



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

AEFI 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 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%	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.

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%	96%	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%	
Jamalpur	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	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	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	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	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	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%	
Jhalakathi	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	138	7	3.94	95%	100%	95%	99%	97%	
National	1094	1453	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

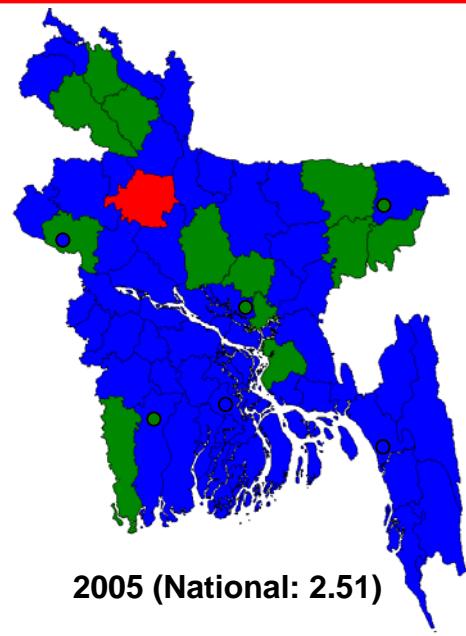
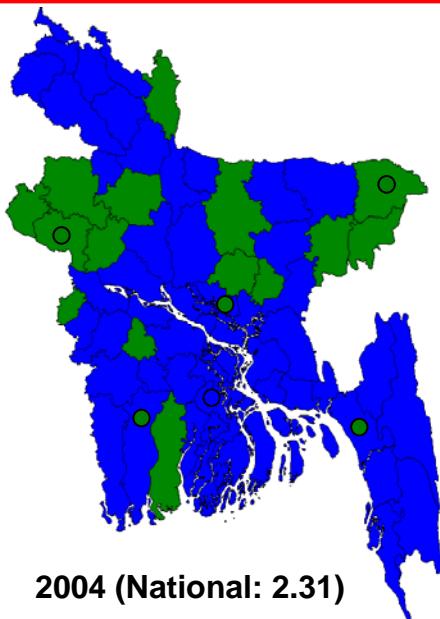
Disease Surveillance - 2005

EPI week 01, 2006

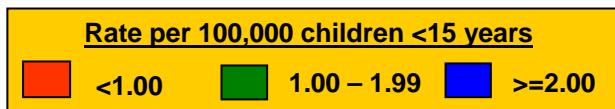
District	Neonatal Tetanus			Measles			AEFI # of case Reported	
	# of case reported by Active Surveillance	# of case reported by Passive Surveillance	# of case Investigated	# of case reported by Active Surveillance	# of case reported by Passive Surveillance	Outbreak*		
						Number of Outbreak % Investigated)		
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				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	
Narsinghdi	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

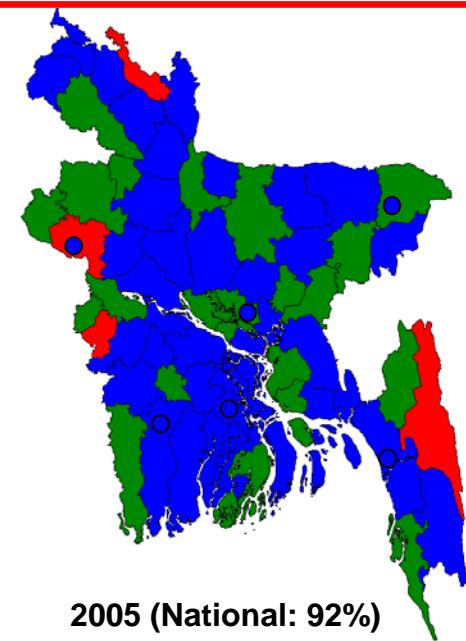
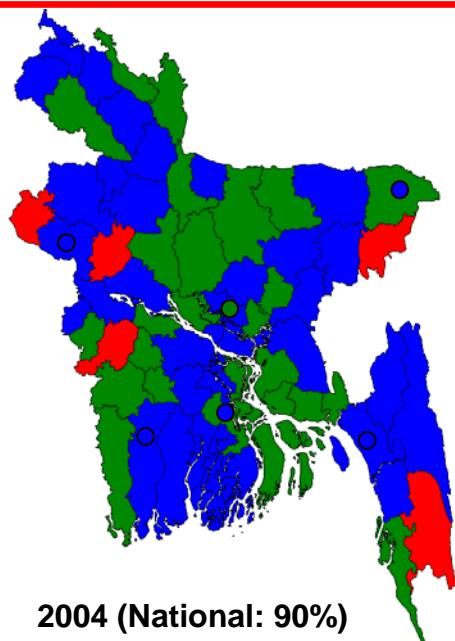
Annualized Non-Polio AFP Rate, by District, Bangladesh 2004-2005*



*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