

The Resurgence of Measles - A Tragic Residue of Covid Epoch

Mangala Belur¹, Kajal Srivastava², Akhila B S^{3*}, Hetal Rathod⁴

^{1,2,3,4}Dr D Y Patil Medical college, Sant Tukaram Nagar, Pimpri, Pune, India

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ABSTRACT

Measles is a highly contagious, serious viral disease mainly affecting children under the age of five with a case fatality rate ranging from 0.1% in developed world to as much as 30% among refugee communities. As of the beginning of November 2022, the most current monthly statistics submitted to the WHO indicated that India was one of the top 10 nations responsible for the highest number of cases (9500 cases) worldwide. The most significant factor was COVID pandemic that had detrimental impact on the main approach including interruption of health services, supply-chain disruption and routine immunization-measles vaccination campaigns being paused or postponed in many countries to avert further spread of COVID-19 that lead to fall in consumption of MR vaccine in a span of few months after pandemic started. Other contributing factors might include burgeoning migrant community, missed doses of vaccination and malnutrition spike. There is a need to urgently address the basic needs of health care facilities and to fill the gaps in routine immunization and its surveillance system to curb the measles outbreak in this post pandemic era.

Keywords: Measles, COVID-19, Outbreak, Immunization

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***Correspondence:** Dr. Akhila B S (Email: drakhilabs.official@gmail.com)

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Sir,

Measles is a highly contagious, serious viral disease mainly affecting children under the age of five with a case fatality rate ranging from 0.1% in developed world to as much as 30% among refugee communities.^{1,2} Prior to the development of the measles vaccine in 1963 and extensive immunization, significant epidemics were thought to occur every two to three years, and the disease was responsible for an estimated 2.6 million fatalities annually.² By averting an estimated 23.2 million fatalities from measles between 2000 and 2018, intensified immunization efforts led to the reduction of measles deaths.² But it is seen that despite the availability of a safe and effective vaccine, there were substantial deaths, particularly among children under 5 years especially in the current scenario with COVID era prevailing, depicting almost 17338 measles cases being reported globally in January and February 2022, compared to only half of the cases in the first months of 2021.² As of the beginning of April 2023, the most current statistics (September 2022 – February 2023) submitted to the WHO indicated that India was the leading nation responsible for the highest number of measles outbreak cases (61,562 cases) worldwide ²(Figure 1).

The most significant factor was COVID pandemic that had detrimental impact on the main approach that concentrated on enhanced regular vaccination, improved measles case management, and meticulous measles monitoring which previously contributed to diminution of the overall burden of measles.³ Interruption of health services, supply-chain disruption and routine immunization-measles vaccination campaigns being paused or postponed in many countries to avert further spread of COVID-19 lead to fall in consumption of MR vaccine in a span of few months after pandemic started.³ Additionally, an observational study conducted in a tertiary care facility for two years in Maharashtra that revealed a 98.2% decline in MR vaccine usage during a period of five months (from December 2019 to April 2020) reiterates this theory⁴ (Figure 2). To make matters even worse, the governments, global stakeholders and

healthcare workers primarily focused on dealing with the challenges posed by COVID-19 diverting the already scarce funds to COVID-19 management due to the inability of the economy to support both COVID-19 and measles programs causing subsequent rise in measles cases.⁵ Other contributing factors during COVID times could be rigorous lockdown instituted by police in various places, lack of transport, fear of infecting the elderly and children living in the same home, physical distancing and quarantine hindering individuals from accessing healthcare facilities to acquire routine vaccinations for themselves or their children, various falsehoods circulating on social media that advise parents to discourage their children from getting vaccinations, incorporating even minor adverse events that get heightened in the media, raising social agitation.^{4,5}

Another area of concern was the burgeoning migrant community, which makes up around 37% of Indian population currently and is known to have a low herd immunity threshold for measles, cautioning potential outbreaks in vulnerable populations due to high infectivity of measles virus.⁶

During the latter two years of the COVID pandemic, several previously established determinants also have gotten exacerbated, which has caused a resurgence in measles incidence including overcrowding, the higher case fatality ratio among children under five and those from the lower socioeconomic class, fear of injections, lower parental education, lack of awareness about the measles and the measles vaccine, limited public demand for and confidence in vaccines, difficulties encountered by hard-to-reach areas, inadequate health infrastructure, fallible cold chain system, and inefficient monitoring activities for reporting of adverse events.⁷ Besides, two key issues to be emphasized will be the drastic rise in unvaccinated population as well as missed doses and surge in malnutrition among children and women culminating in a spike in the number of measles cases as nutritional deficit makes such children more susceptible to contracting measles than normal children.⁸

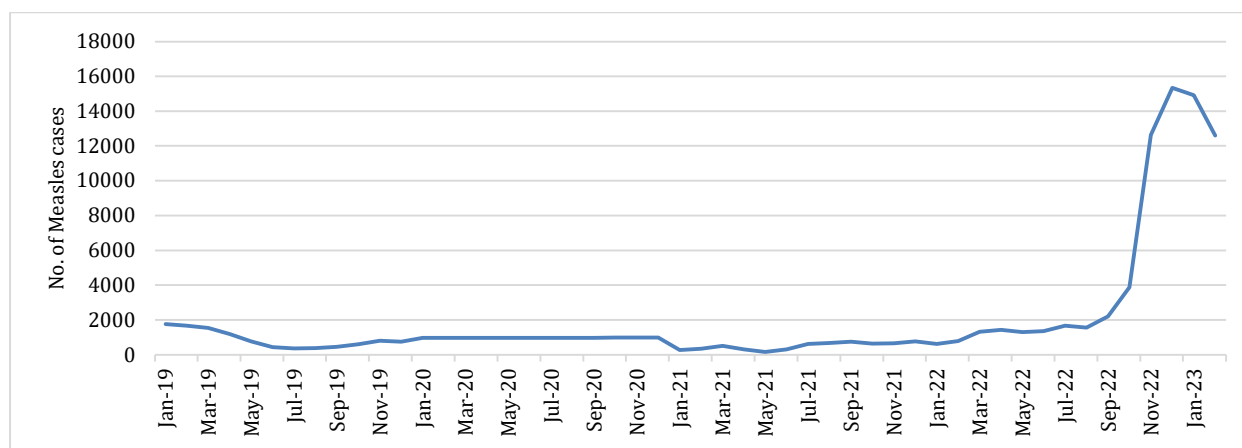


Figure 1: Time trends showing resurgence in Measles outbreak cases after COVID lockdown period (WHO source)²

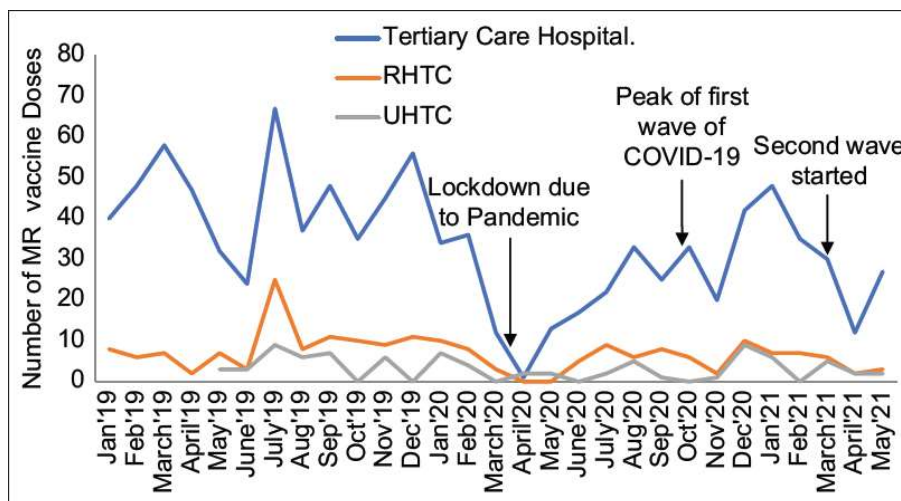


Figure 2: Time trends showing MR vaccination during Covid lockdown period⁴

The Covid-19 pandemic has disrupted health and health systems worldwide. Hence, in this post-pandemic era it is essential to urgently address the basic needs of health care facilities and to fill the gaps in routine immunization and its surveillance system to curb the measles outbreak.

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