



# WEEKLY EPIDEMIOLOGICAL REPORT

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Ministry of Health, Nutrition & Indigenous Medicine

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## A global outbreak of Measles following the pandemic

The COVID-19 pandemic (2019–2022) has brought the world to a standstill, and public health has been one of the hardest hit areas. With the focus on controlling and mitigating the impact of the pandemic, other public health programs such as immunization were sidelined. As a result, there was a decline in immunization coverage globally, leading to the spread of vaccine-preventable diseases.

### Impact of the COVID-19 pandemic on the Immunization Program

The COVID-19 pandemic led to a significant disruption of the routine immunization program across the world. Many countries redirected the resources allocated to the immunization program to the control of pandemics, leading to a shortage of vaccines and immunization services. Many parents were hesitant on bringing their children to immunization clinics due to the fear of contracting COVID-19. According to an assessment carried out by the World Health Organization in May 2020, mass vaccination campaigns across all vaccines have been heavily disrupted by the COVID-19 pandemic. All these led to low immunization coverage and delays in immunization, increasing the vulnerability to vaccine-preventable diseases such as measles and JE.

The World Health Organization (WHO) reports that globally there has been an average 10% drop in immunization coverage during the pandemic, which translates to millions of people missing out on vital vaccines. The World Health Organization recommends a figure closer to 95% coverage to achieve herd immunity against vaccine-preventable diseases.

### Ongoing Global outbreak of measles following pandemic

Measles is extremely contagious. Around nine out of ten people who are not vaccinated become infected when exposed to the measles virus. When measles is

complicated, the virus can cause fatal complications such as encephalitis or severe pneumonia.

According to recent information, the number of measles cases reported worldwide has strikingly increased by 79% during the first two months of 2022, compared to the same period in 2021. The rise in cases has been reported from different regions of the world. The top ten countries to report a measles outbreak include India, Somalia, Yemen, Zimbabwe, Indonesia, Ethiopia, Pakistan, the Democratic Republic of the Congo, Nigeria, and Afghanistan. According to a report published in September 2022, a recent measles outbreak in Zimbabwe reported 6,500 cases and killed 704 children last year. A current outbreak was confirmed in Lumbini Province in Nepal between November 2022 and February 2023. There has been a total of 567 cases, including one death. The outbreak has also involved several high-income countries, such as the USA, which recently reported an outbreak in Central Ohio with 73 diagnosed cases and 26 hospitalizations. Health officials link the recent surge in measles cases to the drop in immunization coverage, weakened measles surveillance, and continued delays and interruptions in immunization activities during and after the pandemic. According to the November 25 Morbidity and Mortality weekly report, only about 25 million children living in lower-middle-income countries have missed their first dose through routine immunization services in 2021, while another 14.7 million missed their second dose.

It is shown that over 61 million doses of measles-containing vaccine were postponed or missed due to COVID-19-related delays in supplementary immunization activities. It is estimated that global vaccination coverage for measles dropped from 89% in 2019 to 81% in 2021, the lowest since 2008. Owing to the present scenario, the World Health Organization warns that nearly 40 million children across the world are dangerously susceptible to the growing threat of

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measles in the future.

**The situation in Sri Lanka and how we should respond to the global outbreak**



Sri Lanka was announced as a country free of measles in 2019. To achieve the elimination targets, the country had to overcome several challenges. Hence, we must take all necessary steps to sustain the measles elimination status in

the country. However, with the recent measles outbreaks across the seas, the country is facing the challenge of sustaining its measles-free status. Ensuring the smooth functioning of the National Immunization Program and maintaining measles vaccination coverage above 95% is the main factor that will help secure this. The measles vaccine was introduced into the National Immunization Program in 1984, and at present, 2 doses of measles-containing vaccine (Measles-Mumps-Rubella) are administered at 9 months and 3 years of age. Thanks to the well-established public health system and the dedicated public health staff, Sri Lanka was able to maintain high vaccination coverage even during the pandemic, when many other countries in the world were failing. Sri Lanka achieved a measles vaccination coverage above 95% in the year 2020 and 2021. Since Sri Lanka was able to keep the high vaccination coverage even during the pandemic, the country has been able to remain free of measles cases to date, though the risk remains.

**Measles vaccination**

Measles is a highly contagious, respiratory virus that can be life-threatening to children. The paediatricians recommend all children receive two doses of the combination Measles-Mumps-Rubella (MMR) vaccine. Research has shown that the MMR vaccine is 97% effective against measles and has no serious adverse effects or is linked to autism. The World Health Organization recommends 80%–94% vaccination coverage to achieve herd immunity against measles. Vaccination campaigns raised the global coverage of the first dose of measles-containing vaccine from 72% in 2000 to 86% in 2019. However, with the COVID-19 pandemic, the figure dropped to 84% in 2020.

The global coverage of the first dose of the measles-containing vaccine has more than doubled from the 1980s to 2019. Nonetheless, massive backsliding in the coverage was seen during the COVID-19 pandemic. The data indicate that this backsliding was seen not only for measles but also for diphtheria, tetanus, pertussis, tuberculosis, hepatitis B, and HPV. Missed immunization, however, is not the only reason for the increase in measles morbidity and mortality following the pandemic. Research has shown that malnutrition, particularly the low intake of vitamin A, which reduces mortality by 65%, also plays a considerable role in increasing the severity of viral infections. It is worth taking into consideration that countries with recent outbreaks have strained healthcare systems. The overburdened healthcare systems, weakened human resources, reduced drug availability, and poorly equipped hospitals all contribute to the outbreaks.

**Way forward**

Measles is a highly contagious disease that can spread quickly across

international borders and communities. WHO reports that, as a result, achieving and sustaining measles elimination status has always been a challenge. Since 2016, ten countries that previously achieved elimination status have experienced outbreaks and reestablished transmission. Because the country is a popular tourist destination and currently faces significant socio-economic issues with a decline in the health system, Sri Lanka faces a great threat of experiencing a measles outbreak if it does not become responsive to the ongoing global outbreak.

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**Table 1 : Water Quality Surveillance  
Number of microbiological water samples February 2023**

District	MOH areas	No: Expected *	No: Received
Colombo	15	90	NR
Gampaha	15	90	NR
Kalutara	12	72	NR
Kalutara NIHS	2	12	NR
Kandy	23	138	52
Matale	13	78	30
Nuwara Eliya	13	78	NR
Galle	20	120	NR
Matara	17	102	28
Hambantota	12	72	15
Jaffna	12	72	NR
Kilinochchi	4	24	NR
Manner	5	30	2
Vavuniya	4	24	NR
Mullatvu	5	30	33
Batticaloa	14	84	56
Ampara	7	42	37
Trincomalee	11	66	NR
Kurunegala	29	174	NR
Puttalam	13	78	NR
Anuradhapura	19	114	NR
Polonnaruwa	7	42	21
Badulla	16	96	NR
Moneragala	11	66	NR
Rathnapura	18	108	NR
Kegalle	11	66	NR
Kalmunai	13	78	NR

\* No of samples expected (6 / MOH area / Month)  
NR = Return not received

Table 1: Selected notifiable diseases reported by Medical Officers of Health 11<sup>th</sup>-17<sup>th</sup> Mar 2023 (11<sup>th</sup> Week)

RDHS	Dengue Fever		Dysentery		Encephaliti		Enteric Fever		Food Poi-		Leptospirosis		Typhus		Viral Hep-		Human		Chickenpox		Meningitis		Leishmania-		WRCD		
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	T*	C**	
Colombo	161	3348	0	3	0	6	0	1	0	6	7	50	0	0	0	2	0	0	0	15	60	2	7	0	3	20	92
Gampaha	136	3338	1	4	0	6	0	1	0	1	13	80	0	0	0	6	0	0	0	12	64	1	24	2	10	1	93
Kalutara	49	934	0	5	0	1	0	0	0	3	17	93	0	1	0	1	0	1	1	14	79	0	18	0	1	2	98
Kandy	71	740	1	8	0	0	0	1	0	1	4	46	1	20	0	1	0	0	13	75	1	5	0	11	71	100	
Matale	21	273	0	1	0	0	0	1	0	2	2	22	0	1	0	2	0	0	3	17	0	2	16	86	25	99	
NuwaraEliya	1	44	0	21	0	0	0	0	0	7	3	25	1	17	0	0	0	0	1	29	0	3	0	0	43	100	
Galle	46	463	0	8	1	2	0	0	1	6	20	137	2	20	0	0	0	0	7	93	2	4	0	0	28	100	
Hambantota	22	252	1	1	0	0	0	0	0	4	8	58	1	32	1	9	0	0	3	37	0	7	8	97	35	100	
Matara	35	413	0	7	0	2	0	0	0	3	11	106	1	9	0	2	0	0	9	64	0	6	0	31	49	100	
Jaiffna	48	869	5	20	0	1	0	5	0	6	0	4	15	358	1	1	0	1	10	66	0	0	1	2	55	93	
Kilinochchi	3	42	0	2	0	0	0	0	0	0	2	6	1	3	0	0	0	0	0	4	0	0	0	0	16	100	
Mannar	0	28	0	4	0	0	0	0	0	0	0	15	0	3	0	0	0	0	0	0	0	2	0	0	14	78	
Vavuniya	11	48	0	5	0	1	0	0	0	0	2	13	0	6	0	1	0	0	2	8	0	1	0	0	0	95	
Mullaitivu	1	21	0	6	0	0	1	2	0	6	0	11	0	3	0	0	0	0	0	2	0	0	0	0	14	97	
Batticaloa	53	526	2	55	0	5	1	4	0	6	0	19	0	0	0	1	0	0	2	19	0	9	0	0	40	99	
Ampara	0	38	0	1	0	1	0	0	0	0	0	11	0	0	0	1	0	0	0	16	0	6	0	2	15	77	
Trincomalee	41	463	0	3	0	0	0	0	0	3	2	17	0	5	0	0	0	0	0	12	0	3	0	1	23	97	
Kurunegala	53	752	1	11	0	4	0	0	0	0	7	60	0	7	1	5	0	0	8	133	4	39	13	101	21	98	
Puttalam	61	1806	0	3	0	0	0	0	0	0	1	11	0	6	0	1	0	0	3	28	0	11	0	3	16	96	
Anuradhapur	15	141	0	1	0	0	0	1	0	1	8	91	0	21	0	1	0	0	5	68	0	8	10	124	20	97	
Polonnaruwa	4	186	1	4	0	2	0	0	0	6	0	38	0	4	0	5	0	0	2	20	0	8	2	102	27	87	
Badulla	24	363	1	10	0	2	0	0	0	4	5	80	5	12	1	28	0	0	8	44	1	6	0	7	58	100	
Monaragala	3	102	0	5	0	0	0	0	0	0	13	97	1	13	0	6	0	0	4	20	1	24	7	41	20	100	
Ratnapura	37	496	0	8	0	4	0	1	0	6	26	228	0	11	0	6	0	0	3	29	3	53	2	45	34	100	
Kegalle	31	598	0	1	0	0	0	0	0	2	12	86	1	9	0	1	0	0	2	98	0	9	1	9	28	99	
Kalmune	31	998	0	18	1	1	0	0	0	0	10	0	0	0	0	0	0	0	0	9	0	8	0	0	32	99	
<b>SRI LANKA</b>	<b>958</b>	<b>17282</b>	<b>13</b>	<b>215</b>	<b>2</b>	<b>38</b>	<b>2</b>	<b>17</b>	<b>1</b>	<b>73</b>	<b>16</b>	<b>1414</b>	<b>29</b>	<b>561</b>	<b>4</b>	<b>80</b>	<b>0</b>	<b>2</b>	<b>12</b>	<b>1094</b>	<b>15</b>	<b>263</b>	<b>62</b>	<b>676</b>	<b>30</b>	<b>97</b>	

Source: Weekly Returns of Communicable Diseases (esurveillance.epid.gov.lk). T=Timeliness refers to returns received on or before 17<sup>th</sup> Mar, 2023. Total number of reporting units 358. Number of reporting units data provided for the current week: 310. C\*\*=Completeness

**Table 2: Vaccine-Preventable Diseases & AFP**

11<sup>th</sup>–17<sup>th</sup> Mar 2023(11<sup>th</sup> Week)

Disease	No. of Cases by Province									Number of cases during current week in 2023	Number of cases during same week in 2022	Total number of cases to date in 2023	Total number of cases to date in 2022	Difference between the number of cases to date in 2023 & 2022
	W	C	S	N	E	NW	NC	U	Sab					
AFP*	00	00	01	00	00	00	00	00	00	01	01	19	18	5.5 %
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Mumps	01	00	00	00	00	00	01	00	00	02	01	44	08	450 %
Measles	01	00	00	00	01	00	00	00	00	01	02	08	09	- 11.1 %
Rubella	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
CRS**	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Tetanus	00	00	00	00	00	00	00	00	00	00	00	01	01	0 %
Neonatal Tetanus	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Japanese Encephalitis	00	00	00	00	00	00	00	00	00	00	00	00	01	0 %
Whooping Cough	00	00	00	00	00	00	00	00	00	01	00	02	00	0 %
Tuberculosis	55	20	10	03	07	08	09	03	14	129	183	1787	1519	17.6 %

**Key to Table 1 & 2**

**Provinces:** W: Western, C: Central, S: Southern, N: North, E: East, NC: North Central, NW: North Western, U: Uva, Sab: Sabaragamuwa.  
**RDHS Divisions:** CB: Colombo, GM: Gampaha, KL: Kalutara, KD: Kandy, ML: Matale, NE: Nuwara Eliya, GL: Galle, HB: Hambantota, MT: Matara, JF: Jaffna, KN: Killinochchi, MN: Mannar, VA: Vavuniya, MU: Mullaitivu, BT: Batticaloa, AM: Ampara, TR: Trincomalee, KM: Kalmunai, KR: Kurunegala, PU: Puttalam, AP: Anuradhapura, PO: Polonnaruwa, BD: Badulla, MO: Moneragala, RP: Ratnapura, KG: Kegalle.  
**Data Sources:**  
**Weekly Return of Communicable Diseases:** Diphtheria, Measles, Tetanus, Neonatal Tetanus, Whooping Cough, Chickenpox, Meningitis, Mumps., Rubella, CRS,  
**Special Surveillance:** AFP\* (Acute Flaccid Paralysis), Japanese Encephalitis  
**CRS\*\*** =Congenital Rubella Syndrome  
**NA** = Not Available

Influenza Surveillance in Sentinel Hospitals - ILI & SARI								
Month	Human				Animal			
	No Total	No Positive		Infl A	Infl B	Pooled samples	Serum Samples	Positives
March								

Source: Medical Research Institute & Veterinary Research Institute

Comments and contributions for publication in the WER Sri Lanka are welcome. However, the editor reserves the right to accept or reject items for publication. All correspondence should be mailed to The Editor, WER Sri Lanka, Epidemiological Unit, P.O. Box 1567, Colombo or sent by E-mail to [chepid@sitnet.lk](mailto:chepid@sitnet.lk). **Prior approval should be obtained from the Epidemiology Unit before publishing data in this publication**

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