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Bangladesh introduces new vaccine to prevent severe forms of child pneumonia and meningitis

4 million children to be vaccinated annually with new combination vaccine protecting against 5 killer diseases

Bangladesh EPI has introduced a new combination vaccine that will protect its children against five killer diseases in one injection, including, for the first time, the deadly bacterium *Haemophilus influenzae* type b (Hib) that causes some severe forms of pneumonia and meningitis. The new combination or 5-in-1 vaccine will protect children against Hib and four other **deadly diseases: diphtheria, tetanus, pertussis, and hepatitis B.**

The Launching ceremony for introduction of Hib vaccine in the form of Pentavalent vaccine (DPT, Hep-B and Hib) held on 15 January 2009 at Khulna City Corporation. 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, the State Minister of the Ministry of Labour and Employment, the Mayor of Khulna City Corporation, the Secretary of Ministry of Health and Family Welfare, the WHO Representative to Bangladesh and Chief, Health and Nutrition, UNICEF were also present as Special Guests. The meeting was chaired by Director General of Health Services. Following the speeches, the Chief Guest along with Special Guests and Representatives of other UN agencies and partners administered the first shots of the combination vaccine to the children.

Each year, Hib is estimated to cause millions of serious illnesses and 400,000 deaths globally, the majority of them among children under five years of age. Even with treatment, thousands of children die of Hib disease every year. Survivors are often permanently disabled, paralyzed, deafened or brain damaged. The vaccine will be provided under the routine immunization programme to nearly four million children born in Bangladesh every year. In the first phase, the new vaccine is being administered in Khulna City Corporation and Khulna District. EPI has planned to introduce this Hib pentavalent vaccine phase wise all over the country by July 2009. As Bangladesh records high routine immunization coverage, it is estimated that Hib vaccine can save about 20,000 children's lives annually.

Hib vaccine is a safe, effective and highly cost-effective intervention. Instead of three different injections (DPT, Hepatitis B and Hib), children will only need one injection at three different times during their first year of life: at the age of 6 weeks, 10 weeks and 14 weeks. This will make it easier for health workers who will need less time and less logistics to immunize all children. At the same time, the use of the combination vaccine containing five antigens in one shot will increase the Routine Immunization Coverage.

The introduction of the 5-in-1 Hib pentavalent vaccine in Bangladesh is carried out with the financial and technical support from the GAVI Alliance and its key partners including UNICEF, WHO and the Hib Initiative. GAVI is supporting the training of about 60,000 health and family planning workers together with WHO and UNICEF for introduction of this vaccine.

This life-saving vaccine represents an important step forward in preventing childhood diseases in Bangladesh. It will greatly help our country to achieve Millennium Development Goal 4 which aims at reducing under-five mortality.



Surveillance Summary										
Description	2001	2002	2003	2004	2005	2006	2007	2008	2009 ¹	
Number of AFP cases	1287	1365	1128	1301	1458	1619	1844	1790	183	
No. of compatible cases according to virologic classification system	36	0	0	2	0	2	0	0	0	
No. of cases with isolation of wild poliovirus	0	0	0	0	0	18	0	0	0	
No. of discarded polio cases (i.e., non-polio AFP)	1251	1365	1128	1299	1458	1599	1844	1774	122	
No. of cases pending classification	0	0	0	0	0	0	0	16	61	
Expected annual number of non-polio AFP cases (1/100,000 children <15 yr)*	533	549	556	563	1094	1114	1135	1153	1178	
AFP Surveillance Performance Indicators										
Indicators	Target	2001	2002	2003	2004	2005	2006	2007	2008	2009 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	3.07	1.35
02 Completeness of passive reporting from facilities	≥ 90%	65%	62%	67%	82%	91%	89%	90%	93%	91%
03 Timeliness of passive reporting from facilities	≥ 80%	38%	36%	62%	75%	84%	83%	85%	87%	86%
04 Suspected AFP cases investigated within 48 hours of notification	≥ 80%	96%	96%	98%	98%	99%	100%	99%	99%	96%
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%
06 Stool specimens arriving at laboratory within 3 days after collection	≥ 80%	97%	98%	99%	99%	98%	99%	100%	100%	100%
07 Stool specimens arriving at laboratory in "good" condition "good" = 1. Presence of unmelting 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%
08 Confirmed AFP cases receiving a follow-up exam at least 60 days after paralysis onset	≥ 80%	93%	99%	100%	98%	99%	100%	100%	97% 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%	96%
10 Stool specimens from which non-polio enterovirus (NPEV) was isolated	≥ 10%	29%	28%	23%	20%	20%	15%	15%	23%	14%

¹ Data as of February 21, 2009; ² among cases occurring up to December 7, 2008; * Prior to 2005 NPAFP rate calculated as 1/100,000 under 15 children

Please provide your feedback and comments to Dr. Md. Abdul Jalil Mondal, DPM-EPI or Dr. A K F Mozibur Rahman, Program Manager,
Child Health & Limited Curative Care, EPI Bhaban, Mohakhali, Dhaka 1212 Telephone: 9880530 or 9898797
Chief Advisor to the Editorial Board: Dr. A B M Jahangir Alam, Director-PHC & Line Director-ESD, DGHS, Mohakhali Dhaka.

AFP Surveillance Performance Indicators, 2008 - 2009

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 AFP Rate 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		
	2008	2009	2008	2009	2008	2009	2008	2009	2008	2009	2008	2009	2008	2009	2008	2009	2008	2009	2008	2009	2008	2009	2008	2009	2008	2009	
Barisal Division																											
Barguna	7	7	12	0						12	0	0	0	3.23	0.00	3.23	0.00	100%	NA	100%	NA	100%	NA	100%	NA	100%	NA
Barisal (non BCC)	18	18	51	4						50	2	1	2	5.61	2.84	5.50	1.42	94%	100%	98%	100%	92%	100%	100%	100%	93%	NA
BCC only	2	2	4	0						4	0	0	0	3.80	0.00	3.80	0.00	100%	NA	100%	NA	100%	NA	100%	NA	100%	NA
Bhola	16	16	62	9						61	7	1	2	7.95	7.39	7.82	5.75	94%	100%	100%	100%	97%	89%	100%	100%	95%	NA
Jhalakati	6	6	13	1						13	1	0	0	4.42	2.20	4.42	2.20	100%	100%	100%	100%	100%	100%	100%	100%	67%	NA
Patuakhali	13	14	25	2						24	2	1	0	3.73	1.91	3.58	1.91	88%	50%	100%	100%	88%	100%	100%	100%	100%	NA
Perojpur	10	10	21	0						21	0	0	0	4.38	0.00	4.38	0.00	90%	NA	100%	NA	90%	NA	100%	NA	100%	NA
Total_BAR	72	73	188	16	0	0	0	0	0	185	12	3	4	5.21	2.85	5.13	2.14	94%	94%	99%	100%	94%	94%	100%	100%	95%	NA
CTG Division																											
Bandarban	3	3	4	1						4	1	0	0	2.71	4.29	2.71	4.29	100%	100%	100%	100%	100%	100%	100%	100%	100%	NA
Brahmanbaria	21	22	35	2						34	2	1	0	3.29	1.21	3.20	1.21	94%	100%	97%	0%	97%	100%	100%	100%	91%	NA
Chandpur	22	23	34	4						34	2	0	2	3.04	2.25	3.04	1.13	94%	75%	100%	100%	88%	50%	100%	100%	100%	NA
Chittagong (non CCC)	39	40	43	3						41	1	2	2	2.19	0.98	2.09	0.33	86%	100%	100%	100%	84%	100%	100%	100%	100%	NA
CCC only	22	23	23	5						23	4	0	1	2.07	2.83	2.07	2.26	87%	100%	100%	100%	87%	100%	100%	100%	80%	NA
Comilla	42	42	61	5						61	4	0	1	2.93	1.54	2.93	1.23	100%	100%	100%	100%	98%	100%	98%	100%	94%	NA
Cox's Bazar	17	17	20	6						20	4	0	2	2.35	4.49	2.35	2.99	95%	100%	100%	100%	95%	100%	100%	100%	100%	NA
Feni	11	11	18	1						18	0	0	1	3.28	1.16	3.28	0.00	100%	100%	100%	100%	94%	100%	100%	100%	100%	NA
Khagrachari	6	6	7	0						7	0	0	0	2.40	0.00	2.40	0.00	100%	NA	100%	NA	86%	NA	100%	NA	NA	NA
Lakshmipur	13	14	20	1						20	1	0	0	2.98	0.96	2.98	0.96	90%	100%	100%	100%	85%	100%	100%	100%	100%	NA
Noakhali	24	24	27	2						26	1	1	1	2.28	1.08	2.20	0.54	96%	100%	96%	100%	85%	100%	100%	100%	100%	NA
Rangamati	5	5	3	1						3	1	0	0	1.13	2.39	1.13	2.39	67%	100%	100%	100%	67%	100%	100%	100%	100%	NA
Total-CTG	225	230	295	31	0	0	0	0	0	291	21	4	10	2.61	1.75	2.58	1.19	94%	97%	99%	94%	91%	94%	100%	100%	96%	NA
Dhaka Division																											
Dhaka (non DCC)	28	30	46	8						46	8	0	0	3.23	3.47	3.23	3.47	89%	100%	100%	100%	87%	88%	100%	100%	100%	NA
DCC only	71	74	88	6						88	4	0	2	2.50	1.05	2.50	0.70	86%	83%	100%	100%	90%	100%	100%	100%	93%	NA
Faridpur	16	16	34	1						34	1	0	0	4.25	0.80	4.25	0.80	88%	100%	97%	100%	88%	100%	100%	100%	88%	NA
Gazipur	19	19	27	2						27	1	0	1	2.92	1.38	2.92	0.69	93%	100%	100%	100%	93%	100%	100%	100%	100%	NA
Gopalganj	10	10	31	7						30	4	1	3	6.13	8.91	5.93	5.09	74%	86%	94%	100%	74%	71%	100%	100%	100%	NA
Jamalpur	19	20	53	8						52	5	1	3	5.51	5.33	5.41	3.33	96%	100%	92%	100%	98%	100%	100%	100%	86%	NA
Kishoreganj	23	23	40	2						39	2	1	0	3.51	1.13	3.42	1.13	93%	100%	100%	100%	95%	100%	100%	100%	100%	NA
Madaripur	10	10	20	2						20	0	0	2	4.08	2.64	4.08	0.00	100%	100%	100%	0%	95%	100%	100%	100%	100%	NA
Manikganj	12	12	18	4						18	2	0	2	3.11	4.44	3.11	2.22	94%	100%	100%	100%	100%	100%	100%	100%	100%	NA
Munshiganj	11	11	28	4						28	2	0	2	4.97	4.57	4.97	2.29	100%	100%	96%	100%	100%	100%	100%	100%	100%	NA
Mymensingh	40	41	47	2						46	1	1	1	2.34	0.64	4.29	0.32	83%	100%	98%	100%	87%	100%	100%	100%	100%	NA
Narayanganj	20	21	27	2						27	1	0	1	2.64	1.25	2.64	0.62	93%	100%	100%	100%	93%	100%	100%	100%	100%	NA
Narsingdhi	18	18	25	2						25	2	0	0	2.76	1.41	2.76	1.41	100%	100%	100%	100%	100%	100%	100%	100%	100%	NA
Netrokona	18	18	28	0						27	0	1	0	3.13	0.00	3.01	0.00	89%	NA	100%	NA	96%	NA	100%	NA	100%	NA
Rajbari	9	9	14	1						14	0	0	1	3.24	1.49	3.24	0.00	86%	100%	93%	100%	86%	100%	100%	100%	80%	NA
Sariatpur	10	10	29	3						29	2	0	1	5.91	3.92	5.91	2.61	86%	100%	97%	100%	93%	100%	100%	100%	100%	NA
Sherpur	11	11	18	3						18	1	0	2	3.18	3.41	3.18	1.14	100%	100%	100%	100%	100%	100%	100%	100%	100%	NA
Tangail	29	29	46	2						46	0	0	2	3.21	0.90	3.21	0.00	87%	100%	100%	100%	91%	100%	100%	100%	100%	NA
Total-DHAKA	374	382	619	59	0	0	0	0	0	614	36	5	23	3.32	2.01	3.29	1.23	90%	97%	98%	97%	92%	95%	100%	100%	98%	NA
Khulna Division																											
Bagerhat	13	13	19	4						19	1	0	3	2.90	3.95	2.90	0.99	100%	100%	100%	100%	100%	100%	100%	100%	100%	NA
Chuadanga	10	10	23	2						23	1	0	1	4.73	2.61	4.73	1.31	96%	100%	100%	100%	87%	100%	100%	100%	100%	NA
Jessore	23	23	34	3						34	3	0	0	2.98	1.68	2.98	1.68	88%	100%	100%	100%	82%	100%	100%	100%	100%	NA
Jhenaidah	14	15	20	3						20	1	0	2	2.79	2.68	2.79	0.89	95%	67%	100%	100%	85%	100%	100%	100%	100%	NA
Khulna (non KCC)	13	13	22	2						22	1	0	1	3.40	1.99	3.40	1.00	95%	100%	100%	100%	95%	100%	100%	100%	100%	NA
KCC only	8	9	8	1						8	0	0	1	1.90	1.51	1.90	0.00	88%	100%	100%	100%	100%	100%	100%	100%	100%	NA
Kushtia	16	16	27	4						27	2	0	2	3.37	3.19	3.37	1.60	96%	75%	89%	100%	93%	75%	100%	100%	100%	NA
Magura	8	8	14	0						14	0	0	0	3.67	0.00	3.67	0.00	86%	NA	100%	NA	86%	NA	100%	NA	100%	NA
Meherpur	6	6	13	0						13	0	0	0	4.71	0.00	4.71	0.00	92%	NA	100%	NA	100%	NA	100%	NA	100%	NA
Narail	6	6	19	0						19	0	0	0	6.35	0.00	6.35	0.00	84%	NA	100%	NA	89%	NA	100%	NA	90%	NA
Satkhira	17	17	28	6						28	5	0	1	3.32	4.55	3.32	3.79	100%	100%	100%	100%	93%	100%	100%	100%	88%	NA
Total-KHU	134	136	227	25	0	0	0	0	0	227	14		11	3.40	2.40	3.40	1.34	93%	92%	99%	100%	91%	96%	100%	100%	97%	NA
Raj Division																											
Bogra	27	28	32	4						32	4	0	0	2.33	1.87	2.33	1.87	88%	100%	100%	100%	84%	100%	100%	100%	100%	NA
Dinajpur	24	25	24	1						23	0	1	1	1.96	0.52	1.88	0.00	88%	100%	100%	100%	83%	100%	100%	100%	100%	NA
Gaibandha	19	19	30	4						29	4	1	0	3.20	2.74	3.09	2.74	83%	100%	93%	100%	90%	100%	100%	100%	100%	NA
Joypurhat	8	8	11	1						11	1	0	0	2.89	1.69	2.89	1.69	82%	100%	100%	100%	91%	100%	100%	100%	100%	NA
Kurigram	16	16	20	1						20	1	0	0	2.55	0.82	2.55	0.82	100%	100%	90%	100%	95%	100%	100%	100%	100%	NA
Lalmonirhat	10	10	12	0						12	0	0	0	2.37	0.00	2.37	0.00	83%	NA	100%	NA	92%	NA	100%	NA	100%	NA
Natore	13																										

1Data as of Epidemiologic Week 08, Februaru 21, 2009, 2 for cases occuring upto 07 December 2008 which has inadegate stool or positive isolate at NPL or NPEV

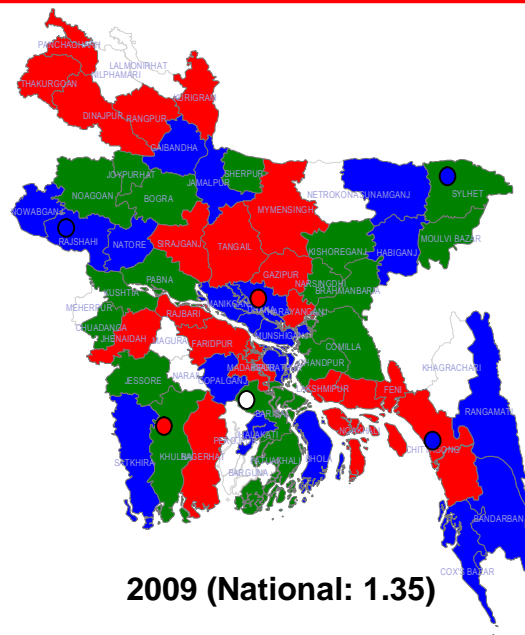
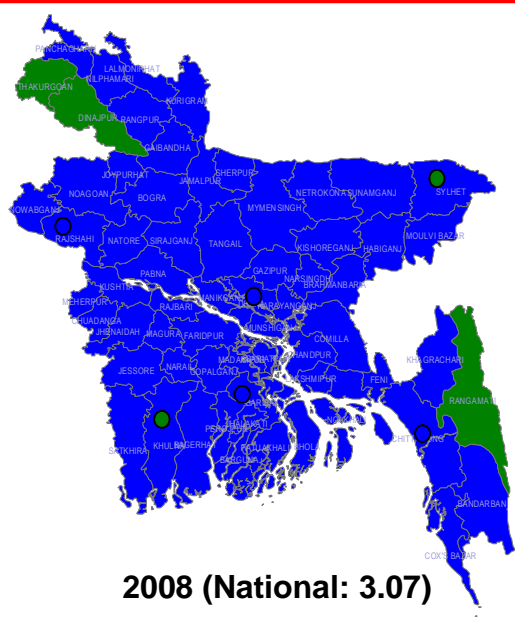
Disease Surveillance, 2008 - 2009

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			
	2008	2009	2008	2009	2008	2009	2008	2009	2008	2009	2008	2009	2008	2009	2008	2009
Barisal Division																
Barguna			1				1		18	1					15	
Barisal (non BCC)	2		7	1	2		2		22						45	3
BCC only															1	
Bhola	3		8		6				5						14	
Jhalakhati	3		2		3		2		2						7	
Patuakhali							4		15						6	
Pirojpur			1						9						17	
Total BAR	8	0	19	1	11	0	9	0	71	1			0	0	105	3
CTG Division																
Bandarban										1					6	2
Brahmanbaria	5		5		7				18	1					25	
Chandpur			2		2		3		46	2					48	
Chittagong (non CCC)	1			1			4		10	1					10	
CCC only	2		3		2		8		6						7	
Comilla	1				1		1		12						10	
Cox's Bazar			1												5	2
Feni									19						17	
Khagrachari	1	1	1						1						4	
Laxmipur	3		3		3				46						22	2
Noakhali	4		3		4		2		9						12	
Rangamati									1							
Total-CTG	17	1	18	1	19	0	18	0	168	5			0	0	166	6
Dhaka Division																
Dhaka (non DCC)	2		2		1	1	1		63	1					40	
DCC only	2		4		5		25		594	9					171	19
Faridpur	1		1						29						85	1
Gazipur	3		1		3		3		3						17	2
Gopalganj	2		5		3		1		22						26	
Jamalpur	2		5		2				58	7					41	1
Kishoreganj	7	1	9	1	3		13	2	31	1					46	1
Madaripur	4		3		4		3	1	48	1					79	1
Manikganj	2		1		1				89	1					43	
Munshiganj	2		1		1		2		176	5					69	3
Mymensingh	4	1	5		5	1	1		73	1					82	2
Narayanganj	1						1		68						38	1
Narsingdhi	4		2		3		3		3						11	
Netrokona	1		5	1	2				33						36	2
Rajbari									40	1					109	2
Shariatpur	1		1				2		23						63	
Sherpur			2						30	1					26	2
Tangail	4		8		6		9		19	1					67	5
Total-DHAKA	42	2	55	2	39	2	64	3	1,402	29			0	0	1,049	42
Khulna Division																
Bagerhat	3		5		2		2		51	1					41	1
Chuadanga	1		1	1	1	1	2		31						22	
Jessore							14	1	63						23	1
Jhenaidah									22	1					26	
Khulna (non KCC)	1		1		1		1		11						34	
KCC only	1				1		3		8						16	3
Kushtia	3		1		3				45						25	
Magura							5		76						21	
Meherpur									11	1					5	2
Narail	3		3		4		1		14						13	
Satkhira	2		1		3				7						26	
Total-KHU	14	0	12	1	15	1	28	1	339	3			0	0	252	7
Raj Division																
Bogra	2		3		3		2		24	1					119	5
Dinajpur	4		4		4		6		19						55	1
Gaibandha	1		2		4				3						44	
Joypurhat							2		14						25	1
Kurigram							3		7						16	1
Lalmonirhat	2				1	1	1		1						23	1
Natore	4		3		4		5		74		1(100%)		132		50	2
Nilphamari	1		1		2										25	
Noagoan	2		3		2		7		90	1					42	3
Nowabganj	2		2		2		4		38	1					24	
Pabna	3		2		1		19		65	4					44	1
Panchagarh	1		2		1		2		5						19	1
Rajshahi (non RCC)	3		3		3		8		31	1					43	1
RCC only							3		64	1					48	
Rangpur	3				3	1	1		2						32	2
Sirajganj									3						15	
Thakurgaon	1		1		1	1	4		5						35	
Total-RAJ	29	0	26	0	31	3	67	0	445	9	1(100%)		132	0	659	19
Sylhet Division																
Habiganj	3		4		6				10						25	
Maulvibazar	7		6		5				15						10	
Sunamganj	8		7		8		28		40						20	1
Sylhet (non SCC)	5		5		7		6		32						7	1
SCC only	1						18	1	6						4	
Total-SYL	24	0	22	0	26	0	52	1	103	0			0	0	66	2
National	134	3	152	5	141	6	238	5	2,528	47	1(100%)		132	0	2,297	79

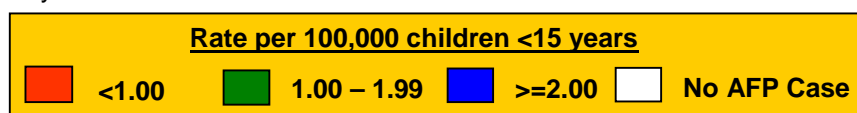
Data as of 17 February 2009, * Only Lab Confirmed Measles and Mixed Type outbreak Cases

Data as of 17 February 2009, * Only Lab Confirmed Measles and Mixed Type outbreak Cases

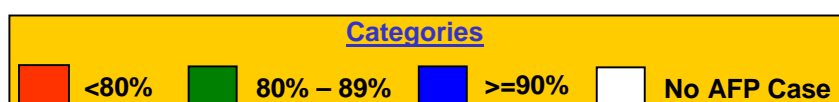
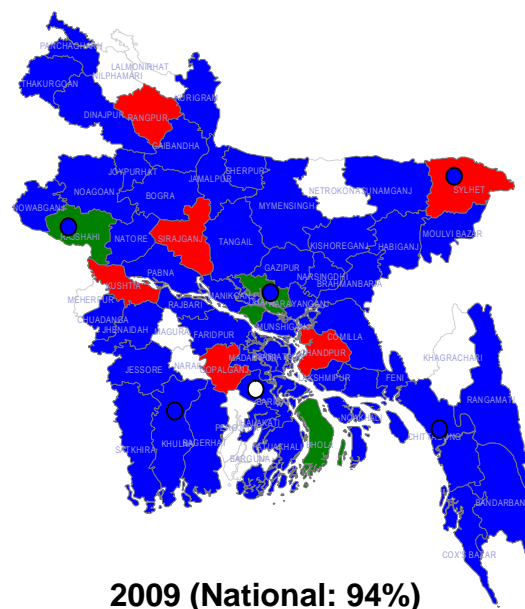
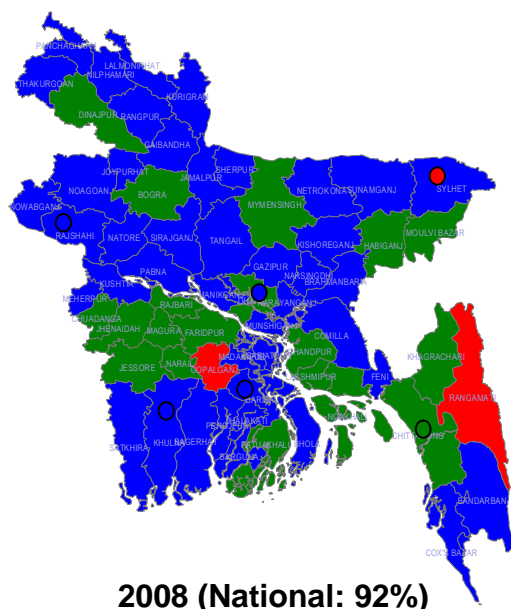
Annualized Non-Polio AFP Rate, by District, Bangladesh 2008-2009*



*Data as of 21 February 2009



Percentage of AFP Cases with Two Stool Samples Collected within 14 days of Paralysis Onset, by District, Bangladesh 2008-2009*



*Data as of 21 February 2009

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