

CONTINUED MEDICAL EDUCATION

Measles & Rubella Vaccination Campaign in India: Why, How, When and Where

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Citation

Chaudhary P, Saxena S. Measles & Rubella Vaccination Campaign in India: Why, How, When and Where. Indian J Comm Health. 2018; 30, 2: 111 – 114.

Source of Funding: Nil **Conflict of Interest:** None declared

Article Cycle

Received: 28/05/2018; **Revision:** 12/06/2018; **Accepted:** 26/06/2018; **Published:** 30/06/2018

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Globally, in 2015, measles killed an estimated 1,34,200 children - mostly under-5 years of age and an estimated 49,200 deaths occurred due to measles in India. Most of these children were the ones who have not received two doses of measles vaccine. This is despite the fact that the Government of India is providing vaccines free of cost under the Universal Immunization Programme. Even today some of the children in the country are not protected against the deadly life-threatening diseases. Some of these children are left unvaccinated because their parents are hesitant to immunise, believes that vaccines are dangerous. (1)

There are many reasons for low vaccination coverage like lack of awareness or fear of side-effects of vaccination. Some of the times children are left unvaccinated because their parents receive wrong information about vaccination from a handful of people who keep trying to sabotage the vaccination programme in the country by giving factual figures and facts. (2) With digital age, social media and WhatsApp has become a new tool to spread rumours without even disclosing their identity. (3)

While many parents believe that measles is a mild disease with symptoms of fever and rash and does not have much negative impact on their children's lives. Even most of the Indian population is not even aware of rubella and congenital rubella syndrome and the

impact this disease has on the future generation of the country. These parents should know that diseases like pneumonia, diarrhoea, malnutrition, encephalitis, blindness and deafness are borne out of measles while rubella infection forces a mother within three months of her pregnancy to miscarriage or a child born with Congenital Rubella Syndrome (CRS). (3)

Tremendous progress has been made globally to reduce the burden of childhood deaths due to measles. There has been an 84% global decline in measles deaths from 2000 to 2016 which is credited to the measles vaccine. (4) Measles may appear as a mild disease but what many people don't know is that measles can make a child vulnerable to life threatening complications such as pneumonia, diarrhoea and brain infection which may lead to life-long disabilities or death. (1)

Similar is the case with rubella. If you ask any person in the country about this disease, very few would be aware of it and of those who know about rubella, even lesser number would be aware of the impact this disease has on our future generation. If a woman is infected with rubella during early pregnancy, it can lead to abortion, miscarriage, still birth, and set of congenital anomalies in the foetus and newborns known as Congenital Rubella Syndrome (CRS), which is a cause of public health concern. CRS is characterized by multiple defects, particularly affecting the eyes

(glaucoma, cataract), ears (hearing loss), brain (microcephaly, mental retardation) and heart defects—many of which are lifelong disabilities, requiring treatment, surgeries and other expensive care throughout life. In 2010, an estimated 1,03,000 children were born with CRS globally, of which nearly 47,000, i.e. 46% were in South-East Asia Region. An estimated 30,000 children are born with congenital rubella syndrome in India. (1)

The MR vaccine which is being used in the campaign is completely safe and has been available for more than 40 years. Even the private practitioners in the country have been giving MR or MMR vaccine to the children for years now. The MR campaign has been successfully conducted in many countries including our neighbouring countries like Bangladesh, Myanmar etc and western countries in Region of the Americas. (5) The mass immunization campaigns in the Region of the Americas covered more than 250 million adolescents and in fact The Region of Americas is the first in world to eliminate measles, rubella and congenital syndrome. This has been possible only because all the children in these countries have been vaccinated against measles and rubella. (6)

There is no specific treatment for these two deadly diseases but these diseases can not only be prevented by vaccination but can actually be eliminated, as shown by the WHO Region of the Americas. India is fully committed to the goal of elimination of measles and rubella and to achieve this goal, Government of India has recently launched MR vaccination campaign which will target children of 9 months to less than 15 years of age. This is an ambitious goal, since measles control requires the highest immunization coverage of any vaccine preventable disease, which means that the health system must be able to reach every community. Measles harms not only the individual but also the community. Persons with measles can transmit infection to the children who are too young to be vaccinated yet are still susceptible. Therefore, it is important that all the children of target age group are vaccinated under the MR campaign irrespective of any previous vaccination for MR or MMR vaccine. (1)

Many of the parents believe that since their children have already been vaccinated against measles and rubella, they don't need to be vaccinated with campaign dose of MR vaccine. But these parents need to understand that this is an additional dose of vaccine. The country has been able to win the battle against polio because children were vaccinated not only through routine immunization but also through the campaigns. Similarly, MR campaign is being conducted but will target wider age group of children so that older

individuals who have not been vaccinated against measles and rubella can also get this vaccine. The aim of this campaign is not to protect one individual but the whole community from measles and rubella which will eventually help us in eliminating measles and rubella from the country. As such, campaigns are a proven strategy for increasing vaccination equity. Campaigns also have the effect of rapidly increasing population immunity by reducing the number of susceptible individuals in the population, which can result in protective "herd" immunity. The herd immunity helps in protecting the whole community and is required to eliminate any disease. (1,3)

Why an additional dose?

The surveillance data shows that majority (~90%) of measles and rubella cases occur in children upto 15 years of age therefore, targeting children in the age group of 9 months to less than 15 years of age will knock out the susceptible population.

Cases have been seen in vaccinated children, who are mainly those children who were vaccinated but failed to develop protection immediately or subsequently, thereby, adding to the pool of susceptible. It is also in alignment with the SEAR goal of measles elimination and rubella/congenital rubella syndrome control. Vaccination of the susceptible cohort will help in rapidly building population immunity and breaking the disease transmission chain, thereby, the spread of disease. Vaccination of girls only may lead to decrease in the number of CRS cases, however, the infection will still persist in the environment, posing threat to the susceptible person(s). Therefore, it is pertinent that everyone in the target age group is vaccinated. Various studies have shown that there is no harm done with an additional dose of the vaccine. MR vaccine has been used internationally, in routine as well as in campaigns. (1,7,8)

Why: The campaign aims to rapidly build up population immunity by reaching out to 100% target children with MR vaccine, knocking out the susceptible cohort and, thereby, reducing the morbidity and mortality associated with measles and rubella. The surveillance data shows that majority (~90%) of measles and rubella cases occur in children upto 15 years of age, therefore, targeting children in the age group of 9 months to less than 15 years of age. The Measles-Rubella campaign is a part of global efforts to reduce illness and deaths due to measles and rubella/CRS in the country. In September 2013, during the 66th WHO-South East Asia Regional Committee Meeting, India along with 10 other member countries of SEAR resolved to eliminate measles and control rubella and congenital rubella

syndrome (CRS) by 2020. Measles immunization directly contributes to the reduction of under-five child mortality. In combination with rubella vaccine, it will control rubella and prevent CRS. (1,8)

HOW: In 2010, India introduced second dose of measles in the country and also conducted measles campaign in select states where measles vaccination coverage was less than 80%. As per WHO records, introduction of measles second dose led to nearly 50% reduction in measles cases and deaths in the country from 2011 to 2013. It was a remarkable achievement for the country. (8)

Now to achieve the aim of measles elimination, the country needs to achieve 95% vaccine coverage. Therefore, it is important that we achieve a high vaccination coverage during MR vaccination campaign and protect not only our today's generation but the future generation also.

Who will be vaccinated?1

All children from 9 months to less than 15 years will be given a single shot of Measles-Rubella vaccine during the campaign, irrespective of their previous measles/rubella vaccination or measles/rubella disease status.

Where will the children be vaccinated? (1)

The target children will be vaccinated at session sites at schools, health facilities (PHCs, CHCs or Hospitals) and outreach sites. During the first week in schools. During second and third week, through health facilities and outreach session sites. The MR vaccine will be provided free of cost in campaign as well as in routine immunization.

When: Measles & Rubella vaccination campaign was launched on 5th February 2017 in the country and is the largest ever measles-rubella campaign launched in the world. (1) Till April 2018, 13 states/UTs have successfully completed the campaign vaccinating more than 7 crore children. The remaining states/UTs are planned for MR campaign subsequently. (9,10)

Challenges faced in previous MR Campaigns: (11-13)

Government and partners are working together to make MR campaign a success, simultaneously with strengthening health system for achieving high routine immunization coverage. However, various challenges have been faced in initial phases of the campaign. It is one of the largest campaign in world targeting about 410 million children with geographic and social diverse population. Planning for the campaign in itself has been a huge task for the Government as it requires large amount of funds and a huge manpower.

Vaccine hesitancy and spread of misinformation in community using new media, WhatsApp groups threatened the campaign as was observed in Tamil

Nadu, Karnataka, Kerala, Punjab and other states. Fake alerts, which include texts and audio clips, claim the vaccine is banned in the US for causing serious side effects, including damaging a child's immunity and memory. There is also the claim that the vaccine is being pushed into India by the global pharmaceutical industry looking for a market to dump their products. Even more 'sinister' stuff doing the rounds on social media is that the vaccination is being used on minorities. With these fake rumours going around it was a challenge to complete the campaign in states with more than 90% coverage.

In addition, inter-sectoral coordination especially with education department was a challenge with private schools refusing to participate in the campaign. On other thing observed during the first phase of the campaign was that preparatory time of eight weeks prior to campaign rollout is required and essential for the success of the campaign.

Steps taken to overcome challenges: (14) After facing these challenges in the field, Government revised the MR campaign strategy and took various steps to make the campaign a success. Two core groups were constituted at national level to guide strategic framework for MR campaign to address the operational and communication challenges. Since, most of the children targeted in the campaign are school-going children, therefore, a customised package was developed for teachers and parents. To tackle the negative rumours, social media packages were developed like WhatsApp messages, tweets, short videos and testimonials by popular pediatricians/religious leaders and social and digital media are being regularly monitored by the Government for any negative message. The Government started a website on MR campaign (measlesrubella.in) which gives all the information about the campaign and also gives answers to the various questions raised by parents and teachers about the MR vaccine and campaign.

The key influential people including celebrities and organizations at the state and district level) who can lend their support to the campaign through different channels (including participating in the launch, recording video messages, appearing on posters etc. were brought on board and IAP and IMA at all levels supported the Government in increasing awareness about the campaign. Celebrities like Mr. Amitabh Bachchan who has been the face of the polio campaign was made brand ambassador of the campaign and various other celebrities at state and district level were engaged in the campaign.

To make sure that all the guidelines are followed during implementation of the campaign, planning and monitoring package consists of enhanced preassessment templates, planning and implementation templates and monitoring tools that are also mobile-based were developed and shared with the State Governments. The Social Mobilization

Network (SMNet) were also deployed to the high-risk areas/states to provide support in planning, training and monitoring of communication activities during MR campaign. It is expected that these steps taken will help in smooth implementation of next phases of the campaign and achieving the 100% target during the campaign and making India measles and rubella free.

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Figures

FIGURE 1 MR CAMPAIGNS PLAN FOR INDIA (10)

