



EPI Surveillance Bulletin



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Measles Vaccination (follow-up) Campaign 2010

Bangladesh conducted "Measles vaccination (follow-up) Campaign 2010" from 14 to 28 February 2010 in order to vaccinate 18,136,066 children aged 9 months to 5 years throughout the country by 120000 vaccination centers. In addition to measles vaccine, OPV was also administered targeting 20,924,847 children aged 0-5 years of age. That was a combined vaccination campaign.

The Honorable Minister, Ministry of Health and Family Welfare Prof. Dr A F M Ruhul Haque, MP inaugurated the campaign on 14 February 2010 at Clinic Bhaban of Bangladesh Secretariat. Honorable Adviser to Prime Minister Prof. Syed Modasser Ali, State Minister for MOHFW Dr Capt. (Retd) Mozibur Rahman Fakir, Health Secretary Sheikh Altaf Ali, Director General of DGHS Prof Shah Monir Hossain and WHO Representative to Bangladesh Dr Duangvadee Sungkhobol attended the launching ceremony.

Bangladesh conducted measles catch up campaign in 2005-2006 and already achieved high measles vaccination coverage ranged 80-89%. However 15% of vaccinated children don't develop the immunity as the vaccine efficacy is 85% when given at 9 months. So 25-30 percent of children in each birth cohort remain susceptible to measles. This is why the Ministry of Health and Family Welfare conducted the "Measles Follow-up Campaign 2010" with the objective to particularly target those children who were born after the last campaign in 2005-2006 or not attained age of nine month at that time. More than 50,000 health and family planning staffs, 600,000 volunteers from educational institutes, Ansar and VDP, nursing institute, clubs, social organizations and NGO workers had been mobilized in order to carry out the campaign. A contingent of supervisor from national to upazila level was engaged to supervise and monitor the all activities for ensuring the quality. Moreover WHO Divisional Coordinators, Surveillance Medical Officers, GAVI supported district Immunization Medical Officers, volunteers of JOCV-JAICA and 9 international experts acted as independent observer during campaign period. It was the world largest measles follow up campaign.



Picture: Measles Vaccination Campaign Inauguration ceremony: WHO country representative to Bangladesh, Secretary of Ministry of Health and Family Welfare, Honorable Minister of Health and Family Welfare, Honorable Adviser to Prime Minister, Honorable State Minister of Health and Family welfare from left to right on the dais.

Table shows Division wise administrative coverage:

Division →	Barisal	Chittagong	Dhaka	Khulna	Rajshahi	Sylhet
Measles target	1,203,156	4,183,259	5,726,482	1,607,147	4,110,545	1,305,477
Measles coverage	1,202,889	4,152,184	5,727,713	1,584,144	4,130,280	1,288,475
OPV target	1,360,270	4,843,171	6,708,563	1,830,249	4,683,662	1,498,932
OPV coverage	1,363,699	4,801,019	6,750,531	1,813,047	4,687,840	1,480,406

The target was determined through registration of every child by house to house visit. Nationally, the measles vaccination coverage was 18,085,685 out of 18,136,066 targeted children which is nearly 100% and the OPV coverage was 20,896,542 out of 20,924,847 targeted children which is also nearly 100%. This was another success story of Bangladesh EPI.

Surveillance Summary

Description	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Number of AFP cases	1287	1365	1128	1301	1458	1619	1844	1790	1502	1179
No. of compatible cases according to virologic classification system	36	0	0	2	0	2	0	0	0	0
No. of cases with isolation of wild poliovirus	0	0	0	0	0	18	0	0	0	0
No. of discarded polio cases (i.e., non-polio AFP)	1251	1365	1128	1299	1458	1599	1844	1790	1502	1070
No. of cases pending classification	0	0	0	0	0	0	0	0	0	109
Expected annual number of non-polio AFP cases (2/100,000 children <15 yr)*	533	549	556	563	1094	1114	1135	1153	1151	1203

AFP Surveillance Performance Indicators

Indicators	Target	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
01 Annual Non-Polio AFP rate in children < 15 years old	≥ 2.0	2.34	2.49	2.03	2.31	2.66	2.87	3.25	3.10	2.61	2.45
02 Completeness of passive reporting from facilities	≥ 90%	65%	62%	67%	82%	91%	89%	90%	93%	91%	91%
03 Timeliness of passive reporting from facilities	≥ 80%	38%	36%	62%	75%	84%	83%	85%	87%	86%	84%
04 Suspected AFP cases investigated within 48 hours of notification	≥ 80%	96%	96%	98%	98%	99%	100%	99%	99%	99%	99%
05 Confirmed AFP cases with 2 stool specimens collected within 14 days after paralysis onset	≥ 80%	80%	89%	90%	90%	92%	93%	92%	92%	94%	96%
06 Stool specimens arriving at laboratory within 3 days after collection	≥ 80%	97%	98%	99%	99%	98%	99%	100%	100%	100%	100%
07 Stool specimens arriving at laboratory in "good" condition "good" = 1. Presence of unmelted ice or temperature <8°C 2. Adequate volume (≥ 8 grams or size of ½ thumb) 3. No evidence of leakage 4. No evidence of desiccation (drying)	≥ 90%	100%	99%	100%	100%	100%	100%	100%	100%	100%	100%
08 Confirmed AFP cases receiving a follow-up exam at least 60 days after paralysis onset	≥ 80%	93%	99%	100%	98%	99%	100%	100%	99%	99%	90%
09 Stool specimens with laboratory results: - Within 28 days after specimen receipt (old algorithm)	≥ 80%	99%	100%	100%	100%	100%	100%	100%	-	-	-
- Within 14 days after specimen receipt (new algorithm)	≥ 80%							80%	93%	95%	97%
10 Stool specimens from which non-polio enterovirus (NPEV) was isolated	≥ 10%	29%	28%	23%	20%	20%	15%	15%	23%	19%	19%

¹ Data as of September 25, 2010; ² among cases occurring up to July 11, 2010; * Prior to 2005 NPAFP rate calculated as 1/100,000 under 15 children

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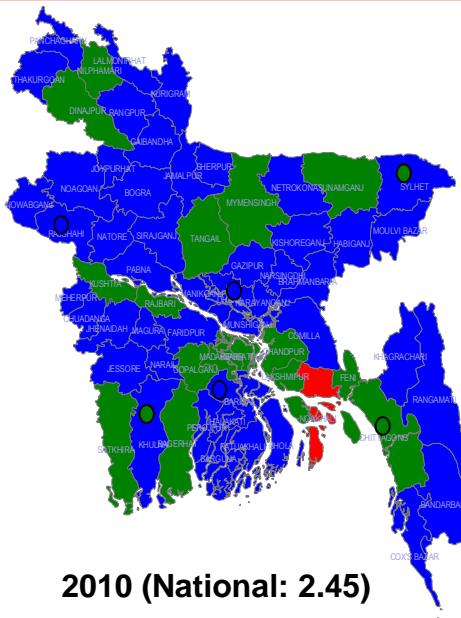
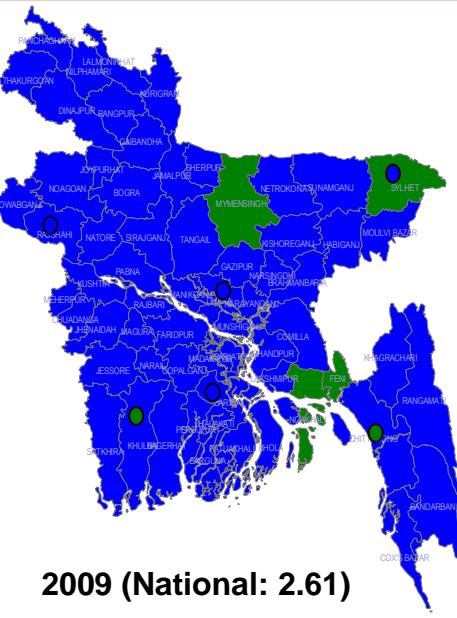
AFP Surveillance Performance Indicators, 2009 - 2010

District	Minimum operational target of non-polio AFP	Total # AFP ¹		Wild polio-virus isolated		# Compatible cases	Non- Polio AFP cases ¹		Pending final classif. ¹		Annualized Non-polio AFP Rate ¹		Notification within 10 d after paralysis onset ¹		Investigation within 48 h after notification ¹		% with 2 stools within 14 days ¹		Stool sample arriving to lab within 72 hrs ¹		% with 60-day follow-up ²		
		2009	2010	2009	2010		2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	
Barisal Division																							
Barguna	8	8	10	7			10	7	0	0	2.55	2.34	90%	100%	100%	100%	90%	100%	100%	100%	100%	100%	
Barisal (non BCC)	20	21	29	24			29	22	0	2	2.94	2.93	100%	100%	100%	100%	96%	100%	100%	100%	100%	100%	
BCC only	2	3	3	4			3	4	0	0	2.88	5.04	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Bhola	16	17	39	18			39	15	0	3	4.93	2.49	100%	94%	100%	100%	97%	100%	100%	100%	100%	100%	
Jhalakati	6	7	14	10			14	10	0	0	4.35	4.09	100%	100%	100%	100%	100%	100%	100%	100%	100%	75%	
Patuakhali	14	14	18	13			18	13	0	0	2.65	2.51	89%	100%	100%	100%	94%	100%	100%	100%	100%	100%	
Perojpur	10	11	24	14			24	10	0	4	4.70	2.57	96%	100%	100%	100%	96%	100%	100%	100%	100%	100%	
Total_BAR	76	81	137	90	0	0	0	0	137	81	0	9	3.62	2.81	97%	99%	100%	100%	97%	99%	100%	100%	94%
CTG Division																							
Bandarban	3	3	5	3			5	3	0	0	3.58	2.82	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	NA
Brahmanbaria	22	23	25	23			25	23	0	0	2.26	2.74	92%	100%	92%	100%	96%	100%	100%	98%	100%	100%	71%
Chandpur	21	22	23	15			23	13	0	2	2.21	1.64	91%	87%	100%	100%	83%	87%	100%	100%	100%	100%	100%
Chittagong (non CCC)	41	42	42	30			42	24	0	6	2.07	1.55	88%	93%	98%	100%	90%	93%	100%	100%	100%	100%	88%
CCC only	20	21	18	12			18	11	0	1	1.79	1.43	100%	100%	100%	100%	92%	100%	100%	100%	100%	100%	100%
Comilla	43	44	52	48			52	44	0	4	2.44	2.71	98%	98%	98%	100%	98%	98%	100%	100%	100%	100%	100%
Cox's Bazar	16	17	20	18			20	18	0	0	2.45	2.90	100%	100%	100%	100%	95%	100%	100%	100%	100%	100%	100%
Feni	11	12	10	6			10	5	0	1	1.79	1.17	90%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Khagrachari	5	5	10	8			10	8	0	0	4.17	4.38	90%	88%	100%	100%	100%	100%	88%	100%	100%	100%	100%
Lakshmpur	14	15	17	9			17	9	0	0	2.46	1.71	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Noakhali	24	25	20	12			20	9	0	3	1.68	0.99	80%	100%	90%	83%	70%	100%	100%	100%	100%	100%	100%
Rangamati	5	5	10	6			10	6	0	0	4.10	3.23	80%	100%	100%	100%	80%	100%	100%	100%	100%	100%	NA
Total-CTG	225	234	252	190	0	0	0	0	252	173	0	17	2.25	2.03	93%	97%	98%	99%	92%	96%	100%	100%	93%
Dhaka Division																							
Dhaka (non DCC)	23	24	40	35			40	33	0	2	3.47	3.76	100%	97%	100%	93%	100%	100%	99%	100%	86%		
DCC only	57	58	71	53			71	47	0	6	2.49	2.17	93%	96%	100%	94%	96%	100%	90%	100%			
Faridpur	16	17	17	13			17	13	0	0	2.10	2.11	94%	92%	100%	94%	92%	100%	100%	100%	100%	100%	100%
Gazipur	19	20	21	23			21	21	0	2	2.24	2.94	86%	100%	100%	86%	96%	98%	100%	97%	100%	75%	
Gopalganj	11	11	26	9			26	7	0	2	4.86	1.72	81%	100%	100%	88%	100%	100%	100%	100%	100%	100%	NA
Jamalpur	20	20	51	28			51	28	0	0	5.21	3.76	98%	100%	98%	94%	100%	100%	99%	100%	100%	100%	100%
Kishoreganj	24	25	38	28			38	24	0	4	3.20	2.66	97%	86%	95%	96%	97%	89%	100%	100%	70%		
Madaripur	10	11	17	7			17	7	0	0	3.24	1.75	88%	100%	82%	86%	88%	100%	100%	100%	100%	100%	
Manikganj	12	13	23	18			23	18	0	0	3.80	3.91	96%	100%	100%	96%	100%	100%	97%	100%	100%	100%	
Munshiganj	12	13	18	16			18	16	0	0	3.01	3.51	100%	94%	100%	100%	100%	100%	100%	100%	100%	100%	
Mymensingh	41	43	41	35			41	31	0	4	1.98	1.97	83%	89%	100%	85%	97%	99%	100%	100%	80%		
Narayanganj	20	21	24	18			24	18	0	0	3.28	2.35	100%	100%	96%	96%	94%	100%	100%	100%	50%		
Narsingdhi	18	18	20	22			20	20	0	2	2.26	2.98	95%	91%	100%	95%	100%	100%	100%	100%	100%	100%	
Netrokona	18	19	21	27			21	25	0	2	2.29	3.59	86%	85%	100%	90%	93%	100%	100%	100%	100%	80%	
Rajbari	9	9	9	4			9	4	0	0	2.04	1.19	89%	100%	100%	89%	100%	100%	100%	100%	100%	100%	
Sariapur	10	11	16	8			16	7	0	1	3.19	1.83	81%	88%	100%	88%	88%	100%	100%	100%	100%	100%	
Sherpur	12	12	25	13			25	12	0	1	4.25	2.68	96%	85%	100%	96%	92%	100%	100%	100%	100%	50%	
Tangail	30	31	40	24			40	22	0	2	2.64	1.91	83%	96%	100%	95%	88%	100%	100%	100%	100%	80%	
Total-DHAKA	362	376	518	381	0	0	0	0	518	353	0	28	2.86	2.56	92%	94%	98%	99%	93%	96%	100%	98%	86%
Khulna Division																							
Bagerhat	14	15	20	10			20	10	0	0	2.84	1.87	90%	100%	100%	90%	100%	100%	100%	100%	100%	100%	100%
Chuadanga	9	10	15	17			15	13	0	4	3.21	3.66	100%	100%	88%	93%	94%	100%	97%	100%	50%		
Jessore	23	24	23	26			23	23	0	3	2.01	2.64	100%	96%	100%	91%	96%	100%	100%	100%	100%	100%	
Jhenaidah	15	15	17	18			17	15	0	3	2.33	2.71	94%	89%	100%	90%	89%	100%	100%	100%	100%	100%	
Khulna (non KCC)	14	14	16	13			16	13	0	0	2.34	2.50	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	NA
KCC only	8	9	6	6			6	4	0	2	1.45	1.27	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Kushtia	16	17	22	12			22	11	0	1	2.73	1.79	95%	100%	91%	92%	95%	83%	100%	100%	100%	100%	100%
Magura	8	8	8	9			8	7	0	2	2.10	2.41	88%	100%	100%	88%	100%	100%	100%	100%	100%	100%	
Meherpur	5	6	6	6			6	5	0	1	2.20	2.41	100%	83%	100%	100%	67%	100%	100%	100%	100%	100%	
Narail	6	7	8	6			8	6	0	0	2.48	2.44	88%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Satkhira	17	18	30	15			30	13	0	2	3.50	1.99	97%	100%	100%	97%							

Disease Surveillance, 2009 - 2010

District	Neonatal Tetanus								Measles								AEFI			
	# of case reported by Active Surveillance		# of case reported by Passive Surveillance		# of case Investigated		# of case reported by Active Surveillance		# of case reported by Passive Surveillance		Outbreak*				# of case Investigated)	# of cases	# of case Reported			
	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010						
Barisal Division																				
Barguna	1	1	1	1	2				21	2							6	7		
Barisal (non BCC)	2		3	1	2				6	3							35	40		
BCC only								2		2							2	4		
Bhola	1		3	1	3	1			1	2							1			
Jhalakhati	2		4		2				1	0							10	13		
Patuakhali	3	2	3	1	2	2	3	1	3	7							1	1		
Pirojpur					1			1	1	13							15	11		
Total BAR	9	3	14	4	12	3	3	4	33	29					0	0	69	77		
CTG Division																				
Bandarban									1	1							4	1		
Brahmanbaria	6	1	8	2	8	1	1		20	11							10	10		
Chandpur		1	1			6	3	46		38							32	12		
Chittagong (non CCC)	1		3	1	1			1	2	8							9	10		
CCC only	2	5	1	5	2	5	2	8	3	2							4	1		
Comilla	1	4	1		1	4		1	9	29							8	10		
Cox's Bazar	2		2		2				1	3							6	2		
Feni		2		2		2	1		14	0							6	5		
Khagrachari	2		2		1		1	2	6	10							4	3		
Laxmipur	5	2	4	5	5	4	2	1	10	39							14	12		
Noakhali	8	4	9	3	7	4	2		27	2							10	8		
Rangamati								5		14							8	5		
Total-CTG	27	19	30	19	27	20	15	21	139	157					1(100%)	0	18	115	79	
Dhaka Division																				
Dhaka (non DCC)	2	3	1	1	2	4		1	11	39							20	26		
DCC only	5	2	1		5	1	12	15	269	208	1 (100%)						112	18		
Faridpur	1	1	2	2	3	1			8	3							65	42		
Gazipur		2		1				4	6	21							21	12		
Gopalganj	3		2		3			2	9	1							4	14		
Jamalpur		2	2	1		1			150	94							29	12		
Kishoreganj	7	3	7	4	5	1	13	1	17	46							31	16		
Madaripur			1				7		19	5							55	36		
Manikganj			1				2		8	9							31	20		
Munshiganj							2	47	87		1(100%)						46	51		
Mymensingh	7	2	6	1	9	2	3	2	67	30							53	32		
Narayanganj	1	1			1	1		1	11	18							18	27		
Narsingdi									4	8							30	35		
Netrokona			1						37	31							21	3		
Rajbari		1							50	0							45	10		
Shariatpur	3		1	1	3		3		16	17							45	17		
Sherpur	1		2	3	1				24	19							12	8		
Tangail	1	2			2	2	7	4	29	16							68	35		
Total-DHAKA	31	17	29	13	35	13	47	32	782	652	1 (100%)	1(100%)	76	46	711	381				
Khulna Division																				
Bagerhat	2	2	2	3	1	2			7	5	1(100%)						12	38		
Chuadanga	2	2	2	2	2	1	2		2	1							22	4		
Jessore	4	1	4	1	3	1	3	4	16	7							31	18		
Jhenaidah	1		1		1	2	1	21		6							20	7		
Khulna (non KCC)	3		3		3				4	18							28	29		
KCC only									1	1							11	16		
Kushthia	2	1	1		2		2	1	11	7							23	6		
Magura	1		1		1				19	7							20	10		
Meherpur							7	1	26	13							9	2		
Narail	2		1	2	2		1	1	9	14							17	1		
Satkhira	1		1		1		1	2		10							23	24		
Total-KHU	16	8	14	10	14	6	17	10	116	89	1(100%)	0	12	242	163					
Raj Division																				
Bogra	3	1	2	1	3	1	4	3	21	32							89	88		
Dinajpur	1		1		1			1	12	19							76	41		
Gaibandha	3	1	4	1	2	1	1		2	2							36	15		
Jyotpurhat									4	1							16	21		
Kurigram	4		1		3		2	1	11	1							13	11		
Lalmonirhat	1	2		1	2		2			1							21	18		
Natore			1				3	1	50	34							17	21		
Nilphamari							3		4	1							14	23		
Noagoan	1				1		4	8	48	34							31	36		
Nowabganj							5	2	19	16							17	6		
Pabna							18	1	90	72							33	17		
Panchagarh								1	1	3							17	12		
Rajshahi (non RCC)		1					1		30	13							43	25		
RCC only							3	3	68	15	1(100%)						40	50		
Rangpur	2	1	1	1	2	1			8								19	3		
Sirajganj	2	1			2			1	8	1							9	9		
Thakurgaon	2		3		2		1	4	4	14							31	16		
Total-RAJ	19	5	15	3	17	4	46	29	380	259	1(100%)	0	40	532	393					
Sylhet Division																				
Habiganj	3	3	2	2	2	3		3	4	7							17	3		
Maulvibazar	4	1	5	1	4	1	4	14	14	20	1(100%)						8	3		
Sunamganj	7	5	8	3	1	5	4	1	8	2							13	15		
Sylhet (non SCC)	4		2		3		1	19	19	25							8	2		
SCC only	1		2		1		13	15	12	9							1			
Total-SYL	19	9	19	6	11	9	22	52	57	63	1(100%)						48	0	47	23
National	121	61	121	55	116	55	150	148	1,507	1,249	2(100%)	4(100%)	124	116	1,716	1,116				

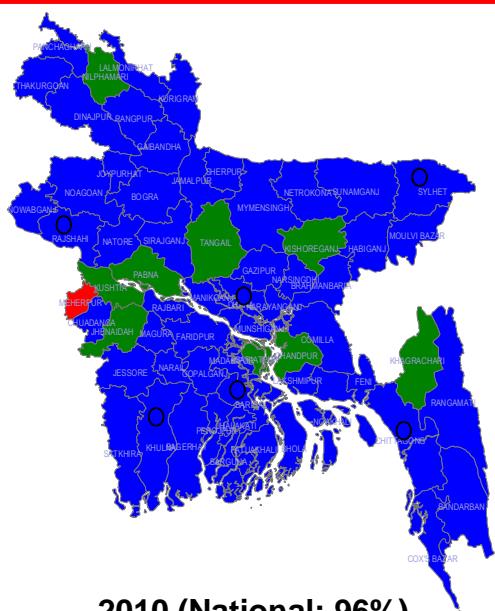
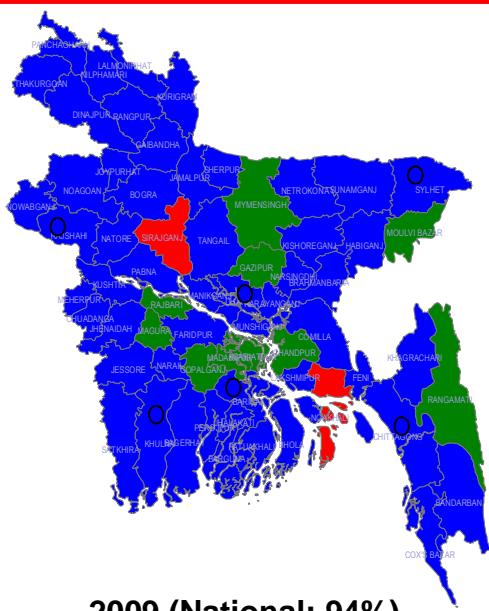
Annualized Non-Polio AFP Rate, by District, Bangladesh 2009-2010*



*Data as of 25 September 2010



Percentage of AFP Cases with Two Stool Samples Collected within 14 days of Paralysis Onset, by District, Bangladesh 2009-2010*



*Data as of 25 September 2010

International Developmental Partners for Polio Eradication in Bangladesh include Centers for Disease Control and Prevention, Atlanta, Governments of Japan, the Netherlands, USAID, Rotary International, U.K. DFID, UN Foundation, UNICEF and WHO