



EPI Surveillance Bulletin

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Bangladesh introduces new MR and MCV2 vaccine to prevent Measles, Rubella & Congenital Rubella Syndrome

In September 2012, Bangladesh EPI has introduced a combination MR (Measles and Rubella) and Measles containing vaccine second dose (MCV2) that will protect children and adolescent girls or child bearing age women against Measles and Rubella diseases. The Government of Bangladesh through its national EPI programme had been providing measles containing vaccine (MCV1) to all under one year children along with other EPI vaccines since 1979. The measles first dose is replaced by MR vaccine and MR single dose is given to children after 9 months and adolescent girls at 15 years. MCV2 is given to children at 15-18 months.

Rubella is an acute, usually mild viral disease traditionally affecting susceptible children and young adults. Its public health importance is due mainly to the teratogenic potential of the virus. Rubella infection of the foetus during early pregnancy may result in abortion, miscarriage, fetal death, or birth of an infant with serious congenital defects known as congenital rubella syndrome (CRS). CRS is an important cause of blindness, deafness, congenital heart disease and mental retardation. Through implementation of rubella vaccination strategies the incidence of rubella has been substantially reduced in many countries. Regions that had achieved high coverage with rubella vaccine had reduced incidence of CRS.

The Launching ceremony for introduction of MR (Measles and Rubella) and MCV2 vaccine was held in the Auditorium of Dhaka Shishu Hospital, Dhaka on 26 September 2012. In the launching ceremony, the Hon'ble Minister, Ministry of Health and Family Welfare, Prof A.F.M Ruhul Haque was the Chief Guest. In this occasion, Professor (Dr.) Syed Modasser Ali, the Advisor to the Hon'ble Prime Minister for Health and Family Welfare and Social Welfare Affairs Ministry was the special guest. Director General of Family Planning, Director-Dhaka Shisu Hospital, WHO Representative to Bangladesh and Representative, UNICEF, Bangladesh were also present as guests of honor. The meeting was chaired by Director General of Health Services. Programme Manager-EPI and Surveillance presented the key notes on MR and MCV2 vaccine introduction in Bangladesh. Following the speeches, the Chief Guest along with Special Guests and Representatives of UN agencies and partners administered the first shot of the MR vaccine to the children and inaugurated the event.



The vaccine will be provided under the routine immunization programme to nearly 3.8 million children born in Bangladesh every year. **MR and MCV2 vaccine** are safe, effective and highly cost-effective intervention. Children will only need one MR injection after 9 months, one MCV2 injection at 15 months and adolescent girls/ women need one MR injection at 15 years of age with TT dose eligibility.

The introduction of MR vaccine was funded by the Government of Bangladesh. MCV2 is provided through GAVI funds. 60,000 health and family planning workers, supervisors and Mid Level Managers were trained prior to introduction. Hence this was an another opportunity to improve their skills. WHO and UNICEF also provided technical and financial assistance for this introduction. Sentinel surveillance for congenital rubella syndrome (CRS) will be initiated in November 2012 at neonatology, pediatric, ENT, cardiology and ophthalmology units where cases of CRS are likely to be reported.

EPI life-saving vaccines represent an important step forward in preventing childhood diseases in Bangladesh.

Surveillance Summary													
Description	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012 ¹	
Number of AFP cases	1287	1365	1128	1301	1458	1619	1844	1790	1502	1537	1610	1207	
No. of compatible cases according to virologic classification system	36	0	0	2	0	2	0	0	0	0	0	0	
No. of cases with isolation of wild poliovirus	0	0	0	0	0	18	0	0	0	0	0	0	
No. of discarded polio cases (i.e., non-polio AFP)	1251	1365	1128	1299	1458	1599	1844	1790	1502	1537	1610	1067	
No. of cases pending classification	0	0	0	0	0	0	0	0	0	0	0	140	
Expected annual number of non-polio AFP cases (2/100,000 children <15 yr)*	533	549	556	563	1094	1114	1135	1153	1151	1203	1220	1236	
AFP Surveillance Performance Indicators													
Indicators	Target	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012 ¹
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	2.63	2.72	2.37
02 Completeness of passive reporting from facilities	≥ 90%	65%	62%	67%	82%	91%	89%	90%	93%	91%	91%	92%	97%
03 Timeliness of passive reporting from facilities	≥ 80%	38%	36%	62%	75%	84%	83%	85%	87%	86%	84%	86%	87%
04 Suspected AFP cases investigated within 48 hours of notification	≥ 80%	96%	96%	98%	98%	99%	100%	99%	99%	99%	99%	99%	98%
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%	95%	95%	95%
06 Stool specimens arriving at laboratory within 3 days after collection	≥ 80%	97%	98%	99%	99%	98%	99%	100%	100%	100%	100%	100%	99%
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%	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%	99%	100%	94% ²
09 Stool specimens with laboratory results: - Within 28 days after specimen receipt (old algorithm)	≥ 80%	99%	100%	100%	100%	100%	98%	100%	-	-	-	-	-
- Within 14 days after specimen receipt (new algorithm)	≥ 80%							80%	93%	95%	96%	91%	83%
10 Stool specimens from which non-polio enterovirus (NPEV) was isolated	≥ 10%	29%	28%	23%	20%	20%	15%	15%	23%	19%	19%	18%	16%

¹ Data as of September 30, 2012; ² among cases occurring up to July 15, 2012; * Prior to 2005 NPAPF rate calculated as 1/100,000 under 15 children

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AFP Surveillance Performance Indicators, 2011 - 2012

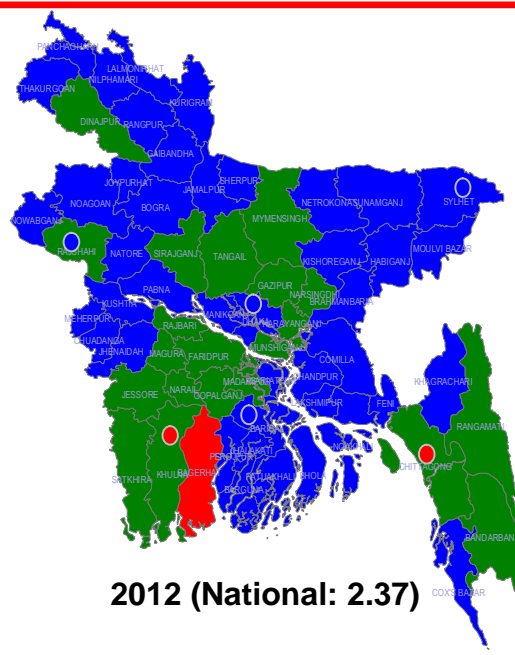
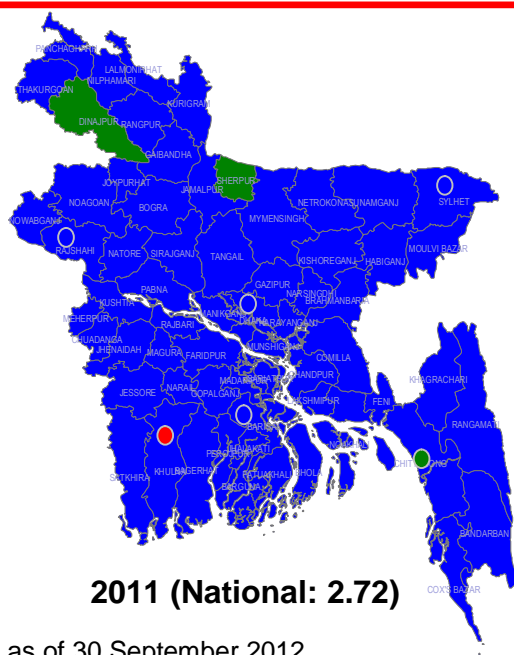
District	Minimum operational target of non-polio AFP		Total # AFP ¹		Wild polio-virus isolated		# Compatible cases		Non- Polio AFP cases ¹		Pending final classif. ¹		Annualized Non-polio AFP Rate ¹		Notification within 10 d after paralysis onset ¹		Investigation within 48 h after notification ¹		% with 2 stools within 14 days ¹		Stool sample arriving to lab within 72 hrs ¹		% with 60-day follow-up ²		
	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012	
Barisal Division																									
Barguna	9	9	10	8						10	7	0	1	2.48	2.28	100%	100%	100%	100%	100%	88%	100%	100%	100%	100%
Barisal (non BCC)	21	21	24	21						24	18	0	3	2.36	2.33	100%	95%	100%	100%	100%	95%	100%	100%	100%	86%
BCC only	3	3	3	2						3	2	0	0	2.79	2.45	100%	100%	100%	100%	100%	100%	100%	100%	NA	NA
Bhola	17	17	34	31						34	29	0	2	4.18	4.68	100%	100%	100%	100%	100%	97%	100%	100%	100%	100%
Jhalakati	7	7	10	10						10	10	0	0	3.02	3.97	100%	90%	100%	100%	100%	100%	100%	100%	100%	100%
Patuakhali	15	15	19	12						19	11	0	1	2.71	2.07	100%	92%	100%	100%	100%	100%	100%	100%	100%	100%
Perojpur	11	11	22	13						22	13	0	0	4.19	3.25	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Total-BAR	83	83	122	97	0	0	0	0	0	122	90	0	7	3.13	3.04	100%	97%	100%	100%	100%	97%	100%	100%	100%	96%
Chittagong Division																									
Bandarban	3	3	5	3						5	2	0	1	3.48	1.83	100%	67%	100%	100%	100%	67%	100%	100%	100%	50%
Brahmanbaria	23	24	31	24						31	23	0	1	2.73	2.66	100%	96%	100%	100%	100%	92%	97%	100%	100%	100%
Chandpur	22	22	33	39						33	39	0	0	3.08	4.79	94%	100%	100%	100%	88%	100%	100%	100%	100%	100%
Chittagong (non CCC)	42	43	42	35						42	31	0	4	2.01	1.95	98%	97%	98%	100%	93%	97%	100%	100%	100%	100%
CCC only	21	22	20	8						20	6	0	2	1.93	0.76	100%	100%	100%	100%	90%	100%	100%	100%	100%	100%
Comilla	44	45	61	42						61	38	0	4	2.78	2.28	98%	100%	100%	98%	97%	98%	100%	100%	100%	100%
Cox's Bazar	17	18	26	17						26	14	0	3	3.09	2.19	100%	94%	100%	94%	100%	100%	100%	100%	100%	100%
Feni	12	12	20	19						20	17	0	2	3.47	3.88	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Khagrachari	5	6	8	9						8	7	0	2	3.24	3.72	88%	100%	100%	78%	88%	100%	94%	100%	100%	100%
Lakshmipur	15	15	18	17						18	17	0	0	2.53	3.14	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Noakhali	25	25	43	31						43	27	0	4	3.50	2.89	95%	100%	98%	97%	98%	100%	100%	100%	100%	100%
Rangamati	6	6	8	4						8	3	0	1	3.19	1.57	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Total-CTG	235	241	315	248	0	0	0	0	0	315	224	0	24	2.73	2.55	98%	98%	99%	98%	96%	98%	100%	100%	100%	98%
Dhaka Division																									
Dhaka (non DCC)	24	25	44	27						44	26	0	1	3.70	2.88	93%	96%	95%	96%	93%	100%	100%	100%	100%	100%
DCC only	59	60	66	59						66	55	0	4	2.25	2.47	94%	92%	100%	100%	95%	90%	98%	99%	95%	100%
Faridpur	17	17	17	15						17	11	0	4	2.04	1.74	82%	93%	100%	93%	100%	93%	100%	97%	100%	100%
Gazipur	20	20	24	18						24	14	0	4	2.48	1.90	92%	94%	100%	89%	92%	89%	100%	94%	100%	67%
Gopalganj	12	12	15	10						15	8	0	2	2.72	1.91	100%	90%	100%	100%	90%	100%	100%	100%	100%	100%
Jamalpur	21	21	32	19						32	18	0	1	3.18	2.35	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Kishoreganj	25	25	36	30						36	28	0	2	2.95	3.01	89%	97%	100%	97%	78%	100%	100%	100%	100%	100%
Madaripur	11	11	14	9						14	7	0	2	2.59	1.70	93%	100%	100%	100%	89%	100%	100%	100%	100%	100%
Manikganj	13	13	18	13						18	10	0	3	2.89	2.11	100%	92%	100%	100%	94%	92%	97%	96%	100%	100%
Munshiganj	13	13	17	10						17	7	0	3	2.76	1.49	88%	100%	100%	100%	88%	100%	97%	100%	100%	0%
Mymensingh	43	44	43	34						43	29	0	5	2.02	1.79	91%	100%	97%	93%	91%	100%	96%	100%	100%	100%
Narayanganj	21	22	31	15						31	13	0	2	2.99	1.65	90%	93%	100%	100%	90%	93%	100%	100%	100%	100%
Narsingdhi	19	19	20	16						20	13	0	3	2.20	1.88	95%	75%	100%	100%	85%	81%	100%	100%	100%	75%
Netrokona	19	20	21	17						21	16	0	1	2.23	2.23	90%	100%	100%	94%	90%	94%	100%	94%	100%	100%
Rajbari	10	10	10	7						10	6	0	1	2.20	1.73	100%	100%	100%	86%	90%	100%	100%	100%	100%	100%
Sariatpur	11	11	12	12						12	12	0	0	2.32	3.05	100%	92%	100%	100%	100%	100%	100%	100%	100%	100%
Sherpur	13	13	12	15						12	13	0	2	1.98	2.82	92%	93%	100%	100%	100%	100%	96%	100%	100%	100%
Tangail	32	32	44	22						44	17	0	5	2.82	1.43	89%	100%	98%	86%	95%	100%	98%	100%	100%	100%
Total-DHAKA	383	388	476	348	0	0	0	0	0	476	303	0	45	2.55	2.14	93%	94%	99%	97%	93%	94%	99%	98%	99%	96%
Khulna Division																									
Bagerhat	15	15	23	7						23	5	0	2	3.17	0.91	91%	86%	91%	100%	87%	86%	100%	100%	100%	100%
Chuadanga	10	10	21	12						21	9	0	3	4.37	2.46	100%	75%	100%	100%	95%	75%	100%	100%	100%	100%
Jessore	24	24	29	14						29	12	0	2	2.46	1.34	93%	93%	100%	100%	97%	86%	100%	100%	100%	100%
Jhenaidah	15	16	30	16						30	15	0	1	4.00	2.63	100%	94%	100%	100%	93%	100%	98%	100%	100%	67%
Khulna (non KCC)	15	15	17	14						17	10	0	4	2.42	1.87	82%	86%	100%	86%	82%	86%	100%	100%	100%	100%
KCC only	9	9	2	2						2	2	0	0	0.47	0.62	100%	100%	100%	100%	100%	100%	100%	100%	100%	NA
Kushtia	17	17	28	20						28	19	0	1	3.37	3.01	96%	85%	100%	100%	93%	95%	100%	100%	100%	50%
Magura	8	8	12	4						12	3	0	1	3.06	1.00	83%	100%	100%	100%	92%	75%	100%	100%	100%	100%
Meherpur	6	6	10	6						10	6	0	0	3.56	2.81	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%
Narail	7	7	12	7						12	5	0	2	3.61	1.98	100%	100%	100%	100%	100%	86%	100%	100%	100%	50%
Satkhira	18	18	22	9						22	7	0	2	2.49	1.04	95%	78%	100%	89%	91%	67%	100%	100%	100%	100%
Total-KHU	144	145	206	111	0	0	0	0	0	206	93	0	18	2.95	1.75	95%	88%	99%	97%	93%	87%	100%	100%	100%	77%
Rajshahi Division																									
Bogra	29	30	31	33						31	28	0	5	2.15	2.55	94%	91%	100%	100%	100%	97%	100%	100%	100%	100%
Joypurhat	9	9	10	11																					

Disease Surveillance, 2011 - 2012

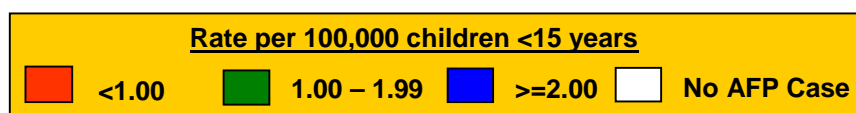
District	Neonatal Tetanus						Measles								AEFI	
	# of case reported by Active Surveillance		# of case reported by Passive Surveillance		# of case Investigated		# of case reported by Active Surveillance		# of case reported by Passive Surveillance		Outbreak*				# of case Reported	
											Number of Outbreak Investigated		# of cases			
	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012
Barisal Division																
Barguna							28	4	37	18					1	1
Barisal (non BCC)	1		1		1		5	3	14	3					40	17
BCC only							2	1	3							1
Bhola	2		2		2		10	2	25	6		1		25	2	2
Jhalakhati							12	1	14	7					15	12
Patuakhali	1	1	1	1	1	1	40	20	36	16	2	1	67	46	2	
Pirojpur	1	1	1	1	1	1	17	5	23	21					14	4
Total-Barisal	5	2	5	2	5	2	114	36	152	71	2	2	67	71	74	37
CTG Division																
Bandarban							1	2	2	4	3		109		5	25
Brahmanbaria	1	3	1	1		1	1	3	34	8	3	1	69	12	9	11
Chandpur		1			2	1	5	1	19	16	4		49		74	125
Chittagong (non CCC)			1		1		8	2	20	7	2		53		7	20
CCC only	1	1	1		1		24	1	21		5		201			7
Comilla	1	3	1	1	1	1	2	1	23	13	1	1	29	35	31	33
Cox's Bazar	1	3	1	2	1	2	5	3	9	7		1		222	2	5
Feni		4		4		5	9	4	22	18					7	10
Khagrachari							17	2	28	9	2		57		3	24
Laxmipur	4	2	5	2	4	2	11	3	51	14	3	1	53	12	24	12
Noakhali	5	6	6	6	6	7	15	10	46	18					8	21
Rangamati							11	1	19	1	2		40		2	7
Total-Chittagong	13	23	16	16	16	19	109	33	294	115	25	4	660	281	172	300
Dhaka Division																
Dhaka (non DCC)	2	2			2		104	29	106	26					35	31
DCC only	2	4		1		1	377	133	506	175	13	5	355	102	21	22
Faridpur	2	3	3	3	2	2	4	1	25	6					26	19
Gazipur	2	2			2		35	5	58	29					22	14
Gopalganj	3	2	5		1	2	6		17	1	2		70		4	2
Jamalpur	1						4		81	59					13	15
Kishoreganj	6	2	9	1	4	2	4	2	43	16					15	16
Madaripur	4	1	8		1		3	1	14	4	1		12		33	27
Manikganj		1					3	3	52	18	2	1	67	9	12	30
Munshiganj	1	1	1		1		12	2	37	9					13	11
Mymensingh	6	2	5	1	6	2	21	9	90	32	2	1	77	36	28	9
Narayanganj	1				1		9	6	14	13					18	28
Narsingdhi	1						4	5	40	5		1		67	34	19
Netrokona	1		3	2	1	2			28	8	2		37		2	4
Rajbari							1	1	23	16	1		74		32	37
Shariatpur	1						2	2	25	15	1	2	126	72	22	12
Sherpur	1		1	1	1		4	2	32	7	1		23		5	2
Tangail	2			1	2		24	1	52	36					53	35
Total-Dhaka	36	20	35	10	24	11	617	202	1,243	475	25	10	841	286	388	333
Khulna Division																
Bagerhat	3	2	3	4	1	3	1	1	22	25	2		42		56	198
Chuadanga		1		1			4	1	24	11	2		57		10	14
Jessore	1		2		2		25	22	124	60	2	1	38	17	18	7
Jhenaidah		2		1		2	52	36	56	75	1	2	13	35	11	8
Khulna (non KCC)	3	1	5	1	2	1	4	3	27	25		1		46	42	40
KCC only							2	6	11	7					11	8
Kushtia	2	1	2	1	2		17	11	27	53	2	1	52	45	7	10
Magura	3	1	2	1	2	1	12		37	9	1		11		17	13
Meherpur	1	1	1	1		1	6	7	15	11					3	2
Narail	2	1	3	1	1		37	5	47	14	1		20		12	2
Satkhira							8	4	26	32					20	19
Total-Khulna	15	10	18	11	10	8	168	96	416	322	11	5	233	143	207	321
Rajshahi Division																
Bogra	4	2	3	3	5	2	6	4	62	28	1		7		48	38
Joypurhat							19	9	25	15	1		24		20	22
Natore	1		1		1		1	1	42	35					25	20
Noagoan	1	1		1	1	1	38	27	79	42	5	3	128	76	30	64
Nowabganj	2		2		3		1	2	24	23					18	19
Pabna	1				1		2		156	82	2	1	38	37	22	13
Rajshahi (non RCC)		1		1		1	1	1	30	23	1	2	13	56	38	34
RCC only		1		1		1	28	13	41	22	5		115	0	11	25
Sirajganj	1	2			1	2		3	7	14	2	2	48	55	4	11
Total-Rajshahi	10	7	6	6	12	7	96	60	466	284	17	8	373	224	216	246
Rangpur Division																
Dinajpur	1	1	1		1	1	14	1	114	27	3		45		23	4
Gaibandha	3	1	3		5	1	5	1	16	10	3	1	99	8	28	20
Kurigram	1	1		2	2	1	14	6	12	12					5	11
Lalmonirhat							10	3	13	1					16	35
Nilphamari							3		5	7					10	27
Panchagarh							4	3	4	2	1		9		16	5
Rangpur							2	6	11			1		7	18	21
Thakurgaon	1				1		3	13	44	14					13	9
Total-Rangpur	6	3	4	2	9	3	55	33	219	73	7	2	153	15	129	132
Sylhet Division																
Habiganj	6	1	8	1	5		18	6	27	16					3	1
Maulvibazar	1		2		2		34	14	69	31	2	1	156	18	2	1
Sunamganj		4	2	3	2	5	23	3	46	6	2	1	319	54	3	6
Sylhet (non SCC)	2		2	1	2	1	9	1	51	19					2	
SCC only							4		10						1	
Total-Sylhet	9	5	14	5	11	6	88	24	203	72	4	2	475	72	11	8
National	94	70	98	52	87	56	1,247	484	2,993	1,412	91	33	2,802	1,092	1,197	1,377

Data as of 30 September 2012, * Only Lab Confirmed Measles

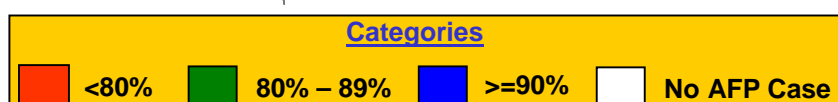
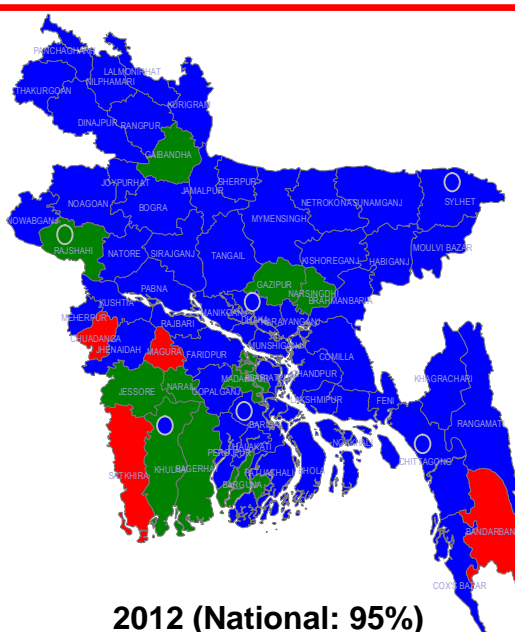
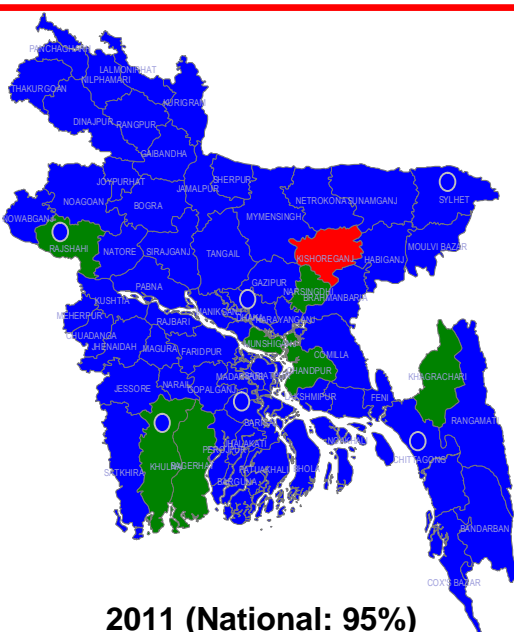
Annualized Non-Polio AFP Rate, by District, Bangladesh 2011-2012*



*Data as of 30 September 2012



Percentage of AFP Cases with Two Stool Samples Collected within 14 days of Paralysis Onset, by District, Bangladesh 2011-2012*



*Data as of 30 September 2012

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