

THE MEASLES SITUATION: A FACT SHEET

What is measles?

Measles is one of the most contagious diseases. Almost all non-immune children contract measles if exposed to the virus. Measles is an acute viral illness caused by a virus from the paramyxovirus family. As a respiratory disease, the measles virus normally grows in the cells that line the back of the throat and lungs. Measles is a human disease with no known animal reservoir.

Measles remains a leading cause of death among young children despite the availability of a safe and effective vaccine for the past 40 years.

Who are the most at risk?

Non-immunized people, especially young children, are at highest risk for measles and its complications, including death.

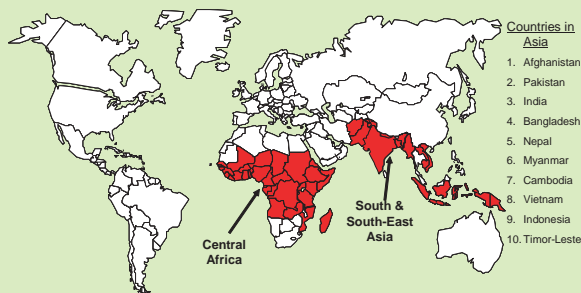
What is the current measles situation?

Global: While measles is now rare in many industrialized countries, it remains a common illness in many developing countries. More than 30 million people are affected each year by measles. The overwhelming majority (>95%) of measles

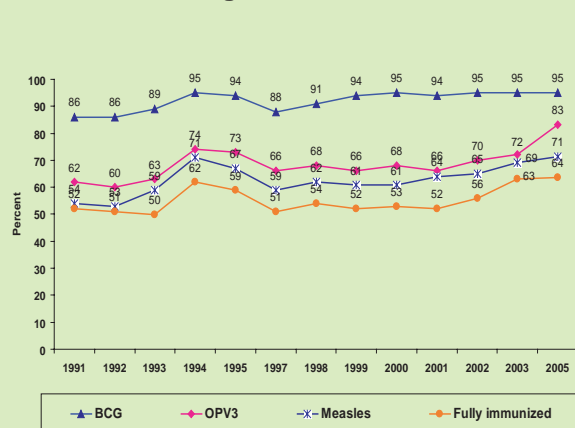
deaths occur in countries with per capita Gross National Income of less than US\$1000. In countries where measles has been largely eliminated, cases imported from other countries remain an important source of infection.

Bangladesh: While Bangladesh has made significant progress in child survival, measles remains a leading cause of death and disability among young children. An estimated 20,000 children under five years of age die from measles annually, making it the fifth leading cause of death in this age group. Routine measles vaccination coverage is 71%, and with vaccine efficacy of 85% when given at 9 months of age, it is estimated that 40% of children in each birth cohort remain susceptible to measles due to dropout, left out, and failure to develop immunity.

WHO/UNICEF priority countries for measles mortality reduction



Measles coverage among 12-23 Months Old Children in Bangladesh from 1991 to 2005



Source: CES 1991 – 1995, 1997 – 2003, 2005

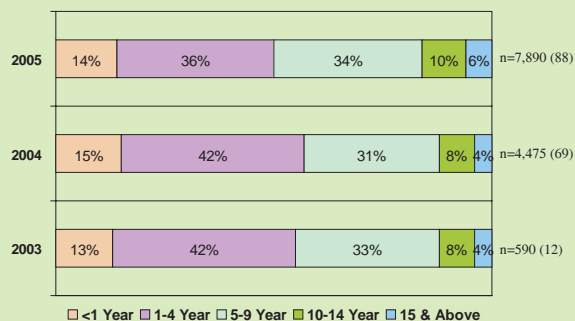
In 1984, before routine EPI was intensified in Bangladesh, an estimated 2.6 million children developed measles every year. Although the EPI programme provides almost universal access to immunization, measles coverage has ranged from 54% - 71% among 12 month old children in the past decade. There has been no improvement since then.

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What are the findings of measles surveillance in Bangladesh?

In 2003, measles surveillance was strengthened by making it a part of the integrated vaccine preventable disease surveillance. In Bangladesh, an outbreak of measles is defined as the occurrence of 10 or more cases in any ward (rural or urban) in a 30-day period. Analyses of measles outbreak data of 2003, 2004 and 2005 reveal that 85% of the measles cases were in the age group of 9 months to <10 years. In Bangladesh, this age group children is 25% of the total population, which is equal to 35 million.

Age distribution of Measles cases: Measles outbreaks 2003 - 2005



Why a measles campaign?

Although impressive routine immunization services exist in the country to immunize children <1 year of age, only 71% have received measles vaccine. As measles vaccination does not confer 100% protection and since the seroconversion rate is only 85% when given at 9+ months of age, a substantial number of children remain unprotected even if they are vaccinated. So, a catch-up campaign offers a 2nd opportunity to the susceptible group of 35 million children and a way to maintain population immunity against measles and sustain high measles vaccination coverage.

What events led to the campaign?

The World Health Organization (WHO) and UNICEF adopted a joint strategic plan for global measles mortality reduction in 2001 which was endorsed by the World Health Assembly in 2003. Bangladesh endorsed the measles mortality reduction goal set at the UN Special Session on Children in May 2002 and the World Health Assembly in 2003. Bangladesh also reaffirmed its commitment through endorsing the recommendations of the WHO/SEAR regional technical consultative group meeting in June 2003 and Cape Town Declaration on measles in October 2003. The Government of Bangladesh has endorsed a National Plan of Action by adopting the global strategies to address the issue of measles burden.

The general objective of the Plan of Action for Measles Control is to reduce disease burden and to reduce the number of measles deaths by half by 2006 relative to 1999 estimates and to attain elimination stage by 2010.

Guided by this plan, the National Steering Committee on Polio Eradication and Measles Control has decided to conduct a nationwide Measles Catch-up Campaign in two phases.

What is the campaign aim?

The campaign target is to vaccinate 35 million children, aged between 9 months and <10 years against measles, irrespective of their previous measles vaccination status or illness. The campaign aim is to cover more than 90% of the targeted children.

CAMPAIGN OVERVIEW

What is the campaign strategy?

The measles campaign will be conducted as a rolling campaign in wards over 3 weeks. It will be conducted in educational institutions and the community separately. In the rural areas, the same regular vaccinators will work both in educational institutions and in outreach sites at community level. Vaccinators and volunteers will be grouped into 3 teams, one for each of the 3 wards. The vaccination will be conducted in educational institutions during the 1st week and in the routine EPI sites during the 2nd and 3rd weeks.

In urban areas, educational institutions will be covered in the 1st week using all available vaccinators, including temporary vaccinators. It will continue through regular EPI sites (as in rural areas) in the following 2 weeks without interrupting routine EPI services.

At least one fixed site in each City Corporation ward, upazila and municipality will remain open on every working day throughout the campaign period. Additional teams will be deployed as needed.

Sessions at regular EPI sites will run without break from 8:00 AM to 4:00 PM. Sessions in educational institutions will run until all children are vaccinated.

Who will be vaccinated?

All children aged 9 months to <10 years will be vaccinated regardless of previous vaccination status and measles illness. Children who have already received a dose of routine measles vaccine just less than 4 weeks prior to the campaign, may be given vaccine doses from any site during the campaign period once 4 weeks have passed.

If a child aged 9- 23 months has not received any routine measles vaccine, the dose given during campaign will be considered as a campaign dose. Guardians will be requested

to bring the child 4 weeks later to any routine EPI session to receive the regular dose before they reach two years of age.

What is the campaign schedule?

The best time to schedule a measles campaign is during seasons of low transmission, as determined by local experience and reviews of epidemiological data. The 1st phase of the campaign was thus conducted from 3rd to 22nd September 2005 and the 2nd phase will be conducted from 25th February to 16th March 2006.

Who are the vaccinators?

A vaccination team will have five members: two vaccinators (Health Assistant, Family Welfare Assistant, Municipality/City Corporation Vaccinator and Medical Assistant, Sub Assistant Community Medical Officer, Senior Nurses, NGO Vaccinator, etc) and three volunteers.

How will the children register?

Starting three or four weeks prior to the actual campaign, field workers and volunteers will conduct house-to-house canvassing highlighting the importance of the campaign and vaccination schedule in the area. All children will be enlisted in a registration form that indicates whether a child is a student or not. IPC will be conducted in educational institutions by union/urban ward supervisors to motivate authorities and seek their support to ensure the presence of target students on the day of the campaign.

How should the vaccine be administered?

Only 0.5 ml Auto Disable (AD) syringes will be used to administer the vaccine. The

CAMPAIGN OVERVIEW

dose of 0.5 ml will be given subcutaneously in the upper outer quadrant of the right arm (of children of 2 to <10 years age) and on the outer part of the right mid-thigh (of children of 9 to <24 months age) irrespective of previous vaccination status and measles illness.

When should measles vaccination not be administered?

Children with high fever or other signs of serious disease should be vaccinated only after consultation with their physicians. Most importantly, children with a history of severe reactions to measles vaccine should not be vaccinated.

What are the campaign sites?

Rural area: Educational institutions will be covered during the first week. EPI sites of four sub-blocks will be covered during the second week, and EPI sites in the remaining four sub-blocks will be covered during the third week. If all target children in a regular site cannot be vaccinated on the day of the campaign, those left out can be vaccinated during the routine EPI sessions held in that sub-block, adjacent sub-block or fixed site during the campaign period.

Urban area: Educational institutions will be covered during the first week. All scheduled routine EPI sessions will continue according to annual session plans during the campaign period in urban areas. There is no set pattern for calculating vaccination sites in an urban ward like there is in a rural union. Therefore, the number of EPI sites to be held daily during the 2nd to 3rd week will be determined by dividing the total number of EPI sites in the ward by available days for the campaign.

Fixed sites: Routine EPI fixed sites at upazila health complexes, district hospitals,

City Corporation clinics/hospitals, medical college hospitals, NGO clinics/hospitals will remain open throughout the campaign to vaccinate the target aged children along with their regular activities.

Additional sites: Street children, working children or other high-risk populations in urban and rural areas may not be present at school or community vaccination sites. Additional teams will be assigned to reach them.

What are the cold chain, vaccine and logistics distribution arrangements?

During the campaign, only large grey vaccine carriers with four icepacks will be used for carrying vaccine. These carriers can accommodate 25 measles vaccine vials and 25 diluents ampoules to vaccinate 225-250 children. Each team will be supplied with at least two extra icepacks in a separate grey or yellow vaccine carrier.

Diluents will be kept between +2 to +8 degree celsius one day before they are used. Each immunization team will use 2 vaccine carriers i.e., one for measles vaccines and the other for extra icepacks to boost the cold chain.

There will be buffer stocks of vaccines, injection materials, frozen icepacks and other cold chain equipment and transport arrangement ready for any emergencies.

What are the waste disposal arrangements?

Each vaccination site will have a sufficient number of safety boxes based on the estimated target population. When the boxes are three-fourth filled, incinerators will be used where available to incinerate them. In areas without incinerators, pits will be dug to burn the boxes.

What happened in Phase-1?

The first campaign was conducted from 3-22 September 2005 in two districts and one City Corporation, targeting 1.5 million children. Approximately 1,622 vaccinators and 15,500 volunteers were involved in mobilizing and vaccinating children from over 10,000 sites (schools and routine EPI fixed-sites) during a three week period. A contingent of national and international observers supervised and monitored Phase-1.



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The first phase was conducted in the districts of Bogra and Rajshahi, and Rajshahi City Corporation. Approximately 1.4 million children were vaccinated through intersectoral collaboration and a partnership between the Bangladesh Government, Government of Japan, CDC, WHO and UNICEF. This phase was funded by the Government of Japan, WHO, UNICEF, and GoB (operational costs). During the first week, 50% of the target children were vaccinated in schools, while



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the rest were vaccinated from routine EPI fixed-sites over the next two weeks. A total of 1,374,390 children, representing 93% were vaccinated. Vaccine and AD syringe wastage rates were within the acceptable limits of 12% and 5%, respectively.

What are the lessons from Phase-1?

- High level of commitment of different GoB and non-GoB sectors.
- National leaders and international partners are important for the success of such a large campaign.
- Participation from education, administration, religious affairs, local people's representatives, social bodies and NGOs is essential.
- Realistic and comprehensive micro-planning is essential for campaign



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success. IPC was reported to be the most common and effective method of communication. The next most effective method was miking. School children also played a great role in the dissemination of campaign messages.

- Adequate and timely supply of vaccine and logistics is crucial.
- Effective implementation of supervision and monitoring plans is essential. It is beneficial to have local, national and international observers supervise and monitor the campaign.

What is expected from Phase-2?

Over 33 million children will be covered by Phase-2, which will be conducted in the remaining 62 districts and 5 city corporations from 25th February to 16th March, 2006. This will be the largest public health undertaking in the history of Bangladesh, involving around 50,000 skilled vaccinators, 750,000 volunteers, 100,000 schools and 150,000 EPI fixed-sites.



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How are the preparations going?

An estimated 40 million doses each of vaccines and AD syringes have been procured including 4 million reconstitution syringes and 200,000 safety boxes. 400 freezers /ILRs have been distributed and installed at the districts and upazilas for storing the vaccine and for freezing ice-packs.

All communication materials have been

Items procured for the campaign :
Vaccines - 40 million doses
AD syringes - 40 million
Reconstitution syringes - 4 million
Safety boxes - 200,000
Cold boxes - 455
Vaccine carrier -18,000
Ice packs - 70,000
Ice-lined refrigerators - 400

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developed, printed and distributed. For communication and social mobilization, many activities including IPC are being undertaken along with advocacy through different mass electronic and printed media.

Training for field workers and supervisors at different levels has been completed. Advocacy meetings at divisional, district and upazila levels, meetings with Education Officers & Teachers' Association planning meetings as well as Press Conferences are going on.

Partnerships

The partners in Phase-2 are the Government of Bangladesh, WHO, UNICEF, American Red Cross (ARC), United Nations Foundation (UNF), Government of Japan and Centers for Disease Control (CDC). The campaign is estimated to cost US\$15 million, contributed by ARC. GoB is contributing a substantial amount (25%) of the operational costs.

How will the campaign be supervised?

The success of the campaign will depend largely on the work of the motivated and hard-working front line personnel who have contributed and participated in preparing the microplans, facilitated training and helped identify and solve the problems faced while planning the campaign.



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One 1st line supervisor will be assigned to each rural and municipality ward and three in each City Corporation ward. In rural areas, the 1st line supervisors will be Health Inspectors, Sanitary Inspectors, Assistant Health Inspectors, Family Planning Inspectors & NGO supervisors. In urban areas, the 1st line supervisors will be City Corporation/Municipality, government and NGO supervisors.

It is important for the campaign that all supervisors have technical skills to identify and correct any problem in the cold chain, injection technique and to actually vaccinate children when needed.

In addition to their other duties, each supervisor will visit areas covered by the vaccinators on the previous day and conduct an informal survey in at least 20 households having at least one target-aged child to detect any missed children. This will be done from the 2nd day of the 2nd week of the campaign. If 2 or more children are found unvaccinated, the authorities will be notified, and "mop up" activities to

vaccinate the missed children will be conducted in that area immediately. If less than 2 children are found left out, they will be advised to attend the nearest site for vaccination on that day or later.

What are the monitoring arrangements?

In addition to 1st line supervisors, upazila, municipality and City Corporation level supervisors, as well as district, divisional, and national managers and independent observers from partner agencies will monitor the campaign. To ensure the quality of the campaign, they will use a checklist similar to that used by supervisors. The analysis of the monitoring checklists will help identify low coverage and evaluate the campaign activities and implementation process.

Independent observers will also conduct Rapid Convenience Assessments (RCA) using RCA forms. These tools will not measure vaccination coverage, but will identify pockets of non-vaccinated children and help plan the "mop-up".



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SPREADING THE MESSAGE BY WORD OF MOUTH

Sariakandi Upazila, about 200 kilometres from the capital city of Dhaka, is a sleepy outback where the Brahmaputra River flows at its fiercest. The place is characterized by erosion, flood, illiteracy, unemployment and poverty. But the worst of the menaces - diseases which kill children - are missing here. The reason is simple.

Sariakandi is blessed with well informed and motivated mothers.

Nineteen year old Mosammat Molly Khatun is one of these mothers. Her daughter Jannatul Firdausi has just stepped into her 10th month. Molly Khatun knows that this is the right age for her child to get her measles shot. So she brought her to the Sariakandi Upazila (sub-district) Health and Family Planning Centre for vaccination.

What inspired her to take the step was the 'flood' of information, mostly by word of mouth, about the measles campaign.

"You will not find a single mother in Sariakandi who does not know why, how and when to immunize a child", Molly Khatun says with a flash of pride on her face.

No child has died of the six diseases (measles, TB, tetanus, malaria, pneumonia, diarrhoea) in Sariakandi in the last six months. A rare feat for a remote place like this which is known throughout the country

for its natural disasters and the 'Monga' (the period of extreme food scarcity each year during April-May and October).



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The remarkable change in Sariakandi has been achieved by the National Measles Immunisation Campaign, the first of such magnitude ever conducted in Bangladesh. The first phase of the campaign in September 2005 covered two districts, reaching 1.5 million children under the age of 10. The second and larger campaign in 2006 aims to reach 33.5 million children, making it one of the largest measles immunization campaigns in the world.

Molly Khatun heard from people that the campaign would begin in their area on 3rd September. She says, "I heard about the campaign the first time a week ago from the Family Welfare Assistant. Then, my husband told me about it. He had heard about it in a public address announcement. Later, I heard microphone horns also blaring out the message."

"Nothing travels faster and stronger than the word of mouth. It's the most effective method of communication, especially when it comes to health communication, and more so, if it is in Bangladesh", says Dr. Sudhir Chandra Banik, Upazilla Health and Family Planning Officer (UHFPO), focal point of all the campaign activities in his area.

Compiled from 'Spreading the message by word of mouth' by Shamsuddin Ahmed.



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