



Analysis of AEFI in Jamalpur: Looking Forward for Better Future

On September 4, 2003 six children received measles vaccine in out reach site in the village of Sabilapur, Melandah Upazila, Jamalpur district. Within a few hours of vaccination all six children developed adverse events including high fever, vomiting, listlessness, convulsion, loose motion and skin rash. The symptoms that were suggestive of toxic shock were most serious in the 3 children, who died within 18-24 hours after vaccination. The other 3 children, who had milder symptoms, recovered.

The incident, which created alarm and concern in the community, was reported in national press and other media. The response from upazila, district, divisional and national levels was timely and appropriate. Immediately two separate enquiry committees were formed by the deputy commissioner of Jamalpur district and by the civil surgeon. High officials from EPI and DGHS, UNICEF and WHO immediately visited the area.

The dead bodies were sent for autopsy and viscera sent for chemical and histopathological tests. The implicated measles vaccine was seized and along with unused vaccine vials of the same batch and unused vials of diluent has been sent for appropriate tests in WHO accredited laboratory in Europe. Meanwhile, EPI has suspended the further use of the implicated batch (EU 2102) all over the country pending clearance by the appropriate authority. Measles vaccination with other batches of vaccine available in the field should be continued as usual.

High-level officials also met the community leaders of the village several times and the upazila to express profound grief at

the loss of invaluable lives. At the same time they recalled the service EPI has been providing to Bangladeshi children; it has been able to save lives of millions since its inception. EPI and DGHS will take all necessary measures to prevent these sort of untoward events in future.

The participants of these meeting (that included parents of the ill-fated children, local elite, political leaders and elected representatives) expressed their opinion that, despite the loss of lives in their community it is very important that the EPI activities continue as before. They agreed to provide support to EPI so that lost confidence in the program might be restored.

AEFI and loss of lives as a result of vaccination is a regrettable event. The cause of it may not be finally known before the inquests and different tests are completed, but measures should be taken at all levels to ensure safe injections to all children, especially in immunization. We must remember the basics of maintenance of cold chain, sterility, safe injection practices and safe disposal. For this reason it is even more important to complete the EPI refresher training in all districts and upazilas maintaining high quality of those trainings.

EPI is fairly confident that appropriate and timely actions taken by DGHS and the partner organizations will help in restoring people's faith in immunization program and strengthen it even further.

Shishu Shishu Proti Shishu Khuje Fero Proti Shishu !

Surveillance Summary for 1998-2003 (through Epidemiologic Week 37, September 7-13, 2003)

	1998	1999	2000	2001	2002	2003 ¹
Number of AFP cases	475	761	1138	1287	1365	891
No. of clinically confirmed polio cases	298	322	197	NA	NA	NA
No. of compatible cases according to virologic classification system	NA	NA	NA	36	0	0
No. of cases with isolation of wild poliovirus	10	29	1	0	0	0
No. of discarded polio cases (i.e., non-polio AFP)	165	439	941	1251	1365	801
No. of cases pending classification	0	0	0	0	0	90
Expected annual number of non-polio AFP cases (1/100,000 children <15 yr)	495	505	515	533	549	556

AFP Surveillance Performance Indicators:

Indicator	Target	1998	1999	2000	2001	2002	2003
1. Annual Non-Polio AFP rate in children < 15 years old	≥ 1/100,000	0.33	0.87	1.82	2.35	2.49	2.22 ²
2. Completeness of active reporting from hospitals	≥ 90%	46%	73%	95%	100%	100%	100%
3. Timeliness of active reporting from hospitals	≥ 80%	15%	44%	72%	88%	100%	100%
4. Suspected AFP cases investigated within 48 hours of notification	≥ 80%	89%	83%	93%	96%	96%	98%
5. Confirmed AFP cases with 2 stool specimens collected ≤ 14 days after paralysis onset	≥ 80%	59%	49%	68%	80%	89%	89%
6. Stool specimens arriving at laboratory ≤ 3 days after collection	≥ 80%	88%	81%	92%	97%	98%	100%
7. 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%	92%	97%	100%	100%	99%	100%
8. Confirmed AFP cases receiving a follow-up exam at least 60 days after paralysis onset	≥ 80%	80%	97%	95%	93%	99%	95% ³
9. Stool specimens with laboratory results ≤ 28 days after specimen receipt	≥ 80%	16%	58%	94%	99%	100%	98% ⁴
10. Stool specimens from which non-polio enterovirus (NPEV) was isolated	≥ 10%	5%	13%	21%	29%	28%	24%

¹ Data as of Sep 13, 2003; ² NPAPF rate annualized for cases according to Jul 12, 2003; ³ among cases with inadequate stools occurring up to Jun 15, 2003; ⁴ as of Aug 16, 2003:

AFP Surveillance Performance Indicators -- 2003

Epiweek 37, 2003

District	# Expected 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 ² (/1,00,000)	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	# eligible for 60-day follow-up ³	% with 60-day follow-up ³
Dhaka Division													
DCC ONLY	37	31			27	4	1.05	77%	100%	87%	100%	2	100%
DHAKA (NON DCC)	14	25			21	4	1.99	91%	100%	84%	100%	3	100%
FARIDPUR	8	26			24	2	5.11	92%	100%	92%	100%	2	100%
GAZIPUR	9	13			11	2	1.86	77%	100%	85%	100%	1	100%
GOPALGANJ	5	19			18	1	4.46	95%	100%	95%	100%	1	100%
JAMALPUR	9	15			15	0	3.10	73%	93%	80%	100%	3	100%
KISHOREGANJ	11	30			29	1	4.22	97%	97%	97%	100%	1	100%
MADARIPUR	5	18			18	0	5.94	83%	100%	89%	100%	2	100%
MANIKGANJ	6	12			12	0	2.79	67%	100%	75%	100%	3	100%
MUNSHIGANJ	6	18			16	2	4.02	100%	94%	100%	100%	0	NA
MYMENSINGH	19	21			18	3	1.08	67%	95%	76%	100%	3	100%
NARAYANGANJ	9	10			6	4	1.03	80%	100%	80%	100%	0	NA
NARSINGDHI	8	10			10	0	2.32	90%	100%	100%	100%	0	NA
NETROKONA	8	11			10	1	2.09	64%	82%	82%	100%	2	100%
RAJBARI	4	7			5	2	1.39	71%	100%	71%	100%	0	NA
SHARIATPUR	5	20			16	4	4.83	90%	100%	90%	95%	1	100%
SHERPUR	5	10			10	0	2.97	90%	100%	100%	100%	0	NA
TANGAIL	14	25			22	3	2.26	84%	100%	88%	100%	2	100%
Total-DHAKA	182	321	0	0	288	33	2.38	84%	98%	88%	100%	26	100%
CTG Division													
CCC ONLY	12	7			7	0	0.77	100%	100%	100%	100%	0	NA
CHITTAGONG (NON CCC)	20	27			26	1	2.04	93%	96%	85%	100%	3	100%
BANDARBAN	1	0			0	0	0.00	NA	NA	NA	NA	0	NA
BRAHMANBARIA	10	8			7	1	0.93	88%	88%	63%	100%	2	100%
CHANDPUR	10	22			20	2	3.34	91%	96%	96%	96%	0	NA
COMILLA	20	38			34	4	2.88	92%	97%	97%	100%	1	100%
COX'S BAZAR	8	14			12	2	1.86	93%	100%	93%	100%	1	100%
FENI	5	7			6	1	2.23	100%	100%	100%	100%	0	NA
KHAGRACHARI	2	6			6	0	5.57	50%	67%	50%	83%	3	100%
LAXMIPUR	6	13			13	0	3.71	92%	100%	92%	100%	1	100%
NOAKHALI	11	14			12	2	1.86	86%	100%	93%	100%	1	100%
RANGAMATI	2	4			4	0	3.71	75%	75%	100%	100%	0	NA
Total-CTG	107	160	0	0	147	13	2.22	90%	96%	91%	99%	12	100%
Sylhet Division													
SCC	1	0			0	0	0.00	NA	NA	NA	NA	0	NA
SYLHET (NON SCC)	10	12			11	1	1.30	100%	100%	100%	100%	0	NA
HABIGANJ	8	8			8	0	1.86	88%	88%	88%	100%	1	100%
MAULVIBAZAR	7	10			10	0	2.39	90%	90%	90%	100%	1	0%
SUNAMGANJ	9	12			10	2	1.86	92%	100%	83%	100%	1	100%
Total-SYL	35	42	0	0	39	3	1.75	93%	95%	91%	100%	3	67%
Raj Division													
RCC ONLY	2	3			3	0	1.86	67%	100%	100%	100%	0	NA
RAJSHAHI (NON RCC)	8	7			7	0	1.16	100%	100%	86%	100%	1	100%
BOGRA	13	13			13	0	1.71	100%	100%	100%	100%	0	NA
DINAJPUR	11	15			15	0	2.03	87%	100%	93%	100%	1	100%
GAIBANDHA	9	14			9	5	1.24	86%	93%	79%	100%	1	100%
JOYPURHAT	4	6			5	1	2.32	50%	100%	67%	100%	1	100%
KURIGRAM	8	11			11	0	2.55	82%	100%	64%	100%	4	100%
LALMONIRHAT	5	5			3	2	0.74	80%	100%	80%	100%	0	NA
NATORE	7	5			4	1	0.80	100%	100%	100%	100%	0	NA
NILPHAMARI	7	10			9	1	1.06	70%	100%	80%	100%	1	100%
NOAGOAN	10	22			18	4	2.60	96%	100%	86%	100%	2	100%
NOWABGANJ	6	4			4	0	0.93	100%	100%	100%	100%	0	NA
PABNA	9	13			10	3	1.65	77%	100%	69%	100%	3	100%
PANCHAGARH	4	9			7	2	1.86	78%	100%	78%	100%	2	100%
RANGPUR	11	8			6	2	0.68	86%	100%	75%	100%	1	0%
SIRAJGANJ	12	10			10	0	1.24	100%	100%	100%	100%	0	NA
THAKURGAON	5	10			9	1	3.34	80%	100%	70%	100%	3	100%
Total-RAJ	131	165	0	0	143	22	1.59	86%	99%	83%	100%	20	95%
Khulna Division													
KCC ONLY	5	1			1	0	0.37	100%	100%	100%	100%	0	NA
KHULNA (NON KCC)	7	8			8	0	1.86	75%	100%	75%	100%	2	100%
BAGERHAT	7	6			6	0	1.59	83%	100%	83%	100%	1	100%
CHUADANGA	4	9			7	2	3.25	89%	100%	100%	100%	0	NA
JESSORE	11	11			11	0	1.52	80%	91%	73%	100%	3	100%
JHENAIDAH	7	9			9	0	1.86	100%	100%	100%	100%	0	NA
KUSHTIA	7	15			13	2	2.39	73%	100%	87%	100%	1	0%
MAGURA	4	6			5	1	1.86	100%	83%	100%	100%	0	NA
MEHERPUR	3	2			1	1	0.62	100%	100%	100%	100%	0	NA
NARAIL	3	3			3	0	0.62	100%	100%	100%	67%	0	NA
SATKHIRA	8	9			6	3	1.16	78%	100%	89%	100%	1	0%
Total-KHU	66	79	0	0	70	9	1.60	85%	97%	89%	99%	8	75%
Barisal Division													
BCC	1	3			3	0	5.57	100%	100%	100%	100%	0	NA
BARISAL (NON BCC)	9	19			17	2	3.10	95%	90%	95%	100%	1	100%
BARGUNA	4	21			19	2	7.89	100%	100%	100%	100%	0	NA
BHOLA	7	20			20	0	5.31	85%	100%	90%	100%	2	100%
JHALAKHATI	3	15			14	1	6.81	93%	93%	100%	100%	0	NA
PATUAKHALI	6	19			16	3	4.02	84%	100%	84%	100%	2	100%
PIROJPUR	5	27			25	2	8.91	100%	100%	96%	100%	0	NA
Total_BAR	35	124	0	0	114	10	5.47	94%	98%	94%	100%	5	100%
National	556	891	0	0	801	90	2.22	87%	98%	89%	100%	74	95%

¹Data as of Epidemiologic Week 37, Sep 13, 2003; ² Non-Polio AFP rate is annualized for cases occurring up to Jul 12, 2003; ³ among cases with inadequate stools occurring up to Jun 15, 2003;

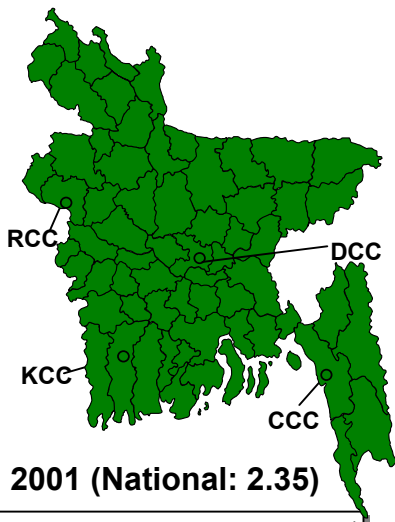
Disease Surveillance -- 2003

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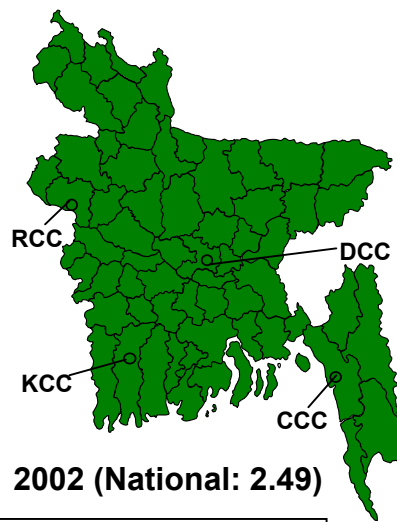
District	Neonatal Tetanus			Measles			AEFI
	Total Reported by Active Surveillance	Total reported by Passive Surveillance	Total Case Investigated	Total Reported by Active Surveillance	Total reported by Passive Surveillance	Total reported by Outbreak Investigation*	Total case reported
Dhaka Division							
DCC ONLY							
DHAKA (NON DCC)	9		10	488	58		
FARIDPUR	6	7	3	11	33	15	
GAZIPUR	2		2	17	12		3
GOPALGANJ	4	3	3	14	14		
JAMALPUR	3	1	3	54	39		7
KISHOREGANJ	11	10	7	48	103		5
MADARIPUR				2	3		4
MANIKGANJ	2		1	10			
MUNSHIGANJ	2		2	6	9		
MYMENSINGH	16	9	22	35	31	21	
NARAYANGANJ				12	2		
NARSINGDHI	3	1	3	9	30		
NETROKONA	4	5	4	5	42		4
RAJBARI	2				3		
SHARIATPUR	1		1	2	3		
SHERPUR	9	4	9	8	6		3
TANGAIL	1		1	47	37		4
Total-DHAKA	75	40	71	768	425	36	30
CTG Division							
CCC ONLY							
CHITTAGONG (NON CCC)	2	1	2	31	13		2
BANDARBAN				4	1	16	
BRAHMANBARIA	20	25	16	3	20		3
CHANDPUR				6	10		8
COMILLA	2	1	1	13	123		
COX'S BAZAR	2		1	19	34		
FENI	2	3	1	6	9		1
KHAGRACHARI	1	1		3	1		
LAXMIPUR	4	7	5	38	54		6
NOAKHALI	3	4	4	7	32		
RANGMATI				5	2		
Total-CTG	36	42	30	135	299	16	20
Sylhet Division							
SCC							
SYLHET (NON SCC)	4	1	3	46	3		
HABIGANJ	11	12	5	10	10	18	11
MAULVIBAZAR	9	7	2	6	25		
SUNAMGANJ	12	9	16	50	51		25
Total-SYL	36	29	26	112	89	18	36
Raj Division							
RCC ONLY							
RAJSHAHI (NON RCC)	2	2		6	6		2
BOGRA	2		3	1	4		1
DINAJPUR	3	3	2	10	15		4
GAIBANDHA	1	4	2	18	38	146	
JOYPURHAT				7	6		3
KURIGRAM				14	19	52	
LALMONIRHAT				8	13		
NATORE	5	5	6	2	4		3
NILPHAMARI	1	2	1	3	15		1
NOAGOAN	1	1	1	4	17		
NOWABGANJ	3	6	6	1	6	223	
PABNA	4	4	1	12	53		10
PANCHAGARH				7	6		
RANGPUR	4	2	3	8	10		
SIRAJGANJ	1	2		3	3		
THAKURGAON	1			12	13		1
Total-RAJ	28	31	25	116	228	421	25
Khulna Division							
KCC ONLY							
KHULNA (NON KCC)	5	3	4	5	14		1
BAGERHAT	4		2	20	64		1
CHUADANGA	5	4	4	12	35		
JESSORE	14	5	6	11	13		10
JHENAIDAH	7	5	5	3	11		5
KUSHTIA	3	4	1	2	14		7
MAGURA	6	4	5	9	23		5
MEHERPUR	2			15	14		2
NARAIL	5	4	4	1	3		8
SATKHIRA	4	2	3	1	21		4
Total-KHU	55	31	34	79	212	0	43
Barisal Division							
BCC							
BARISAL (NON BCC)	1			21	114	34	1
BARGUNA		1	1	14	65		1
BHOLA	1	1		9	56		1
JHALAKHATI	1		1	19	12		1
PATUAKHALI				14	28	83	2
PIROJPUR	1	1		6	3		
Total_BAR	4	3	2	83	278	117	6
National	234	176	188	1293	1531	608	160

Data as of Epidemiologic Week 36, Sep 6, 2003; *16 Measles Outbreak were Identified

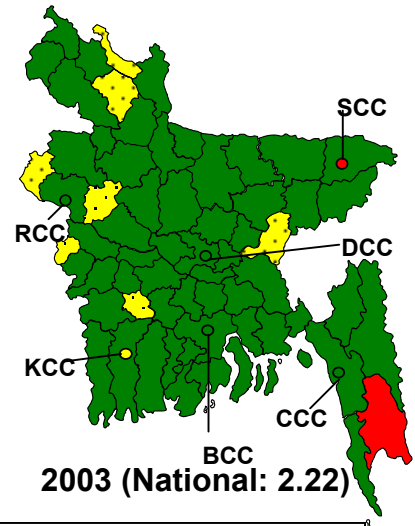
Non-Polio AFP Rate, by District, Bangladesh 2001-2003*



64 of 64 Districts (100%)
+ 4 CC reached target.

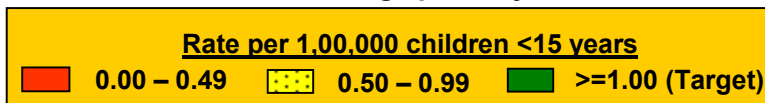


64 of 64 Districts (100%)
+ 4 CC reached target.

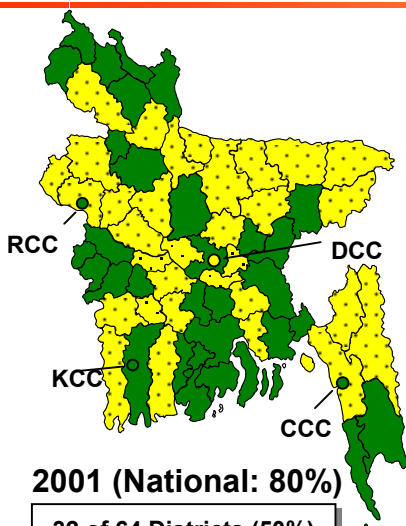


56 of 64 Districts (88%)
+ 4 of 6 CCs reached target.

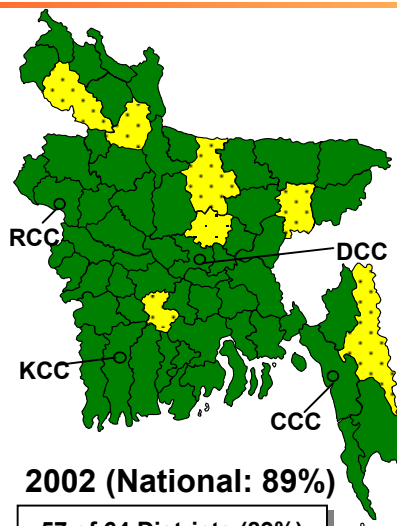
*Non-polio AFP rate annualized for cases occurring up to July 12, 2003



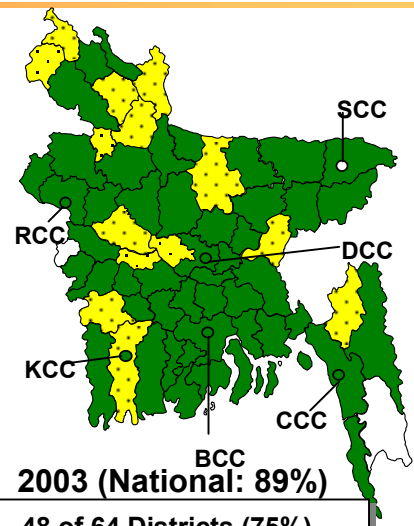
Percent of AFP Cases with Two Stool Samples Collected within 14 days of Paralysis Onset, by District, Bangladesh 2001-2003*



32 of 64 Districts (50%)
+ 3 CC reached target.



57 of 64 Districts (89%)
+ 4 CC reached target.



48 of 64 Districts (75%)
+ 5 of 6 CCs reached target.

*Data as of Epidemiologic Week 37, September 13, 2003

