

# PRIMARY HEALTHCARE

## Revitalization of Community Clinics

Bangladesh is one among the few countries of the world that provide free medical services to the people at the community level through various public-health facilities. To ensure provision of services at the door-step of rural people all over Bangladesh, the present Government took initiatives in 2009 to revitalize the community clinics. Approval of the project titled “Revitalization of Community Health Care Initiatives in Bangladesh” by the Executive Committee of the National Economic Council (ECNEC) on 17 September 2009 was a historic move towards making the community clinics functional from 1 July 2009. The project will continue until the end of 30 June 2014.

### Community Clinics: Background and the Present Scenario

The Government of Bangladesh, in 1996-2001, planned to establish 18,000 community clinics (CCs) for provision of primary healthcare

**Table 4.1. Number of posts sanctioned for the Community Clinic Project**

Name of post	No. of sanctioned posts	No. of existing posts
Project Director	1	1
Additional. Project Director	2	2
Deputy Project Director	6	6
Communication Officer	1	1
Programmer	1	1
Accounts Officer	1	1
Training Officer	1	1
Data Entry Operator	8	8
PA-cum-Computer Operator	3	3
Accountant, Cashier	2	2
Store Keeper, Driver, MLSS	18	18
Community Health Care Provider	13,500	12,991
<b>Total</b>	<b>13,544</b>	<b>13,035</b>

services to rural people. The Government decided to establish 18,000 CCs, with 13,500 new constructions and 4,500 to be operated from within the existing health facilities at the upazila and union levels. Following the decision, 10,723 community clinics were constructed, of which 8,000 were made functional by the period from 1998 to 2003. However, due to the change of Government in 2001, the community clinics were closed until 2008.

The major activities of the ‘revitalization’ project undertaken by the present Government aim at the following:

- Making functional 10,624 existing community clinics
- Constructing 2,876 new community clinics (which included 99 previously-constructed but non-functional community clinics)
- Starting operation of community clinic units at 4,500 upazila and union health facilities
- Recruiting 13,500 Community Health Care Providers (CHCPs)—one for each community clinic
- Revitalizing and establishing 18,000 CCs.

With full manpower and necessary logistics, the project office is now fully functional. Recruitment of 12,991 Community Health Care Providers is completed, and recruitment of the rest 509 is in progress. The community clinic is a unique example of community participation as the clinics are constructed on land donated by local people. At present, in addition to the CHCPs (who are of the same locality) the domiciliary health workers, namely the Health Assistants and Family Welfare Assistants under the Ministry of Health and Family Welfare, are providing health services alternatively—each for 3 days a week at the community clinics.

The services provided in community clinics are the following:

1. Maternal and neonatal healthcare (MNH) services
2. Integrated Management of Childhood Illness (IMCI)

3. Reproductive health and family-planning services (RH/FP)
4. Expanded Program on Immunization
5. Nutrition education and micronutrient supplementation
6. Distribution of family-planning commodities
7. Health education and counseling
8. Identification of severe illnesses, like tuberculosis, malaria, pneumonia, emergency obstetric care (EmOC), life-threatening influenza, anthrax, etc.
9. Treatment for minor ailments and first-aid
10. Referral to union-level health facilities (health and family welfare center, union subcenter, rural health center, etc.), upazila health complexes (UHCs), and district hospitals.

A 9 to 13-member body of local people, called community group manages activities of each community clinic. The community group is represented by people from different sectors within the catchment areas of respective clinics. Four of the community group members are female. The community group plays a vital role in the management of a community clinic through mobilizing community involvement, participation and ownership, ensuring sustainability of the activities. The common responsibilities include day-to-day maintenance, cleanliness, security, local fund-generation and transparent use thereof, monitoring, evaluation, and local planning for smooth functioning of the community clinic. Besides the community group, there exist three other support groups in the catchment area of each community clinic. Each support group comprises 10 to 15 members and works under the leadership of community group members. The support groups work for raising awareness of the community people about the health services available, about service providers and schedules of services, referral, and means to promote own and familial health, healthful practices, and behavior. The local government representatives are also involved with the community clinic. Local union parishad member is the chairperson

of the community group. The union parishad members are the community group members in their respective wards by dint of position. Union parishad chairmen are the advisers of the community clinics of respective unions.

The community clinics will use modern information technology to store, process, and transmit health-related data from the catchment areas. The IT literate CHCPs in all community clinics will be provided with a mini-laptop computer with Internet connection. It is planned that the community clinics will be developed as local health-related data-bank containing quantitative data on community clinic itself; community group; support group; health, nutrition, family planning, and general information. This will involve storing, processing, and interpreting data, and acting upon in the community clinic. The data will be used both locally and nationally for monitoring, evaluation, and planning at the local and the national level. The mini-laptops will also be used for introducing telemedicine service in the community clinics.



*Professor Dr. Abul Kalam Azad, Additional Director General (Planning & Development) of DGHS (second from left), visiting a Community Clinic. Mothers who had deliveries at that clinic are seen with their newborn babies*

**Table 4.2. Updated status of community clinics project**

Description	No.
Community clinics planned to be established	18,000
Independent community clinics planned to be built	13,500
Community clinic units planned to be operated within the existing upazila and union health facilities	4,500 had

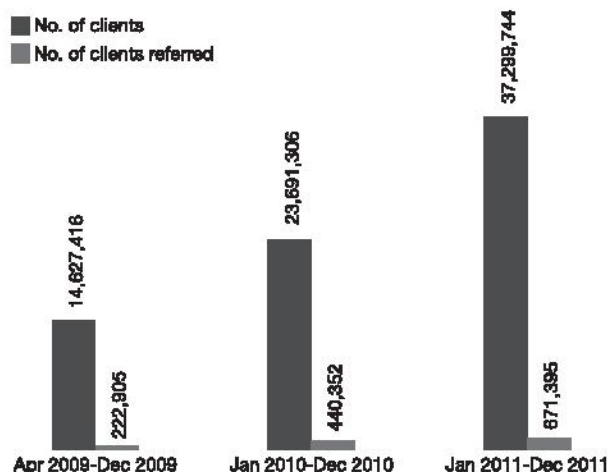
**Table 4.2 Continued**

Description	No.
Community clinics built during 1998-2001 period	10,723
Community clinics made non-functional during 2001-2008 period	99
Community clinics planned to be built in the current project period (2009-2014); remaining to be built	2,876 (2,777 new plus revitalization of 99 non-functional CCs)
Community clinics made functional	11,816
Community clinics repaired by Health Engineering Department (2009- 2011)	10595
Community clinics newly constructed by Health Engineering Department	
Construction completed	1180
Construction will be completed	691
Construction of the remaining CCs to be made functional during 2011-2013	1005

**Table 4.3. Status of medicine supply to community clinics**

Financial year	No. of items	Total amount in Taka	Cost per community clinic per year (Taka)	Remarks
2009-2010	25	58 crore	72,000	Tk. 15 crore was granted from Director of Primary Health Care of the DGHS
2010-2011	28	91 crore	85,000	Given to 10323 CCs
2011-2012	30	103 crore	90,868	Till now Tk. 67 crore given to 11409 CCs

All necessary medicines are being provided in adequate amounts to the community clinics. Initially, the package consisted of 25 items of drugs. However, depending on the need and reality, the package has been revised and extended to have 30 items.



**Figure 4.1. Service utilization in Community Clinics (2009-2011)**

Community clinic is an unprecedented instance of community participation and public-private partnership. Being inspired by community participation, some UN agencies and NGOs have started working with the community clinic project...

Community clinics are being made functional in phases since 2009. At present, 11,816 community clinics are functioning. The number of clients is increasing day by day. Figure 4.1 shows the utilization of services from the CCs during 2005-2011.

Community clinic is an unprecedented instance of community participation and public-private partnership. Being inspired by community participation, some UN agencies and NGOs have started working with the community clinic project. Many other organizations are also coming forward to working as the days are passing.

**Table 4.4. Status of service-utilization in the community clinics**

Period	No. of clients	No. of clients referred	Average number of clients per community clinic per day
Apr 2009-Dec 2009	14,627,416	222,905	12
Jan 2010-Dec 2010	23,691,306	440,352	19
Jan 2011-Dec 2011	37,299,744	671,395	29
Total	75,618,466	1,134,037	

**Table 4.5. Profile of GO-NGO collaboration for community clinics**

Organization	Memorandum of Understanding	Type of support
PLAN International	Signed	Strengthening 200 CCs of 6 upazilas and capacity-building of 1,000 Core Groups (CGs) in 5 districts
Micronutrient Initiative	Signed	Piloting in 3 upazilas to address neonatal health through vitamin A syrup (50,000 IU) within 48 hours of birth
Eminence	Signed	Capacity development of CCs and Support Groups in 11 districts
SEED	Signed	Capacity development of CGs and Support Groups
DASHCO	Signed	Capacity development of CGs and Support Groups
ACDI/VOCA	Signed	Capacity development of CGs and Support Groups
CARE	Signed	Capacity development of CGs and Support Groups
VSO	Signed	Capacity development of CGs and Support Groups
Save the Children-USA	Signed	Capacity development of CGs and Support Groups
PHD	Signed	Capacity development of CGs and Support Groups

Community clinic is the flagship program of the present government. Undoubtedly, it is a pro-people health initiative. If quality health services can be ensured near door-steps even at the remotest corner of the country, people will spontaneously seek necessary service from the well-trained care providers at the health facilities instead of the untrained traditional healers. It is expected that community clinics will ensure provision of quality healthcare for the mass people of rural Bangladesh, particularly the poor, vulnerable and the underprivileged and will contribute to the achievement of the MDGs within 2015.

#### **Upward referral linkage of primary healthcare: upazila hospitals and union facilities**

The community clinics have upward referral linkages at the union and upazila level. Table 4.6 summarizes the health facilities available at the upazila level and below. There are 459 government hospitals at the upazila level, which altogether provide 18,340 hospital beds. Some of the unions also have hospitals, with beds ranging from 10 to 20. There are 23 union-level hospitals with total bed-capacity of 410. At the union level, there are 1,382 union subcenters and 87 union health and family welfare centers. This latter group of health facilities provides only outdoor services. The Directorate General of Family Planning (DGFP) also has 3,719 union health and family welfare centers (not mentioned in Table 4.6). Further below the union level, there are 11,816 functional independent community clinics at the ward level. There is, on average, one community clinic for every 6,000 people.

**Table 4.6. Primary healthcare centers run by the DGHS at the upazila level and below (2011)**

Upazila level			Union level			Ward level	
Type of facility	No. of hosp.	No. of beds	Type of facility	No. of hosp.	No. of beds	Type of facility	No.
Upazila health complex (50-bed)	248	12400	10-bed hospital	5	50	Community clinics (OPD only)	11,816
Upazila health complex (31-bed)	165	5115	20-bed hospital	18	360		
Upazila health complex (20-bed)	1	20					
Upazila health complex (10-bed)	11	110					
Total upazila health complexes	425	17645	Total hospitals	23	410		
31-bed hospital	05	155	Union subcenter (OPD only)	1,382	00		
30-bed hospital	1	30					
Trauma center (20-bed)	5	100	Union health and family welfare center (OPD only)	87	00		
Total	11	285	Total	1,469	00		

**Total no. of hospitals 459 and total no. of beds 18,340**

### Domiciliary service

There are domiciliary workers—one for every 5 to 6 thousand people at the ward or village level. There are 26,436 sanctioned posts of domiciliary workers under the DGHS, of which 20,841 are for health assistants (HA), 4,196 for assistant health inspectors (AHI), and 1,399 for health inspectors (HI).

### Urban Health

The urban primary healthcare in Bangladesh is virtually provided by the Ministry of Local Government, Rural Development and Cooperatives (MoLGRD) through city corporations and municipalities. These local bodies run a number of small to medium-sized hospitals and outdoor facilities. Besides, two large-scale primary healthcare projects, viz. Urban Primary Health Care Project (UPHCP) and Smiling Sun Franchise Program are run by NGOs in collaboration with the city corporations and with the financial assistance from donors. The clients in these latter projects also share a part of the cost through service-charge. The Ministry of Health and Family Welfare contributes to urban primary healthcare through outpatient services distributed through its secondary, tertiary and specialized hospitals located in the urban settings. Besides, there are 35 urban dispensaries and 23 school health clinics in

some of the bigger cities and municipalities. Under Health, Nutrition and Population Sector Program (HNPS 2003-2011), there was a component for urban health to compliment the urban primary healthcare services provided by the MoLGRD. The Urban Health Program of MoHFW will be further improved in Health, Population and Nutrition Sector Development Program (HPNSDP) 2011-2016.

### Emergency Obstetric Care (EOC) Program

The Government of Bangladesh, in collaboration with UNICEF, is undertaking facility-based Emergency Obstetric Care (EOC) Program in all the districts of Bangladesh to improve the maternal health situation targeting to achieve the Millennium Development Goal 5. All the government medical college hospitals, district hospitals, upazila hospitals, and maternal and child welfare centers take part in providing EOC. A number of private clinics or hospitals and health-related NGOs also participate in the program. The service is provided in two forms, viz. Comprehensive Emergency Obstetric Care (CEmOC) and Basic Emergency Obstetric Care (BEOC). Currently, all medical college hospitals, 59 district hospitals, 3 general hospitals, 132 upazila health complexes, and 63 MCWCs provide CEmOC, and rest of the upazila health complexes

provide BEOC. NGOs and private care providers from a number of districts also provide similar services. Under a program, jointly operated by the Management Information Systems (MIS) of the DGHS and UNICEF, data are collected from the EOC facilities. For this publication, data from 646 health facilities, including 14 medical college hospitals, 62 district/general hospitals, 413 upazila health complexes, 57 maternal and child welfare centers (MCWCs), private hospitals from 63 districts, NGOs from 35 districts, and 2 other types of hospitals have been used for analysis. These data were then translated into a format called United Nations Process Indicators. Table 4.7 summarizes the sources of EOC data we received for 2011.

**Table 4.7. Number of hospitals and non-state care providers which sent emergency obstetric care data to MIS-Health in 2011**

Type of hospital	No.	Percentage
Medical college hospitals	14	2.17
District and general hospitals	62	9.60
Upazila health complexes	413	63.93
Districts from where NGO care providers sent data	35	5.42
Districts from where private care providers sent data	63	9.75
MCWC	57	8.82
Others	2	0.31
Total	646	100.00

Data show that there were 599,213 reported deliveries in the country's EOC facilities in 2011, and there were 587,373 livebirths. The number of newborn deaths in these EOC facilities was 3,187, and that of maternal death was 1,714. Table 4.8 shows the division-wise distribution.

**Table 4.8. No. of total deliveries, livebirths, newborn deaths, and maternal deaths in the emergency obstetric care facilities of Bangladesh by division (2011)**

UN Process Indicator	National	Barisal	Chittagong	Dhaka	Khulna	Rajshahi	Rangpur	Sylhet
Total no. of deliveries (N)	599,213	29,690	95,869	186,996	83,597	85,878	81,691	35,492
Livebirth (N)	587,373	28,839	93,320	184,955	82,105	84,552	80,028	33,573
Newborn death (N)	3,187	605	582	725	235	194	424	422
Maternal death (N)	1,714	155	209	534	146	243	228	199

Figure 4.2 shows the rates of newborn and maternal deaths as percentage of total livebirths and no. of total deliveries respectively in 2011. These death rates are obtained only from the EOC facilities and should not be seen as reflections of the whole community. Nationally, the newborn death rate as percentage of total livebirths was 0.5%, which was 2.0% and 1.2% in Barisal and Sylhet division respectively but varied between 0.2% and 0.6% in other five divisions (Khulna, Dhaka, Rajshahi, Rangpur, and Chittagong). The maternal death rate at facilities as percentage of total no. of deliveries was 0.3% nationally. The rate was 0.5% and 0.6% in Barisal and Sylhet division respectively. The rate varied between 0.2% and 0.3% in other five divisions (Khulna, Dhaka, Rajshahi, Rangpur, and Chittagong).

Table 4.9 shows the detailed figures of the process indicators summarized for each division. The reported institutional delivery rates varied between 15.64% and 25.46%, with average for the whole country being 20.78%. The met need for emergency obstetric care varied between 37.01% and 69.17% (average: 55.95%). Caesarean section rate was between 6.23% and 10.07% (average 8.23%). The case-fatality rate

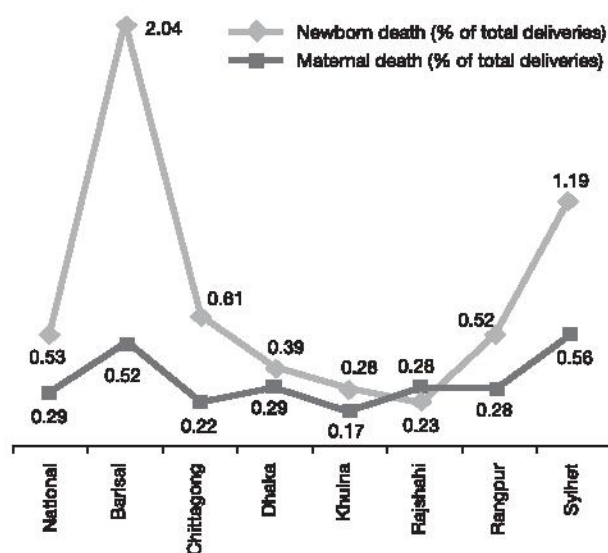


Figure 4.2. Rates of newborn and maternal deaths in emergency obstetric care facilities by division (year 2011)

was between 0.41% and 1.03% (average 0.71%).

Table 4.10 shows the distribution of EOC services provided by the medical college hospitals, district hospitals, upazila health complexes, NGO facilities, and the private clinics/hospitals. Out of the 599,213 reported deliveries, 87,811 took place in medical college hospitals, 89,611 in district hospitals, 163,457 in upazila hospitals, 41,541 in maternal and child welfare centers, 34,474 in NGO facilities, 181,085 in private clinics/hospitals, and 1,234 in other public facilities. It stands at 383,654 (64.0%) deliveries in major public facilities (upazilla health complexes, district hospitals and medical college hospitals, and maternal and child welfare centers) and 215,559 (36.0%) deliveries in NGO/private clinics and hospitals. Of the total no. of deliveries at the major public facilities, 22.9% took place in medical college hospitals, 23.4% in district hospitals, and the largest proportion (42.6%) took place in upazila health complexes; 10.8% of deliveries took place in maternal and child health centers. Of the total no. of deliveries

Table 4.9. Summary of data received from the emergency obstetric care facilities in 2011 and translated into UN Process Indicators by division

Head	Barisal	Chittagong	Dhaka	Khulna	Rajshahi	Rangpur	Sylhet	Bangladesh
Visit for ANC service (N)	70,213	315,404	596,363	304,461	183,292	233,985	75,688	1,779,406
Admitted patients (N)	45,544	126,188	261,227	122,903	126,287	116,075	53,862	852,086
Complications treated (N)	15,941	31,181	91,443	35,286	30,914	22,033	15,247	242,045
Normal delivery (N)	14,585	58,206	93,718	48,925	61,521	54,123	21,893	352,971
Forceps/Vacuum/Destructive operation (N)	120	952	662	240	303	797	626	3,700
Vaginal breech/Face presentation delivery (N)	80	1,476	1,224	365	411	830	508	4,894
Caesarean section (N)	14,843	35,305	91,392	34,067	23,645	25,941	12,304	237,497
Total deliveries (N)	29,690	95,869	186,996	83,597	85,878	81,691	35,492	599,213
Livebirth (N)	28,839	93,320	184,955	82,105	84,552	80,029	33,573	587,373
Stillbirth (N)	1,146	3,535	4,937	1,919	1,856	2,317	2,158	17,868
Other surgeries (N)	1,056	5,440	11,148	3,924	4,072	3,569	2,095	31,304
Referred in (N)	1,182	16,435	8,308	2,310	2,346	1,967	1,876	34,424
Referred out (N)	2,783	6,515	12,947	4,569	6,556	7,944	3,882	45,196
Visit for PNC service (N)	24,467	97,295	270,362	86,556	78,244	84,642	35,557	677,123
Maternal death (N)	155	209	534	146	243	228	199	1,714
Neonatal death (N)	605	582	725	235	194	424	422	3,187
Proportion (%) of all births in EmOC facilities	15.64	17.07	20.60	24.58	22.61	25.46	19.30	20.78
Met need (%) for EmOC	55.97	37.01	67.15	69.17	54.27	45.78	55.28	55.95
Caesarean section rate as % of all births	7.82	6.29	10.07	10.02	6.23	8.08	6.69	8.23
Case-fatality rate (CFR) (%)	0.97	0.67	0.58	0.41	0.79	1.03	1.31	0.71

in NGO/private clinics/hospitals, 16% were done at NGO facilities and 84.0% at private clinics/hospitals. Table 4.10 reveals that there were 237,497 caesarean sections in 2011, of which public hospitals performed 104,513 (44.0%), and NGO and private clinics/hospitals performed 132,984 (56.0%). Of the total no. of caesarean sections at public facilities (n=104,513), 42.6%

were done in medical college hospitals (n=44,481), 30.4% in district hospitals (n=31,723), 19.4% in upazila health complexes (n=20,243), and 7.7% in maternal and child welfare centers (n=8,066). Of the total caesarean sections done by NGO and private facilities (n=132,984), 9.6% were done at NGO facilities (n=12,732), and 90.4% were done by private clinics/hospitals (n=120,252).

**Table 4.10. Summary of data received from the emergency obstetric care facilities in 2011 and translated into UN Process Indicators**

UN Process Indicator		Medical college hospital	District hospital	Upazila health complex	Maternal and child welfare center	NGO	Private clinic/hospital	Others	Total
Visit for ANC service (N)	No.	120,030	219,442	596,718	267,513	359,902	215,425	376	1,779,406
	%	6.7	12.3	33.5	15.0	20.2	12.1	0.0	100.0
Admitted patients (N)	No.	140,320	169,985	249,244	46,264	205,232	39,415	1,626	852,086
	%	16.5	19.9	29.3	5.4	24.1	4.6	0.2	100.0
Complications (N)	No.	44,056	68,360	63,021	5,638	54,972	5,618	380	242,045
	%	18.2	28.2	26.0	2.3	22.7	2.3	0.2	100.0
Normal delivery (N)	No.	41,602	56,742	140,904	32,881	58,656	20,952	1,234	352,971
	%	11.8	16.1	39.9	9.3	16.6	5.9	0.3	100.0
Forceps/Vacuum/Destructive operation (N)	No.	799	266	1,417	102	729	387	0	3,700
	%	21.6	7.2	38.3	2.8	19.7	10.5	0.0	100.0
Vaginal breech/Face delivery (N)	No.	929	952	670	492	1,448	403	0	4,894
	%	19.0	19.5	13.7	10.1	29.6	8.2	0.0	100.0
Caesarean section (N)	No.	44,481	31,723	20,243	8,066	120,252	12,732	0	237,497
	%	18.7	13.4	8.5	3.4	50.6	5.4	0.0	100.0
Total deliveries (N)	No.	87,811	89,611	163,457	41,541	181,085	34,474	1,234	599,213
	%	14.7	15.0	27.3	6.9	30.2	5.8	0.2	100.0
Livebirth (N)	No.	84,932	85,757	159,832	41,245	180,253	34,204	1,150	587,373
	%	14.5	14.6	27.2	7.0	30.7	5.8	0.2	100.0
Stillbirth (N)	No.	5,402	4,709	4,665	763	1,750	495	84	17,868
	%	30.2	26.4	26.1	4.3	9.8	2.8	0.5	100.0
Other surgeries (N)	No.	8,761	11,009	7,491	491	3,158	394	0	31,304
	%	28.0	35.2	23.9	1.6	10.1	1.3	0.0	100.0
Referred in (N)	No.	13,147	8,639	2,172	1,686	6,895	1,885	0	34,424
	%	38.2	25.1	6.3	4.9	20.0	5.5	0.0	100.0
Referred out (N)	No.	888	7,132	30,032	1,773	2,939	2,050	382	45,196
	%	2.0	15.8	66.4	3.9	6.5	4.5	0.8	100.0
PNC service (N)	No.	55,969	105,129	234,553	63,521	172,778	43,912	1,261	677,123
	%	8.3	15.5	34.6	9.4	25.5	6.5	0.2	100.0
Maternal death (N)	No.	1,117	368	129	0	67	33	0	1,714
	%	65.2	21.5	7.5	0.0	3.9	1.9	0.0	100.0
Neonatal death (N)	No.	2,255	163	261	4	332	172	0	3,187
	%	70.8	5.1	8.2	0.1	10.4	5.4	0.0	100.0



Of the total no. of deliveries at the major public facilities, 22.9% took place in medical college hospitals, 23.4% in district hospitals, and the largest proportion (42.6%) took place in upazila health complexes...

### Voucher Scheme for Maternal Health

The Bangladesh Ministry of Health and Family Welfare and WHO agreed in 2004 to pilot the innovative Maternal Health Voucher Scheme, a demand-side financing (DSF) initiative, to improve access to and use of quality maternal health services. This is in line with the reform agenda of the Health Sector Programs of the Ministry. The scheme was formally inaugurated in 2007. Currently, the program is being implemented in 46 upazilas of 41 districts and 7 MNHI upazila under 4 districts. Under the program, eligibility for getting vouchers is a defined poverty criterion, validated by the local government representative. Half of the target population qualifies as poor. The total numbers of annual beneficiaries in 46 upazilas are 182,000 pregnant women.

A voucher entitles its holder for specific health services free of charge. Services include: ante- and postnatal care, safe delivery, treatment for complications, including caesarean section, transportation cost, and laboratory tests. If delivery is attended by skilled staff, voucher-holders get unconditional cash benefits for nutritious food and gift-box.

Performance data continue to increase (Fig.4.3). Safe delivery rate is now at impressive 89% amongst the voucher recipients who constitute approximately 50% of pregnant women in the target upazilas. Participation of non-public healthcare providers (NGO and private facilities) is also increasing. The DSF program is firmly anchored in the new sector program—HPNSDP (2011-2016). The target for five years is set at 100; each year 20 new upazilas will be brought under the DSF program. In addition to increased rate of safe delivery at 89%, institutional delivery rate also increased to 40%. The use-rate of antenatal care service continued to improve. However, referral rates remained unchanged. The caesarean section rate contained at 9% against national rate of 8%. Strikingly, the maternal mortality rate among the voucher-holder women is 12 per 100,000

livebirths, in sharp contrast with the national rate of 194 per 100,000 livebirths. WHO is providing technical assistance in field supervision through deployment of DSF organizers in 33 upazilas and in operating a national DSF cell located at the DGHS.

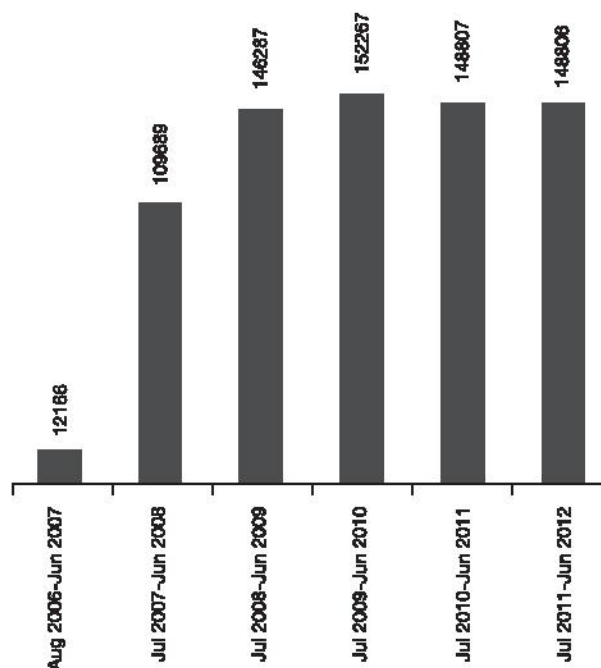


Figure 4.3. Number of beneficiary pregnant mothers who received Maternal Health Vouchers in different years (Total=718,022) under Demand-side Financing Program

A voucher entitles its holder for specific health services free of charge. Services include: ante- and postnatal care, safe delivery, treatment for complications, including caesarean section, transportation cost, and laboratory tests. If delivery is attended by skilled staff, voucher-holders get unconditional cash benefits for nutritious food and gift-box...

### Maternal and Neonatal Health (MNH) Program

The Director of Primary Health Care of the DGHS is implementing the Maternal and Newborn Health Program in four districts of Bangladesh,

with the assistance of UNFPA, UNICEF, and WHO and funded by EC and DFID. The districts are: Thakurgaon, Jamalpur, Narail, and Maulvibazar. All the upazilas under these four districts are included in the program. The program focuses on saving maternal and newborn lives through creating need-based demand and priority-based actions. The broad principle of this program is Local Level Planning (LLP) and decentralization. The offices of the civil surgeons and the deputy directors of family planning serve as the two principal locations for the project. The three UN agencies help ensure inclusion of the three 'added values', viz. participation of civil society organizations, direct disbursement of funds to agreed cost-centers, and covering the difficult-to-reach populations. The national-level authorities deal with major procurement, training, and partnership arrangements with NGOs and national communication campaigns. The project plans to allocate a fixed ceiling of fund to each district, based on needs, and defined by its poverty level, population and number of upazilas. The fund is in addition to Ministry's routine allocation. It is proposed that over the lifetime of the project, at least 30% of resources at the district level must be devoted to demand-side interventions, involving both state and non-state agencies. There is a coordination mechanism to ensure that local-level planning fits into the national MNH policies, strategies, and guidelines. The project is designed for implementation through five years in two phases. The first phase is a start-up phase covering a period of 18 months and includes four districts. After 18 months of operation, a review will be conducted. If this is satisfactory, agreement will be reached for expansion, covering an additional 16 districts (for implementation across 42 months). If after review it is decided not to move for scale-up, this project will remain only in 4 districts and end up after further 18 months. The project has a number of "novel and innovative" approaches, based on global best practices, to accelerate progress towards achievement of MDG 4 and 5, having the following elements: (i) a district-focused approach with direct resource allocation to identified cost-centers and the application of WHO's problem-solving techniques to develop, monitor, and implement the plans; (ii) continuum of care that links the mothers and newborns and addresses the three delays model; (iii) rights-based equitable approach in planning, monitoring, implementation and supervision through involvement of consumer groups and public-health watch groups to ensure accountability to women, families, and communities; (iv)

piloting initiatives, such as contracting private practitioners to provide specialized services in an attempt to improve human resources for MNH at the district and upazila levels; (v) pilot-testing of demand-side financing schemes (vouchers and other means) targeting the vulnerable and marginalized households to address equity; and (vi) pilot-testing of ARH community-based and clinic-based 'youth-friendly' services and Voluntary Confidential Counselling and Testing (VCCT) centers in selected districts with high risks of HIV and STIs.

### **Training of Manpower for Improving Maternal Health**

The shortage of skilled manpower in the remote areas to extend obstetric care is one of the major barriers to improving the maternal health. The Ministry of Health and Family Welfare undertook a short-term measure to tackle the problem by producing trained manpower for fulfilling the gap in the interim period. Young medical doctors were given 6 months' training on obstetric and anesthesiology. The number of doctors receiving training in the former discipline was 160 and, in the latter discipline, this was 155. The Directorate General of Health Services is also implementing Community-based Skilled Birth Attendant (CSBA) training program since 2003 with the goal to train and educate the family welfare assistants/female health assistants and similar health workers working in NGOs and private sector, with midwifery skills. The CSBAs are trained to conduct the normal safe deliveries at home and to identify the risks and complicated cases so that they can motivate and refer them to the nearby health facilities where comprehensive EOC services are available. The CSBA training course is divided in three major phases. The first phase is the basic course for six months in a training center, and the second phase provides a nine-month work experience as CSBA in own communities under supervision. The third phase is the three-month additional course where trainees get opportunity to rectify their shortcomings. Other initiatives also exist to improve maternal healthcare situation. The CSBA training program is now organized in 342 upazilas of 60 districts. Table 4.11a shows a division-wise distribution of this training, and Table 4.11b highlights the nature of such training. By the end of May 2011, a total of 6,155 CSBAs completed basic training with support from UNFPA. There is a plan to create positions of 13,500 CSBAs by 2015 for posting two CSBAs in each union across the country.

**Table 4.11a. Distribution of CSBAs across divisions**

Division	Dhaka	Khulna	Chittagong	Rajshahi	Rangpur	Barisal	Sylhet	Total
No.	1,916	1,109	692	917	633	373	278	6,155
%	31	18	15	15	10	6	5	100

**Table 4.11b. Training achievement of various groups in 2011**

Name of training/Event	Target	Achievement In 2011	Total	%
<b>SBAs training</b>				
Basic training for CSBAs	540	606	606	112
SBA supervisors training	270	213	213	78
Additional training for SBAs (upgrading)	200	326	310	155
Refresher training for SBAs	270	473	473	175
<b>Midwifery training</b>				
TOT for midwifery training	40	50	50	125
6 Months post-basic midwifery training	80	80	80	100
<b>Fistula surgery and management training</b>				
Basic training on surgical treatment and Management of fistula for doctors-3 months	5	10	10	200
Specialized training for doctors-1 month	10	8	8	80
Two-week refresher training for doctors	10	8	8	80
Refresher training on surgical treatment and management of fistula for doctors-12 days	10	8	9	90
Three-week refresher training on fistula management for nurses	20	24	24	120
Refresher training on surgical treatment and management of fistula for nurses-1 week	20	26	26	130
<b>Workshop, seminar , camp and others</b>				
CSBA orientation on RH issues for gate-keepers at Cox's Bazar district	750	733	733	98
Celebration of International Midwifery Day on 5 May 2011	1	1	1	100
Finalization of national strategy on obstetric fistula	1	1	1	100

### **Cervical and Breast Cancer Screening Program**

There are around 17,686 cases of cervical cancer, and about 10,364 deaths due to cervical cancer occur each year in Bangladesh (according to International Agency for Research on Cancer). Cervical cancer constitutes about 22% of all cancers in females in Bangladesh. Cervical cancer can be prevented if it is detected and treated in the pre-cancerous condition. Breast cancer

screening is a method of detecting breast cancer at an early stage. Early detection of breast cancer significantly reduces the morbidity and mortality relating to breast cancer. The Government of Bangladesh (GoB), with support from UNFPA, has taken initiatives to develop a cervical and breast cancer screening program in Bangladesh. Since 2004, the Department of Obstetrics and Gynecology of Bangabandhu Sheikh Mujib Medical University (BSMMU) is helping the Government

Cervical cancer can be prevented if it is detected and treated in the pre-cancerous condition...

to implement the screening program on cervical and breast cancer throughout the country. Visual inspection of the cervix after acetic acid (VIA) application is an accepted method of cervical cancer screening at maternal and child welfare centers, district hospitals, medical college hospitals, and Bangabandhu Sheikh Mujib Medical University Hospital. VIA is administered by trained family welfare visitors (FWVs), senior staff nurses, and doctors. These trained persons use VIA technique to detect the pre-cancerous conditions or initial stages of cervical cancer among women visiting the mentioned centers in almost all districts of Bangladesh. Screen-positive women are referred to BSMMU and various government medical college hospitals for colposcopic evaluation and management. In Bangladesh, cervical cancer screening program is in an initial stage of development. Colposcopy became an important part of this screening

program in 2008 both for diagnosis and guiding the treatment. Women with pre-cancerous lesions are managed by loop electrosurgical excision procedure (LEEP) at the colposcopy clinic of BSMMU and several medical college hospitals. The sensitivity and specificity of VIA to detect CIN 2-3 lesions were 93.6% and 58.3% respectively in a study performed at BSMMU and other medical college hospitals.

This screening program has been implemented through capacity-building for service providers of medical college hospitals, district hospitals, maternal and child welfare centers and selected upazila hospitals, union health and family welfare centers, and various non-government organizations, including Urban Primary Health Care Project (UPHCP). Eight hundred thirty-eight (838) service providers (doctors, SSNs, FWVs, and paramedics) of 252 service centers of 64 districts of Bangladesh received training on VIA and CBE.

They are performing VIA for cervical cancer screening and clinical breast examination (CBE) for breast cancer screening at service centers and referring screen-positive women to medical college hospitals and BSMMU for further evaluation and management. Table 4.12 shows the distribution of health personnel who have been given training on VIA by the project.

**Table 4.12. Distribution of health personnel given training from 2005 to 2011 on VIA (Visual Inspection of Cervix with Acetic Acid)**

Year	Designation	MCH/DH/UHC	MCWC	UHFVCs	UPHCP	Total	Grand total
Pilot program	Doctors	31	17	-	-	48	113
	Nurses/FWVs	21	32	12	-	65	
2006	Doctors	13	10	-	12	35	100
	Nurses/FWVs	21	12	20	12	65	
2007	Doctors	20	13	-	7	40	134
	Nurses/FWVs	47	30	-	17	94	
2008	Doctors	24	14	-	10	48	154
	Nurses/FWVs	59	27	-	20	106	
2009	Doctors	11	8	-	10	29	153
	Nurses/FWVs	66	38	-	20	124	
2010	Doctors	8	8	2	10	28	88
	Nurses/FWVs	18	9	13	20	60	
2011	Doctors	4	6	-	9	19	96
	Nurses/FWVs	24	21	5	27	77	
Total		367	245	52	174	838	838

### Colposcopy performed at different medical college hospitals In 2011

In 2011 (January to December), 5,735 women with VIA-positive result attended the colposcopy clinics of BSMMU and various medical college hospitals (Table 4.13).

Table 4.13. Total number of colposcopy done in 2011

Name of institutions	Number of colposcopy done
Bangabandhu Sheikh Mujib Medical University (BSMMU)	1,683 (29.34%)
Rajshahi Medical College Hospital (RjMCH)	924 (16.11%)
Chittagong Medical College Hospital (CMCH)	446 (7.78%)
Mymensingh Medical College Hospital (MMCH)	409 (7.13%)
MAG Osmani Medical College Hospital (SMAGOMCH), Sylhet	464 (8.09%)
Khulna Medical College Hospital (KMCH)	370 (6.45%)
Dhaka Medical College Hospital (DMCH)	494 (8.61%)
Shaheed Suhrawardi Medical College Hospital (SSMCH)	120 (2.10%)
Comilla Medical College Hospital (CoMCH)	200 (3.48%)
Barisal Sher-e-Bangla Medical College Hospital (SBMCH)	232 (4.05%)
Rangpur Medical College Hospital (RpMCH)	128 (2.24%)
Faridpur Medical College Hospital (FMCH)	226 (3.94%)
Shaheed Ziaur Rahman Medical College Hospital (SZMCH), Bogra	39 (0.68%)
Total	5,735 (100%)

### Colposcopy performed at BSMMU from 2005 to 2011

From January 2005 to December 2011, 7,960 women with VIA-positive result attended the colposcopy clinic of BSMMU from different districts. Among them, 2,993 (48%) women had normal cervix; 2,068 (33%) women had CIN-I, 541 (9%) had CIN II/III, and 463 (7%) women had cervical cancer.

In total, 838 service providers of 252 service centers of 64 districts are offering cervical and breast cancer screening to married women aged 30 years and above (Table 4.14).

To develop well-equipped referral centers (colposcopy centers), colposcopy training was provided to 92 postgraduate gynecologists from 14 government medical college hospitals and BSMMU. Training program was organized at BSMMU with the help of trainers from BSMMU, other institutes, United Kingdom, and India. In the colposcopy centers, facilities for colposcopy and management of pre-cancerous condition of the cervix were made available. A colposcope allows magnified visualization of the site of cervical pre-cancerous condition, helps in taking guided biopsy and treatment, like Loop Electrosurgical Excision Procedure (LEEP) for cervical intraepithelial neoplasia (CIN).

Table 4.14. Total number of VIA/CBE centers

Name of location	Number of centers
District hospitals	57
BSMMU, Institute of Child and Mother Health, Medical College Hospitals	15
MCHTI, MFSTC, Mother and Child Welfare Centers	68
Upazila Health Complexes	15
Union Health & Family Welfare Centers	37
Urban Primary Health Care Project	25
Non-government organizations	35
Total	252

Colposcopy clinic of BSMMU and Khulna MCH performed LEEP and Cold Coagulation to manage pre-cancerous conditions of the cervix. Colposcopy clinics of Rajshahi, Mymensingh, Chittagong, Dhaka, and Rangpur Medical College Hospitals, Barisal Sher-e-Bangla Medical college Hospital, and Sylhet MAG Osmani Medical College Hospital, are performing LEEP.

Figure 4.4 shows that 427,247 VIA tests were performed from January 2005 to December 2011 at various service centers. Among them, 20,807 (4.87%) women were found VIA-positive.

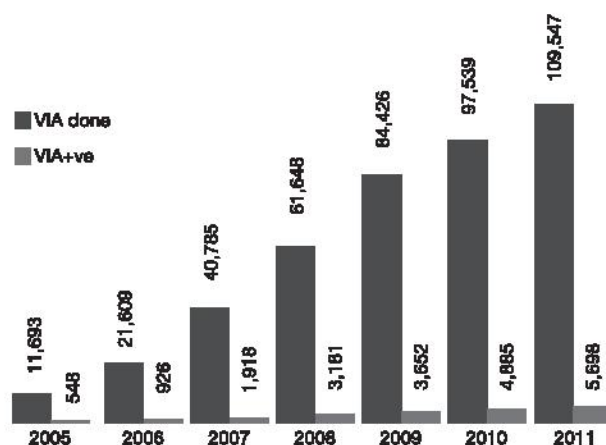


Figure 4.4. Year-wise distribution of number of VIA tests done and VIA+ve cases found

In total, 3,50,100 CBE tests were performed from January 2007 to December 2011 at different centers and, among them, 5,928 women were CBE-positive (Figure 4.5).

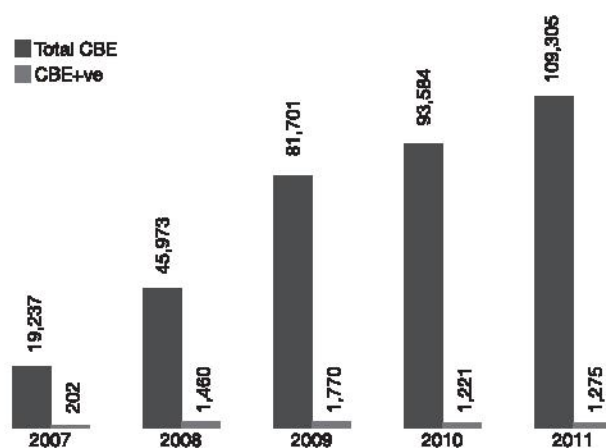


Figure 4.5. Year-wise distribution of number CBE tests done and CBE +ve cases found

### Colposcopy performed at BSMMU

From January 2005 to December 2011, a total of 7,960 women with VIA-positive results attended the colposcopy clinic of BSMMU from different districts. Among them, 2,993 (48%) women had normal cervix. 2,068 (33%) had CIN-I, 541 (9%) had CIN II/III, and 463 (7%) had cervical cancer (Figure 4.5). The women with pre-cancerous condition of cervix received treatment by simple methods (LEEP or Cold Coagulation) from the colposcopy clinics, and women of cervical cancer were referred to BSMMU, different medical college hospitals, and cancer institute.

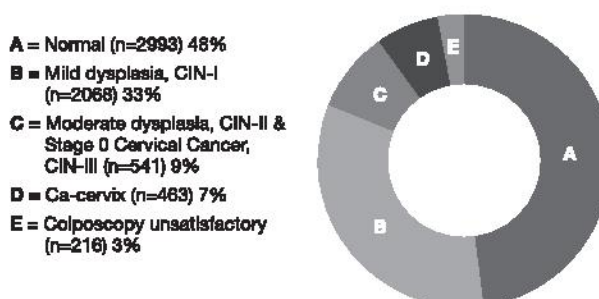


Figure 4.6. Distribution of VIA+ve referred cases by colposcopic examination

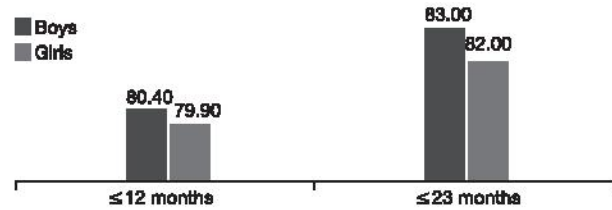
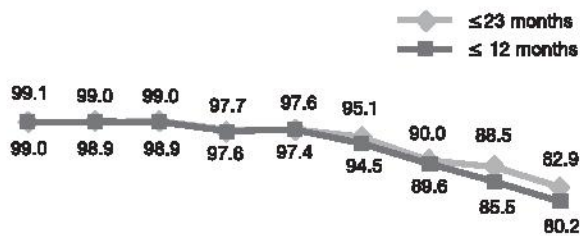
Table 4.15 shows that 3,50,100 clinical breast examinations (CBE) were performed from January 2007 to December 2011 at different centers. Among them, 5,928 women were CBE-positive. As of now, most of the districts of Bangladesh have at least two centers for cervical and breast cancer screening. It is opined that awareness creation, use of facilities, and further scaling-up will have noticeable impact on improvement of women's health and prevention of cancer.

### Universal Child Immunization

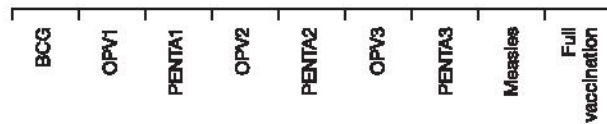
The most noticeable among the various measures through the Ministry of Health and Family Welfare continues to improve the child health is the high coverage of child immunization. Report of the EPI Coverage Evaluation Survey 2011 is now available, which shows that percentage of fully-vaccinated under-two children is 82.9%, which was 79.0% in 2007. Hepatitis B and Hib vaccines are also included now in the routine immunization. The picture of universal child immunization program in Bangladesh has been shown in Figure 4.7 through 4.11.

**Table 4.15. Year-wise performance of clinical breast examination (CBE) in Bangladesh (January 2007 to December 2011)**

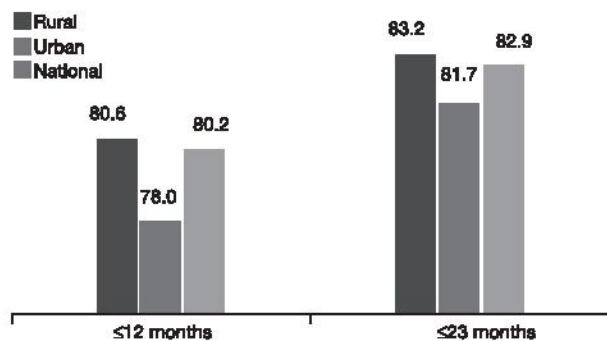
No. and %	2007		2008		2009		2010		2011		Total	
	CBE done	CBE +ve	CBE done	CBE +ve	CBE done	CBE +ve	CBE done	CBE +ve	CBE done	CBE +ve	CBE done	CBE +ve
No.	19,237	202	45,973	1,460	81,701	3,432	93,884	1,221	109,305	1,275	350,100	5,928
% +ve		1.1		3.2		4.2		1.3		1.1		1.7



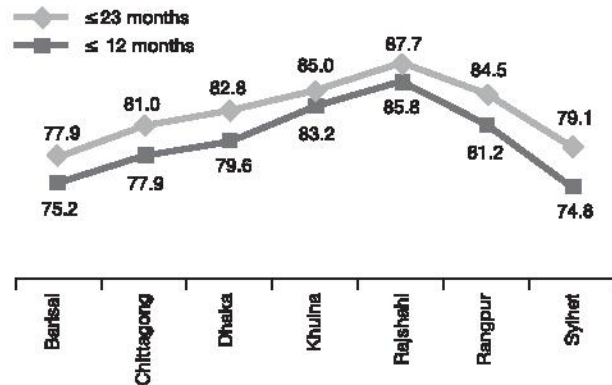
**Figure 4.9. National valid full vaccination coverage between boys and girls among ≤12 months and ≤23 months old children in Bangladesh (EPI CES 2011)**



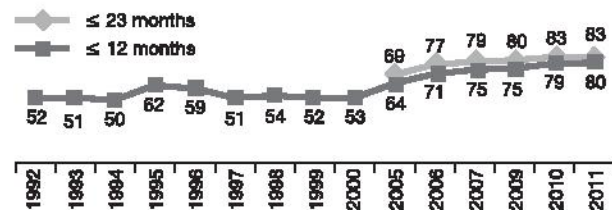
**Figure 4.7. Valid vaccination coverage among ≤23 and ≤12 months children in Bangladesh (EPI CES 2011)**



**Figure 4.8. Valid vaccination coverage among ≤12 months and ≤23 months old children between rural and urban areas in Bangladesh (EPI CES 2011)**



**Figure 4.10. Division-wise valid vaccination coverage in Bangladesh (EPI CES 2011)**



**Figure 4.11. Annual national trend of valid full vaccination coverage in Bangladesh (EPI CES 2011)**

Bangladesh has requested for providing GAVI assistance to include pneumococcal and rotavirus vaccines in the EPI. Discussions are ongoing to introduce also typhoid fever and oral cholera vaccines. Bangladesh is fortunate to have no polio cases virtually from 2001, except in a window period in 2006. In 2006, 18 wild polio cases were imported in the country from the bordering districts of India. To keep the country polio-free, Bangladesh observes country-wide National Immunization Day (NID). So far, 19 NIDs were conducted. Observance of NID has to be continued until India and Nepal become polio-free. Both the countries are trying to be polio-free.

There is a global vision for 90% reduction of measles-related child deaths by 2013. Bangladesh already achieved this target. Overall, 92% of the eligible children in Bangladesh were covered by measles vaccination under Measles Follow-up Campaign 2011. There was a little variation in the coverage between urban and rural areas, i.e. 93% in urban areas vs. 92% in rural areas. In the Measles Follow-up Campaign, PENTA vaccines, high-potency vitamin A, and anthelmintic coverage were also included (Table 4.16).

### Tetanus Toxoid (TT) for Women of Childbearing Age

Bangladesh is maintaining maternal and neonatal tetanus-free status since 2008. EPI Bangladesh aims to immunize the number of women of childbearing age by administering tetanus toxoid vaccine (TT) before the age of 18 years. A period of 2 years and 7 months is required to complete all the 5 doses of TT vaccines. If a woman starts it at the age of 15 years and maintains the exact interval, she would

Bangladesh has requested for providing GAVI assistance to include pneumococcal and rotavirus vaccines in the EPI. Discussions are ongoing to introduce also typhoid fever and oral cholera vaccines...

be able to complete all the doses before she reaches the age of marriage, ensuring protection for her entire reproductive life. Figure 4.12 shows the valid TT vaccination status in the country. Although the crude TT vaccination coverage (TT vaccination doses without maintaining exact interval) is relatively higher, it is assumed that coverage of TT4 and TT5 doses go down in the country. Attention is needed to improve the situation in this regard.

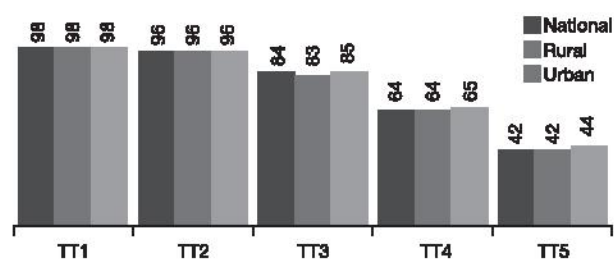


Figure 4.12. Valid tetanus toxoid vaccination coverage among women aged 15-49 years (EPI CES 2011)

Table 4.16. Coverage of PENTA vaccine and vitamin A capsules among children (EPI CES 2011)

Location	PENTA vaccine (coverage)(0-59 months)	PENTA vaccine (during measles campaign) (0-59 months)	Vitamin A capsule (12-59 months)	Anti-helminthes (24-59 months)
National	96%	93%	85%	90%
Rural	97%	92%	86%	90%
Urban	96%	94%	83%	89%



## Integrated Management of Childhood Illness

The "Integrated Management of Childhood Illness (IMCI)" program was introduced in Bangladesh in 2002 with assistance from UNICEF, WHO, and other development partners. Before integration, there were separate vertical child health programs, viz. Control of Diarrheal Diseases (CDD) and Acute Respiratory Infections (ARI). IMCI addresses morbidities which are responsible for almost 75% of under-five deaths. To simplify case management in the primary healthcare settings by the health workers and paramedics, the childhood diseases/problems covered by IMCI program in Bangladesh have been classified into 10 broad categories, viz. (i) very severe disease, (ii) pneumonia, (iii) cough and cold-not pneumonia, (iv) diarrhea, (v) fever-malaria, (vi) fever-not malaria, (vii) measles, (viii) ear problems, (ix) PEM (protein-energy malnutrition), and (x) others. IMCI is provided through facility-based treatment as well as through home-care. The latter is called Community IMCI Program. Currently, facility IMCI is running in 420 upazilas of 50 districts and community IMCI in 15 upazilas. UNICEF and WHO provide technical and financial assistance to the Ministry of Health and Family Welfare for implementing the IMCI program. Various other development partners and NGOs also collaborate with the Government.

The Management Information System (MIS) of the DGHS tries to capture data from IMCI services provided in different IMCI facilities. Community IMCI Program is a newer intervention, and a separate system for data collection is developed. Facility-based IMCI is delivered in 50 districts. The districts are: Barisal, Bhola, Patuakhali under Barisal division; Brahmanbaria, Bandarban, Chandpur, Chittagong, Comilla, Cox's Bazar, Khagrachhari, Laxmipur, and Rangamati under Chittagong division; Dhaka, Gazipur, Gopalganj, Jamalpur, Kishoreganj, Madaripur, Mymensingh, Narsingdi, Netrakona, Shariatpur, Sherpur, and Tangail under Dhaka division; Bagerhat, Chuadanga, Jessore, Khulna, Narail, and Satkhira under Khulna division; Bogra, Chapainowabganj, Joypurhat, Naogaon, Natore, Pabna, Rajshahi, and Sirajganj under Rajshahi division; Dinajpur, Gaibandha, Kurigram, Lalmonirhat, Nilphamari, Panchagarh, Rangpur, and Thakurgaon under Rangpur division; and Hobiganj, Maulvibazar, Sunamganj, and Sylhet under Sylhet division.

Data on 2,337,994 patients from the IMCI facilities of the 50 districts have been received by MIS-Health. The patients were aged 0 day to less than 5 years. The distribution of the patients by divisions is shown in Figure 4.13.

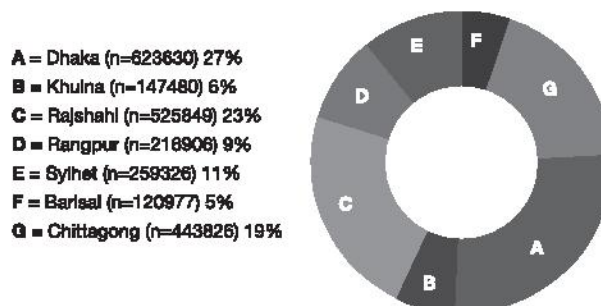


Figure 4.13. Distribution of patients in the IMCI facilities by division (N=2,337,994)

Figure 4.14 shows the age distribution of the children. It is seen that children from 1 to 5 year(s) of age constituted the largest IMCI service recipients (62%), followed by 2 to 12 months age-group (31%). Of the total under-five children, 2% were at the neonatal age. Age-group of 29 to 59 days comprised 5% of the total children receiving services from the IMCI facilities.

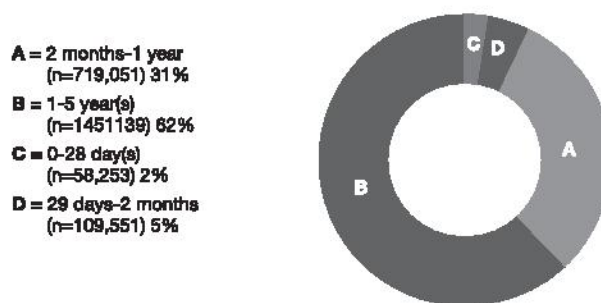


Figure 4.14. Distribution of patients in the IMCI facilities by age group (N= 2,337,994)

Table 4.16 shows the distribution of the IMCI diseases among children aged 1 day to 5 years. It is seen that the number and percentage of patients increased with age in case of each disease. Caution is needed to interpret this situation. This trend should be related to more attendance of the older children in the IMCI facilities than the younger ones.

**Table 4.17. Distribution of IMCI diseases by age-group (summary of data received from IMCI facilities in 50 districts in 2011)**

Disease/health problem	Unit	0-28 day(s)	29-59 days	2-12 months	1-5 year(s)	Total
Very severe disease	No.	9,609	15,713	15,394	15,299	56,015
	%	17	28	27	27	100
Pneumonia	No.	0	0	85,488	118,988	204,476
	%	0	0	42	58	100
No pneumonia (Cough and cold)	No.	0	0	280,830	506,152	786,982
	%	0	0	36	64	100
Diarrhea	No.	6,109	18,640	110,946	212,985	348,680
	%	2	5	32	61	100
Fever-Malaria	No.	0	0	2,107	4,787	6,894
	%	0	0	31	69	100
Fever-Not malaria	No.	0	0	156,785	319,747	476,532
	%	0	0	33	67	100
Measles	No.	201	407	1,059	1,597	3,264
	%	6	12	32	49	100
Ear problem	No.	2,835	7,916	31,740	66,399	108,890
	%	3	7	29	61	100
Malnutrition	No.	4,663	11,199	32,200	64,751	112,813
	%	4	10	29	57	100
Others	No.	20,602	37,292	112,274	286,195	456,363
	%	5	8	25	63	100
Total	No.	44,019	91,167	828,823	1,596,900	2,560,909
	%	2	4	32	62	100

Table 4.18 presents the distribution of the IMCI diseases within each age-group. Among the total children, respiratory tract infection was the leading cause of morbidity (cough and cold 30.7%; pneumonia 8.0%).

Fever (malaria or not malaria) and diarrhea were the morbidities among 19.0% and 13.6 % of the children respectively. Similar pattern of morbidities was also observed among children of all age-groups. However, very severe disease, diarrhea, protein-energy malnutrition, and ear problem were also prevalent during the neonatal period—1-28 day(s)—affecting 21.8%, 13.9%, 10.6, and 6.4% respectively.

To simplify case management in the primary healthcare settings by the health workers and paramedics, the childhood diseases/problems covered by IMCI program in Bangladesh have been classified into 10 broad categories...

**Table 4.18. Distribution of IMCI diseases (%) within each age-group of children of both sexes (summary of data received from IMCI facilities in 50 districts in 2011)**

Disease/health problem	0-28 day(s)	29-59 days	2-12 months	1-5 year(s)	Total
Total cases	44,019	91,167	828,823	1,596,900	2,560,909
Very severe disease	21.8	17.2	1.9	1.0	2.2
Pneumonia	0.0	0.0	10.3	7.5	8.0
No pneumonia (Cough and cold)	0.0	0.0	33.9	31.7	30.7
Diarrhea	13.9	20.4	13.4	13.3	13.6
Fever-Malaria	0.0	0.0	0.3	0.3	0.3
Fever-Not malaria	0.0	0.0	18.9	20.0	18.6
Measles	0.5	0.4	0.1	0.1	0.1
Ear problem	6.4	8.7	3.8	4.2	4.3
Malnutrition	10.6	12.3	3.9	4.1	4.4
Others	46.8	40.9	13.5	17.9	17.8
Total	100.0	100.0	100.0	100.0	100.0

Table 4.19 shows the burden of each of the IMCI diseases (based on the number and percentage of children visiting IMCI facilities) shared by the IMCI facilities in various divisions. The estimates

are not representative of the prevalence of these diseases. The variation in the number of patients may also be due to variation in the number of IMCI facilities among the divisions.

**Table 4.19. Distribution of the number of children aged 1 day to 5 years according to IMCI diseases among divisions (summary of data received from IMCI facilities in 50 districts in year 2011)**

Disease	Unit	Barisal	Chittagong	Dhaka	Khulna	Rajshahi	Rangpur	Sylhet	Total
Very severe disease	No.	2,529	11,036	16,413	3,367	8,401	6,446	7,823	56,015
	%	5	20	29	6	15	12	14	100
Pneumonia	No.	7,680	41,715	60,728	7,320	41,986	20,451	24,596	204,476
	%	4	20	30	4	21	10	12	100
No pneumonia (Cough and cold)	No.	38,094	140,935	220,599	54,490	190,087	73,535	69,242	786,982
	%	5	18	28	7	24	9	9	100
Diarrhea	No.	17,341	68,223	90,549	19,567	65,895	37,052	50,053	348,680
	%	5	20	26	6	19	11	14	100
Fever-Malaria	No.	365	2,770	1,132	307	1,064	777	479	6,894
	%	5	40	16	4	15	11	7	100
Fever-Not malaria	No.	28,333	82,953	144,092	39,179	91,322	51,796	38,857	476,532
	%	6	17	30	8	19	11	8	100
Measles	No.	93	919	980	110	496	200	466	3,264
	%	3	28	30	3	15	6	14	100
Ear problem	No.	5,523	18,088	28,700	4,323	24,587	11,081	16,588	108,890
	%	5	17	26	4	23	10	15	100

Table 4.19 Continued

Disease	Unit	Barisal	Chittagong	Dhaka	Khulna	Rajshahi	Rangpur	Sylhet	Total
Malnutrition	No.	6,067	21,795	26,268	4,001	28,063	11,775	14,844	112,813
	%	5	19	23	4	25	10	13	100
Others	No.	27,377	92,482	112,920	30,108	110,240	34,071	49,165	456,363
	%	6	20	25	7	24	7	11	100
Total	No.	133,402	480,916	702,381	162,772	562,141	247,184	272,113	2,560,909
	%	5	19	27	6	22	10	11	100

Table 4.20. Distribution of children (%) aged 1 day to 5 years according to IMCI diseases within each division (summary of data received from IMCI facilities in 50 districts in 2011)

Disease/health problem	Barisal	Chittagong	Dhaka	Khulna	Rajshahi	Rangpur	Sylhet	Total
No. of cases	133,402	480,916	702,381	162,772	562,141	247,184	272,113	2,561,509
Very severe disease	1.9	2.3	2.3	2.1	1.5	2.6	2.9	2.2
Pneumonia	5.8	8.7	8.6	4.5	7.5	8.3	9.0	8.0
No pneumonia (Cough and cold)	28.6	29.3	31.4	33.5	33.8	29.7	25.4	30.7
Diarrhea	13.0	14.2	12.9	12.0	11.7	15.0	18.4	13.6
Fever-Malaria	0.3	0.6	0.2	0.2	0.2	0.3	0.2	0.3
Fever-Not malaria	21.2	17.2	20.5	24.1	16.2	21.0	14.3	18.6
Measles	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.1
Ear problem	4.1	3.8	4.1	2.7	4.4	4.5	6.1	4.3
Malnutrition	4.5	4.5	3.7	2.5	5.0	4.8	5.5	4.4
Others	20.5	19.2	16.1	18.5	19.6	13.8	18.1	17.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 4.20 shows the percent distribution of children aged 1 day to 5 years according to IMCI diseases within each division (summary of data received from IMCI facilities in 50 districts in 2011).

### Nutrition for the Community

The Ministry of Health and Family Welfare had a National Nutrition Program (NNP) included under Health, Nutrition and Population Sector Program (HNPS 2003-2011). As of 2011, the program was available in 172 upazilas. However, in Health, Population and Nutrition Sector Development Program 2011-2016, the nutrition service has been planned to be mainstreamed for delivery through the normal service-delivery chain of the DGHS and the DGFP. A new operational plan called National Nutrition Service (NNS) has been included under the DGHS in HPNSDP 2011-2016. As of June 2011, in the NNP areas, there was a community nutrition worker for every 1,200 population.

She held nutrition clinic 6 days per week in her community. The NNP provided nutrition care for the following: (i) children (birth registration plus services for malnourished under-two children); (ii) mothers (pregnant and lactating mothers); (iii) newly-married couples; (iv) adolescents; (v) father- and mother-in-law forum; (vi) a forum of husbands of pregnant women; (vii) monitoring body-weights of children and pregnant women; (viii) supplementary nutrition (supply of specially-prepared local nutritious foods); (ix) training; (x) behavior change communication; (xi) food security (homestead gardens, poultry farming, vulnerable group feeding, etc.). To implement the nutrition program at the field level, there were 36,764 community nutrition workers, 3,732 community nutrition organizers, 960 field supervisors, and 172 upazila managers under the NNP. The beneficiaries of the NNP included 9.1 million households covering 45 million people. The registered population for nutrition care included 1.94 million under-two children, 0.5 million pregnant

women, 0.42 million lactating mothers, 2.1 million adolescent girls, and 0.24 million newly-married women.

The nutrition service has been planned to be mainstreamed for delivery through the normal service-delivery chain of the DGHS and the DGFP...

#### **Medical Waste Management at Upazila Level**

Medical wastes are products of healthcare activities and, if not handled and disposed of properly, these can transmit diseases by direct contact or by

contaminating soil, air, and water. In uncontrolled environment, service providers, other individuals, community people, and the environment remain at risk. Under HNPSP 2003-2011 and HPNSDP 2011-2016, medical waste management has been included as one of the important components of health facility management. The waste management function for the health facilities at the upazila level and below has been entrusted with the operational plan of essential services delivery (ESD). The components of the program are: (i) construction of pits (for infectious, general and recyclable wastes, and sharps) in the upazila health complexes; (ii) procurement and regular supply of logistics for collection and transportation of wastes and the safety materials for the waste-handlers; (iii) training and orientation of the health personnel on proper waste management; and (iv) community awareness of medical wastes, its management, and individual responsibility.