



EPI Surveillance Bulletin



Epidemiologic Week 01: Jan 1 – 7, 2006

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AEFI Surveillance: A proven way to maintain people's confidence in vaccination program

Adverse Events Following Immunization (AEFI) is defined as a medical incident that takes place after an immunization, causes concern and is believed to be caused by immunization. Generally speaking, modern vaccines are safe and very much effective. But in a very rare event vaccination results in some adverse events which are caused either by inherent property of vaccine or by an error in transportation, storage, preparation and administration of vaccine or by coincidental events. Above all in some cases any relationship between cause and effect can not be established. The concept of AEFI surveillance was first introduced in Bangladesh in 2003 along with new surveillance system of AFP and other Vaccine Preventable Diseases (VPDs). Initially the surveillance of AEFI was facility based. From 2006 it will be also community based.

At any rate, an AEFI, regardless of its cause, may create a feeling of dissatisfaction in the community over EPI program and leads to low coverage. So, an effective AEFI surveillance system is at the root of preserving public confidence in immunization program. In the recent past AEFI surveillance has been emerged as an effective means of monitoring immunization safety and has contributed to the credibility and quality of the national immunization program. In order to increase immunization acceptance and improve the quality of services, surveillance of AEFI has been an integral part of our national immunization program. The goals of AEFI surveillance are to: 1. minimize the negative impact of AEFI on public health. 2. ensure the quality of vaccines used for immunization in the country. 3. ensure the quality of immunization services in the country.

In 2005, number of AEFI stands at 1872 compared to 1483 in 2004 mostly because of better reporting. Most of the cases occurred following DPT vaccination and most of them are abscesses. This year additional efforts have been given to improve AEFI surveillance. A comprehensive manual, 'Guideline for AEFI Surveillance' along with different forms for AEFI Case Investigation, AEFI Reporting, Line Listing and Compilation have been developed this year. The Guideline delineates steps and ways of reporting, investigating and managing an AEFI case. It sets standards and procedures for facility as well as community based AEFI surveillance.

More importantly, it guides how to deal with parents, community and media people following an occurrence of an AEFI.

A National AEFI Expert Review Committee has also been formed to assess & classify serious AEFI reported to the surveillance system. Eminent Pediatrician, Epidemiologist, Immunologist, Virologist and Representative of Directorate of Drug Administration are the members of the committee. This committee will also evaluate, analyze & make recommendations of actions to be taken, support EPI program in encouraging AEFI reporting and advice EPI and National Regulatory Authority at times of crisis.

In order to commission community based AEFI surveillance and to strengthen facility based surveillance, a two days' training of trainers (TOT) was conducted at EPI HQ in several batches in September and October. Surveillance Medical Officers, Divisional Coordinators, District Immunization Medical Officers and two trainers from each district (as assigned by the Civil Surgeon) were trained as national facilitators in the TOT. National trainers for districts included Deputy Civil Surgeon, Medical Officer to Civil Surgeon, Resident Medical Officer, Upazila Health & Family Planning Officer and Medical Officer-MCH. A Training Curriculum for doctors and managers along with Facilitators' Guide to train field workers & supervisors and Guide for field workers and Facilitators were developed to ensure quality training by trainers from EPI HQ, WHO and UNICEF.

Following national TOT, district level trainings of trainers were conducted in all 64 districts by December. National trainers facilitated the training in collaboration with SMOs and DIMOs. At City Corporation level, central level trainings of trainers were conducted. Afterwards upazila / zone level training for field workers and supervisors were conducted by the district trainers/central CC trainers and the EPIFs.

Presently one day training for doctors and nurses of Sadar Hospitals, Medical College Hospitals, Private/NGO Hospitals and other MOs of UHCs are being conducted in all districts and expected to be completed before Measles catch up campaign which is scheduled to begin on 25 February 2006.

Surveillance Summary for 1999-2005 (through Epidemiologic Week 01, January 1-7, 2006)

	1999	2000	2001	2002	2003	2004	2005 ¹
Number of AFP cases	761	1138	1287	1365	1128	1301	1453
No. of clinically confirmed polio cases	322	197	NA	NA	NA	NA	NA
No. of compatible cases according to virologic classification system	NA	NA	36	0	0	2	0
No. of cases with isolation of wild poliovirus	29	1	0	0	0	0	0
No. of discarded polio cases (i.e., non-polio AFP)	439	941	1251	1365	1128	1299	1372
No. of cases pending classification	0	0	0	0	0	0	81
Expected annual number of non-polio AFP cases (1/100,000 children <15 yr)*	505	515	533	549	556	563	1094

AFP Surveillance Performance Indicators:

Indicator	Target	1999	2000	2001	2002	2003	2004	2005
1. Annual Non-Polio AFP rate in children < 15 years old	≥ 2.0	0.87	1.82	2.34	2.49	2.03	2.31	2.51
2. Completeness of passive reporting from facilities	≥ 90%	66%	83%	65%	62%	67%	82%	91%
3. Timeliness of passive reporting from facilities	≥ 80%	30%	58%	38%	36%	62%	75%	84%
4. Suspected AFP cases investigated within 48 hours of notification	≥ 80%	83%	93%	96%	96%	98%	98%	99%
5. Confirmed AFP cases with 2 stool specimens collected ≤ 14 days after paralysis onset	≥ 80%	49%	68%	80%	89%	90%	90%	92%
6. Stool specimens arriving at laboratory ≤ 3 days after collection	≥ 80%	81%	92%	97%	98%	99%	99%	99%
7. 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%	97%	100%	100%	99%	100%	100%	100%
8. Confirmed AFP cases receiving a follow-up exam at least 60 days after paralysis onset	≥ 80%	97%	95%	93%	99%	100%	98%	98% ²
9. Stool specimens with laboratory results ≤ 28 days after specimen receipt	≥ 80%	58%	94%	99%	100%	100%	100%	99% ³
10. Stool specimens from which non-polio enterovirus (NPEV) was isolated	≥ 10%	13%	21%	29%	28%	23%	20%	20%

¹ Data as of January 7, 2006; ² among cases occurring up to October 24, 2005; ³ as of December 10, 2005, * Prior to 2005 NPAFP rate calculated as 1/100,000 children.

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AFP Surveillance Performance Indicators - 2005

Epiweek 1, 2006

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
Dhaka Division												
DCC only	61	54			52	2	1.70	96%	98%	93%	100%	85%
Dhaka (non DCC)	25	45			41	4	3.34	93%	100%	89%	98%	90%
Faridpur	15	23			23	0	3.01	96%	100%	96%	100%	95%
Gazipur	18	15			14	1	1.58	100%	100%	93%	100%	100%
Gopalganj	10	24			23	1	4.67	100%	100%	100%	100%	100%
Jamalur	18	32			32	0	3.48	88%	97%	88%	100%	96%
Kishoreganj	22	33			32	1	2.90	88%	100%	94%	100%	96%
Madaripur	10	22			22	0	4.59	91%	100%	96%	100%	100%
Manikganj	11	17			14	3	2.50	77%	100%	88%	100%	100%
Munshiganj	11	32			30	2	5.45	97%	100%	97%	100%	100%
Mymensingh	39	51			49	2	2.53	80%	98%	84%	100%	100%
Narayanganj	19	16			14	2	1.45	94%	100%	100%	100%	100%
Narsingdhi	17	19			19	0	2.24	90%	100%	90%	100%	100%
Netrokona	17	26			24	2	2.79	100%	100%	96%	100%	100%
Rajbari	8	11			11	0	2.65	100%	100%	100%	100%	91%
Shariatpur	9	26			23	3	4.88	96%	100%	92%	100%	100%
Sherpur	11	15			15	0	2.74	100%	93%	100%	100%	100%
Tangail	28	31			26	5	1.86	94%	100%	94%	100%	92%
Total-DHAKA	349	492	0	0	464	28	2.65	93%	99%	93%	100%	96%
CTG Division												
CCC only	20	22			22	0	2.17	100%	100%	96%	100%	100%
Chittagong (non CCC)	38	46			44	2	2.33	98%	100%	96%	100%	100%
Bandarban	3	3			3	0	2.19	100%	100%	100%	100%	100%
Brahmanbaria	21	25			24	1	2.34	92%	92%	88%	100%	100%
Chandpur	20	21			19	2	1.86	95%	95%	86%	100%	93%
Comilla	40	50			47	3	2.35	98%	98%	90%	100%	100%
Cox's Bazar	16	19			18	1	2.27	90%	100%	90%	100%	100%
Feni	10	26			26	0	4.96	96%	100%	92%	100%	100%
Khagrachari	5	7			7	0	2.75	86%	100%	86%	100%	100%
Laxmipur	13	24			23	1	3.56	88%	100%	88%	100%	100%
Noakhali	23	43			41	2	3.63	95%	98%	95%	100%	97%
Rangamati	5	7			5	2	2.06	57%	100%	71%	100%	100%
Total-CTG	214	293	0	0	279	14	2.61	94%	98%	91%	100%	99%
Sylhet Division												
SCC	4	3			3	0	1.57	100%	100%	100%	100%	100%
Sylhet (non SCC)	19	25			23	2	2.37	92%	100%	88%	100%	100%
Habiganj	15	14			13	1	1.70	79%	100%	86%	100%	83%
Maulvibazar	14	14			11	3	1.54	100%	100%	100%	100%	100%
Sunamganj	18	14			13	1	1.48	100%	100%	93%	92%	92%
Total-SYL	70	70	0	0	63	7	1.79	93%	100%	91%	99%	95%
Raj Division												
RCC only	3	5			5	0	2.88	100%	100%	100%	100%	100%
Rajshahi (non RCC)	17	16			15	1	1.80	75%	100%	69%	100%	100%
Bogra	26	13			12	1	0.91	85%	100%	92%	100%	100%
Dinajpur	23	27			22	5	1.89	78%	100%	89%	100%	100%
Gaibandha	18	20			20	0	2.19	90%	100%	90%	90%	100%
Joypurhat	7	13			11	2	2.98	85%	100%	85%	100%	100%
Kurigram	15	16			16	0	2.11	81%	100%	94%	100%	100%
Lalmonirhat	10	13			11	2	2.27	85%	100%	77%	100%	100%
Natore	13	13			13	0	2.00	100%	100%	100%	100%	100%
Nilphamari	14	12			12	0	1.75	100%	100%	100%	100%	100%
Noagoan	21	30			28	2	2.72	100%	97%	87%	96%	100%
Nowabganj	13	19			18	1	2.83	90%	100%	84%	100%	100%
Pabna	19	25			24	1	2.55	100%	100%	100%	100%	100%
Panchagarh	7	11			11	0	2.97	100%	100%	100%	100%	100%
Rangpur	22	15			13	2	1.17	100%	100%	93%	93%	100%
Sirajganj	24	25			25	0	2.12	88%	100%	96%	100%	95%
Thakurgaon	11	12			11	1	2.05	100%	100%	100%	100%	100%
Total-RAJ	263	285	0	0	267	18	2.03	91%	100%	91%	99%	100%
Khulna Division												
KCC only	8	8			7	1	1.76	100%	100%	100%	88%	100%
Khulna (non KCC)	13	15			14	1	2.22	93%	100%	93%	100%	100%
Bagerhat	13	24			23	1	3.58	100%	96%	100%	100%	100%
Chuadanga	9	11			11	0	2.42	82%	100%	73%	100%	100%
Jessore	22	31			31	0	2.85	97%	100%	94%	100%	100%
Jhenaidah	14	18			18	0	2.62	94%	100%	94%	100%	100%
Kushtia	15	19			18	1	2.36	90%	100%	90%	94%	93%
Magura	7	8			8	0	2.21	100%	100%	100%	88%	100%
Meherpur	5	8			7	1	2.68	88%	100%	88%	100%	100%
Narail	6	11			10	1	3.40	91%	91%	82%	100%	100%
Satkhira	16	15			14	1	1.73	87%	93%	87%	100%	100%
Total-KHU	128	168	0	0	161	7	2.52	94%	98%	92%	98%	99%
Barisal Division												
BCC	2	5			4	1	4.01	100%	100%	100%	100%	100%
Barisal (non BCC)	18	31			30	1	3.35	90%	100%	94%	97%	100%
Barguna	7	25			23	2	6.36	100%	100%	96%	100%	100%
Bhola	15	28			28	0	3.75	89%	100%	96%	100%	100%
Jhalakhati	6	21			19	2	6.54	95%	100%	95%	100%	95%
Patuakhali	13	15			15	0	2.34	93%	100%	87%	93%	79%
Pirojpur	9	20			19	1	4.07	100%	100%	100%	100%	100%
Total-BAR	70	145	0	0	138	7	3.94	95%	100%	95%	99%	97%
National	1094	1453	0	0	1372	81	2.51	93%	99%	92%	99%	98%

¹Data as of Epidemiologic Week 1 January 7, 2006, ² for cases occurring upto October 24, 2005

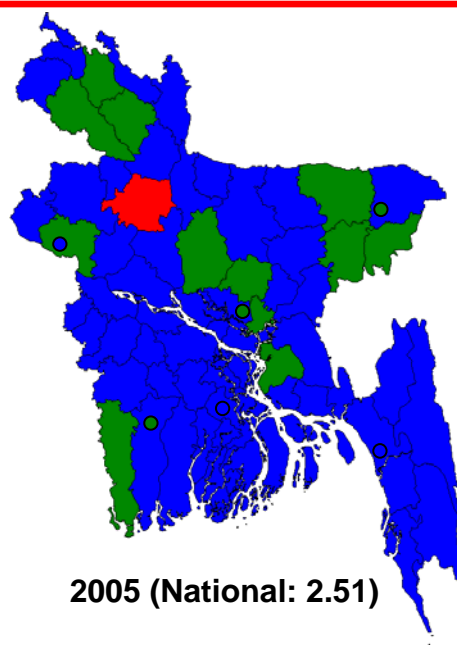
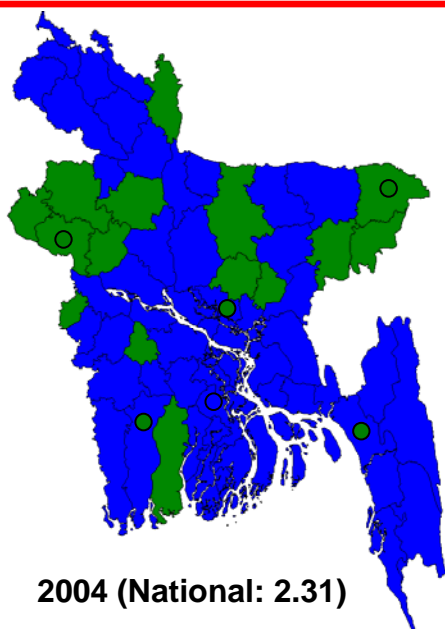
Disease Surveillance - 2005

EPI week 01, 2006

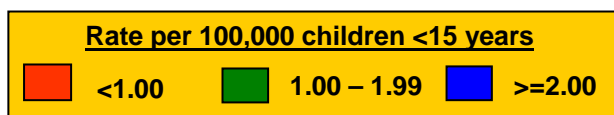
District	Neonatal Tetanus			Measles				AEFI # of case Reported
	# of case reported by Active Surveillance	# of case reported by Passive Surveillance	# of case Investigated	# of case reported by Active Surveillance	# of case reported by Passive Surveillance	Outbreak*		
						Number of Outbreak (% Investigated)	# of cases	
Dhaka Division								
DCC only	11	15	11	205	207	20(100%)	2791	3
Dhaka (non DCC)	4	3	4	26	51	3(100%)	480	29
Faridpur	2	5	5	5	54	1(100%)	79	76
Gazipur	3	3	2	15	39	1(100%)	79	7
Gopalganj	7	7	7	4	147	3(100%)	144	51
Jamalpur		2		4	36			17
Kishoreganj	26	23	15	58	145	7(100%)	364	27
Madaripur		1		16	176	7(100%)	510	59
Manikganj	2	1		3	27	7(100%)	1211	40
Munshiganj	2	4	2	4	288	3(100%)	175	18
Mymensingh	21	6	20	40	195	6(100%)	582	81
Narayanganj		1		83	75	1(100%)	73	30
Narsingdhi	1			19	44	1(100%)	53	9
Netrokona	2	8	8	6	186	7(100%)	920	27
Rajbari	1	3	2		49			8
Shariatpur	3	4	3	5	130	5(100%)	314	48
Sherpur	3	7	7		69	1(100%)	146	31
Tangail	4	3	5	15	27			26
Total-DHAKA	92	96	91	508	1945	73(100)%	7921	587
CTG Division								
CCC only	8	4	7	73	56	2(100%)	161	5
Chittagong (non CCC)	1	7	1	15	73	1(100%)	17	7
Bandarban				2	8			16
Brahmanbaria	9	17	11	2	33	3(100%)	150	7
Chandpur	4	3	3	7	87	3(100%)	57	44
Comilla	8	6	2	9	205	8(100%)	1020	6
Cox's Bazar	7	8	7	7	23	1(100%)	183	8
Feni	2	4	2	3	202	5(100%)	376	11
Khagrachari				2	28			2
Laxmipur	6	9	6	4	68	2(100%)	29	53
Noakhali	7	11	8	20	78	1(100%)	80	20
Rangamati				1	52			3
Total-CTG	52	69	47	145	913	26(100%)	2073	182
Sylhet Division								
SCC	1	1	2	165	180			1
Sylhet (non SCC)	4	4	6	162	308	4(100%)	176	19
Habiganj	9	12	2	23	130	5(100%)	399	37
Maulvibazar	7	6	1	27	168	3(100%)	317	16
Sunamganj	8	12	6	284	336	2(100%)	730	28
Total-SYL	29	35	17	661	1122	14(100%)	1622	101
Raj Division								
RCC only				14	241	5(100%)	329	47
Rajshahi (non RCC)	4	6	5	5	12	1(100%)	266	14
Bogra	2	5	3	7	28	2(100%)	75	165
Dinajpur	7	8	7	3	15	1(100%)	63	59
Gaibandha	2	5	8		28	1(100%)	61	44
Joypurhat	1	1	1	4	28			27
Kurigram		5	7		14			19
Lalmonirhat	1	1	1		19			2
Natore	4	4	4	16	178	7(100%)	703	25
Nilphamari	3	1	2	2	10			41
Noagoan	4	4	5	3	113	3(100%)	273	42
Nowabganj	6	3	6	6	8			10
Pabna	2	2	2	11	40			13
Panchagarh	1	3	2	2	73			10
Rangpur	10	8	9	7	7	2(100%)	47	31
Sirajganj	1	2	1	4	18	1(100%)	127	17
Thakurgaon				18	22	3(100%)	453	6
Total-RAJ	48	58	63	102	854	26(100%)	2397	572
Khulna Division								
KCC only	1	1	1	3	125	14(100%)	1050	11
Khulna (non KCC)	2	4	2	6	702	14(100%)	918	62
Bagerhat	4	4	2	8	301	13(100%)	672	24
Chuadanga	4	5	5	1	23			36
Jessore	5	4	3	10	44			60
Jhenaidah	2	2	2	3	19	2(100%)	99	36
Kushtia	1		1	4	70	2(100%)	176	14
Magura	1	2	1	2	18			20
Meherpur	2	3	2	3	34	1(100%)	108	9
Narail	10	9	10	1	21	1(100%)	66	15
Satkhira	3	3	2		20	2(100%)	176	38
Total-KHU	35	37	31	41	1377	49(100%)	3265	325
Barisal Division								
BCC	2	1	2	29	19			1
Barisal (non BCC)	4	6	2	33	69	1(100%)	48	18
Barguna		1		9	82			5
Bhola	4	7	5	3	72	1(100%)	108	27
Jhalakhati	3	3	1	24	22	1(100%)	68	17
Patuakhali	3	3	2	41	61	3(100%)	331	5
Pirojpur		3	2	15	32	5(100%)	665	32
Total-BAR	16	24	14	154	357	11(100%)	1220	105
National	272	319	263	1611	6568	199(100%)	18498	1872

Data as of Epidemiologic Week 01, January 7, 2006. * Only lab confirmed measles and mixed outbreaks

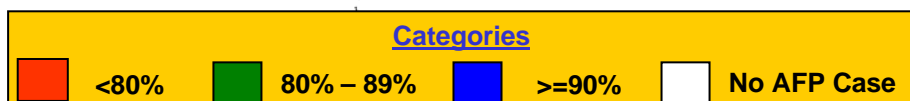
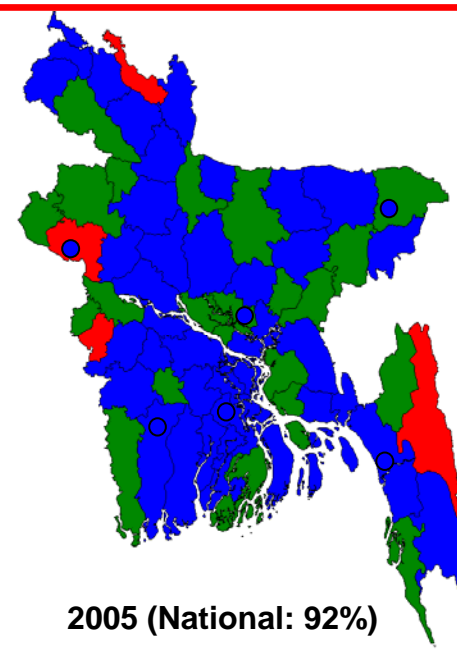
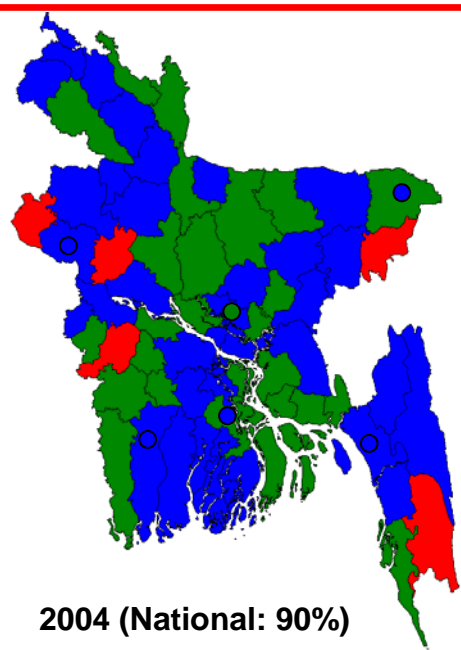
Annualized Non-Polio AFP Rate, by District, Bangladesh 2004-2005*



*Data as of Epidemiologic Week 01, January 7, 2006



Percentage of AFP Cases with Two Stool Samples Collected within 14 days of Paralysis Onset, by District, Bangladesh 2004-2005*



*Data as of Epidemiologic Week 01, January 7, 2006

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