

Measles outbreak in Bangladesh: is a model immunization system faltering?

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Bangladesh's measles outbreak in 2026 is not merely an epidemiological event; it highlights challenges in a country once recognized for strong immunization performance. For decades, the Expanded Programme on Immunization (EPI) achieved high vaccine coverage, reduced child mortality and contributed significantly to global measles control. However, the current resurgence demonstrates how quickly these gains can be reversed when continuity, governance and equity are compromised.¹⁻³

Measles is highly contagious, with a basic reproduction number (R_0) of 12–18, meaning one infected case can infect 12 to 18 other people if no one is immune. Sustained interruption of transmission requires $\geq 95\%$ coverage with two doses of measles vaccine at 9 months and at 15 months. Even small declines in coverage rapidly lead to outbreaks.^{1,4} Bangladesh had nearly reached this threshold in previous years. One of the key indicators for measles elimination is fewer than one case per one million population. Bangladesh came close to that benchmark, reporting 0.72 cases per million in 2024/2025 achieving elimination certification in 2026 along with other 10 SEAR countries.^{2,3} However, the latest Coverage Evaluation Survey (CES) shows that first-dose measles vaccine coverage is 86.1% and second-dose coverage is 80.7% and full immunization schedule coverage in children aged 24–35 months is 81.6%, —all well below the $\geq 95\%$ required to stop measles transmission.^{3,4}

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A high-performing system with hidden vulnerabilities

Bangladesh's immunization programme has been widely recognized by WHO and UNICEF as a model for low- and middle-income countries. Strong routine coverage, community engagement and supplementary immunization activities (SIAs) *e. g.* National Immunization Days supporting polio-free certification, the neonatal tetanus elimination effort and the 2020 nationwide measles–rubella SIA — enabled the country to achieve polio-free certification in 2014, neonatal tetanus elimination in 2008 and major reductions in measles incidence.^{2,5-7} However recent outbreak reflects that this success masked structural vulnerabilities, including reliance on external funding and technical support (Gavi, WHO, UNICEF, World Bank), limited ability to handle problems in management and vaccine supply systems and persistent pockets of zero-dose and under-immunized children.^{3,8-11}

Measles functions as a “canary in the coal mine” for public health systems—an early warning of danger

Its high transmissibility makes measles resurgence a sentinel marker of health system performance—identifying unvaccinated and underserved populations, declining coverage, weaknesses in service delivery, poor surveillance systems, inequitable access to healthcare and fragile infrastructure.^{1,4} Measles outbreak often precede the re-emergence of other vaccine-preventable diseases such as polio, diphtheria, pertussis and mumps, indicating wider risks to population immunity.^{1,12} This pattern mirrors global trends, with WHO and UNICEF reporting millions of missed routine

vaccinations in recent years and rising measles incidence due to declining coverage.¹²

Current burden (2026)

Recent reports indicate widespread measles across Bangladesh, affecting at least 57 districts-including Dhaka, Rajshahi, Chattogram, and Mymensingh-and placing significant pressure on pediatric health services.¹³⁻¹⁵ According to DGHS and WHO data, by 12 April 2026, approximately 2,639 confirmed cases and around 10,225 suspected cases (including hospitalized patients) had been reported, alongside 151 suspected measles-related child deaths and 28 laboratory-confirmed deaths; however, these figures are likely underestimates.¹³⁻¹³

What went wrong?

1. Programme disruption and governance gaps

Measles control requires sustained, consistent coverage; intermittent good performance is not sufficient.^{1,4} The COVID-19 pandemic (2020-2022) disrupted routine immunization in Bangladesh, reducing outreach activities, delaying vaccine delivery due to funding and administrative changes and allowing immunity gaps to accumulate.¹² Governance challenges-including delayed decision-making, weak coordination between national and local levels and accountability issues-further contributed to vaccine stockouts and service disruptions, particularly in hard-to-reach areas. Workforce challenges worsened the situation, including three health worker strikes in 2025 and delayed salaries of up to nine months for porters responsible for transporting vaccines from Upazila Health Complexes to local distribution points, from where vaccinators collect vaccines.^{5,6}

2. Decline in routine immunization coverage

WHO/UNICEF estimates show vaccine coverage is below the level needed for elimination, with ongoing immunity gaps. In some areas, coverage may have dropped to 50–60%, compared to previously high levels (>90%) under EPI.^{1,4} Even small drops below the 95% target can quickly lead to large numbers of unprotected children and outbreaks within 2–3 years as shown in table below.

Table. Measles immunization coverage trends in Bangladesh

Year	MCV1 Coverage (%)	MCV2 Coverage (%)	Notes
2018	~95–97	~93	Stable high coverage
2019	~97		~93–94Peak period
2020	~95–97	~93	Early COVID period
2021	~93–97	~92–93	Disruption / immunity gap accumulation
2022	~92–97	~90–93	Gaps persist
2023	86.1 valid MR1 in CES / 97 WUENIC estimate 80.7 valid MR2 in CES / 93 WUENIC estimate Survey and modelled estimates differ		
2024	Provisional / survey-based concern Provisional / survey-based concern Persistent immunity gaps		
2025	Not yet fully reported. Not yet fully reported Subnational declines and outbreak context Latest WHO/UNICEF estimates and Bangladesh CES survey data. ^{2,3,12}		

3. Failure to implement supplementary immunization activities (SIAs)

Bangladesh historically relied on mass vaccination campaigns to close immunity gaps. However, delays or cancellation of planned SIAs in recent years have increased susceptibility to measles. SIAs are a core strategy in measles control and their absence in Bangladesh's recent programme represents a critical missed opportunity.^{1,6,7} It should be noted that a measles–rubella SIA was planned in the later month of 2024 or early 2025 and accordingly MR application sent to Gavi secretariat seeking financial and operational support during early month of 2024. After reviewing the country application, the Gavi sent decision letter for MR SIAs support in March 2025.

4. Persistent inequities in immunization coverage continue to undermine Bangladesh's otherwise strong national performance

According to UNICEF, Gavi and recent Bangladesh zero-dose assessments, an estimated 70,000 children remain zero-dose (never received any measles vaccine) and more than 400,000 are under-immunized, disproportionately concentrated in urban slums, hard-

to-reach rural communities, migrant groups and environmentally vulnerable regions such as haor and coastal areas.^{3,16} Recent estimates suggest that approximately 1.9% of children are zero-dose and 11.6% are under-immunized, highlighting persistent gaps in service delivery and access.¹⁶ These populations—particularly in densely populated areas like Dhaka—serve as critical reservoirs for measles transmission, acting as ignition points during outbreaks.⁴

5. Health workforce and system strain

The immunization workforce is under pressure, with approximately 45% of health assistant posts vacant in 37 districts. Reduced outreach services, weakened supervision, transport barriers and increased workload for frontline health workers who are key to Bangladesh's vaccination programme and supply delays have weakened programme delivery.^{5,12,17}

6. Interaction with malnutrition

Bangladesh's high burden of child malnutrition increases measles severity, complications (e.g., pneumonia, encephalitis) and mortality, indicating the outbreak reflects not only missed vaccination but also poor nutrition and living conditions.^{1,18-20}

The way forward

1. Immediate catch-up campaign

A nationwide measles-rubella campaign has already commenced in phases—began on 5 April 2026 in 30 Upazilas, expanding to four City Corporations from 12 April and scheduled to go nationwide from 3 May 2026. WHO's 5 April 2026 release describes the emergency campaign target group as children aged 6 months to 5 years in the initial high-risk rollout.^{1,4} Achieving >95% coverage, particularly in high-risk areas to ensure identification and vaccination of zero-dose and under-immunized children, is essential to interrupt transmission.^{1,4,14}

2. Strengthen routine immunization (EPI)

Long term recovery requires reliable vaccine supply, cold chain strengthening, workforce reinforcement to fill vacant posts in 37 districts and restoration of outreach services.^{5,6,12}

3. Target zero-dose children

Identify missed children through microplanning and community mapping, involve local leaders, religious

leaders, political persons and NGOs and link vaccination with primary healthcare services.^{3,16}

4. Strengthen surveillance and accountability

Real-time case-based surveillance, transparent reporting of cases and deaths and independent monitoring of programme performance are essential.²¹ Serological results should be reported within four days of the laboratory receiving samples and promptly shared with programme personnel to enable timely response. In addition, systematic uploading of genotyping data to global surveillance databases is crucial to track transmission patterns, monitor virus evolution and support coordinated international control efforts.

5. Integrating immunization with broader child health and nutrition

Such interventions are essential to address underlying vulnerabilities that increase measles risk. This includes delivering vitamin A supplementation up to 5 years of age at six-month intervals, alongside growth monitoring and malnutrition screening (e.g., MUAC) during routine Expanded Programme on Immunization outreach sessions. These platforms also provide opportunities for caregiver counselling on breastfeeding, hygiene and recognition of danger signs, with clear referral pathways for at-risk children, thereby strengthening both preventive care and early intervention.¹⁸⁻²⁰

6. Plan for sustainable financing

As Bangladesh transitions from donor support, sustainable domestic financing and strong governance are essential to maintain past gains.⁸⁻¹¹

Conclusion

The measles outbreak in Bangladesh is not simply a failure of vaccination—it is a warning signal of broader health system fragility and disrupted services. The tools to eliminate measles already exist. What is required is sustained political commitment, strong governance and a focus on equity. If these are prioritized, Bangladesh can regain its leadership in immunisation.

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