



# EPI Surveillance Bulletin

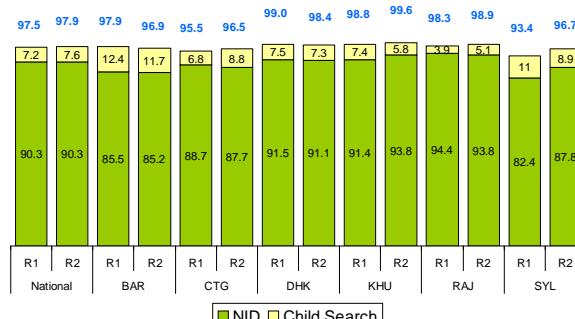
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## 2<sup>nd</sup> round of 17<sup>th</sup> NIDs conducted successfully: challenges to sustain Surveillance and Improve Routine EPI

Bangladesh has successfully conducted the 2<sup>nd</sup> round of 17<sup>th</sup> NIDs. Coverage in the 1<sup>st</sup> round was 97.5% nationally. Analysis of data from the Independent Observers Checklists showed that high coverage in this 2<sup>nd</sup> round has also been achieved. Independent observers visited 2888 sites in 62 Districts including 6 City Corporations and among these sites they visited 1905 fixed sites on the day of the NID and evaluated 9570 children during the Child to Child search were completed. According to the findings of Independent Observers checklists 97.9% of the targeted 20.4 million children of 0-59 months old were given OPV. Of those children 90.3% were vaccinated at the fixed sites and 7.6% during house to house child search. Division wise coverage in the 2<sup>nd</sup> round is ranging from 96.5% in Chittagong to 99.6% in Khulna. 2.1% of the children were missed which represents 504,000 children.

### 17<sup>th</sup> NIDs Site and CTC Search Coverage By Round and by Division



National EPI takes the opportunity to thank all NID volunteers, field workers, health managers, government and NGO staff from different sectors, partner agencies and above all the general public and the parents of the children for their active role and support to make 17<sup>th</sup> NIDs such an exemplary success.

Bangladesh is maintaining polio free status for more than 2 years and the real challenge for the future is to sustain the high quality surveillance and increasing the coverage of routine EPI. We must ensure that all the AFP cases are detected and investigated timely, so that Bangladesh can be able to demonstrate its ability to detect any case of polio that might occur. It is also essential to strengthen routine EPI services to further minimize the number of susceptible children. A lower number of susceptible will minimize the chance of outbreak due to imported wild polio virus. EPI is adopting different approaches to strengthen its routine services including uniform session planning, introduction of RED strategies, training on cold chain and injection safety for all vaccinators.

In 2005 and 2006, EPI conducted phase by phase country wide Measles Catch-Up Campaign. From 15 July 2008, EPI has introduced Measles case based surveillance in all Health facilities. EPI has taken initiative for providing proper management of measles cases during outbreak investigation. EPI is currently planning for Measles Follow-Up Campaign in 2010.

### Surveillance Summary

Description	2001	2002	2003	2004	2005	2006	2007	2008 <sup>1</sup>
Number of AFP cases	1287	1365	1128	1301	1458	1619	1844	1787
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	1747
No. of cases pending classification	0	0	0	0	0	0	0	40
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 <sup>1</sup>
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	3.03
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%	87%
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%	92%
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%	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%	98% <sup>2</sup>
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%
10 Stool specimens from which non-polio enterovirus (NPEV) was isolated	≥ 10%	29%	28%	23%	20%	20%	15%	15%	23%

<sup>1</sup> Data as of January 24, 2009; <sup>2</sup> among cases occurring up to November 9, 2008; \* Prior to 2005 NPAFP rate calculated as 1/100,000 under 15 children

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**AFP Surveillance Performance Indicators, 2007 - 2008**

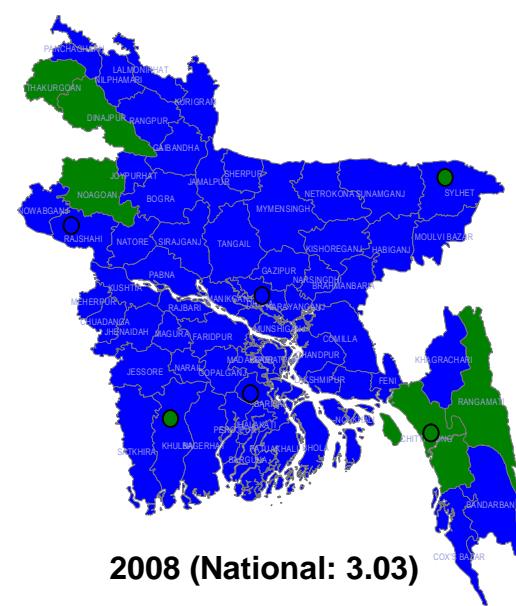
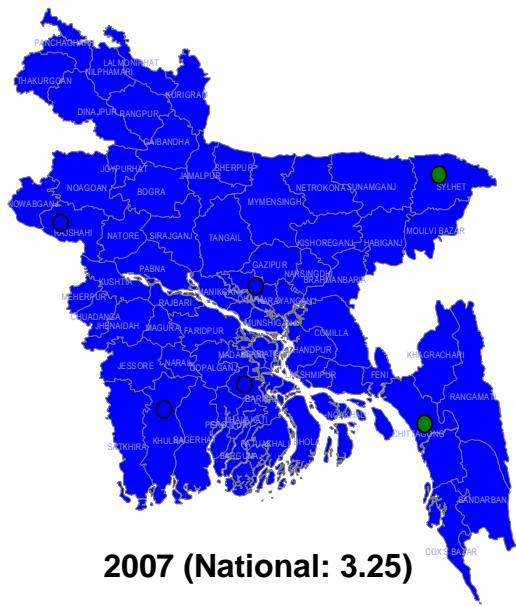
District	Minimum operational target of non-polio AFP		Total # AFP <sup>1</sup>		Wild polio-virus isolated		# Compatible cases		Non- Polio AFP cases <sup>1</sup>		Pending final classif. <sup>1</sup>		Annualized Non-polio AFP Rate <sup>1</sup>		Notification within 10 d after paralysis onset <sup>1</sup>		Investigation within 48 h after notification <sup>1</sup>		% with 2 stools within 14 days <sup>1</sup>		Stool sample arriving to lab within 72 hrs <sup>1</sup>		% with 60-day follow-up <sup>2</sup>			
	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008		
<b>Barisal Division</b>																										
Barguna	7	7	23	12					23	12	0	0	6.25	3.23	100%	100%	100%	87%	100%	100%	100%	100%	100%	100%	100%	
Barisal (non BCC)	18	18	48	50					48	50	0	0	5.30	5.50	92%	96%	100%	98%	90%	94%	100%	100%	100%	100%	100%	
BCC only	2	2	4	4					4	4	0	0	3.87	3.80	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Bhola	15	16	39	62					39	61	0	1	5.08	7.82	95%	94%	100%	100%	97%	97%	100%	100%	100%	100%	100%	
Jhalakati	6	6	12	13					12	13	0	0	4.10	4.42	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Patuakhali	13	13	35	25					35	24	0	1	5.30	3.58	97%	88%	100%	100%	97%	88%	97%	100%	100%	100%	100%	
Perojpur	10	10	18	21					18	21	0	0	3.79	4.38	100%	90%	100%	100%	90%	100%	100%	100%	100%	100%	100%	
<b>Total-BAR</b>	<b>71</b>	<b>72</b>	<b>179</b>	<b>187</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>179</b>	<b>185</b>	<b>0</b>	<b>2</b>	<b>5.01</b>	<b>5.13</b>	<b>96%</b>	<b>94%</b>	<b>100%</b>	<b>99%</b>	<b>94%</b>	<b>95%</b>	<b>99%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>		
<b>CTG Division</b>																										
Bandarban	3	3	4	4					4	4	0	0	2.78	2.71	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Brahmanbaria	21	21	40	35					40	34	0	1	3.81	3.20	90%	94%	98%	97%	90%	97%	100%	100%	100%	100%	100%	
Chandpur	22	22	34	34					34	32	0	2	3.14	2.86	94%	94%	100%	100%	94%	88%	100%	100%	100%	100%	100%	
Chittagong (non CCC)	39	39	53	43					53	39	0	4	2.74	1.99	92%	86%	100%	100%	91%	84%	100%	100%	100%	100%	100%	
CCC only	22	22	20	23					20	22	0	1	1.85	1.98	100%	87%	95%	100%	95%	87%	100%	100%	100%	100%	100%	
Comilla	41	42	81	61					81	61	0	0	3.94	2.93	98%	100%	100%	94%	98%	100%	98%	100%	93%	100%		
Cox's Bazar	17	17	27	20					27	20	0	0	3.25	2.35	93%	95%	100%	100%	93%	95%	100%	100%	100%	100%	100%	
Feni	11	11	24	18					24	18	0	0	4.44	3.28	96%	100%	100%	100%	96%	94%	100%	100%	100%	100%	100%	
Khagrachari	6	6	12	7					12	6	0	1	4.30	2.06	92%	100%	100%	100%	86%	92%	100%	100%	100%	NA	100%	
Lakshmipur	13	13	34	20					34	20	0	0	5.13	2.98	97%	90%	100%	100%	85%	100%	100%	100%	100%	100%	100%	
Noakhali	23	24	27	27					27	25	0	2	2.32	2.11	96%	96%	96%	89%	85%	100%	100%	100%	100%	100%	100%	
Rangamati	5	5	7	3					7	3	0	0	2.73	1.13	100%	67%	86%	100%	67%	100%	100%	50%	100%	100%	100%	100%
<b>Total-CTG</b>	<b>223</b>	<b>225</b>	<b>363</b>	<b>295</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>363</b>	<b>284</b>	<b>0</b>	<b>11</b>	<b>3.27</b>	<b>2.51</b>	<b>95%</b>	<b>94%</b>	<b>99%</b>	<b>99%</b>	<b>94%</b>	<b>91%</b>	<b>100%</b>	<b>100%</b>	<b>99%</b>	<b>99%</b>		
<b>Dhaka Division</b>																										
Dhaka (non DCC)	27	28	47	46					47	46	0	0	3.47	3.23	91%	89%	100%	100%	91%	87%	100%	100%	100%	100%	100%	
DCC only	67	71	77	88					77	86	0	2	2.29	2.44	91%	86%	100%	100%	94%	90%	100%	100%	100%	100%	93%	
Faridpur	16	16	44	34					44	31	0	3	5.58	3.87	95%	88%	100%	97%	93%	88%	100%	100%	100%	100%	100%	
Gazipur	18	19	23	27					23	27	0	0	2.52	2.92	96%	93%	100%	100%	96%	93%	100%	100%	100%	100%	100%	
Gopalganj	10	10	19	30					19	28	0	2	3.79	5.53	100%	77%	100%	97%	89%	77%	100%	100%	100%	100%	100%	
Jamalpur	19	19	49	53					49	52	0	1	5.17	5.41	96%	96%	98%	92%	94%	98%	100%	100%	100%	100%	83%	
Kishoreganj	23	23	34	40					34	39	0	1	3.02	3.42	85%	93%	100%	100%	88%	95%	100%	100%	100%	100%	83%	
Madaripur	10	10	22	20					22	20	0	0	4.52	4.08	100%	100%	100%	100%	95%	100%	100%	100%	100%	100%	100%	
Manikganj	11	12	17	18					17	18	0	0	2.97	3.11	100%	94%	100%	100%	94%	100%	100%	100%	100%	100%	100%	
Munshiganj	11	11	26	28					26	28	0	0	4.65	4.97	92%	100%	100%	96%	96%	100%	100%	100%	100%	100%	100%	
Mymensingh	40	40	49	47					49	45	0	2	2.47	2.24	90%	83%	100%	98%	90%	87%	100%	100%	100%	100%	94%	
Narayanganj	20	20	30	27					30	24	0	3	2.99	2.35	87%	93%	100%	100%	90%	93%	100%	100%	100%	100%	89%	
Narsingdhi	18	18	24	25					24	25	0	0	2.71	2.76	88%	100%	100%	92%	100%	100%	100%	100%	100%	100%	100%	
Netrokona	18	18	42	28					42	27	0	1	4.75	3.01	93%	89%	100%	100%	86%	96%	100%	100%	100%	100%	100%	
Rajbari	9	9	13	14					13	14	0	0	3.05	3.24	100%	86%	100%	93%	100%	86%	100%	100%	100%	100%	100%	100%
Sariatpur	10	10	21	29					21	29	0	0	4.34	5.91	100%	86%	100%	97%	95%	93%	100%	100%	100%	100%	100%	100%
Sherpur	11	11	21	18					21	18	0	0	3.75	3.18	81%	100%	100%	100%	90%	100%	100%	100%	100%	100%	89%	100%
Tangail	28	29	42	46					42	46	0	0	2.96	3.21	86%	87%	100%	100%	93%	91%	100%	100%	100%	100%	100%	100%
<b>Total-DHAKA</b>	<b>366</b>	<b>374</b>	<b>600</b>	<b>618</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>600</b>	<b>603</b>	<b>0</b>	<b>15</b>	<b>3.29</b>	<b>3.23</b>	<b>92%</b>	<b>90%</b>	<b>100%</b>	<b>98%</b>	<b>92%</b>	<b>92%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>96%</b>		
<b>Khulna Division</b>																										
Bagerhat	13	13	19	19					19	19	0	0	2.92	2.90	100%	100%	100%	95%	100%	100%	100%	100%	100%	100%	100%	
Chuadanga	10	10	14	23					14	23	0	0	2.95	4.73	93%	96%	100%	100%	100%	87%	86%	100%	100%	100%	100%	
Jessore	22	23	38	34					38	34	0	0	3.38	2.98	95%	88%	97%	100%	95%	82%	100%	100%	100%	100%	100%	
Jhenaidah	14	14	23	20					23	20	0	0	3.25	2.79	100%	95%	100%	100%	87%	85%	100%	100%	100%	100%	100%	
Khulna (non KCC)	13	13	25	22					25	21	0	1	3.90	3.25	96%	95%	100%	100%	95%	100%	100%	100%	100%	100%	100%	
KCC only	8	8	10	8					10	8	0	0	2.42	1.90	100%	88%	100%	100%	90%	100%	100%	100%	100%	100%	67%	
Kushthia	16	16	21	27					21	27	0	0	2.66	3.37	90%	96%	95%	89%	86%	93%	100%	100%	100%	100%	100%	
Magura	7	8	14	14					14	14	0	0	3.74	3.67	100%	86%	100%	100%	86%	100%	100%	100%	100%	100%	100%	
Meherpur	5	6	15	13					15	13	0	0	5.54	4.71	93%	92%	93%	100%	93%	100%	100%	100%				

**Disease Surveillance, 2007 - 2008**

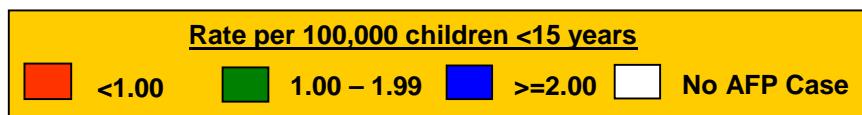
District	Neonatal Tetanus						Measles						AEFI		
	# of case reported by Active Surveillance		# of case reported by Passive Surveillance		# of case Investigated		# of case reported by Active Surveillance		# of case reported by Passive Surveillance		Outbreak*		Number of Outbreak (%) Investigated)	# of cases	# of case Reported
	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008			
<b>Barisal Division</b>															
Barguna	4		2	1			4	1	18	18					11 15
Barisal (non BCC)	1	2	1	7	3	2	4	2	8	22					27 45
BCC only	1				1		3								0 1
Bhola	4	3	6	8	5	6			13	5					16 14
Jhalakhati	1	3		2	1	3	3	2	5	2					10 7
Patuakhali	1		3				14	4	21	14					6 6
Pirojpur			1	1			1			9					24 16
<b>Total BAR</b>	<b>12</b>	<b>8</b>	<b>13</b>	<b>19</b>	<b>10</b>	<b>11</b>	<b>29</b>	<b>9</b>	<b>65</b>	<b>70</b>			<b>0</b>	<b>0</b>	<b>94 104</b>
<b>CTG Division</b>															
Bandarban	9								6						4 6
Brahmanbaria		5	12	5	10	7				18					6 25
Chandpur	2		1	2			2	1	3	52	46				21 48
Chittagong (non CCC)	2	1	5				1	4	6	10					3 10
CCC only	1	2	2	3	2	2	3	8	6	6					2 7
Comilla	2	1	2		1	1		1	31	12					5 10
Cox's Bazar	6		1	1	2		1		3						9 5
Feni	1			8		6			27	19					7 17
Khagrachari	3	1	1	1	1				2	1					7 4
Laxmipur	9	3	2	3	4	3			32	46					15 22
Noakhali		4	6	3	10	4	3	2	2	9					6 12
Rangamati							1		7	1					1
<b>Total-CTG</b>	<b>35</b>	<b>17</b>	<b>40</b>	<b>18</b>	<b>36</b>	<b>19</b>	<b>10</b>	<b>18</b>	<b>174</b>	<b>168</b>			<b>0</b>	<b>0</b>	<b>86 166</b>
<b>Dhaka Division</b>															
Dhaka (non DCC)		2	4	2			1		1	81	62				38 40
DCC only	2	2	5	4		5	18	25	444	593	2(100%)		521		71 169
Faridpur	1	1	3	1	1				33	29					50 83
Gazipur	2	3	4	1	1	3	4	3	5	3	1(100%)		177		11 17
Gopalganj	1	2	3	5		3		1	19	21					10 26
Jamalpur	2	2	7	5	2	2			44	57					31 40
Kishoreganj	15	7	15	8	5	3	11	13	13	31					21 44
Madaripur	1	4	1	3	1	4	1	3	38	48					53 78
Manikganj		2	3	1		1	2		124	89					43 42
Munshiganj		2	3	1		1	3	2	158	176					40 69
Mymensingh	10	4	13	5	12	5	7	1	14	70					24 80
Narayanganj	1	1	2		1			1	47	68	1(100%)		80		23 38
Narsinghdi		4	1	2		3	1	3	2	3					20 11
Netrokona	3	1	5	5	5	2	3		57	33					29 34
Rajbari									21	40					9 108
Shariatpur	1		1	1				2	20	23					41 62
Sherpur	1	1	2	2					20	29					12 26
Tangail	3	4	1	7	3	3	18	9	21	19					16 65
<b>Total-DHAKA</b>	<b>43</b>	<b>42</b>	<b>73</b>	<b>53</b>	<b>31</b>	<b>36</b>	<b>68</b>	<b>64</b>	<b>1,161</b>	<b>1,394</b>	<b>4(100%)</b>		<b>778</b>	<b>0</b>	<b>542 1,032</b>
<b>Khulna Division</b>															
Bagerhat	3	3	5	5	2	2	1	2	17	51					43 41
Chuadanga		1	1	1		1	2	2	40	31					22 22
Jessore	4		6		4		2	14	5	63					21 23
Jhenaidah	1		1		1		2		7	21					18 26
Khulna (non KCC)	2	1		1	1	1		1	46	11					38 34
KCC only	1	1	2			1		3	1	8					7 16
Kushthia	5	3	4	1	5	3	4		82	45					26 23
Magura							3	5	21	76					9 21
Meherpur			1						20	11					9 5
Narail	4	3	2	3	5	4	1	1	9	14					5 13
Satkhira	2	2	2	1	2	3	1		18	7					28 26
<b>Total-KHU</b>	<b>22</b>	<b>14</b>	<b>24</b>	<b>12</b>	<b>20</b>	<b>15</b>	<b>16</b>	<b>28</b>	<b>266</b>	<b>338</b>			<b>0</b>	<b>0</b>	<b>226 250</b>
<b>Raj Division</b>															
Bogra	4	2	2	3	5	3	9	2	12	24					89 116
Dinajpur	4	4	7	3	4	3		6	10	19					29 53
Gaibandha	1	1	4	2	3	4				2					10 44
Joypurhat								2	7	14					15 25
Kurigram	1				1			3		7					3 18
Lalmonirhat	1	2			1		1	4	1						16 23
Natore	3	4	4	3	3	4	5	5	25	72	1(100%)		132		18 50
Nilphamari		1		1		2									18 25
Noagoan	3	2	2	3	3	2	4	7	29	88					22 42
Nowabganj	1	2	1	2	1	2	2	4	10	38					19 24
Pabna	1	3	3	2	1	1		19	9	64					19 44
Panchagarh	1	1	2	2	1	1		2	6	5					18 19
Rajshahi (non RCC)	2	3	1	3	2	3	7	8	20	31					29 43
RCC only								3	161	63	1 (100%)		49		27 48
Rangpur	2	3				3		1		2					7 31
Sirajganj	1				1		2		12	3					7 15
Thakurgaon	2	1	5	1	2	1	1	4	3	5					38 35
<b>Total-RAJ</b>	<b>27</b>	<b>29</b>	<b>31</b>	<b>25</b>	<b>27</b>	<b>30</b>	<b>30</b>	<b>67</b>	<b>308</b>	<b>438</b>	<b>1 (100%)</b>	<b>1 (100%)</b>	<b>49</b>	<b>132</b>	<b>384 655</b>
<b>Sylhet Division</b>															
Habiganj	7	3	6	4	7	6			14	10					23 24
Maulvibazar	6	7	5	6	5	1			22	15					12 9
Sunamganj	11	8	11	7	14	8	31	28	46	40					13 19
Sylhet (non SCC)	3	5	3	5	3	7	2	6	35	31					8 7
SCC only			1				8	18	6	6					1 3
<b>Total-SYL</b>	<b>27</b>	<b>24</b>	<b>25</b>	<b>22</b>	<b>30</b>	<b>26</b>	<b>42</b>	<b>52</b>	<b>123</b>	<b>102</b>			<b>0</b>	<b>0</b>	<b>57 62</b>
<b>National</b>	<b>166</b>	<b>134</b>	<b>206</b>	<b>149</b>	<b>154</b>	<b>137</b>	<b>195</b>	<b>238</b>	<b>2,097</b>	<b>2,510</b>	<b>5 (100%)</b>	<b>1 (100%)</b>	<b>827</b>	<b>132</b>	<b>1,389 2,269</b>

Data as of 25 January 2009, \* Only Lab Confirmed Measles and Mixed Type outbreak Cases

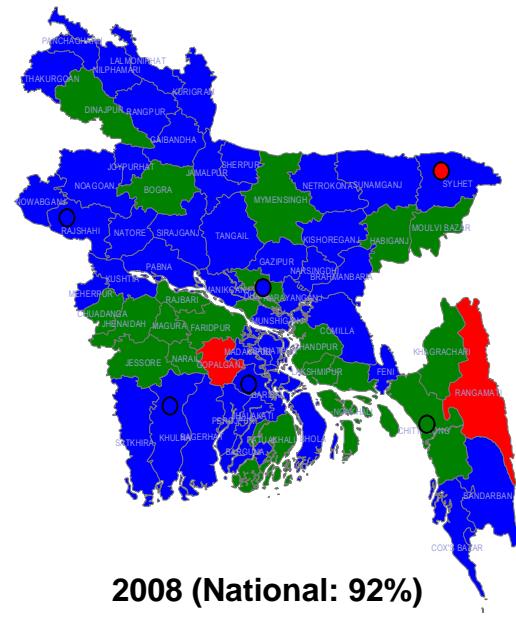
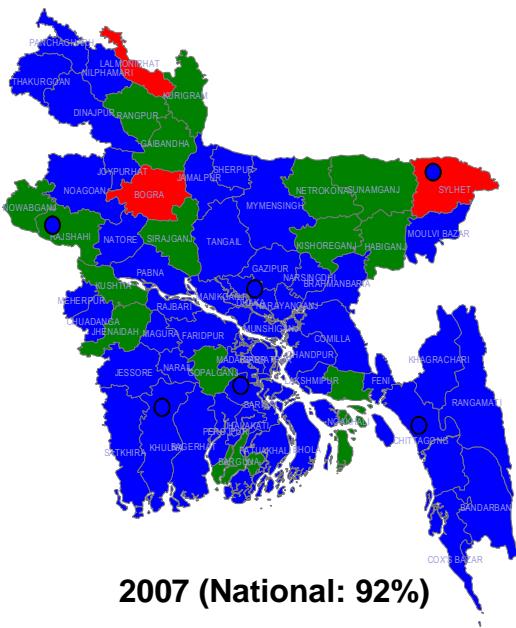
## Annualized Non-Polio AFP Rate, by District, Bangladesh 2007-2008\*



\*Data as of 24 January 2009



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



\*Data as of 24 January 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