



EPI Surveillance Bulletin

Data Quality Self Assessment (DQS): a method to evaluate immunization monitoring system

What is DQS? Data Quality Self-Assessment (DQS) is a flexible toolbox of methods used by the health staff to evaluate different aspects of the immunization monitoring system at Upazila, Municipality and Zone levels.

Uses of DQS: It aims to assist health staff in diagnosing problems relating to data accuracy and to provide orientation to improve Immunization monitoring as highlighted in the Reaching Every District (RED) approach.

DQS aims to determine:

- the accuracy of reported numbers of immunizations (reported coverage) and
- the quality of the immunization monitoring system

The assessment includes a review of data accuracy at different levels and a self-designed questionnaire reviewing monitoring quality issues (e.g. availability of vaccination cards, use of tally sheets, directly-observed recording and reporting practices). Data are then analyzed, with a view to identify strengths and weaknesses which need to be corrected.

The first DQS training was conducted in October 2005 where the national level staff from EPI HQ, WHO, UNICEF and the DIMOs attended. The training was facilitated by 3 external facilitators and one independent consultant from WHO-SEARO and WHO India.

To make DQS as a regular monitoring and evaluation tool for routine immunization activities at Upazila/Zone level, national EPI planned to train all SMOs and selected Health Managers (MO-CS, HO, AHO, ZMO, District EPI Supervisor) from 32 districts and 2 City Corporations where large numbers of unvaccinated children were identified by CES 2006. Accordingly training was organized for all SMOs and new DIMOs in May 2007 and for Health Managers by March 2008. The trained District Health Managers conducting DQS in their assigned area with financial support from EPI HQ.

In addition, the SMOs were advised to conduct one DQS and DIMOs to conduct two DQS per month at Upazila and Zone level. Accordingly the SMOs and DIMOs conducted several DQS in their assigned areas. All the findings of DQS were shared at Upazila, Zone level monthly staff meeting and District's and City Corporation's Monthly Coordination Meeting for further improvements of immunization monitoring system.

Reaching Every District (RED)

WHO, UNICEF, CDC, CVP/PATH and USAID have developed a strategy specifically aimed at overcoming the most common barriers to improve access to immunization services. The strategy aims to achieve sustainable and equitable access to quality immunization services for every child. This is known as "RED" or "Reaching Every District". The focus of RED is on planning at the sub-national administrative level appropriate for the country. This is usually the Upazila, Municipality and Zone level or equivalent, being the level closest to service delivery where there is potential managerial capacity to improve services.

There are five operational components of RED and these are-

1. Re-establishing outreach vaccination services
2. Supportive supervision
3. Linking services with communities
4. Monitoring and use of data for action
5. Planning and management of resources

Based on this RED strategy the National EPI started developing micro-plan at Upazila, Municipality and Zone level from the year 2003. A guideline was developed at that time which was reviewed and updated for developing micro-plan 2008.

All SMOs and DIMOs were trained in November on the new guideline for developing the micro-plan based on RED strategy. The training was conducted in two batches. Following the training an orientation meeting was held at District and City Corporation level in November with all relevant staff from Upazila, Municipality and Zone level.

All Upazilas, Municipalities, and Zones had prepared their micro-plan for 2008 and sent to respective District and City Corporation for final review. Accordingly Districts and City Corporations had reviewed the Upazila's and Zone's micro-plans and sent to EPI HQ for final review and approval.

Surveillance Summary

Description	2001	2002	2003	2004	2005	2006	2007	2008 ¹
Number of AFP cases	1287	1365	1128	1301	1458	1619	1844	806
No. of compatible cases according to virologic classification system	36	0	0	2	0	2	0	0
No. of cases with isolation of wild poliovirus	0	0	0	0	0	18	0	0
No. of discarded polio cases (i.e., non-polio AFP)	1251	1365	1128	1299	1458	1599	1844	668
No. of cases pending classification	0	0	0	0	0	0	0	138
Expected annual number of non-polio AFP cases (1/100,000 children <15 yr)*	533	549	556	563	1094	1114	1135	1153

AFP Surveillance Performance Indicators

Indicators	Target	2001	2002	2003	2004	2005	2006	2007	2008 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	2.51
02 Completeness of passive reporting from facilities	≥ 90%	65%	62%	67%	82%	91%	89%	90%	93%
03 Timeliness of passive reporting from facilities	≥ 80%	38%	36%	62%	75%	84%	83%	85%	88%
04 Suspected AFP cases investigated within 48 hours of notification	≥ 80%	96%	96%	98%	98%	99%	100%	99%	99%
05 Confirmed AFP cases with 2 stool specimens collected within 14 days after paralysis onset	≥ 80%	80%	89%	90%	90%	92%	93%	92%	94%
06 Stool specimens arriving at laboratory within 3 days after collection	≥ 80%	97%	98%	99%	99%	98%	99%	100%	100%
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%	99%
08 Confirmed AFP cases receiving a follow-up exam at least 60 days after paralysis onset	≥ 80%	93%	99%	100%	98%	99%	100%	100%	90% 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%	95% ³
10 Stool specimens from which non-polio enterovirus (NPEV) was isolated	≥ 10%	29%	28%	23%	20%	20%	15%	15%	23%

¹ Data as of June 14, 2008; ² among cases occurring up to March 30, 2008; ³ as of June 2, 2008, * Prior to 2005 NPAFP rate calculated as 1/100,000 under 15 children

AFP Surveillance Performance Indicators, 2007 - 2008

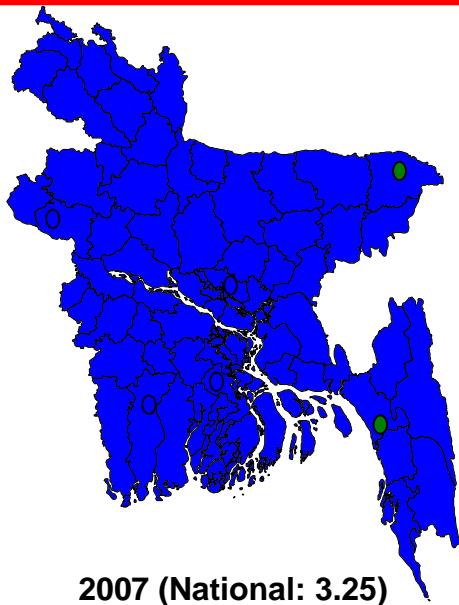
District	Minimum operational target of non-polio AFP		Total # AFP ¹		Wild polio-virus isolated		# Compatible cases	Non- Polio AFP cases ¹		Pending final classif. ¹		Annualized Non-polio AFP Rate ¹		Notification within 10 d after paralysis onset ¹		Investigation within 48 h after notification ¹		% with 2 stools within 14 days ¹		Stool sample arriving to lab within 72 hrs ¹		% with 60-day follow-up ²	
	2007	2008	2007	2008	2007	2008		2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008
Dhaka Division																							
Dhaka (non DCC)	27	28	47	24				47	21	0	3	3.47	3.20	91%	96%	100%	100%	91%	92%	100%	100%	100%	80%
DCC only	67	71	77	37				77	31	0	6	2.29	1.90	91%	92%	100%	100%	94%	97%	100%	100%	100%	83%
Faridpur	16	16	44	16				44	10	0	6	5.58	2.71	95%	100%	100%	100%	93%	100%	100%	100%	100%	NA
Gazipur	18	19	23	14				23	13	0	1	2.52	3.04	96%	100%	100%	100%	96%	100%	100%	100%	100%	67%
Gopalganj	10	10	19	14				19	13	0	1	3.79	5.57	100%	100%	100%	100%	89%	100%	100%	100%	100%	NA
Jamalpur	19	19	49	26				49	26	0	0	5.17	5.86	96%	96%	98%	85%	94%	100%	100%	100%	100%	NA
Kishoreganj	23	23	34	20				34	16	0	4	3.02	3.04	85%	95%	100%	100%	88%	95%	100%	95%	100%	100%
Madaripur	10	10	22	13				22	11	0	2	4.52	4.87	100%	100%	100%	100%	100%	100%	92%	100%	100%	100%
Manikganj	11	12	17	8				17	7	0	1	2.97	2.62	100%	100%	100%	100%	94%	100%	100%	100%	100%	100%
Munshiganj	11	11	26	12				26	12	0	0	4.65	4.61	92%	100%	100%	100%	96%	100%	100%	100%	100%	100%
Mymensingh	40	40	49	25				49	19	0	6	2.47	2.05	90%	88%	100%	100%	90%	92%	100%	100%	100%	100%
Narayanganj	20	20	30	13				30	13	0	0	2.99	2.75	87%	100%	100%	100%	90%	100%	100%	100%	100%	100%
Narsingdh	18	18	24	13				24	12	0	1	2.71	2.87	88%	100%	100%	100%	92%	100%	100%	100%	100%	100%
Netrokona	18	18	42	13				42	13	0	0	4.75	3.14	93%	92%	100%	100%	86%	100%	100%	100%	100%	100%
Rajbari	9	9	13	6				13	5	0	1	3.05	2.51	100%	100%	100%	100%	100%	100%	100%	100%	100%	NA
Sariatpur	10	10	21	12				21	10	0	2	4.34	4.42	100%	92%	100%	92%	95%	92%	100%	100%	100%	0%
Sherpur	11	11	21	8				21	7	0	1	3.75	2.68	81%	100%	100%	100%	90%	100%	100%	100%	100%	50%
Tangail	28	29	42	22				42	17	0	5	2.96	2.57	86%	77%	100%	100%	93%	91%	100%	100%	100%	100%
Total-DHAKA	366	374	600	296	0	0	0	600	256	0	40	3.29	2.97	92%	95%	100%	98%	92%	97%	100%	100%	88%	
CTG Division																							
Bandarban	3	3	4	1				4	1	0	0	2.78	1.47	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Brahmanbaria	21	21	40	13				40	13	0	0	3.81	2.65	90%	92%	98%	100%	90%	100%	100%	100%	100%	100%
Chandpur	22	22	34	13				34	10	0	3	3.14	1.94	94%	100%	100%	100%	94%	85%	100%	100%	100%	100%
Chittagong (non CCC)	39	39	53	19				53	14	0	5	2.74	1.55	92%	89%	100%	100%	91%	89%	100%	100%	100%	100%
CCC only	22	22	20	11				20	5	0	6	1.85	0.97	100%	100%	95%	100%	95%	100%	100%	100%	100%	NA
Comilla	41	42	81	29				81	28	0	1	3.94	2.91	98%	100%	100%	97%	94%	97%	100%	97%	100%	75%
Cox's Bazar	17	17	27	7				27	7	0	0	3.25	1.79	93%	86%	100%	93%	86%	100%	100%	100%	100%	100%
Feni	11	11	24	9				24	8	0	1	4.44	3.16	96%	100%	100%	96%	89%	100%	100%	100%	100%	100%
Khagrachari	6	6	12	4				12	4	0	0	4.30	2.97	92%	100%	100%	100%	100%	92%	100%	100%	100%	NA
Lakshmipur	13	13	34	9				34	6	0	3	5.13	1.94	97%	78%	100%	100%	67%	100%	100%	100%	100%	100%
Noakhali	23	24	27	13				27	12	0	1	2.32	2.20	96%	100%	96%	100%	89%	100%	100%	100%	100%	100%
Rangamati	5	5	7	2				7	2	0	0	2.73	1.64	100%	100%	86%	100%	100%	100%	100%	100%	50%	NA
Total-CTG	223	225	363	130	0	0	0	363	110	0	20	3.27	2.11	95%	95%	99%	99%	94%	92%	99%	99%	96%	
Sylhet Division																							
Habiganj	16	16	18	11				18	8	0	3	2.29	2.17	89%	91%	100%	91%	89%	82%	100%	100%	100%	100%
Moulvi Bazar	15	15	25	13				25	8	0	5	3.39	2.31	92%	85%	100%	92%	77%	100%	100%	100%	100%	100%
Sunamganj	18	18	33	6				33	4	0	2	3.65	0.94	79%	100%	97%	100%	82%	100%	100%	100%	100%	100%
Sylhet (non SCC)	20	20	29	12				29	9	0	3	2.90	1.92	83%	83%	100%	79%	92%	100%	100%	100%	100%	100%
SCC only	5	5	4	2				4	2	0	0	1.73	1.71	100%	50%	100%	100%	100%	100%	100%	100%	NA	NA
Total-SYL	74	74	109	44	0	0	0	109	31	0	13	2.98	1.80	85%	86%	99%	98%	85%	86%	100%	100%	100%	
Raj Division																							
Bogra	27	27	31	12				31	10	0	2	2.29	1.58	77%	92%	94%	100%	77%	92%	100%	100%	100%	100%
Dinajpur	24	24	35	10				35	7	0	3	2.91	1.24	86%	90%	97%	100%	91%	90%	100%	100%	100%	100%
Gaibandha	19	19	24	15				24	12	0	3	2.58	2.77	88%	80%	100%	87%	88%	93%	100%	100%	100%	100%
Jyapurhat	8	8	13	4				13	3	0	1	3.45	1.71	85%	75%	100%	92%	100%	100%	100%	100%	100%	100%
Kurigram	15	16	26	7				26	6	0	1	3.36	1.66	85%	100%	100%	88%	86%	100%	100%	100%	100%	0%
Lalmonirhat	10	10	13	5				13	2	0	3	2.60	0.85	92%	80%	92%	77%	80%	100%	100%	100%	100%	NA
Natore	13	13	17	19				17	18	0	1	2.56	5.81	94%	95%	100%	100%	100%	100%	100%	100%	100%	75%
Nilphamari	14	14	21	12				21	9	0	3	2.97	2.71	100%	100%	90%	100%	95%	100%	100%	100%	100%	50%
Noagoan	21	21	24	12				24	12	0	0	2.28	2.45	92%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Nowabganj	13	13	26	7				26	7	0	0	3.94	2.25	96%	71%	100%	100%	85%	100%	100%	100%	100%	100%
Pabna	19	20	24	8				24	6	0	2	6.27	3.34	92%	100%	100%	88%	96%	100%	100%	100%	100%	100%
Panchagarh	8	8	24	8				24	4	0	0	2.78	0.99	100%	100%	100%	88%	75%	100%	100%	100%	100%	100%
Rajshahi (non RCC)	17	18	24	4																			

Disease Surveillance, 2007 - 2008

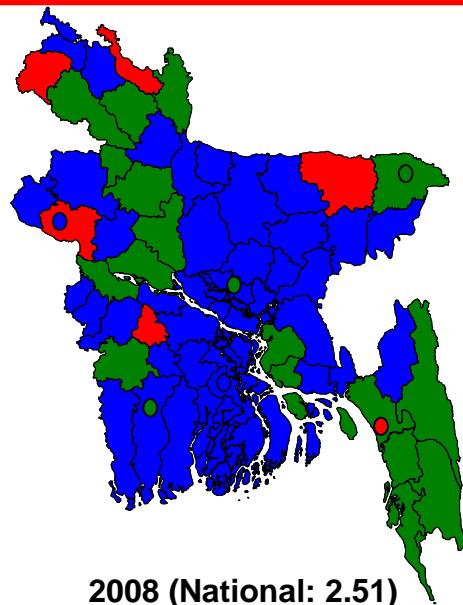
District	Neonatal Tetanus						Measles						AEFI			
	# of case reported by Active Surveillance		# of case reported by Passive Surveillance		# of case Investigated		# of case reported by Active Surveillance		# of case reported by Passive Surveillance		Outbreak*		# of case Reported			
	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008		
Dhaka Division																
Dhaka (non DCC)			4					1	81	45				38 26		
DCC only	2	2	5	1		4	18	13	444	394	2(100%)		521	71 54		
Faridpur	1		3		1				33	18				50 39		
Gazipur	2	3	4	1	1	3	4	1	5	3	1(100%)		177	11 4		
Gopalganj	1		3						19	8				10 15		
Jamalpur	2	1	7	2	2	1			44	24				31 16		
Kishoreganj	15	2	15	2	5	1	11	5	13	18				21 21		
Madaripur	1		1		1		1		38	9				53 28		
Manikganj			3				2		124	59				43 22		
Munshiganj			3				3	2	158	130				40 26		
Mymensingh	10	2	13	1	12	1	7		14	23				24 18		
Narayanganj	1		2		1			1	47	37	1(100%)		80	23 11		
Narsinghdi			1				1		2					20 4		
Netrokona	3		5		5		3		57	15				29 11		
Rajbari									21	11				9 17		
Shariatpur	1		1					2	20	17				41 24		
Sherpur	1		2						20	11				11 10		
Tangail	3		1		3		18	5	21	7				16 22		
Total-DHAKA	43	10	73	7	31	10	68	30	1,161	829	4(100%)		778	0	541	368
CTG Division																
Bandarban									6					4 2		
Brahmanbaria	9	2	12		10	2					7			6 16		
Chandpur			1				1	3	52	20				21 17		
Chittagong (non CCC)	2		5				1	3	6	8				3 7		
CCC only	2		2		2		3	1	6					2 5		
Comilla	1		2		1			1	31	3				5 6		
Cox's Bazar	2		1		2		1		3					9 2		
Feni	6		8		6				27	4				7 11		
Khagrachari	1		1		1				2	1				7 1		
Laxmipur	3	1	2	1	4	1			32	31				15 7		
Noakhali	9		6		10		3	2	2	2				6 8		
Rangamati							1		7					1		
Total-CTG	35	3	40	1	36	3	10	10	174	76			0	0	86	82
Sylhet Division																
Habiganj	7	1	6	1	7	2			14	3				23 12		
Maulvibazar	6	2	5	3	6	3	1		22	8				12 2		
Sunamganj	11	2	11	1	14	2	31	21	46	30				13 12		
Sylhet (non SCC)	3	5	3	3	3	5	2	5	35	21				8 3		
SCC only								8	16	6	5			1 2		
Total-SYL	27	10	25	8	30	12	42	42	123	67			0	0	57	31
Raj Division																
Bogra	4	1	2	3	5	2	9	2	12	11				89 39		
Dinajpur	4	1	7	1	4	1		1	10	10				29 19		
Gaibandha	1		4	1	3	2								10 14		
Joypurhat									7	7				15 9		
Kurigram	1			1						2				3 8		
Salmonirhat	1	1							4					16 12		
Natore	3		4		3		5	1	25	33				18 29		
Nilphamari						1								18 5		
Noagoan	3	1	2	2	3	1	4	3	29	47				22 22		
Nowabganj	1		1		1		2		10	18				19 7		
Pabna	1	2	3	2	1				9	8				19 17		
Panchagarh	1		2		1				6	2				18 5		
Rajshahi (non RCC)	2		1		2	1	7	3	20	5				29 15		
RCC only								1	161	50	1 (100%)		49		27 29	
Rangpur	2													7 15		
Sirajganj	1			1		2			12					7 9		
Thakurgaon	2		5		2		1	1	3	1				38 14		
Total-RAJ	27	6	31	9	27	8	30	12	308	194	1 (100%)		49	0	384	268
Khulna Division																
Bagerhat	3	1	5	2	2	1	1		17	36				43 20		
Chuadanga			1				2	1	40	22				22 7		
Jessore	4		6		4		2	5	5	32				21 6		
Jhenaidah	1		1		1		2		7	4				18 11		
Khulna (non KCC)	2				1			1	46	6				38 16		
KCC only	1		2					1	1	4				7 4		
Kushтия	5	1	4		5	1	4		82	31				26 7		
Magura							3	1	21	19				9 5		
Meherpur			1						20	8				9 2		
Narail	4		2		5		1		9					5 5		
Satkhira	2		2	1	2	1	1		18	3				28 16		
Total-KHU	22	2	24	3	20	3	16	9	266	165			0	0	226	99
Barisal Division																
Barguna	4		2	1			4		18	8				11 5		
Barisal (non BCC)	1		1	1	3	1	4	2	8	6				27 16		
BCC only	1				1		3							0 0		
Bhola	4	2	6	3	5	2			13	3				16 7		
Jhalakhati	1	2		1	1	2	3		5					10		
Patuakhali	1		3				14		21	4				6 2		
Pirojpur			1	1			1			1				24 3		
Total BAR	12	4	13	7	10	5	29	2	65	22			0	0	94	33
National	166	35	206	35	154	41	195	105	2,097	1,353	5 (100%)	0	827	0	1,388	881

Data as of 15 June 2008, * Only Lab Confirmed Measles and Mixed Type outbreak Cases

Annualized Non-Polio AFP Rate, by District, Bangladesh 2007-2008*

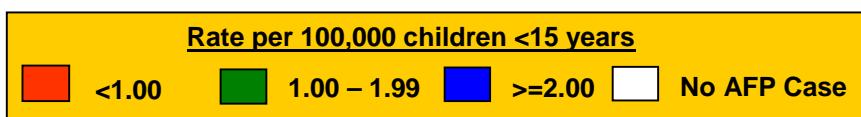


2007 (National: 3.25)

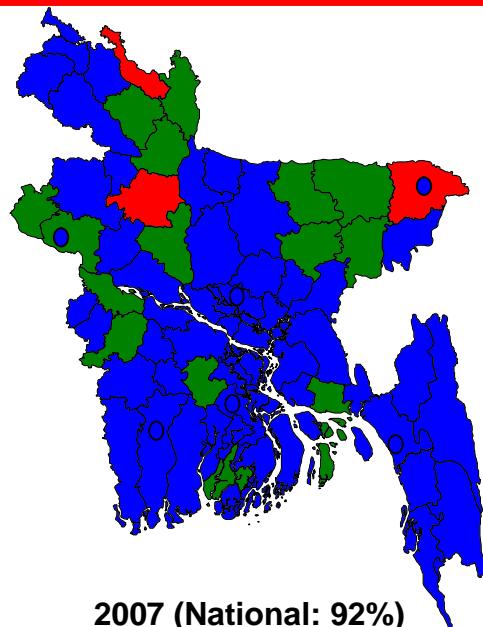


2008 (National: 2.51)

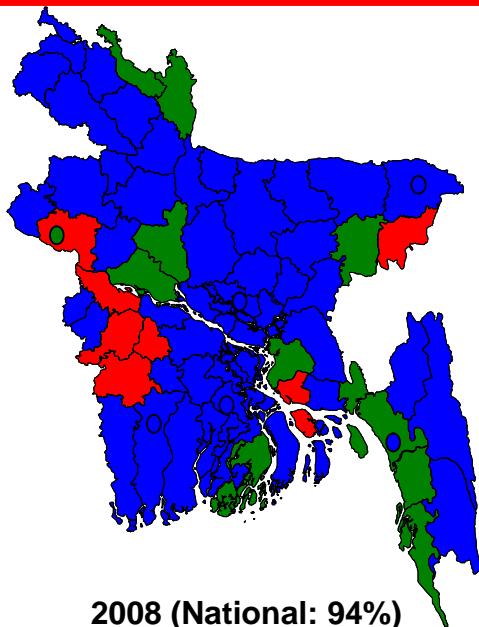
*Data as of 14 June, 2008



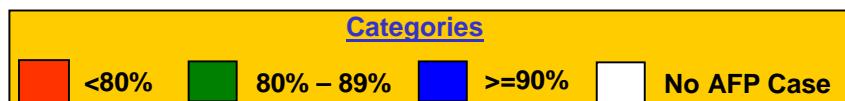
Percentage of AFP Cases with Two Stool Samples Collected within 14 days of Paralysis Onset, by District, Bangladesh 2007-2008*



2007 (National: 92%)



2008 (National: 94%)



*Data as of 14 June, 2008

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