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MEASLES OUTBREAK

March Bulletin 2023

INTRODUCTION

Measles (also called Khasra) is a highly contagious viral disease caused by a paramyxovirus. It mostly affects children and can be fatal among children with moderate and severe malnourishment. Measles can easily spread through airborne respiratory droplets or by direct contact with upper respiratory tract secretions of infected individuals. Globally, measles kills more than 100,000 children every year. The most common symptoms are fever, red or bloodshot eyes, severe cough, and a red rash on the body that lasts for 5-6 days. The red rashes start at the head and then spread to various other body parts. Majority of the patients recover without complications. However, 30% of the cases may suffer from diarrhea, pneumonia, acute otitis media, encephalitis, and even death and 0.01% of patients measles remains in a dormant form within the neural tissues and progresses, usually after a latency period of 5-10 years, into subacute sclerosing panencephalitis (a chronic disease).

Measles is preventable through vaccination. According to WHO statistics, the measles vaccine is estimated to have averted more than 30 million deaths globally, over the past two decades. However, it requires 95 percent vaccination coverage to prevent community outbreaks. As per the guidelines of the government of India, if there are five cases of fever and rashes in a health post out of which two are laboratory confirmed, the health post/cluster/area is considered to have a measles outbreak. India had set a target to eliminate measles and rubella (MR) by 2023, having missed the 2020 deadline due to COVID-19 pandemic and disruptions in routine vaccination. When vaccine coverage decreases, measles is the first disease to resurge, being most contagious and can be a warning sign for outbreaks of serious illnesses, such as whooping cough, diphtheria or polio. Apart from ensuring vaccine coverage, an active fever and rash surveillance mechanism needs to be strengthened for early case identification and contain the disease outbreaks.

INDIA

More than 10,400 cases of measles and 40 deaths had been reported from India by 12th December, 2022. Upsurge in measles cases are reported in the month of November. Maharashtra has reported 3,075 cases and 13 deaths followed by Jharkhand with 2,683 cases and 8 deaths. Cases are also reported from other states - Kerala, Gujarat and Haryana. Most of the measles cases in Maharashtra have seen a surge in Mumbai Metropolitan Region (MMR).

MUMBAI MAHARASHTRA

In 2022, Mumbai had seen 78 active outbreaks and 12 deaths. L Ward (Kurla) had 12 outbreaks, followed by 7 from E Ward- Byculla and 7 from PN-Malad, West. Under the outbreak response immunization (ORI), 83% of the children (9 months to 5 years) and 89% of children (6 - 9 months) have been immunized. As per bulletin from Brihanmumbai Municipal Corporations (BMC), only 1 measles outbreak is recorded, more than 80% of measles vaccine coverage in the wards in January 2023 from M-East ward (Govandi) and regularly reviewing the vaccine coverage and surveillance.

GLOBAL

Globally, Measles has become one of the biggest imminent threats. 22 countries experienced large and disruptive outbreaks in 2022. In 2021, 9 million cases and 128,000 deaths from measles are reported worldwide. A joint publication by the World Health Organization (WHO) and the United States Centers for Disease Control and Prevention (CDC) reports (2021) that 40 million children missed a measles vaccine dose constituting 25 million children who missed the first dose and 14.7 million children missed the second dose. The vaccination coverage, measles surveillance and immunization activities have declined due to COVID-19 pandemic, leaving millions of children susceptible to infection. WHO reiterated the need for the strong political commitment, determination, focused and concerted efforts, and community support to stop and prevent measles outbreaks. WHO also directed to close immunity gaps with tailored approaches, such as through catch-up campaigns, strengthening routine immunization and investment in laboratory supported case-based surveillance.

Top 10 Countries with Global Measles Outbreaks. Provisional data based on monthly data reported to WHO (Geneva) as of early February 2023. Data covers July 2022 – December 2022.

Rank	Country	Number of Cases
1	India**	32,069
2	Somalia	6,141
3	Yemen	5,884
4	Zimbabwe	4,415
5	Indonesia	3,901
6	Ethiopia	3,854
7	Pakistan	2,894
8	Democratic Republic of the Congo***	1,923
9	Nigeria	1,625
10	Afghanistan	1,596

SOUTH-EAST ASIA REGION

South East Asia Regions recorded 73% reduction in death and 64% reduction in cases for measles during 2014-2021. 5 of the 11 countries declared to eliminate measles. However, due to COVID-19 pandemic, vaccination coverage has declined to 86% from 94% for the first dose and 78% from 83% for second doses in 2021. 9 million children remained unvaccinated and 5.3 million children left partially vaccinated against measles. COVID-19 disruptions in vaccination services has left the South East Asia Regions susceptible to disease outbreaks and derailed for 2023 measles and rubella elimination targets.

NATIONWIDE ROADMAP, DIRECTIONS BY CENTRAL GOVERNMENT & NATIONAL WORKSHOP

- Nationwide Roadmap for Eliminating Measles and Rubella by 2023, a guidance tool for planning and the elimination activities including strengthening Measles and Rubella vaccine coverage and surveillance.
- A National workshop conducted for appraising the officers of the states and union territories regarding measles and rubella elimination
- The Indian Academy of Paediatricians had appealed to increase the vaccination coverage.
- The Central government had directed Indian states -
 - 1.to strengthen active fever and rash surveillance, immunization, timely detection and managing vaccine hesitancy with public awareness to save lives from Measles and Rubella infection, especially during November to March period, annually
 - 2.to earmark wards and beds for effective caseload management of measles in dedicated health facilities for timely transfer, referral and clinical management
 - 3.to conduct "Outbreak Response Immunization" (ORI) mode
 - 4.to consider administering one additional dose (special dose for measles and rubella vaccination) in addition to the primary vaccination schedule of first dose at 9-12 months and second dose at 16-24 months in areas showing an upsurge in measles cases
 - 5.to immediately isolation of laboratory confirmed cases for at least 7 days from the date of identification
 - 6.to conduct house-to-house search activities/headcount survey of all children aged 6 months to 5 years to identify vulnerable children and facilitate MRCV coverage
 - 7.to provide pre-emptive care with nutritional and vitamin A supplementation to malnourished children under Guidance for home-based care for measles cases
 - 8.to initiate prompt action on preparedness and measles outbreak response activities
 - 9.to ensure adequate availability of vaccines cross all blocks and districts and heighten the vaccination campaign
 - 10.to activate institutionalized mechanism of the district task force on immunization to be activated under the chairmanship of the district collector to review the situation on a daily/weekly basis and plan the response activities
 - 11.to aware Caregivers on warning signs for immediate hospitalization of children showing i.e., persistent diarrhea, rapid breathing with chest indrawing (pneumonia), and ear discharge
 - 12.to deploy multidisciplinary central teams comprising public health specialists, pediatricians and microbiologists to Maharashtra, Jharkhand, Gujarat & Kerala
 - 13.Union Government provides financial assistance to states to improve their health infrastructure besides funds provided under National Health Mission (NHM)
 - 14.to issue specific advisory to Maharashtra, Haryana and Jharkhand regarding key actions to be taken following outbreaks

DOCTORS FOR YOU RESPONSE TO MEASLES OUTBREAK IN M/EAST WARD MUMBAI, MAHARASHTRA

M/East ward has seen the most number of Measles cases. Children below 5 years are the most affected with increase in mortality rate. Refusal to routine immunization, COVID-19 pandemic, higher migration rates and lack of awareness has led to unsatisfactory vaccination rates in the ward. According to a UNICEF, vulnerability report, there is high residential (73.5%) followed by social (67.99%) , occupational (59.55) and health (39.6%) vulnerability in the ward. With these kind of high vulnerabilities that exists, M/East ward demanded attention towards poor living conditions, primary healthcare service provisions and utilization and related domains for improving overall all health status of the community especially the vulnerable group such as children.

- M/East ward has approximately 1.5 to 2 lakhs households.
- Since the outbreak, workload has increased thereby challenging health systems of M/East ward
- Low vaccination rates. Lack of awareness, refusal to immunization and migration are some of the key reasons for unsatisfactory vaccination rates in M/East ward. There is need to increase outreach routine immunization camps in M/East ward to improve vaccination coverage.

Screening and Referral

- House to house surveillance is being conducted through the government. Door to door survey included search of the suspected cases of measles, speedy immunization of children who have missed a vaccine shot or not taken any dose, spreading awareness about the vaccination and suspected cases are referred to the PHC or secondary hospital.
- Around 10 community mobilizers are conducting house-to-house surveillance for measles.
- Community volunteers mobilized unvaccinated / partially vaccinated children to routine immunization camps conducted through government RI sessions in the community. Through these camps, age appropriate vaccination, Vitamin A supplementation and deworming are given.

Awareness session communities/schools/ anganwadi centres

- Awareness drives about prevention & control of common preventable diseases and WASH activities are carried out within the community using IEC material such as miking, poster pasting, pamphlet distribution will be done in vulnerable communities of M/East ward.

CUMULATIVE BENEFICIARIES

- Total no of household surveyed & identified - 25,265
- Total No of (6m-5y) children surveyed & identified - 6,627
- Total no of (6-9 months) children sur. for zero dose & vitamin A - 395
- Total no. of children (6m-5y) identified for MR vaccination - 4,081
- Children (9m-24m) identified for MR vaccination (additional dose) - 1,247
- Total no of (9 months-5 years) children sur. for additional MR - 6,289
- Total no. of children (6m-5y) referred for MR vaccination - 4081
- Follow up of the children refereed - 1085



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