing vaccine, 1 dose at least 4 weeks after first dose.

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FROM THE POET'S LENS

अभिनंदन! हे जननी आपको अभिनंदन!
9 महीने तक करी कड़ी साधना, उठाया सारा भार,
अपने लहू से सींचा आपने एक बीज, जननी आप की ममता अपार।
हे माँ, आपके मातृत्व को मेरा शत शत नमस्कार।।

प्रसव के बाद जब आपने शिशु को अपना पहला दूध पिलाया,
उसी पहले दूध से उसने स्वास्थ्य रहने का कवच पाया।
आपके वक्ष का जब उसने गर्मी पाई,
तब तपने लगा वह नवजात शिशु एक वज्र सा, माई।।

पूरा किया यह सब आपने बड़े निष्ठा से,
फिर एक जिम्मेदारी आ खड़ी है चौखट पे।
थोड़ी मेहनत और लगेगी बच्चे को स्वास्थ्य रखने के लिए,
टीकाकरण जरूरी है शिशु के तन और मन के विकास के लिए।।

कोशिश करें बच्चे को अस्पताल में जन्म दो,
और जन्म के तुरंत बाद ही 3 टीका दो।
फिर 6, 10, 14 हफ्ते में टीकाकरण के लिए अस्पताल जाना,
9 माह में खसरा का टीका और विटामिन-ए पिलाना।।
अब 16 माह में जब बच्चा टुकुर-टुकुर चलने लगे,
फिर ले आना माँ उसको टीकाकरण के लिए।
5 साल तक, हर 6 महीने पे विटामिन-ए पिलाना है,
थोड़ी परेशानी होगी पर बच्चे को निरोगी बनाना है।
खत्म नहीं हुआ है अभी, पर अब थोड़ा विलंब होगा,
अब टीकाकरण 10 साल और 16 साल पर होगा।।

माँ अपने बच्चे के कल्याण के लिए करो यह प्रण,
हर मुमकिन प्रयास से, पूरा करेंगे टीकाकरण।।

डॉ पन्ना लाल
निदेशक प्राध्यापक

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