The Status of Community Based Health Workers in Rural Bangladesh

Save the Children

EVERY ONE

Save the Children

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The Status of Community Based Health Workers in Rural Bangladesh

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FOREWORD

Save the Children is pleased to share our report, *The Status of Community Based Health Workers in Rural Bangladesh.* This report has been prepared as part of Save the Children's Saving Newborn Lives (SNL) program together with Save the Children's EVERY ONE campaign. Save the Children's SNL program has provided healthcare professionals with cutting-edge research that has led to lifesaving interventions. The EVERY ONE campaign is advocating globally and in Bangladesh for more trained health workers to save the lives of children dying from treatable illnesses and diseases. As part of the research efforts of SNL and together with the EVERY ONE campaign, the ultimate goal of this report is to provide solid data that will serve as a useful tool for the Bangladeshi Government and development partners when they make decisions about the funding, the training and the deployment of community health workers across Bangladesh.

The Status of Community Based Health Workers in Rural Bangladesh provides, for the first time, comprehensive, research-based evidence about the state of community health workers in Bangladesh. It shows those areas which need more community health workers generally and demonstrates the need for more health care workers who are trained in essential newborn care (ENC).

The call to deploy, train and equip more health workers is a key component of the Saving Newborn Lives program and for the EVERY ONE campaign in both Bangladesh and globally. Save the Children's programs in Bangladesh work largely through training and empowering health workers to deliver lifesaving interventions for children, and its advocacy issues relate to the availability and capacity of health workers to save lives.

The government of Bangladesh's Health, Population and Nutrition Sector Development Program (HPNSDP) includes ENC as a key component and calls for universal coverage of postnatal care home visit within 48 hours of birth. We will not see effective implementation of these policy decisions in the areas of nutrition, newborn health and pneumonia without an adequate number of trained health workers- particularly community health workers reaching the most remote areas. With a national average of 13.6 community health workers per 10,000 population, and only 5.2 per 10,000 trained in essential newborn care, Bangladesh badly needs more community health workers to provide lifesaving and life changing healthcare in local communities. This data supports Save the Children's experience on the ground which suggests that the number of health workers in Bangladesh is far less than the need, and that the distribution of trained health workers is inequitable, with remote areas having fewer health workers per capita.

This report is a call to action, asking for more health workers with the appropriate training, particularly in the worst-off areas. With this report in hand, we ask for the support of health professionals and civil society to make policy and investment decisions that will ultimately result in better healthcare for millions of Bangladesh's mothers and children.

For more information please, please visit www.savethechildren.org, or contact Save the Children in Bangladesh by phone at +880 2 8828081.

INTRODUCTION

In developing countries around the world, community health workers (CHWs) are on the front lines, providing vital healthcare for mothers and children. Properly trained, they can promote skilled attendance at delivery while ensuring women have a clean delivery with referral level care for obstetric and postpartum complications. Essential newborn care, hand washing and management of sick newborns are key elements of the healthcare that can be provided by community health workers. CHWs also refer to health facilities for complications and manage the care of sick newborns. Ideally, maternal and newborn care is often linked with a family planning component to promote healthy practices and behaviors.

Studies have shown that home-based newborn care interventions can prevent 30–60% of newborn deaths in high mortality settings under controlled conditions (1,2). Therefore, the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) now recommend home visits in the baby's first week of life to improve newborn survival. In a Joint Declaration (3) entitled "Home visits for the newborn child: A strategy to improve survival", the WHO and UNICEF focus on the need for health workers trained in essential newborn care. The Joint Statement recommends home visits by workers trained in essential newborn care in the first week of a baby's life to improve newborn survival. ENC is comprised of very simple behaviours and practices for all newborns (e.g. thermal/hygienic care, breastfeeding, etc.), that can easily be implemented at home. ENC is included in Bangladesh's National Neonatal Health Strategy, and integrated into Bangladesh's recent Health Population and Nutrition Sector Development Program 2011 – 2016.

Bangladesh has made tremendous strides in maternal and child health over the last thirty years. Still more than 7,300 mothers and 113,884 newborns died in Bangladesh in 2008 mainly due to inadequate care around the time of childbirth (4). The country does not have enough skilled birth attendants and 73% of deliveries occur at home without proper assistance. About half of the neonatal deaths occur in the first day of life and about three quarters in the first week, mostly from preventable causes. In addition, Bangladesh has one of the world's highest malnutrition rates, and coverage for treatment of common diseases is low.

The scenario in Bangladesh is complicated by the fact that donor partners and non-governmental organizations with the support of the government also provide community based health services, but often on a project basis. While the Government's coverage is more or less evenly distributed – albeit at a low level – project work undertaken by non-governmental organizations (NGOs) and supported by the Bangladeshis government and donor partners is often concentrated in specific areas.

For example, the data gathered as part of this report, shows that specific projects such as the large scale maternal, neonatal and child survival programs (i.e. MNCS and MNCH) are making an appreciable difference in the availability of community based health workers for rural Bangladesh. The risk is that, once the projects are finished, the numbers of health workers will fall and the health of those who rely on them will suffer. These projects are largely concentrated in northern Bangladesh, in Rangpur division.

Maternal and neonatal health statistics show that there is a need for more health workers serving their local communities across Bangladesh, but there has never been a clear, comprehensive picture of how many community health workers there are in Bangladesh, what their relative capacities are, who deploys them, or where they operate. This report, entitled "*The Status of Community Based Health Workers in Rural Bangladesh*" is a first step towards identifying the number of rural community health workers in Bangladesh and providing data on those trained in essential newborn care. It provides data on the number of workers and identifies them by type. The report includes breakouts for government and non-government workers and identifies those funded by large time-bound programs (i.e. large-scale,

government supported mother and child health programs) in addition to routine and sustained community-level workers. Above all, the goal of this report is to identify needs in rural Bangladesh, to aid the Government of Bangladesh (GoB) and donors in future program planning to reduce maternal and newborn mortality.

The report findings are based on secondary data analysis. The Ministry of Health (MOH&FW) has endorsed this data collection process which relied entirely on the cooperation of the GoB, NGOs and other stakeholders. The focus was on rural, community-based health workers; urban areas have not been included. Trained ENC workers in this analysis are defined as those health workers receiving a minimum 2-day ENC training, often part of more comprehensive training. The analysis did not include volunteers or untrained community mobilizers as CHWs.

Background:
Analysis
and
Methodology

BACKGROUND: ANALYSIS AND METHODOLOGY

Rationale

Studies have shown that home-based newborn care interventions can improve newborn health outcomes; Therefore, in a Joint Declaration (3) entitled "Home visits for the newborn child: A strategy to improve survival", the WHO and UNICEF focus on the need for health workers trained in essential newborn care. ENC is comprised of very simple behaviours and practices for all newborns (e.g. thermal/hygienic care, breastfeeding, etc.), that can easily be implemented at home. ENC is included in Bangladesh's National Neonatal Health Strategy, and integrated into Bangladesh's recent Health Population and Nutrition Sector Development Program 2011 – 2016. In order to deliver home based ENC, planning requires an understanding of the availability and capacity of community-based health worker deployed throughout the country. This report is an initial attempt to quantify the availability of government and non-government CHWs in Bangladesh, as well as those trained in essential newborn care.

Data segregation

The report provides the numbers of community based health workers in rural Bangladesh by division, district and upazila. The data is disaggregated by different types of community health workers: government, NGOs and those working for large government and NGO time-bound programs (i.e. MNCS and MNCH). The analysis also qualifies those community health workers who are trained in essential newborn care. In order to provide an overview of the density of the community health workers in specific areas, and in order to compare their density across Bangladesh, a proportion of CHWs per 10,000 population was used to generate maps. These maps show the geographic coverage and density of community health workers by population.

Population calculation

Bangladesh's estimated population of 150 million was used to calculate the density. The estimated population was based on the 2001 census and was calculated including a national common growth rate available through 2008 (source: Sample Vital Registration System (SVRS) 2008 report). For 2009, the population was estimated based on the 2009 growth rate from the SVRS-2009 report. The 2009 growth rate was also used to estimate the 2010 and 2011 population.

Data sources

Save the Children relied on partners, including the Directorate General of Health Services (DGHS), Directorate General of Family Planning (DGFP), BRAC, UNICEF, SSFP, Plan, CARE, JICA, and others, to supply the data. The Government, the Director Primary Health Care of DGHS, endorsed the analysis.

Types of health workers included in the data

The type of community based health workers included in the analysis included Family Welfare Assistants (FWAs), Health Assistants (HAs),Community Health Care Promoters (CHCPs), Shasta Shabika (SS) & Shasta Kormi (SK) of BRAC, Community Service Promoters (CSPs) of SSFP and other NGO community health workers, as well as UN agencies and BRAC supported MNCH/MNCS promoters. Volunteer cadres were not included in this initial analysis because of the variation in roles and capacities.

Essential newborn care

This report defines an ENC-trained health worker as one who has received at least two days of ENC training, as stand alone or as part of integrated training, pre- or in-service curriculum. An example is Integrated Management of Childhood Illnesses (IMCI) in-service training.

An ENC trained worker is trained in the following elements of essential newborn care including:

- Facilitating a clean and safe delivery
- Preventing and managing hypothermia
- Assessing breathing status
- Assisting in early breastfeeding
- Providing appropriate umbilical cord care
- Providing appropriate eye care
- Giving special care to preterm and/or low birth weight babies
- Identifying, managing and referring complications

Limitations of the study

This report has a number of limitations as follows:

- Save the Children relied on partners to supply data, it is thus secondary analysis
- The secondary analysis did not include a validation of health worker deployments
- There are few international standards for community health worker density to use
- This report has a rural focus and excludes the urban areas, for example Chittagong City Corporation and Dhaka City Corporation – among others – have not been included in the data
- There is no standard definition for CHWs in Bangladesh; therefore there is some variation in the qualifications, capacities and scopes of work for community based health workers in this analysis.
- There may be small NGOs operating in Bangladesh, deploying community based health workers in rural areas, not captured in this analysis. However, it is believed that the analysis includes the significant programs and any omissions would have only marginal affect on findings.
- Newly formed upazilas were not captured in the mapping software

Report Structure

This report is divided into three parts. In the first section, the data on community health workers is reviewed from the division perspective, followed by a discussion of the district level and the upazila level. The maps which accompany the text serve as a powerful tool showing where there are the most and the fewest healthcare workers. Additional maps and tables identifying the divisions and upazilas with the most and fewest community health workers per 10,000 population are also provided.

The second section examines those community health workers trained in essential newborn care at the division, district and upazila levels, and as in the general community health worker section includes breakouts for all community health workers, government workers and health workers, both government and NGO, who are involved in large, time-bound programs. In this section, maps and tables also help provide insight into those upazilas where there are the most and fewest workers trained in essential newborn care.

Community Health Workers in Bangladesh's Seven Divisions

The Status of Community Based Health Workers in Rural Bangladesh

The report finishes by providing an overview of the study, together with recommendations aimed at helping the Government of Bangladesh and Bangladesh's development partners target their investment to those areas where it is needed most.

COMMUNITY HEALTH WORKERS IN BANGLADESH'S SEVEN DIVISIONS

All Community Health Workers

In rural Bangladesh, the Ministry of Health and Family Welfare (MOH&FW) provides around 54,000 (31%) permanent healthcare workers, and another 52,000 (30%) temporary community health workers via the donor supported MNCS and integrated MNCH Programs, Apart from MNCH program BRAC deploys around 63,000 CHWS including SK and SS through routine BRAC health programs (36%), and other NGOs around 6,000 or 4%

Distribution of Community Health Workers		
	Number	Percent
Government	53,792	31%
MNCS & MNCH	51,554	29%
BRAC	63,018	36%
NGO excluding BRAC	6,126	4%
Total	174,490	100%

Table 1: Distribution of Community Health Workers

Legend
0 - <1
1 - <5
5 - <9
10 - <15
15 - <20
>=20

Map 1: Density of MOH&FWs CHWs by Division

This map shows the density of Ministry of Health and Family Welfare per 10,000 population by division. The study found that permanent GoB health workers like Health assistant, Family Welfare Assistant and newly the Community Clinic Health Care Providers (recruitment under process) are deployed in an equitable way across Bangladesh, albeit at a generally low level.

The map shows the even-handed manner in which government (MOH&FW) health workers are deployed across Bangladesh. Disparities in the density of community health workers among divisions are generally caused by specific programs, especially the large-scale MNCH and MNCS programs. Those programs were primarily designed to address the high mortality areas of the country.

The MNCS Program is formally titled "An Integrated Package of Maternal, Neonatal and Child Survival (MNCS) Interventions". The overall goal of the MNCS Program is to reduce maternal, neonatal and under-five mortality in selected low-performing districts that will accelerate achievement of the Millennium Development Goals (MDG) 4 and 5. The project is funded by AusAID and implemented via the Government of

Bangladesh's DGHS, the Ministry of Health and Family Welfare and UNICEF. The project is implemented by NGOs on-the-ground including Concern Worldwide, Partners in Health & Development (PHD), Bangladesh/VARD , Unnyan Sangha (Sherpur) and ICDDR,B.

The **MNCH Program** is formally titled "Improving Maternal, Neonatal and Child Survival: A partnership Approach to Achieve Millennium Development Goals in Bangladesh". The objective is to reduce maternal neonatal and child mortality and morbidity, particularly, among the poor and socially excluded population. The MNCH Project is funded by the Australian Government Overseas Aid Program(AusAID), the UK's Department For International Development (DFID), and the Embassy of the Kingdom of the Netherlands, and is implemented via the Government of Bangladesh's Directorate General of Health Services and the Ministry of Health and Family Welfare. BRAC, UNICEF and the Government of Bangladesh carry out the work in local communities.

The graph below, *Comparison of All Community Health Workers at the Division Level*, compares the actual density of all community health workers by division. The density of community health workers in Bangladesh's seven divisions ranges from a high of 22 CHWs per 10,000 in Rangpur Division to a low of 9.3 community health workers per 10,000 in neighbouring Rajshahi Division. Barisal and Dhaka divisions with 13.7 CHWs per 10,000 and 15.0 CHWs per 10,000 respectively, are in line with the national average of 13.6 CHWs per 10,000 population. Chittagong, Khulna and Sylhet Divisions trail them with a density of between 11 and 12 CHWs per 10,000 population.

Comparison of All Health Workers at the Division Level
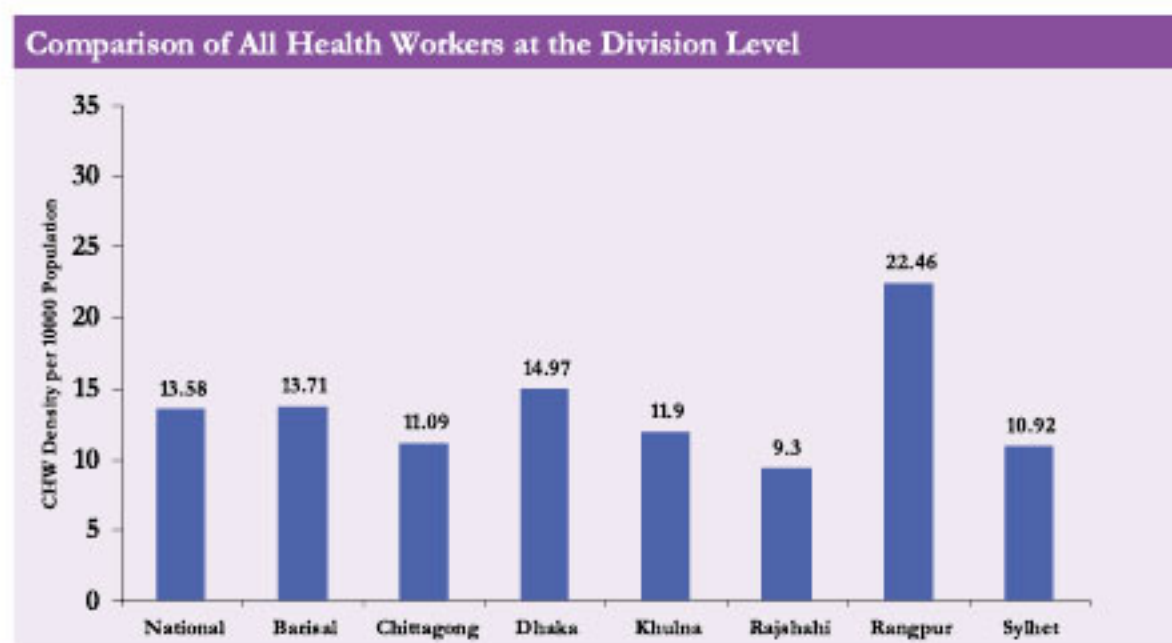
Graph 1: Comparison of All Community Health Workers at the Division Level

Ministry of Health and Family Welfare Community Health Workers

The Government of Bangladesh has deployed health care workers providing permanent on-going care in local communities across Bangladesh. The table below shows that the GoB's Ministry of Health and Family Welfare has around 4.3 health workers per 10,000 population working in rural Bangladesh. Health workers have been deployed by the GoB in an equitable fashion; the lowest density is in Rajshahi Division (4.1 per 10,000) and the highest density of health workers is in Barisal division (4.8 per 10,000).

MOH&FW Community Health Workers Density by Division
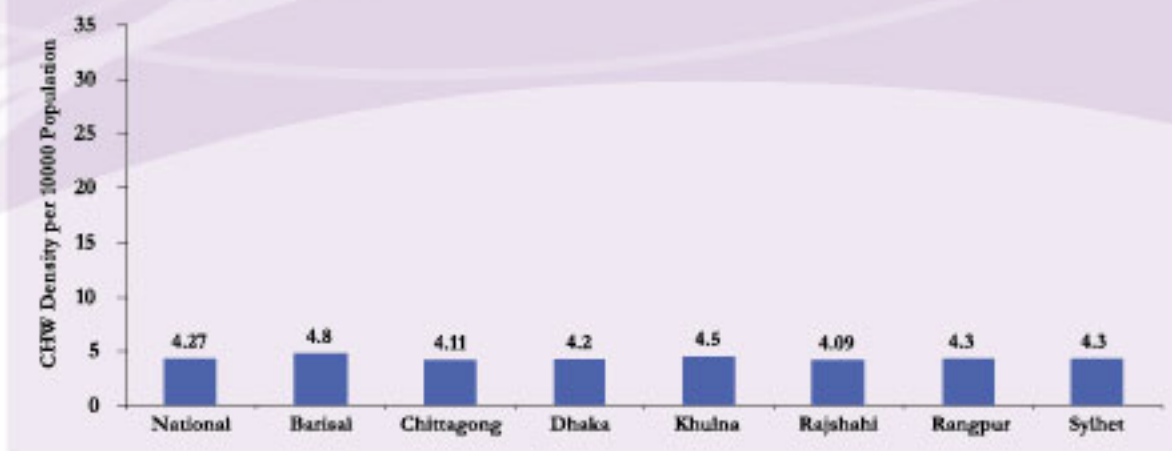
Graph 2 : & FW Community Health Workers Density by Division

NGO Community Health Workers

Many of the community health workers in rural Bangladesh are deployed as part of time-bound programs that were developed in response to specific needs and include health workers who are employed by the large scale MNCH and MNCS Programs. For example, Rangpur Division which has the highest average density per 10,000 of these time-bound health workers (18.1 per 10,000) also has a high infant mortality rate relative to the rest of Bangladesh.

This map shows NGO community health workers by division. These CHWS are generally tied to time-bound programs that have arisen as a result of a need, for example, high infant mortality in specific divisions.

Table 2: Density of NGO CHWs by division

Density of NGO community health workers by division	
Division	**Density**
Barisal	8.9
Chittagong	7.0
Dhaka	10.8
Khulna	7.4
Rajshahi	5.2
Rangpur	18.1
Sylhet	6.6
National average	**9.3**

Map 2: Density of NGO CHWs by division

Nationally, on average, there are around 9.3 of these programmatic community health workers per 10,000 population but these are highly concentrated in certain divisions. With 5.2 community health workers per 10,000, Rajshahi Division has the fewest NGO community health workers per capita and Rangpur Division, with around 18 CHWs per 10,000 population has the most.
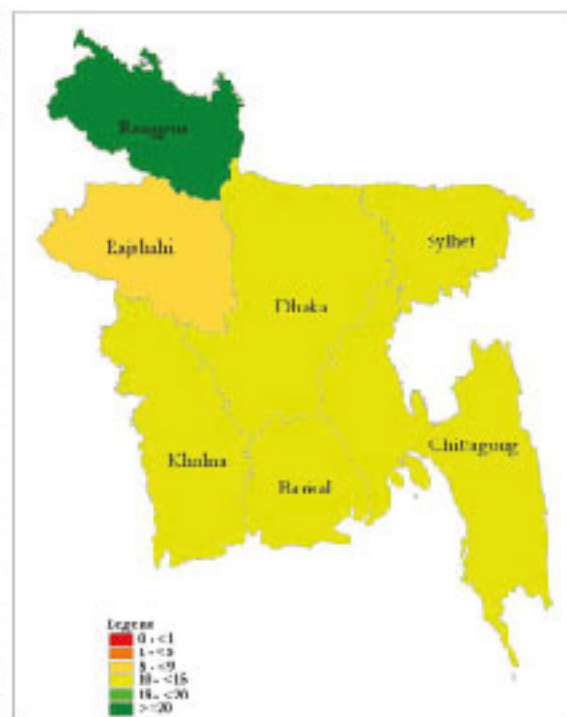
Community Health Workers in Bangladesh's Sixty-four Districts

COMMUNITY HEALTH WORKERS IN BANGLADESH'S 64 DISTRICTS

All Community Health Workers

The districts with the fewest healthcare workers are in Rangpur, Dhaka and Rajshahi Divisions. Lalmonhirat District in Rangpur Division has 5.1 CHWs per 10,000. Tangail, Narayanganj, Noagoan and Rajshahi Districts have between 7 and 7.9 community healthcare workers per 10,000. The district with the most health workers are largely found in Chittagong and Rangpur Divisions. Bandarban and Rangpur Districts have respectively 35.0 and 31.3 CHWs per 10,000.

This map shows all community health workers per 10000 population by district. The concentration of CHWs in Rangpur District is largely a result of integrated MNCH and MNCS programmatic work being rolled out in Rangpur division. In the hill tracts in Chittagong Division, the higher density is due to a lower general population density, which results in higher proportion of health workers to population.
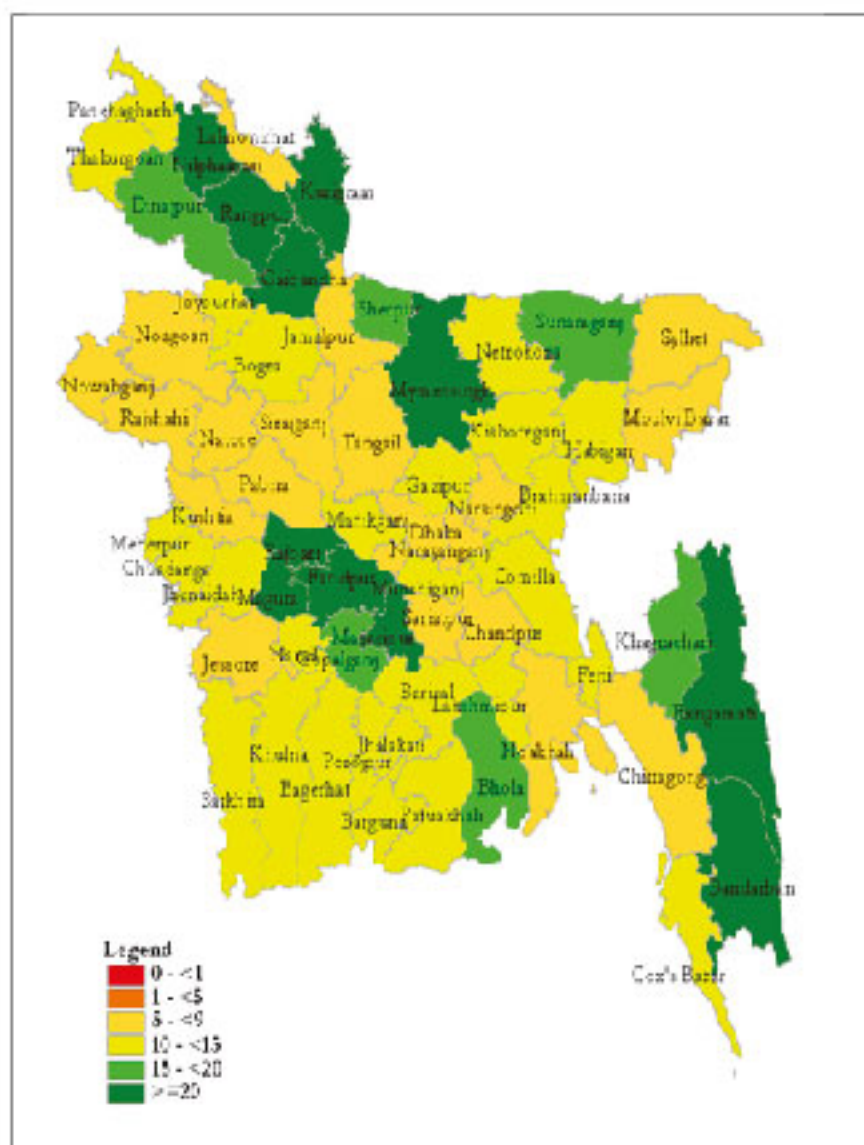
Map 3 : Density of all CHWs per 10000 population by district.

Ministry of Health and Family Welfare Community Health Workers

The picture at the district level shows a slightly different picture of government deployment of community health workers from the division level analysis. Data at the district level shows that while permanent government community health workers are relatively evenly spread across Bangladesh, some districts have a higher density of MOH&FW CHWs. This is especially apparent in southeast Bangladesh, where Bandarban and Rangamati Districts with 8.7 and 7.1 CHWs per 10,000 have nearly double the national average of 4.3 GoB CHWs per 10,000.

This map shows the density of government community health workers per 10,000 population by district. The high density of permanent government community health workers in the Chittagong Hill Tracts (Khagrachari, Rangamati and Bandarban) is due to the relative low density of the population of the hill tracts

The lowest government (MOH&FW) community health worker density is in Narayanganj district of Dhaka division, which has the fewest permanent government CHWs– 2.7 community health workers per 10,000 population. All other districts, MOH&FW have more than 3.3 CHWs per 10,000 population. Rajshahi Division has four districts and Chittagong has three districts with fewer than 4 community health workers per 10,000 population. Districts in Rangpur and Sylhet Divisions fall in the list of bottom 20
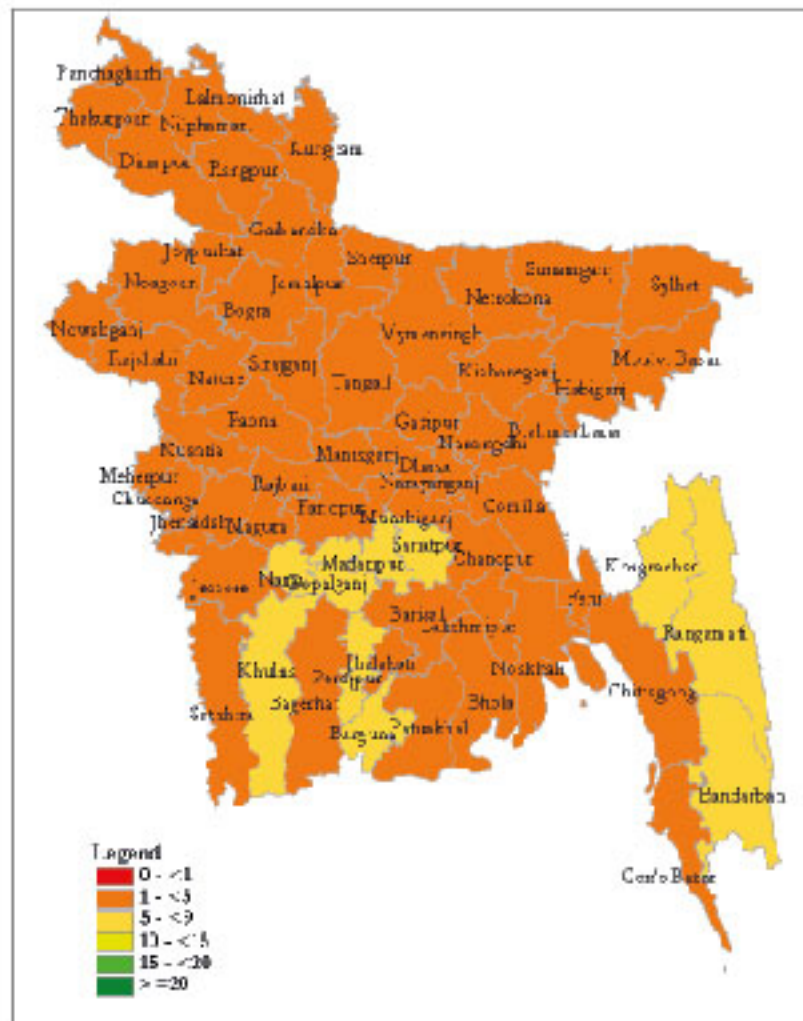
Map 4: Density of government CHWs per 10,000 population by district.

districts of community health worker density are relatively close to the national average of 4.3 per 10,000.While government health workers are relatively evenly spread across Bangladesh, the government has deployed more workers percapita to the Chittagong Hill Tracts, specifically to Bandarban and Rangamati. These districts have 8.7 and 7.1 CHWs per 10,000 as compared to the government national average of 4.3. Considering the difficulties of communication and low density of population in the hilly districts, these relative higher densities of CHWs give the impression of a well judge decision of deployment.

MOH&FW community health worker density per 10000 population in by districts

Sl.	Division	District	Density of CHWs	Sl.	Division	District	Density of CHWs
1	Chittagong	Bandarban	8.7	33	Rajshahi	Noagoan	4.3
2	Chittagong	Rangamati	7.1	34	Chittagong	Brahmanbaria	4.3
3	Barisal	Bergam	6.0	35	Khulna	Chuadanga	4.3
4	Dhaka	Gopalganj	5.8	36	Rajshahi	Bogra	4.3
5	Chittagong		5.6	37	Rangpur	Kurigram	4.3
6	Barisal	Perojpur	5.5	38	Dhaka	Gazipur	4.3
7	Khulna	Khulna	5.4	39	Rangpur	Panchagharh	4.3
8	Dhaka	Madaripur	5.3	40	Dhaka	Jamalpur	4.2
9	Khulna	Narail	5.2	41	Barisal	Bhola	4.2
10	Dhaka	Sariatpur	5.1	42	Rangpur	Dinajpur	4.2
11	Barisal	Jhalakati	5.0	43	Rangpur	Rangpur	4.2
12	Khulna	Bagerhat	4.9	44	Rajshahi	Sirajganj	4.2
13	Khulna	Magura	4.8	45	Rangpur	Thakurgoan	4.2
14	Chittagong	Feni	4.8	46	Sylhet	Sunamganj	4.2
15	Dhaka	Manikganj	4.8	47	Dhaka	Mymensingh	4.2
16	Chittagong	Lakshmipur	4.7	48	Sylhet	Moulvi Bazar	4.1
17	Rajshahi	Joypurhat	4.6	49	Dhaka	Rajbari	4.1
18	Rangpur	Gaibandha	4.6	50	Chittagong	Comilla	4.1
19	Dhaka	Netrokona	4.6	51	Khulna	Jessore	4.0
20	Barisal	Patuakhali	4.6	52	Dhaka	Sherpur	4.0
21	Khulna	Jhenaidah	4.5	53	Khulna	Kushtia	3.9
22	Barisal	Barisal	4.5	54	Rajshahi	Nawabganj	3.8
23	Chittagong	Chandpur	4.5	55	Rajshahi	Pabna	3.8
24	Dhaka	Faridpur	4.5	56	Rajshahi	Rajshahi	3.8
25	Sylhet	Habiganj	4.4	57	Dhaka	Munshiganj	3.8
26	Sylhet	Sylhet	4.4	58	Rajshahi	Natore	3.7
27	Rangpur		4.4	59	Chittagong	Noakhali	3.6
28	Dhaka	Tangail	4.4	60	Dhaka	Narsingdhi	3.4
29	Rangpur	Nilphamari	4.4	61	Chittagong	Cox's Bazar	3.4
30	Khulna	Meherpur	4.4	62	Chittagong	Chittagong	3.3
31	Khulna	Satkhira	4.3	63	Dhaka	Dhaka	3.3
32	Dhaka	Kishoreganj	4.3	64	Dhaka	Narayanganj	2.7

NGO Community Health Workers

Time-bound programmatic community health workers are unevenly spread across Bangladesh, generally in response to need and specifically as a result of implementation of different comprehensive maternal newborn and child health programs. The majority of MNCH and integrated MNCH programs are located in Rangpur and Dhaka Divisions. Community health promoters are working under different NGOs for the implementation of these programs.
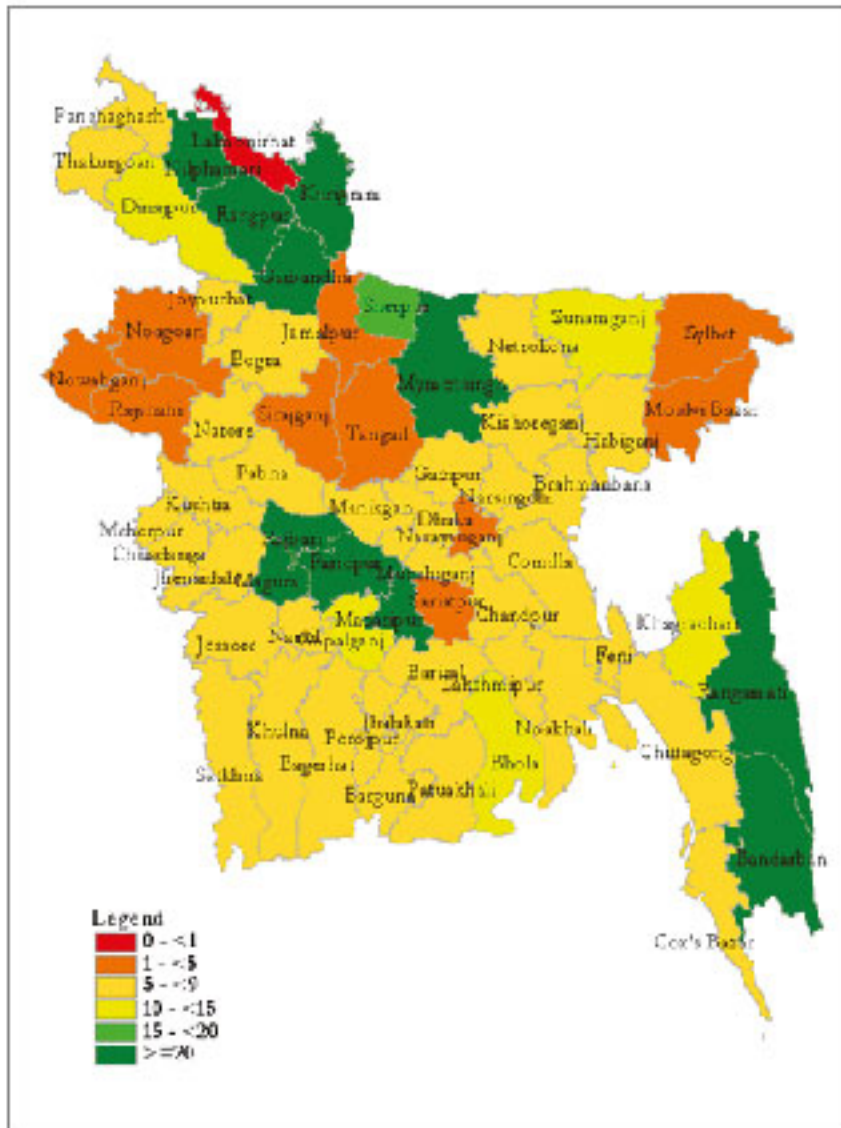
Map 5: Density of NGO Community Health Workers in 65 districts

This map shows the density of NGO health workers per 10000 population by district. Despite the relative high density of NGO workers in Rangpur Division, Lalmonhirat District (located in Rangpur Division) has the lowest density of NGO health workers with 0.7 per 10,000 population.

The national average for NGO community health workers per 10,000 is 9.3. Due to the fact that the government and the NGOs have assigned priorities to specific areas according to needs, the density of these health workers varies from more than 27 in Rangpur district in Rangpur division to fewer than 1 (one) in Lalmonirhat – also in Rangpur Division. Rangpur Division is also where much of the MNCH and MNCS programmatic work is taking place.

NGO community health worker density per 10000 population in by district

Sl.	Division	District	NGO CHWs	Sl.	Division	District	NGO CHWs
1	Rangpur	Rangpur	27.1	33	Chittagong	Lakshmipur	7.3
2	Rangpur	Gaibandha	26.4	34	Khulna	Khulna	7
3	Chittagong	Bandarban	26.3	35	Khulna	Satkhira	6.8
4	Rangpur	Nilphamari	25.3	36	Khulna	Meherpur	6.8
5	Dhaka	Mymensingh	23.3	37	Dhaka	Munshiganj	6.8
6	Khulna	Magura	23	38	Khulna	Narail	6.5
7	Rangpur	Kurigram	22.2	39	Khulna	Bagerhat	6.5
8	Chittagong	Rangamati	22.2	40	Chittagong	Brahmanbaria	6.3
9	Dhaka	Faridpur	22.1	41	Khulna	Jhenaidah	6.2
10	Dhaka	Rajbari	22	42	Chittagong	Chittagong	6.1
11	Dhaka	Madaripur	21.4	43	Dhaka	Narsingdhi	6.1
12	Dhaka	Sherpur	15.4	44	Chittagong	Comilla	6
13	Chittagong	Khagrachari	14	45	Khulna	Kushtia	5.9
14	Sylhet	Sunamganj	12.5	46	Sylhet	Habiganj	5.7
15	Dhaka	Gopalganj	12.1	47	Khulna	Jessore	5.7
16	Rangpur	Dinajpur	11.5	48	Dhaka	Dhaka	5.6
17	Barisal	Bhola	11.2	49	Chittagong	Noakhali	5.5
18	Barisal	Barisal	9.6	50	Rajshahi	Natore	5.3
19	Barisal	Barguna	8.8	51	Chittagong	Chandpur	5.3
20	Dhaka	Netrokona	8.6	52	Barisal	Jhalakati	5.2
21	Rangpur	Thakurgoan	8.4	53	Rajshahi	Pabna	5.2
22	Rajshahi	Joypurhat	8.2	54	Dhaka	Narayanganj	4.6
23	Dhaka	Manikganj	8.2	55	Dhaka	Jamalpur	4.4
24	Rajshahi	Bogra	8.1	56	Rajshahi	Nawabganj	4.3
25	Dhaka	Kishoreganj	7.9	57	Rajshahi	Sirajganj	4.2
26	Khulna	Chuadanga	7.8	58	Rajshahi	Rajshahi	4.1
27	Barisal	Patuakhali	7.8	59	Sylhet	Moulvi Bazar	4.1
28	Barisal	Perojpur	7.7	60	Sylhet	Sylhet	3.9
29	Rangpur	Panchagharh	7.4	61	Dhaka	Sariatpur	3.5
30	Dhaka	Gazipur	7.4	62	Rajshahi	Noagoan	3.2
31	Chittagong	Feni	7.3	63	Dhaka	Tangail	2.6
32	Chittagong	Cox's Bazar	7.3	64	Rangpur	Lalmonirhat	0.7

Community
Health Workers
in Bangladesh's
Four Hundred
Sixty-Four
Upazilas

**The Status of Community Based
Health Workers in Rural Bangladesh**

COMMUNITY HEALTH WORKERS IN BANGLADESH BY UPAZILAS

All Community Health Workers

This map shows all community health workers per 10000 population by upazila. It is clear that largely as a result of time-bound NGO programs together with MNCS and MNCH programs, the density of all community workers is skewed to a few specific areas, largely to upazilas in Rangpur, Dhaka and Chittagong Divisions.
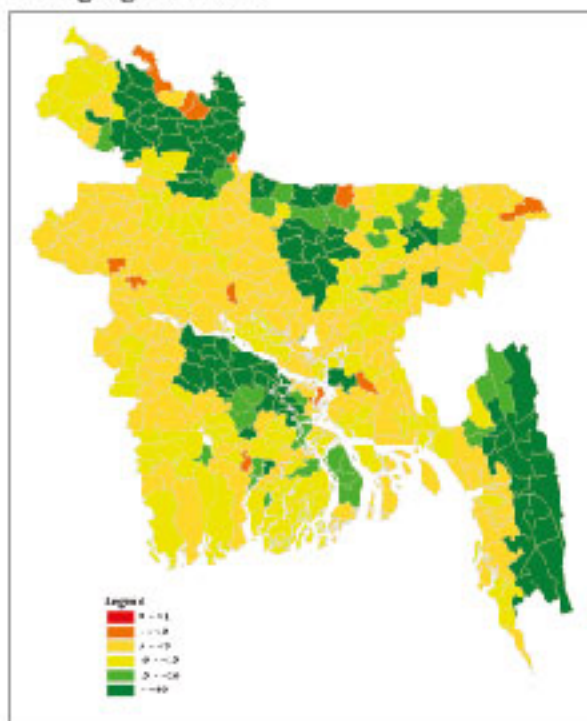
Map 4: Density of all Community Health Workers by Upazila

All community Health Workers Density per 10000 population Top 20 Upazilas			
Sl	Division	District	Upazila	Density
1	Chittagong	Rangamati	Rangamati Sadar	75.0
2	Chittagong	Bandarban	Thanchi	56.7
3	Chittagong	Bandarban	Bandarban Sadar	47.2
4	Chittagong	Bandarban	Rowangchhari	44.0
5	Chittagong	Bandarban	Ruma	41.1
6	Rangpur	Gaibandha	Gaibandha Sadar	35.4
7	Chittagong	Faridpur	Alfadanga	35.4
8	Rangpur	Rangpur	Rangpur Sadar	35.2
9	Rangpur	Rangpur	Pirganj	33.0
10	Rangpur	Gaibandha	Sadullapur	32.7
11	Rangpur	Rangpur	Taraganj	32.4
12	Rangpur	Kurigram	Kurigram Sadar	32.3
13	Rangpur	Gaibandha	Sundarganj	32.3
14	Dhaka	Mymensingh	Bhaluka	32.3
15	Chittagong	Bandarban	Alikadam	32.3
16	Dhaka	Rajbari	Rajbari Sadar	31.9
17	Rangpur	Nilphamari	Jaldhaka	31.7
18	Rangpur	Rangpur	Mithapukur	31.7
19	Rangpur	Rangpur	Badarganj	31.4
20	Chittagong	Khagrachhari	Khagrachhari Sadar	31.3

Largely as a result of NGO programming and large scale mother and child health programs (MNCS and MNCH), the density of all community workers is skewed to a few specific areas, largely Chittagong and Rangpur Divisions. Four upazilas of 3 different have an average density of fewer than 5 community health workers per 10,000 population. Chittagong Division has 5 upazilas with an average density of more than 41 community health workers per 10,000.

The national average density for all community health workers is 13.6 CHWs per 10,000. All of the upazilas in the bottom 20 have 6 or fewer community health workers per 10,000 suggesting that there is little NGO health workers present in their upazilas. The average density of MOH&FW permanent workers, which is fairly even across Bangladesh, is 4.3 CHWs per 10,000. The upazilas with the highest density of CHWs per 10,000 are largely clustered in Chittagong and Rangpur Divisions.

All community Health Workers Density per 10000 population Bottom 20 Upazilas			
SL	Division	District	Upazila	Density
1	Rajshahi	Natore	Bagatipara	4.2
2	Rangpur	Lalmonirhat	Aditmari	4.4
3	Rajshahi	Sirajganj	Chauhali	4.5
4	Chittagong	Chandpur	Kachua	4.9
5	Rangpur	Lalmonirhat	Kaliganj	5.1
6	Rangpur	Kurigram	Char Rajibpur	5.1
7	Rangpur	Lalmonirhat	Patgram	5.1
8	Dhaka	Sariatpur	Bhedarganj	5.2
9	Dhaka	Netrokona	Durgapur	5.3
10	Rangpur	Lalmonirhat	Hatibandha	5.4
11	Rangpur	Lalmonirhat	Lalmonirhat Sadar	5.5
12	Dhaka	Dhaka	Keraniganj	5.6
13	Sylhet	Sylhet	Beanibazar	5.8
14	Sylhet	Moulvi Bazar	Maulvibazar Sadar	6
15	Dhaka	Tangail	Bhuapur	6
16	Rajshahi	Rajshahi	Tanore	6.1
17	Sylhet	Sylhet	Kanaighat	6.1
18	Dhaka	Kishoreganj	Mithamain	6.2
19	Rajshahi	Rajshahi	Charghat	6.2
20	Dhaka	Sariatpur	Gosairhat	6.2

15

Ministry of Health and Family Welfare Community Health Workers

This map depicts the density of MOH&FW community health workers per 10000 population by upazila. With a few notable exceptions, the map shows the relatively even deployment of MOH&FW health workers across Bangladesh.

It's worth noting that Narayanganj Sadar in Dhaka Division has 1.9 MOH&FW health workers per 10,000. Three other upazilas; Keraniganj (Dhaka Division), Kachua (Chittagong Division) and Narsingdi Sadar (Dhaka Division) hover around 2 MOH&FW health workers per 10,000. Three upazilas in Bandarban district have more than 9.8 permanent government CHWs per 10,000. One, Thanchi Upazila, has more than 17 and one, Rowangchhari, has nearly 11.

The national government community health worker average is 4.3 CHWs per 10,000. The upazilas with the lowest density of government community health workers are largely clustered in the western portion of the Chittagong Division and in Dhaka Division.

SL	Division	District	Upazila	Density
1	Chittagong	Bandarban	Thanchi	17.4
2	Chittagong	Rangamati	Rangamati Sadar	11.1
3	Chittagong	Bandarban	Rowangchhari	10.6
4	Chittagong	Chandpur	Matlab	10.4
5	Chittagong	Bandarban	Ruma	10.4
6	Chittagong	Bandarban	Bandarban Sadar	9.7
7	Chittagong	Khagrachari	Khagrachhari Sadar	9.3
8	Chittagong	Rangamati	Juraichhari	9.1
9	Chittagong	Khagrachari	Lakshmichhari	8.8
10	Barisal	Barguna	Bamna	8.2
11	Chittagong	Bandarban	Lama	8.1
12	Chittagong	Rangamati	Rajasthali	7.8
13	Dhaka	Gopalganj	Gopalganj Sadar	7.5
14	Chittagong	Rangamati	Belaichhari	7.4
15	Barisal	Pirojpur	Pirojpur Sadar	7.2
16	Barisal	Jhalakati	Naniarchar	7.1
17	Chittagong	Khagrachari	Ramgarh	7.0
18	Chittagong	Rangamati	Baghaichhari	6.9
19	Barisal	Jhalakathi	Jhalakathi Sadar	6.9
20	Chittagong	Rangamati	Langadu	6.7

MOH&FW CHWs Density per 10000 Population by Upzaila

TOP 20 Upazilas

These tables are followed by maps and short analysis of the situation of MOH&FW community health workers density. The top 20 upazilas are situated mostly in the three hilly districts of Chittagong Division. On the other side the most of the bottom 20 upazillas where the MOH&FW's CHWs density is lowest Dhaka and Chittagong division but they are situated in 11 different districts of all divisions except Sylhet and Khulna. The lowest density of CHW is in Narayanganj Sadar..

MOH&FW CHWs Density per 10000 Population by Upazila
Bottom 20 Upazilas

SL	Division	District	Upazila	Density
1	Dhaka	Narayanganj	Narayanganj Sadar	1.86
2	Dhaka	Dhaka	Keraniganj	2.09
3	Chittagong	Chandpur	Kachua	2.20
4	Dhaka	Narsingdhi	Narsingdi Sadar	2.24
5	Chittagong	Cox's Bazar	Chakaria	2.33
6	Chittagong	Chittagong	Hathazari	2.37
7	Chittagong	Chittagong	Sitakunda	2.56
8	Chittagong	Chittagong	Lohagara	2.60
9	Dhaka	Narayanganj	Bandar	2.64
10	Chittagong	Comilla	Laksam	2.67
11	Dhaka	Narayanganj	Rupganj	2.72
12	Rangpur	Dinajpur	Biral	2.75
13	Chittagong	Chittagong	Banskhali	2.78
14	Dhaka	Munshiganj	Munshiganj Sadar	2.88
15	Dhaka	Dhaka	Savar	2.91
16	Barisal	Jhalakati	Rajapur	2.95
17	Rajshahi	Natore	Gurudaspur	2.97
18	Barisal	Bhola	Manpura	2.98
19	Chittagong	Chittagong	Raozan	2.99
20	Chittagong	Chittagong	Satkania	2.99
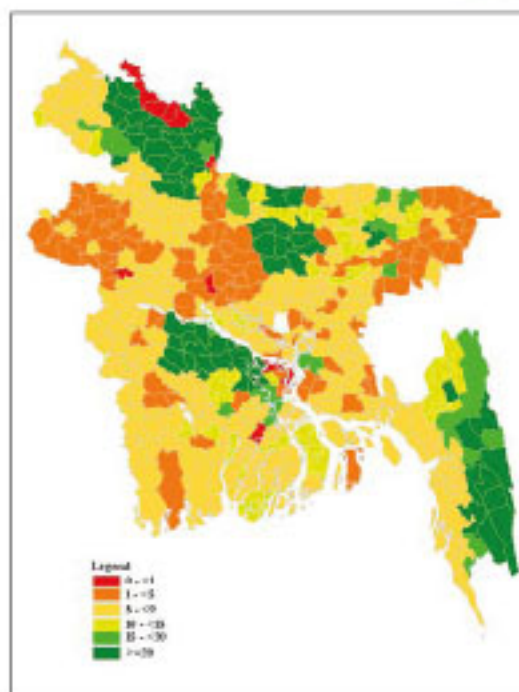
Map map shows the density of NGO community health workers per 10000 population by upazila

NGO Community Health Workers Density per 10000 Population by Upazila
Top 20 Upazilas

SL	Division	District	Upazila	Density
1	Chittagong	Rangamati	Rangamati Sadar	63.8
2	Chittagong	Bandarban	Thanchi	39.3
3	Chittagong	Bandarban	Bandarban Sadar	37.6
4	Chittagong	Bandarban	Rowangchhari	33.4
5	Rangpur	Rangpur	Rangpur Sadar	31.5
6	Chittagong	Bandarban	Ruma	31.3
7	Rangpur	Gaibandha	Gaibandha Sadar	30.6
8	Dhaka	Faridpur	Alfadanga	30.4
9	Rangpur	Rangpur	Pirganj	28.5
10	Rangpur	Kurigram	Kurigram Sadar	28.4
11	Dhaka	Mymensingh	Bhaluka	28.1
12	Rangpur	Gaibandha	Sadullapur	28.0
13	Dhaka	Rajbari	Rajbari Sadar	27.7
14	Rangpur	Gaibandha	Sundarganj	27.7
15	Rangpur	Rangpur	Mithapukur	27.4
16	Rangpur	Nilphamari	Jaldhaka	27.3
17	Rangpur	Rangpur	Taraganj	27.1
18	Rangpur	Rangpur	Badarganj	27.1
19	Rangpur	Kurigram	Rajahat	26.6
20	Dhaka	Mymensingh	Muktagachha	26.4

NGO Community Health Workers

The Government's MOH&FW deploys only 31% of the permanent health care workers across Bangladesh. Most of the community health workers are deployed to carry out time-bound, programmatic work, generally in response to specific needs. MNCH and MNCS program workers account for around 29% of all community health workers and BRAC's routine health program deploys 36% of all community health workers.

The NGO health worker average density across Bangladesh is 9.3 CHWs per 10,000. As the map shows, their deployment across Bangladesh is uneven as these workers are

deployed as part of specific programs. While the upazilas with the most NGO health workers are largely clustered in the western portion of the Chittagong Division and in Rangpur Division, it is worth noting that Bagatipara upazila in Rajshahi Division has a CHW density of 0 as does Char Rajibpur (Rangpur Division) and Jhalakathi Sadar (Barisal Division). Two upazilas in Lalmonirhat District in Rangpur Division, Aditmari and Patgram with densities of 0.4 and 0.5 respectively, round out the bottom five.

Eleven upazilas have fewer than one NGO health worker per 10,000. They include Bagatipara (Rajshahi),Jhalakathi Sadar (Barisal), Bhedarganj, Zanjira (Dhaka), Hatibandha, Aditmari, Patgram,Chauhali ,Char Rajibpur, Kaliganj and Lalmonirhat Sadar (Rangpur). Rangamati Sadar in Chittagong Division tops the Top 10 Upazilas Table with an average density of 63.8 NGO health workers and is followed by Thanchi Upazila with a density of 39.3.

Rangpur, which has four upazilas with a density of more than 28 NGO health workers per 10,000 also has 7 upazilas with fewer than one NGO health worker per 10,000. Three of these are in Lalmonirhat District. The maps following this table show the situation in Rangpur, Dhaka and Sylhet Districts, the three districts with the most upazilas in the bottom 20 upazilas.

Ministry of Health and Family Welfare Community Health Workers in Chittagong Division

Chittagong Division is home to eight (8) of the 20 upazilas with the lowest density of MOH&FW health workers but also has nine (9) of the 10 upazilas with the highest density of MOH&FW health workers.

MOH&FW CHW Density by Upazila Highest density of health workers Chittagong Division		
District	Upazila	Density
Bandarban	Thanchi	17.4
Rangamati	Rangamati Sadar	11.1
Bandarban	Rowangchhari	10.6
Chandpur	Matlab	10.4
Bandarban	Ruma	9.8
Bandarban	Bandarban Sadar	9.7
Khagrachari	Khagrachhari Sadar	9.3
Rangamati	Juraichhari	9.1

MOH&FW CHW Density by Upazila Lowest density of health workers Chittagong Division		
District	Upazila	Density
Chandpur	Kachua	2.2
Chittagong	Hathazari	2.4
Chittagong	Sitakunda	2.6
Chittagong	Lohagara	2.6
Chittagong	Banskhali	2.8
Chittagong	Raozan	3.0
Comilla	Laksam	2.7
Cox's Bazar	Chakaria	2.3
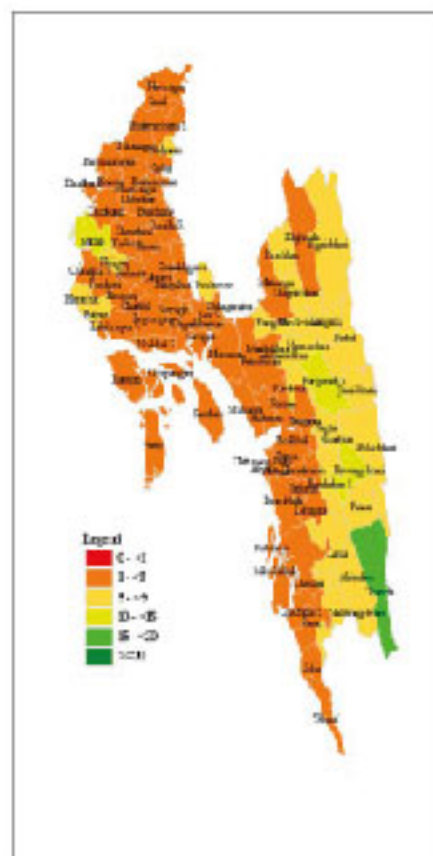
Ministry of Health and Family Welfare Community Health Workers in Dhaka Division
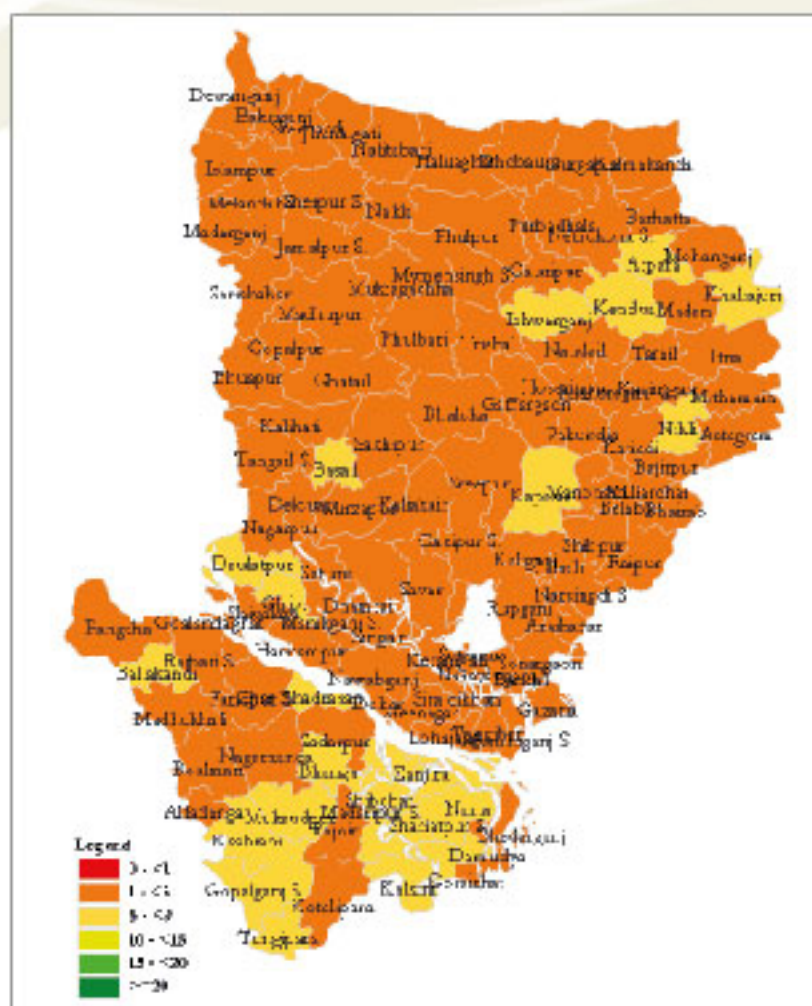
Map shows the density of MOH&FW community health workers per 10000 population by upazila in Dhaka Division

With only 1.9 CHWs per 10,000 population, Narayanganj Sadar in Dhaka Division has one of Bangladesh's lowest MOH&FW community health worker densities. Six other upazilas in Dhaka division have fewer than three (3) community health workers per 10,000 well below the national average of 4.3 MOH&FW community health workers per 10,000. Narayanganj District is home to three (3) of the upazilas with the lowest CHW density per 10,000: Narayanganj Sadar (1.9), Bandar (2.6) and Rupgaanj (2.7).

MOH&FW CHW Density/10000 pop by Upazila Lowest density of health workers		
Dhaka Division		
District	**Upazila**	**Density**
Dhaka	Keraniganj	2.1
Dhaka	Savar	2.9
Munshiganj	Munshiganj Sadar	2.9
Narayanganj	Narayanganj Sadar	1.9
Narayanganj	Bandar	2.6
Narayanganj	Rupgaanj	2.7
Narsingdhi	Narsingdi Sadar	2.2

NGO Community Health Workers in Dhaka Division

Dhaka Division is home to eight upazilas with the lowest density of NGO community health workers. This map shows the density of NGO community health workers per 10000 population by upazila in Dhaka Division.
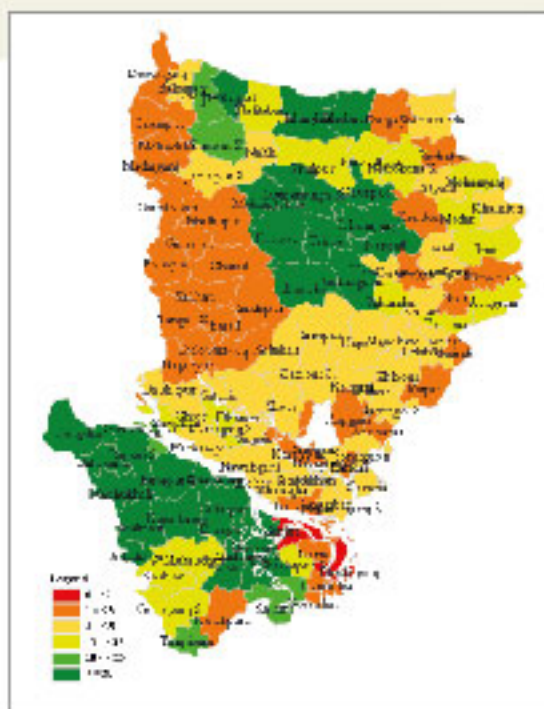
Dhaka Division has eight upazilas in the bottom 20 upazilas. Four of these have a density of one (1.0) or lower, two are around 1.5 and the remaining two hover near a CHW density of two (2). This is well below the national average of 9.3 NGO Health Workers per 10,000.

NGO Community Health Workers per 10000 population		
Lowest density of health workers Dhaka Division		
District	Upazila	Density
Netrokona	Durgapur	1.0
Sariatpur	Bhedarganj	0.7
Sariatpur	Zanjira	0.8
Sariatpur	Gosairhat	1.4
Sariatpur	Damudya	1.5
Tangail	Bhuapur	1.9
Tangail	Kalihati	2.0
Tangail	Ghatail	2.0

NGO Community Health Workers Density per 10000 Population by Upazila

Bottom 20 Upazilas

SL	Division	District	Upazila	Density
1	Rajshahi	Natore	Bagatipara	0.0
2	Rangpur	Kurigram	Char Rajibpur	0.0
3	Barisal	Jhalakati	Jhalakathi Sadar	0.0
4	Rangpur	Lalmonirhat	Aditmari	0.4
5	Rangpur	Lalmonirhat	Patgram	0.5
6	Rajshahi	Sirajganj	Chauhali	0.6
7	Rangpur	Lalmonirhat	Kaliganj	0.7
8	Dhaka	Sariatpur	Bhedarganj	0.7
9	Dhaka	Sariatpur	Zanjira	0.8
10	Rangpur	Lalmonirhat	Hatibandha	0.9
11	Rangpur	Lalmonirhat	Lalmonirhat Sadar	1.0
12	Dhaka	Netrokona	Durgapur	1.0
13	Dhaka	Sariatpur	Gosairhat	1.4
14	Dhaka	Sariatpur	Damudya	1.5
15	Sylhet	Sylhet	Bennibazar	1.5
16	Sylhet	Sylhet	Kanaighat	1.8
17	Dhaka	Tangail	Bhuapur	1.9
18	Sylhet	Moulvi Bazar	Maulvibazar Sadar	2.0
19	Dhaka	Tangail	Kalihati	2.0
20	Dhaka	Tangail	Ghatail	2.0
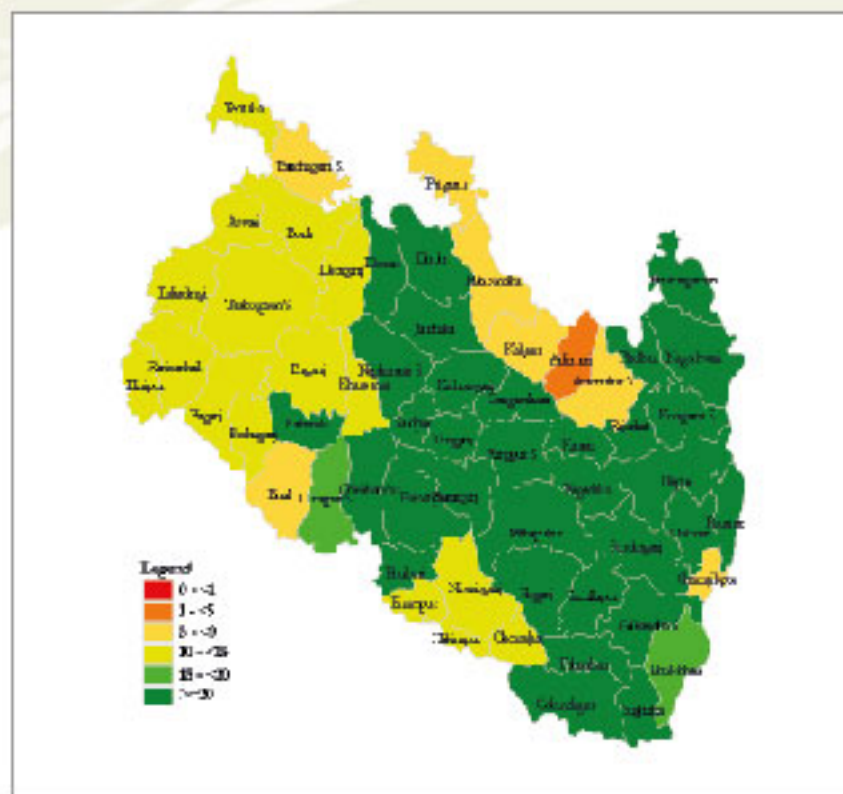
NGO Community Health Workers in Rangpur Division

This map shows the density of NGO health workers per 10000 population by upazila in Rangpur Division. Rangpur Division has upazilas in both the bottom 20 density table and the top 10 density table.

Rangpur has six upazilas with fewer than one NGO health worker per 10,000. Five of the six upazilas are in Lalmonirhat District (Table A). Table (B) shows that Rangpur also has four upazilas with more than 28 NGO health workers per 10,000. This is largely a result of the large-scale ongoing MNCH and MNCS programs which have been rolled out in Rangpur Division.

NGO Community Health Workers Lowest density of health workers

Rangpur Division (A)

District	Upazila	Density
Kurigram	Char Rajhput	0.0
Lalmanirhat	Aditmari	0.4
Lalmanirhat	Patgram	0.5
Lalmanirhat	Kaliganj	0.7
Lalmanirhat	Hatibandha	0.9
Lalmanirhat	Lalmanirhat Sadar	1.0

NGO Community Health Workers Highest density of health workers

Rangpur Division (B)

District	Upazila	Density
Rangpur	Rangpur Sadar	31.5
Gaibandha	Gaibandha Sadar	30.6
Rangpur	Pirganj	28.5
Kurigram	Kurigram Sadar	28.4

NGO Community Health Workers in Sylhet Division

Density of NGO health workers per 10000 population by upazila in Sylhet Division
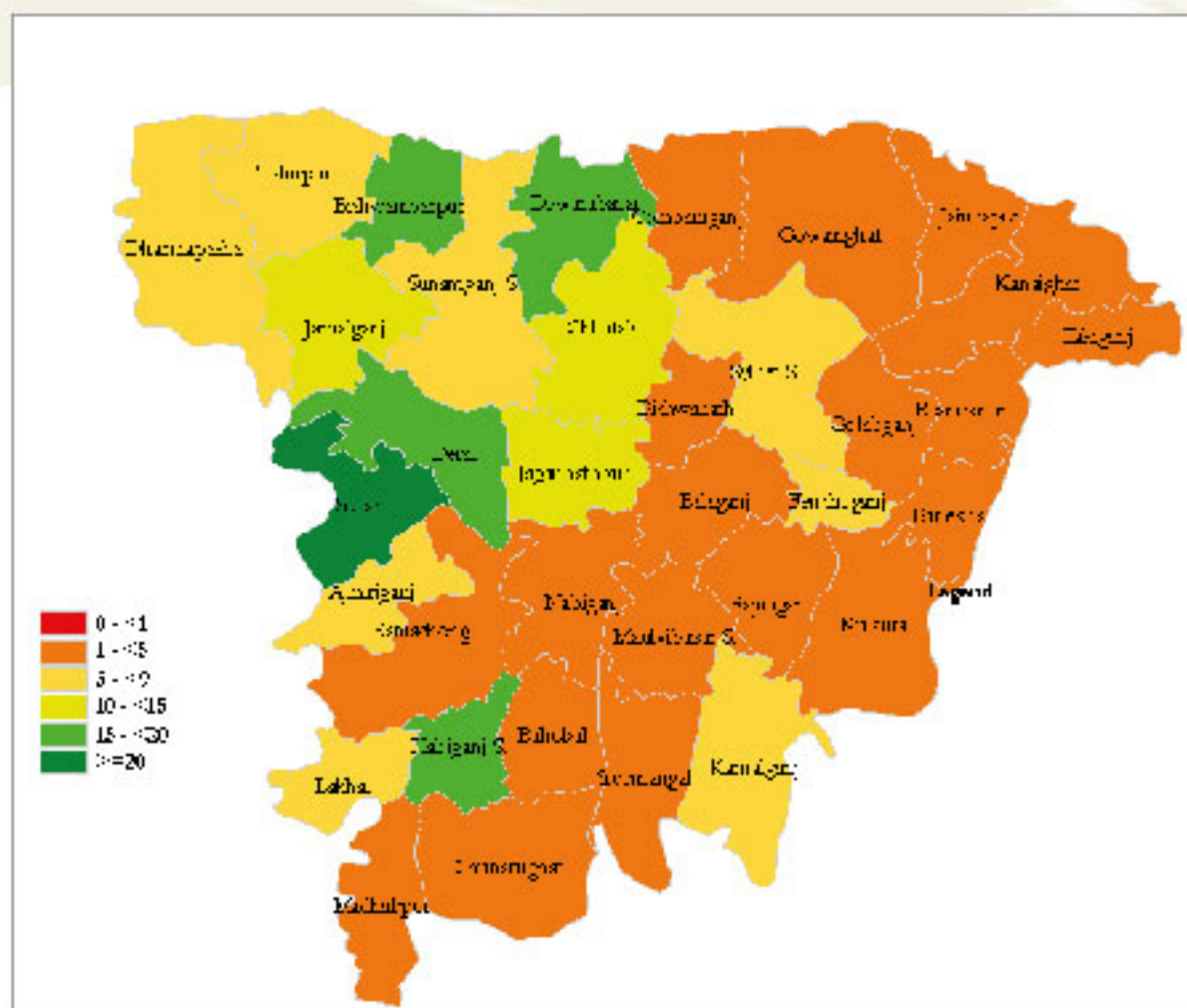
Sylhet Division has three upazilas with an average density of 2 or fewer NGO health workers per 10,000. They include Maulvibazar Sadar, Beanibazar and Kanaighat.

NGO Community Health Workers/10000 Population		
Lowest density of health workers Sylhet Division		
District	Upazila	Density
Moulvi Bazar	Maulvibazar Sadar	2.0
Sylhet	Beanibazar	1.5
Sylhet	Kanaighat	1.8

NGO Community Health Workers in Chittagong Division

Density of NGO health workers by upazila in Chittagong Division
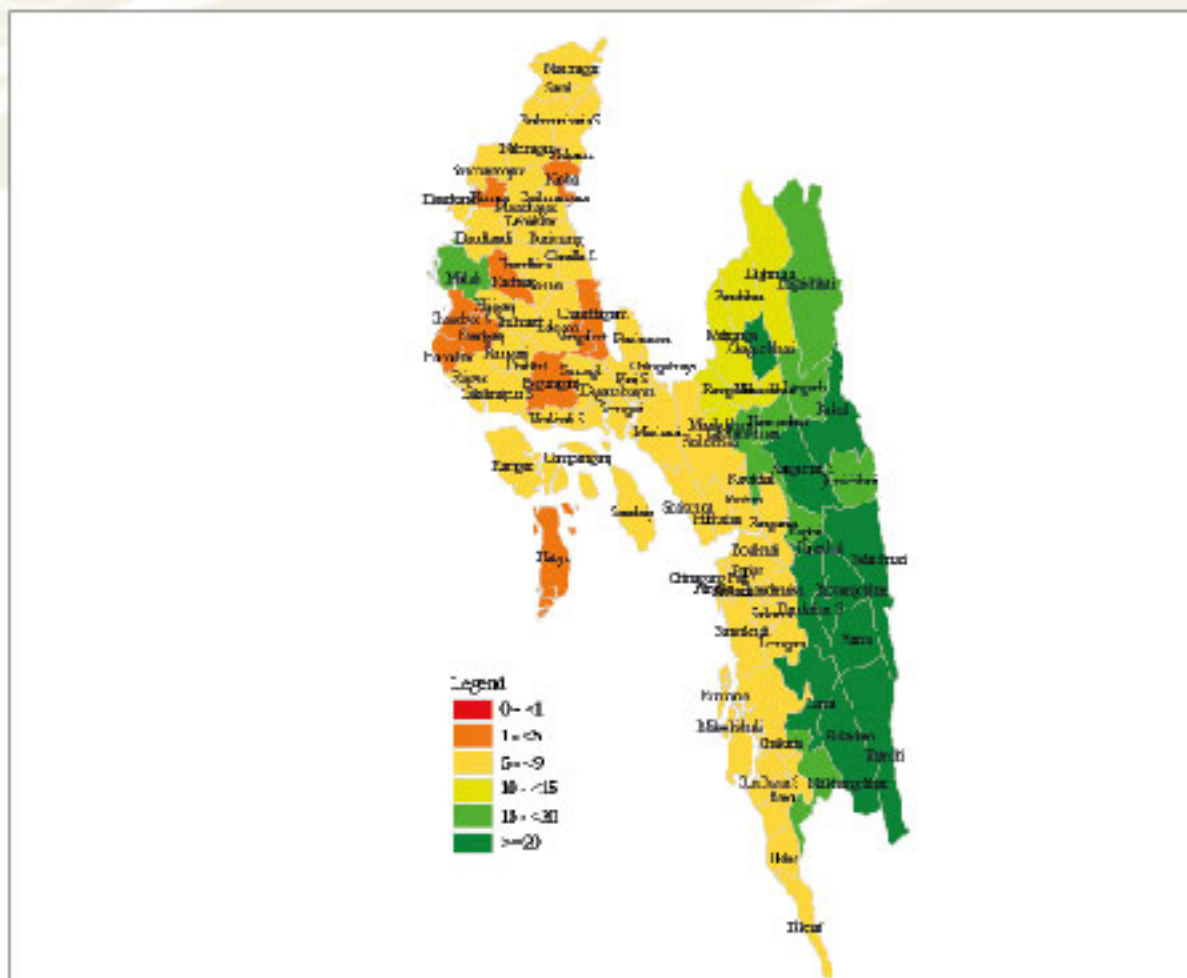
The Chittagong Hill Tracts have some of the highest NGO health worker densities in Bangladesh due to a lower general population density, which results in a higher proportion of health workers to population.

NGO Community Health Workers /10000 Population		
Highest density of health workers Chittagong Division		
Division	District	Density
Rangamati	Rangamati Sadar	63.8
Bandarban	Thanchi	39.3
Bandarban	Bandarban Sadar	37.6
Bandarban	Rowangchhari	33.4
Bandarban	Ruma	31.3

ESSENTIAL NEWBORN CARE

INTRODUCTION

Community health workers, especially those trained in essential newborn care can save the lives of children. A Joint Declaration (3) published by the WHO and UNICEF supports the need for health workers trained in essential newborn care. As a result of studies (5-9) that have shown that home-based newborn care can substantially lower newborn mortality rates in high-mortality, developing country settings by 30 to 61%, the WHO and UNICEF recommend home visits in the first week of a baby's life to improve newborn survival. The Joint Statement concludes "Home visitations after birth is a strategy to deliver effective elements of care to newborns and increase newborn survival. This strategy has shown positive results in high mortality settings."

Essential newborn care

This report defines an ENC-trained health worker as one who has received at least two days of ENC training, as stand-alone or as part of integrated training, pre- or in-service curriculum. An example is IMCI in-service training.

An ENC trained worker is trained in the following elements of essential newborn care including:

- Facilitating a clean and safe delivery
- Preventing and managing hypothermia
- Assessing breathing status
- Assisting in early breastfeeding
- Providing appropriate umbilical cord care
- Providing appropriate eye care
- Giving special care to preterm and/or low birth weight babies
- Identifying, managing and referring complications

The following section of the report will examine community health workers trained in essential newborn care, simple yet effective interventions that can save babies' lives.

ESSENTIAL NEWBORN CARE IN BANGLADESH'S SEVEN DIVISIONS

All Community Health Workers trained in Essential Newborn Care

The national average of ENC trained community health workers is around 5.2 per 10000. With one (1.0) community health worker per 10,000 trained in essential newborn care, Chittagong division has the fewest CHWs per 10000 and Rangpur, with 16 ENC trained workers per 10,000 has the most. There are around 67,000 community health workers trained in essential newborn care with most of them (51,000) concentrated in Dhaka and Rangpur Divisions. Thirty-eight percent of Bangladesh's 176,000 community health workers are trained in essential newborn care.
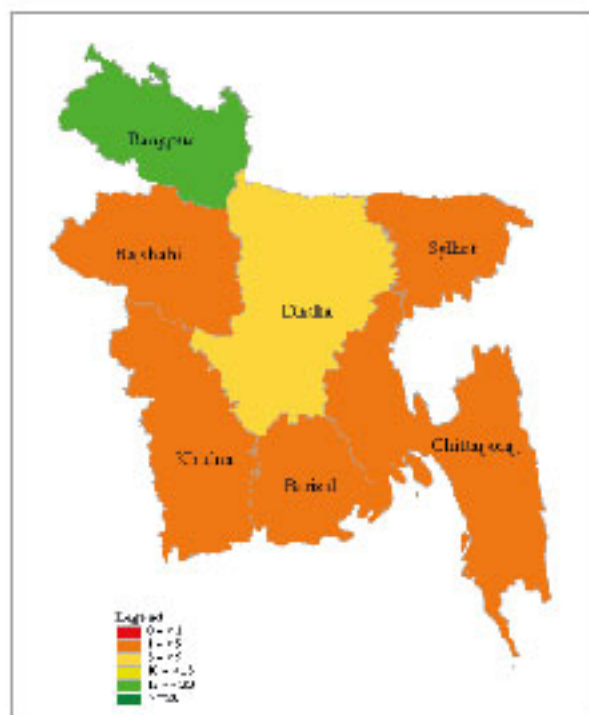
Map Density of All ENC trained health workers across Bangladesh

Among government healthcare workers, around 1.2 per 10,000 are trained in ENC. On average, there are 3.9 ENC trained NGO health workers per 10,000 population.

Much of the disparity between the divisions can be traced to the fact there are no MNCS or MNCH projects in Barisal, Chittagong and Rajshahi Divisions. Much of the MNCS and MNCH program work is concentrated in northern Bangladesh, which explains the relatively high density of community health workers in Rangpur Division.

There is a huge variance of ENC trained community health workers across Bangladesh, largely as a result of the time-bound program work. Government MOH&FW health workers trained in ENC are relatively evenly spread across Bangladesh, albeit at a low level.
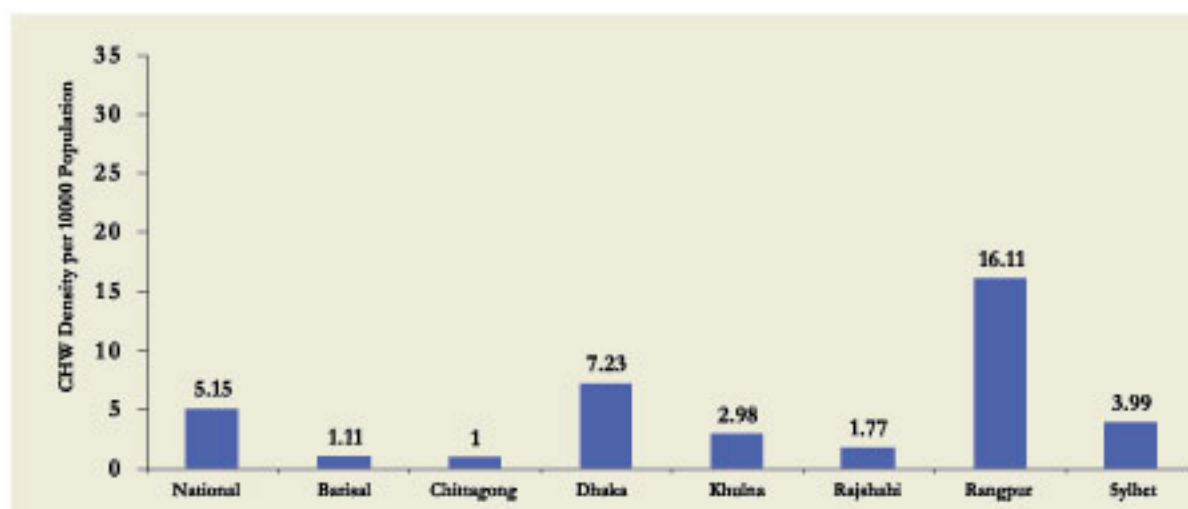
ENC Trained Ministry of Health and Family Welfare Community

Health Workers

Few MOH&FW health workers are trained in essential newborn care. Government levels of trained ENC workers per 10000 are relatively even across Bangladesh, but remain at a low national level of 1.2 per 10,000 nationally.
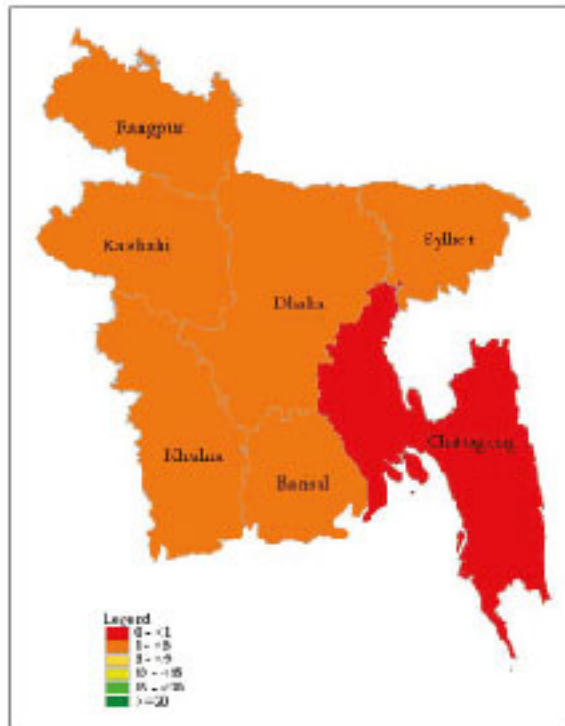
This map shows the density of ENC trained MOH&FW community health workers per 10000 population by division

The spread from division to division is quite marked. Chittagong Division has fewer than 1 community health worker per 10,000 trained in essential newborn care. Barisal, Dhaka, Khulna, Rajshahi and Rangpur Divisions have between 1 and 1.4 permanent government community health workers per 10,000 trained in ENC. Sylhet is notable in that it has around 2.4 community health workers per 10,000 trained in essential newborn care.

Density of ENC Trained MOH&FW Community Health Workers Density by Division
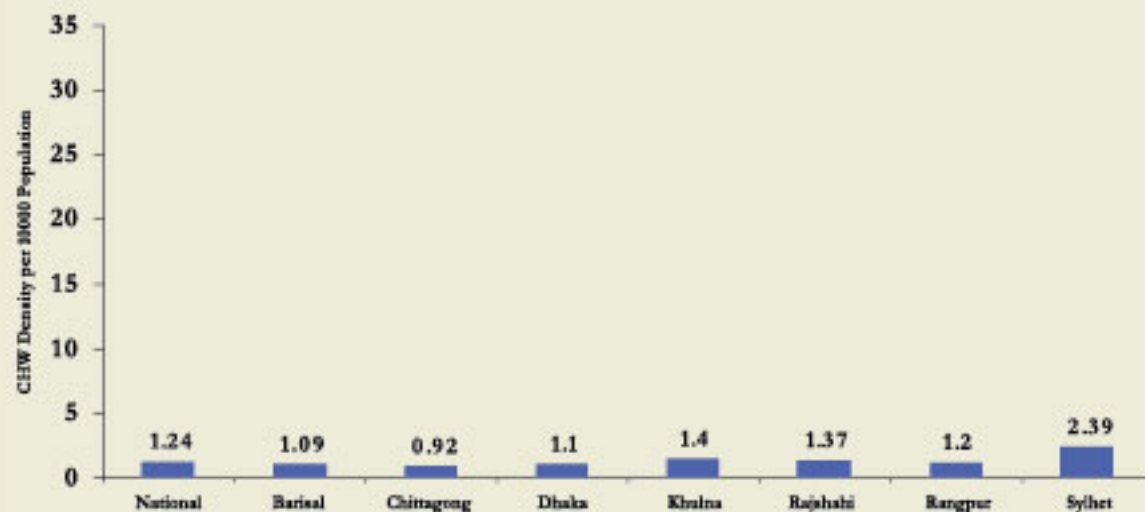
ENC Trained NGO Community Health Workers

The national average density for ENC Trained NGO health workers is 3.9 per 10,000 with Rangpur (14.9) and Dhaka Division (6.1) leading the way. This map shows the density of ENC trained NGO community health workers per 10000 population by division.
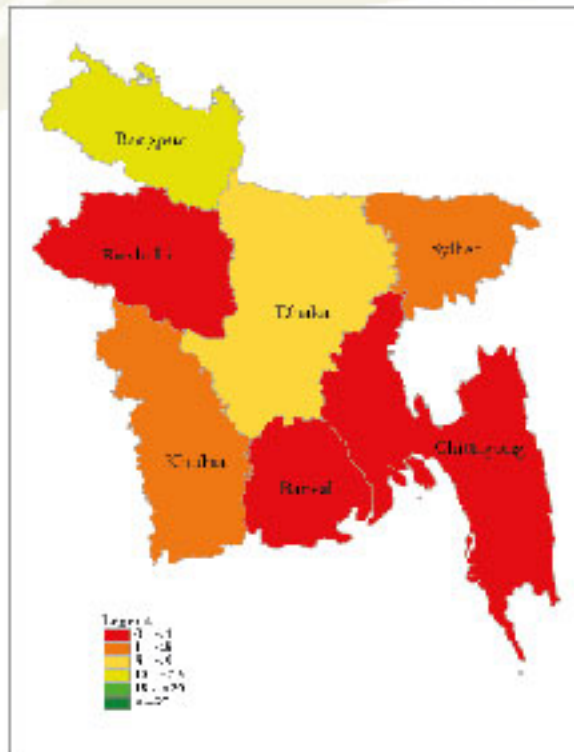
At the division level, the impact of the NGO and MNCH/MNCS programs not only in Rangpur but also in Dhaka Division are apparent.

Density of ENC Trained NGO Community Health Workers by Division
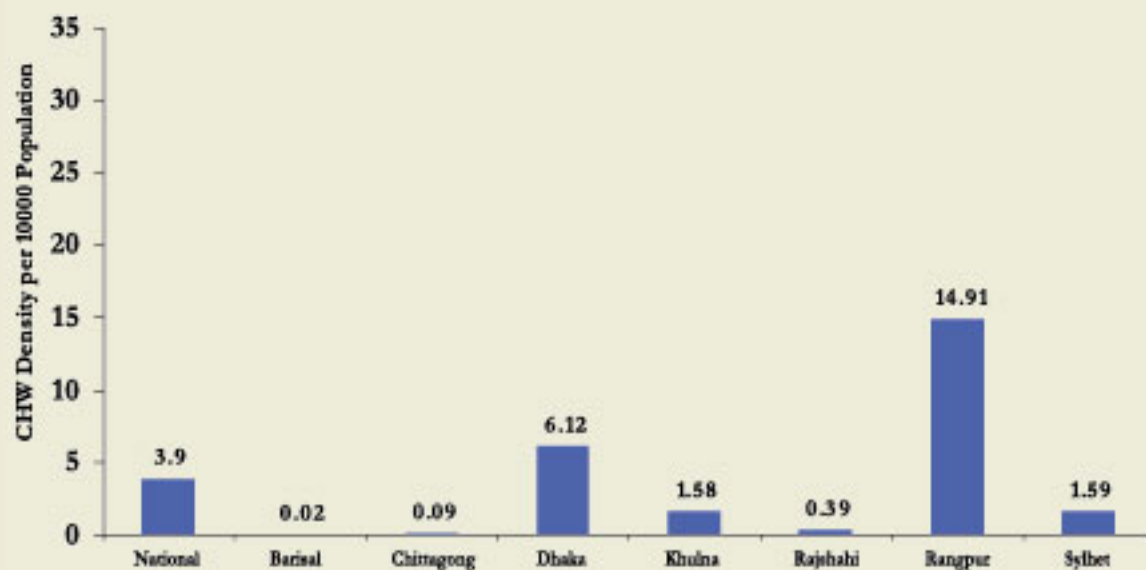
Essential Newborn Care

The Status of Community Based Health Workers in Rural Bangladesh

ESSENTIAL NEWBORN CARE IN BANGLADESH'S SIXTY FOUR DISTRICTS

All Community Health Workers trained in Essential Newborn Care

The national average for all community workers trained in ENC is around 5.2 per 10000. Nine districts have fewer than one ENC trained CHW per 10,000 and 33 districts have fewer than 2 ENC trained CHWs per 10,000. This means that around two-thirds of Bangladesh's 64 districts have fewer than 2 ENC trained CHWs per 10,000. Studies show that early interventions such as wrapping and drying a baby after birth and working with a mother to initiate breastfeeding saves babies' care. Delivering essential newborn care to newborns saves lives; there is a dire need to train CHWs in ENC across Bangladesh as a whole.
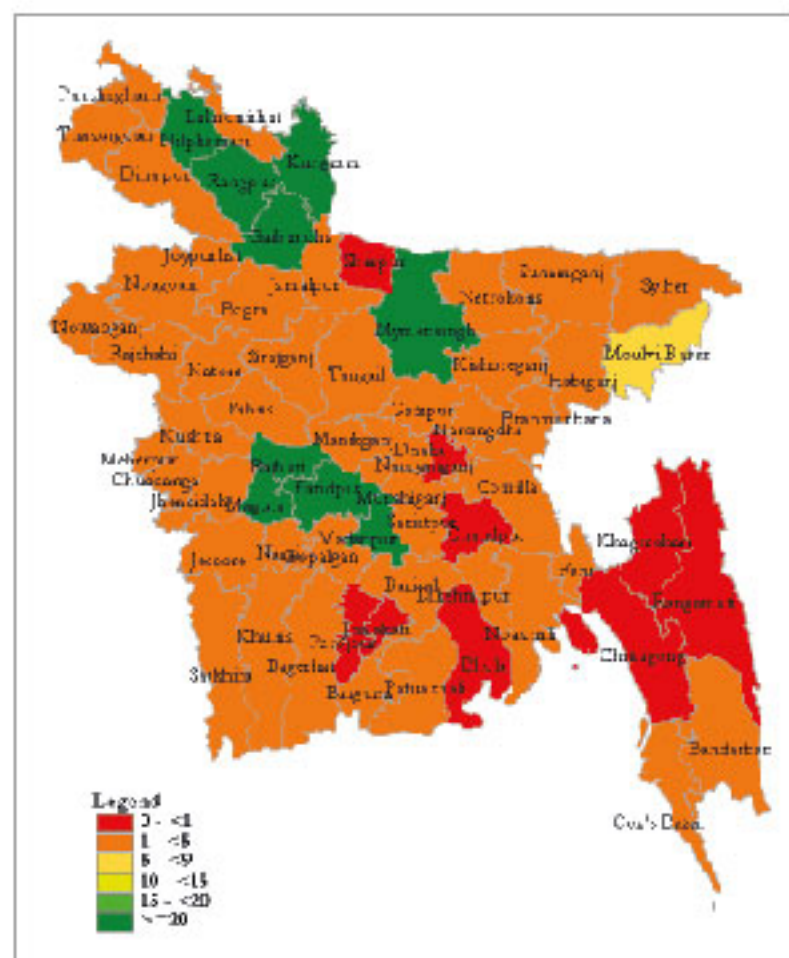
This map illustrates the density of all community health workers trained in ENC per 10000 population by district.

Narayanganj District in Dhaka Division has the fewest ENC trained community health workers and is closely followed by Chandpur District in Chittagong Division. Sherpur (Dhaka Division) and Jhalakati and Bhola Districts in Barisal Division have fewer than 1 CHW per 10,000 trained in ENC.

Half of the districts in the bottom twenty have one or fewer ENC trained CHW per 10,000 population. Overall, thirty-three (33) districts have fewer than 2 ENC trained CHWs per 10,000.

Only nine districts have more than 20 ENC trained CHWs per 10,000. They are found largely in Dhaka and Rangpur Divisions and include Madaripur, Rajbari, Kurigram, Faridpur, Magura (Khulna District), Mymensingh, Nilphamari, Gaibandha and Rangpur districts and appear to be due to the heavy concentration of NGO and MNCHS/MNCS community health workers in these areas.

All CHWs Trained in ENC Density per 10000 population by district						
Bottom 20				**Top 10**		
Division	**District**	**Density**		Division	**District**	**Density**
Dhaka	Narayanganj	0.4		Rangpur	Rangpur	28.2
Chittagong	Chandpur	0.5		Rangpur	Gaibandha	27.4
Dhaka	Sherpur	0.6		Rangpur	Nilphamari	26.0
Barisal	Jhalakati	0.8		Dhaka	Mymensingh	24.1
Barisal	Bhola	0.8		Khulna	Magura	23.9
Chittagong	Chittagong	0.8		Dhaka	Faridpur	23.1
Chittagong	Khagrachari	0.9		Rangpur	Kurigram	23.0
Chittagong	Rangamati	0.9		Dhaka	Rajbari	22.6
Barisal	Perojpur	1.0		Dhaka	Madaripur	21.8
Chittagong	Comilla	1.0		Sylhet	Moulvi Bazar	5.50
Dhaka	Munshiganj	1.0		Khulna	Narail	4.41
Dhaka	Dhaka	1.0		Sylhet	Habiganj	4.23
Chittagong	Lakshmipur	1.1		Sylhet	Sylhet	3.95
Chittagong	Noakhali	1.1		Dhaka	Jamalpur	3.92
Dhaka	Tangail	1.1		Rajsahi	C.Nawabganj	3.00
Barisal	Patuakhali	1.1		Rangpur	Thakurgoan	2.85
Rajshahi	Natore	1.1		Dhaka	Sariatpur	2.74
Khulna	Jhenaidah	1.2		Sylhet	Sunamganj	2.66
Chittagong	Brahmanbaria	1.2		Rajsahi	Joypurhat	2.32
Barisal	Barisal	1.3		Dhaka	Manikganj	2.22

An interesting comparison can be drawn between those districts with fewer than one ENC trained community health worker and that district's corresponding community health worker density. Rangamati district which has fewer than one ENC trained CHW per 10,000 has over 29 CHWs per 10,000. Sherpur District has more than 19 CHWs per 10,000 but fewer than one ENC trained community health worker.

Districts with fewer than one ENC trained CHW per 10000 population compared to the number of CHWs in that district			
Division	**District**	**CHW density**	**ENC trained CHW density**
Barisal	Bhola	15.5	0.8
	Jhalakati	10.2	0.8
	Perojpur	13.2	1.0
Chittagong	Chandpur	9.8	0.5
	Chittagong	9.4	0.8
	Khagrachari	19.6	0.9
	Rangamati	29.3	0.9
Dhaka	Narayanganj	7.3	0.4
	Sherpur	19.4	0.6

ENC Trained Ministry of Health and Family Welfare Community Health Workers
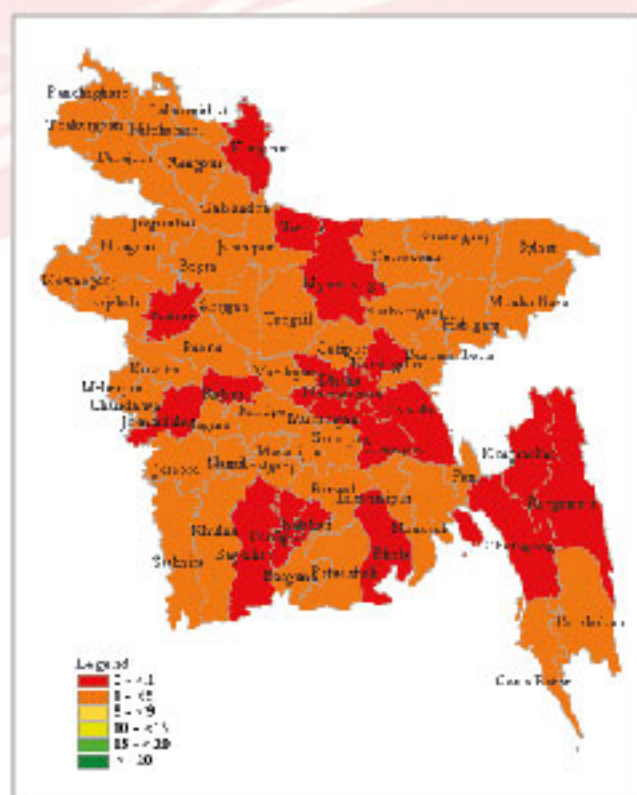
This map illustrates the density of ENC trained MOH&FW community health workers per 10000 population by district. Few MOH&FW government health workers are trained in essential newborn care.

Government levels of trained ENC workers per 10000 are relatively even across Bangladesh, ranging from 3 CHWs trained in ENC per 10,000 in Nawabganj District (Rajshai) to 0.4 per 10,000 CHWs trained in ENC in Narayanganj (Dhaka Division) but remain at a low level of 1.2 per 10,000 nationally.

The table below shows that the bottom 20 districts have fewer than one MOH&FW worker trained in essential newborn care. Even the district with the highest density of the top 10 districts only has 3 MOH&FW health workers trained in ENC per 10,000.

ENC Trained GoB CHWs
CHWs density per 10000 population by district

Bottom 20				Top 10		
Division	District	Density		Division	District	Density
Dhaka	Narayanganj	0.4		Rajshahi	Nawabganj	3.0
Chittagong	Chandpur	0.5		Sylhet	Sunamganj	2.7
Dhaka	Munshiganj	0.5		Sylhet	Habiganj	2.6
Rajshahi	Natore	0.5		Sylhet	Moulvi Bazar	2.5
Dhaka	Rajbari	0.6		Rajshahi	Joypurhat	2.2
Dhaka	Sherpur	0.6		Dhaka	Faridpur	2.0
Dhaka	Dhaka	0.7		Sylhet	Sylhet	2.0
Chittagong	Comilla	0.7		Khulna	Meherpur	2.0
Chittagong	Chittagong	0.8		Khulna	Kushtia	1.8
Barisal	Jhalakati	0.8		Dhaka	Jamalpur	1.7

ENC Trained NGO Community Health Workers

Twenty-three districts have no NGO health workers per 10,000 trained in ENC. This is likely due to a lack of newborn program in the community implemented by NGOs in these districts. Rangpur Division has three districts with more than 24 NGO health workers per 10,000 trained in ENC. Dhaka and Khulna Division each have one district with more than 22 NGO health workers per 10,000 trained in ENC. This is due to MNCH and MNCS programs in these areas.

Map shows the low overall density of ENC trained NGO community health workers per 10000 population by district. The green districts are usually those districts which have MNCH/MNCS community health workers.

ENC Trained NGO CHWs Density per 10000 population by district Top 5		
Division	**District**	**Density**
Rangpur	Rangpur	27.0
Rangpur	Gaibandha	26.4
Rangpur	Nilphamari	24.5
Dhaka	Mymensingh	23.1
Khulna	Magura	22.4

The table below shows that numbers for ENC Trained NGO health workers are generally low. All of the bottom 20 districts have 0 CHWs per 10,000. Nine (9) of the districts with the highest density of CHWS have a density of more than 20 per 10,000 ENC trained NGO health workers, but this number abruptly falls in the 10th district. This suggests a high concentration of ENC trained NGO health workers, likely due to MNCH and MNCH programs in these districts.

ESSENTIAL NEWBORN CARE IN BANGLADESH'S FOUR HUNDRED AND SIXTY-FOUR UPAZILAS

All Community Health Workers trained in Essential Newborn Care
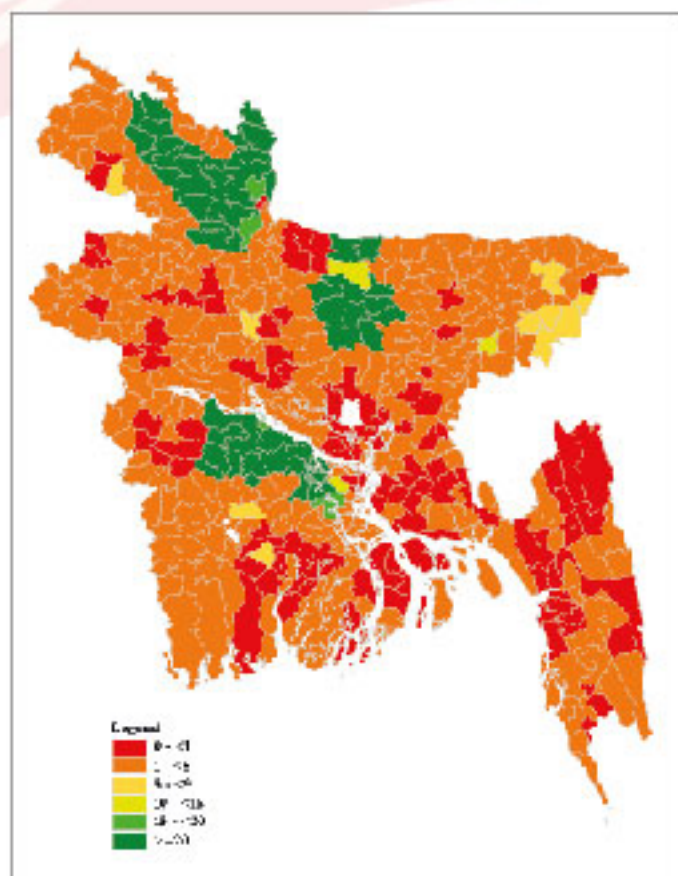
This map shows the variance of all community health workers trained in ENC across Bangladesh per 10000 population by upazila and the concentration in specific time-bound program areas, particularly in Rangpur and Dhaka Division

The table below highlights the upazilas which have the most and least CHWs per 10,000. The bottom five upazilas are Biral (Rangpur), Laksam (Chittagong), and Delduar, Narayanganj Sadar and Bandar (Dhaka Division). They all have a density of MOH&FW ENC trained CHWs below 0.2 per 10,000. Four of the five upazilas with the most ENC trained MOH&FW health workers are in Rangpur Division.

All CHWs trained in ENC
Density per 10000 population by upazila

Bottom 5				Top 5			
Division	District	Upazila	Density	Division	District	Upazila	Density
Rangpur	Dinajpur	Biral	0.0	Rangpur	Rangpur	Rangpur Sadar	32.5
Chittagong	Comilla	Laksam	0.1	Rangpur	Gaibandha	Gaibandha Sadar	31.8
Dhaka	Tangail	Delduar	0.2	Dhaka	Faridpur	Alfadanga	31.5
Dhaka	Narayanganj	N.ganj Sadar	0.2	Rangpur	Rangpur	Pirganj	29.6
Dhaka	Narayanganj	Bandar	0.2	Rangpur	Kurigram	Kurigram Sadar	29.1

ENC Trained Ministry of Health and Family Welfare Community Health Workers

The national average for MOH&FW government workers trained in ENC is 1.2 per 10,000. As has been noted at the division and district levels regarding the density of ENC trained community health workers, the numbers of MOH&FW health workers trained in ENC are equitable across Bangladesh, but aside from a few notable exceptions (as shown in the accompanying table) are uniformly low. The areas with the fewest trained CHW workers in ENC are clustered in Chittagong and Dhaka Divisions.

Legend
- 0 – <1
- 1 – <5
- 5 – <0
- 10 – <15
- 15 – <20
- > 20
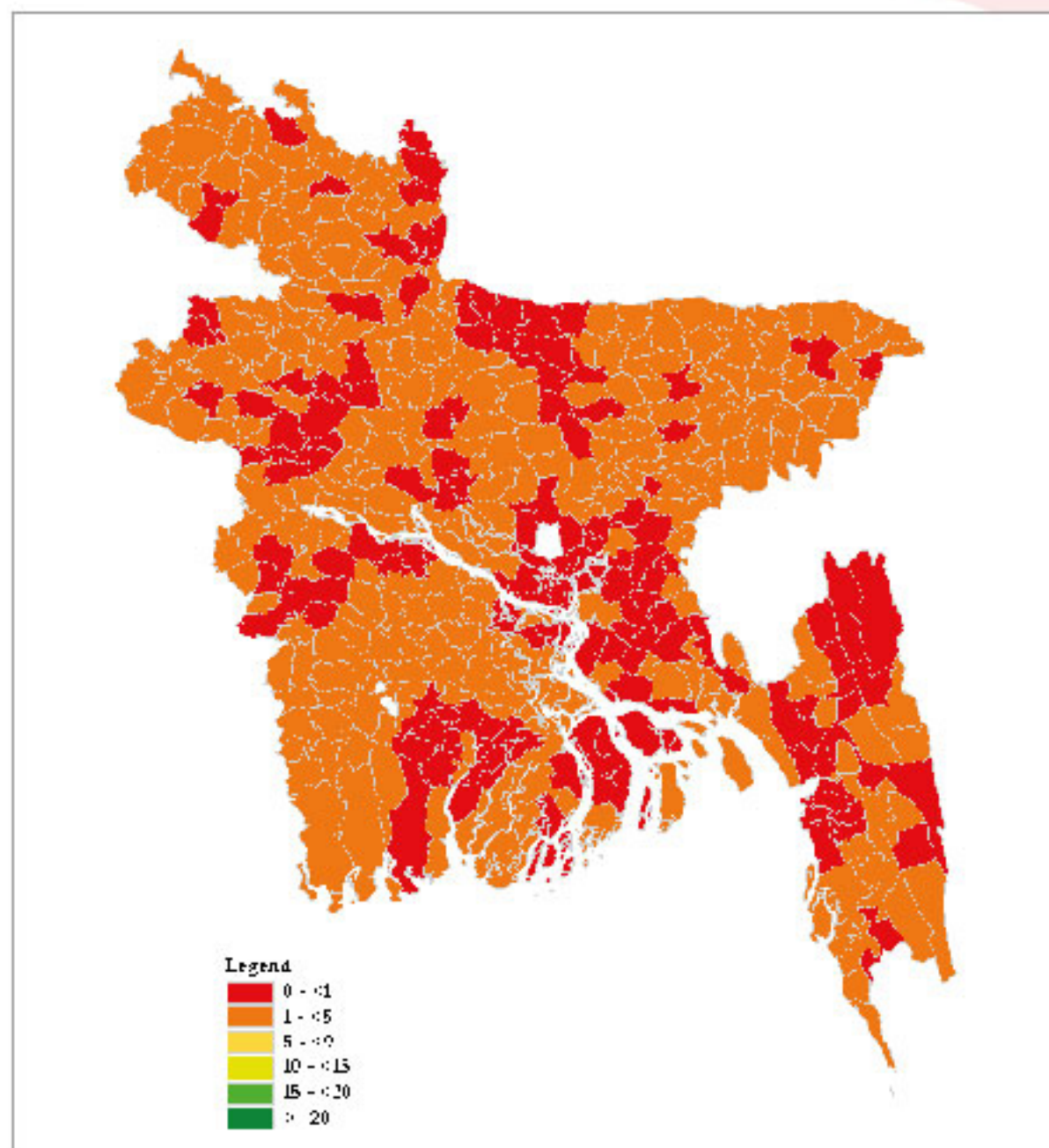
Map 6 shows the density of ENC trained MOH&FW community health workers per 10000 population by upazila

There is little variance for MOH&FW Health Workers trained in essential newborn care among the bottom twenty upazilas. Biral Upazila in Rangpur division has the fewest with 0 per 10,000 MOH&FW trained in ENC. Chittagong and Dhaka Divisions each have 8 upazilas which appear in the bottom 20. Upazilas in the top 10 are ranged fairly tightly from Rowangchhari Upazila in Bandarban district which has 4.2 MOH&FW workers trained in ENC per 10,000 to Nachole Upazila in Rajshahi District with around 3 MOH&FW workers trained in ENC per 10,000 population.

All CHWs trained in ENC Density per 10000 population by upazila							
Bottom 5				**Top 5**			
Division	**District**	**Upazila**	**Density**	**Division**	**District**	**Upazila**	**Density**
Rangpur	Dinajpur	Biral	0.0	Rangpur	Rangpur	Rangpur Sadar	32.5
Chittagong	Comilla	Laksam	0.1	Rangpur	Gaibandha	Gaibandha Sadar	31.8
Dhaka	Tangail	Delduar	0.2	Dhaka	Faridpur	Alfadanga	31.5
Dhaka	Narayanganj	N.ganj Sadar	0.2	Rangpur	Rangpur	Pirganj	29.6
Dhaka	Narayanganj	Bandar	0.2	Rangpur	Kurigram	Kurigram Sadar	29.1

ENC Trained Ministry of Health and Family Welfare Community Health Workers in Chittagong Division

Chittagong Division has eight upazilas in the bottom 20 upazilas ranked by the density of ENC trained MOH&FW community health workers per 10000. All eight upazilas have fewer than 0.4 ENC trained MOH&FW community health workers per 10000.

ENC Trained MOH&FW CHWs Lowest density/10000 pop of health workers		
Chittagong Division		
District	**Upazila**	**Density**
Comilla	Laksam	0.1
Chandpur	Faridganj	0.2
Chandpur	Kachua	0.2
Chittagong	Hathazari	0.2
Chittagong	Raozan	0.3
Chandpur	Hajiganj	0.3
Chittagong	Banskhali	0.3
Rangamati	Kaptai	0.4
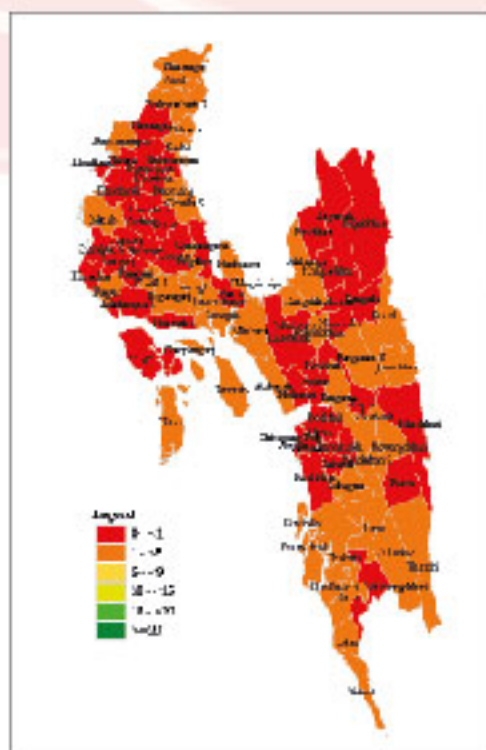
Map shows the density of ENC trained MOH&FW community health workers per 10000 population by upazila in Chittagong Division.

ENC Trained Ministry of Health and Family Welfare Community Health Workers in Dhaka Division

Like Chittagong Division, Dhaka Division has eight upazilas in the bottom 20 upazilas ranked by the density of ENC trained MOH&FW community health workers per 10000. They all have fewer than 0.4 ENC trained MOH&FW CHWs per 10000.
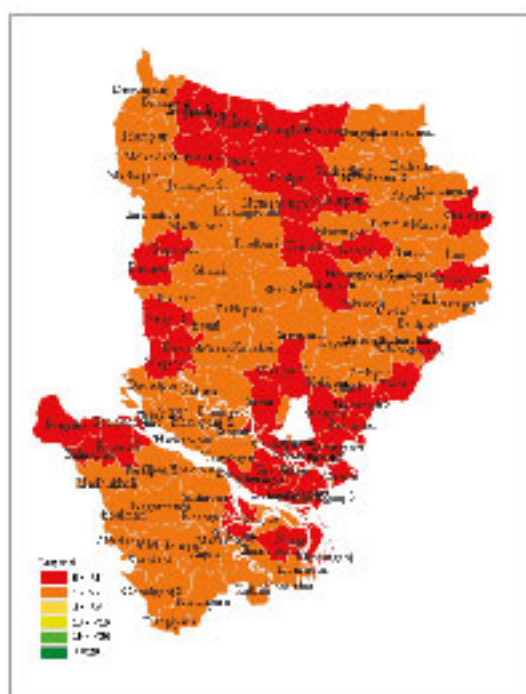
Map Map shows the density of ENC trained MOH&FW CHWs by upazila

ENC Trained MOH&FW CHWs in Dhaka Division		
Lowest density /10000 population		
District	**Upazila**	**Density**
Dhaka	Keraniganj	0.1
Narayanganj	Bandar	0.1
Munshiganj	Munshiganj Sadar	0.2
Tangail	Delduar	0.2
Narayanganj	Narayanganj Sadar	0.2
Narsingdhi	Narsingdi Sadar	0.2
Dhaka	Dohar	0.3
Munshiganj	Lohajang	0.4

ENC Trained NGO Community Health Workers

Map shows the density of ENC trained NGO community health workers
per 10000 population by upazila
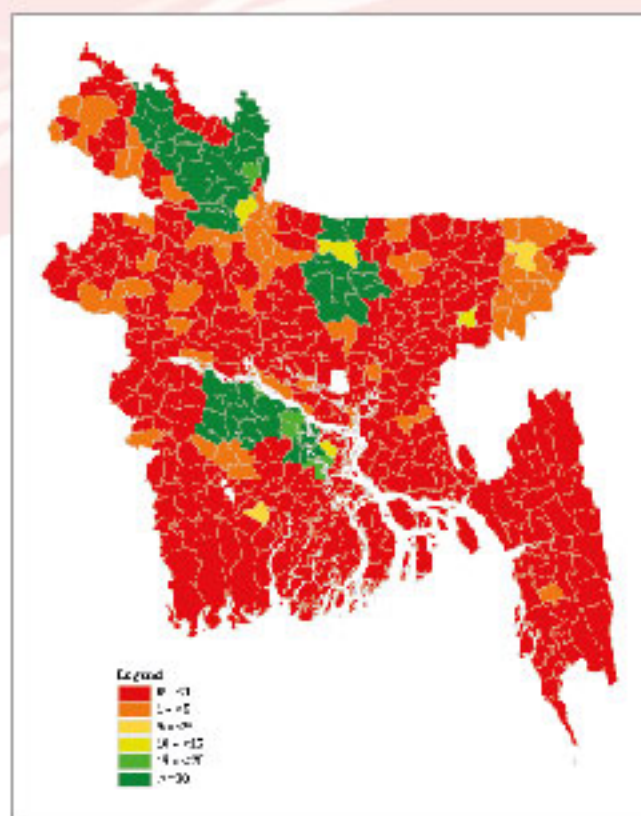
The density of ENC Trained NGO community health workers per 10000 is spread much less equitably across Bangladesh when taking into account MNCH and MNCS programs as well as time-bound NGO programs. As the map shows, MNCS and MNCH programs are largely concentrated in Dhaka and Rangpur Divisions. Barisal Division has virtually no ENC Trained NGO community health workers as can be seen from the bottom 20 table and from the Barisal Division map. Rangpur Division has four upazilas in the top five, all with more than 28 ENC Trained NGO community health workers per 10,000.

ENC Trained NGO Community Health Workers Density per 10000 population by upazila			
Top 10 Upazilas			
Division	**District**	**Upazila**	**Density**
Rangpur	Rangpur	Rangpur Sadar	31.5
Rangpur	Gaibandha	Gaibandha Sadar	30.6
Dhaka	Faridpur	Alfadanga	29.0
Rangpur	Kurigram	Kurigram Sadar	28.4
Rangpur	Rangpur	Pirganj	28.2
Rangpur	Gaibandha	Sadullapur	28.0
Dhaka	Rajbari	Rajbari Sadar	27.7
Rangpur	Gaibandha	Sundarganj	27.7
Dhaka	Mymensingh	Bhaluka	27.5
Rangpur	Rangpur	Mithapukur	27.3
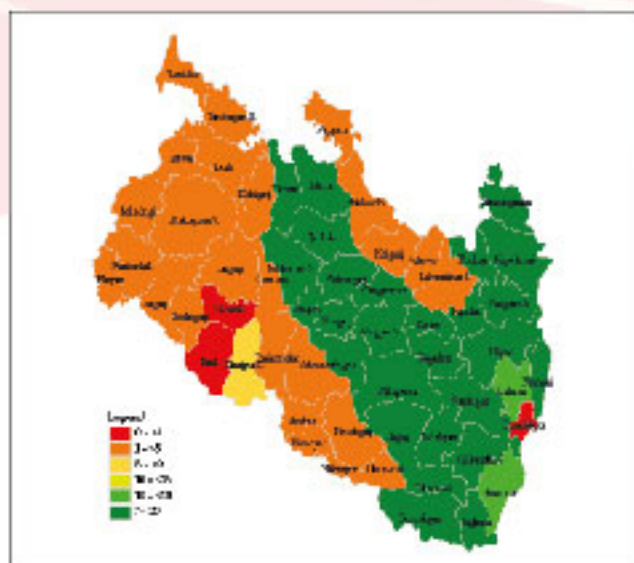
ENC Trained NGO Community Health Workers in Rangpur Division

Rangpur division has 7 of the upazilas with the most ENC Trained NGO health workers. Each of these upazilas has more than 27 ENC Trained NGO health workers per 10,000.

This is clearly the result of the NGO programs and the MNCH and MNCS programs which are being rolled out in Rangpur Division.

Map shows the density of ENC trained NGO community health workers per 10000 population by upazila in Rangpur Division

ENC Trained NGO Community Health Workers -Rangpur Division		
Density per 10000 population by upazila 5 highest density Upazilas of Rangpur Division		
District	Upazila	Density
Rangpur	Rangpur Sadar	31.5
Gaibandha	Gaibandha Sadar	30.6
Kurigram	Kurigram Sadar	28.4
Rangpur	Pirganj	28.2
Gaibandha	Sadullapur	28.0
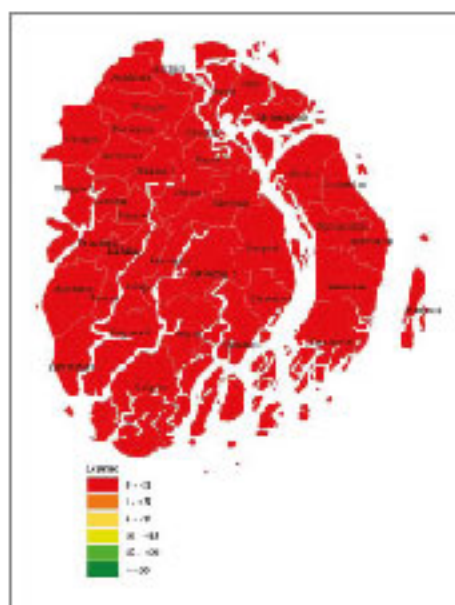
Barisal Division has virtually no ENC Trained NGO community health workers.

Map shows the density of ENC trained NGO community health workers per 10000 population by upazila in Barisal Division. Barisal Division has virtually no ENC Trained NGO community health workers

Conclusions &
Summary
Of Findings

The Status of Community Based
Health Workers in Rural Bangladesh

CONCLUSIONS & SUMMARY OF FINDINGS

The study showed that Ministry of Health & Family Welfare health workers are deployed in a relatively equitable manner in rural Bangladesh, albeit at a low level. NGO workers and those who are employed as part of large-scale, government supported mother and child health programs (for example MNCH & MNCS programs) are generally employed in large numbers in specific areas. As a result, the overall density of community health workers in rural Bangladesh ranges from 22.5 CHWs per 10,000 population in Rangpur to 9.3 CHWs per 10,000 in Rajshahi.

With a few exceptions that are apparent largely at the upazila level, MOH&FW government health workers are deployed in an even handed manner across Bangladesh (Map A). Disparities in the density of community health workers among divisions and upazilas are generally caused by specific programs (Map B), especially the large-scale maternal and neonatal health programs run by the government in conjunction with multilateral donors, UN agencies and BRAC.

Density of permanent MOH&FW health workers per 10,000 population (Map

Density of NGO community health workers per 10,000 population (Map
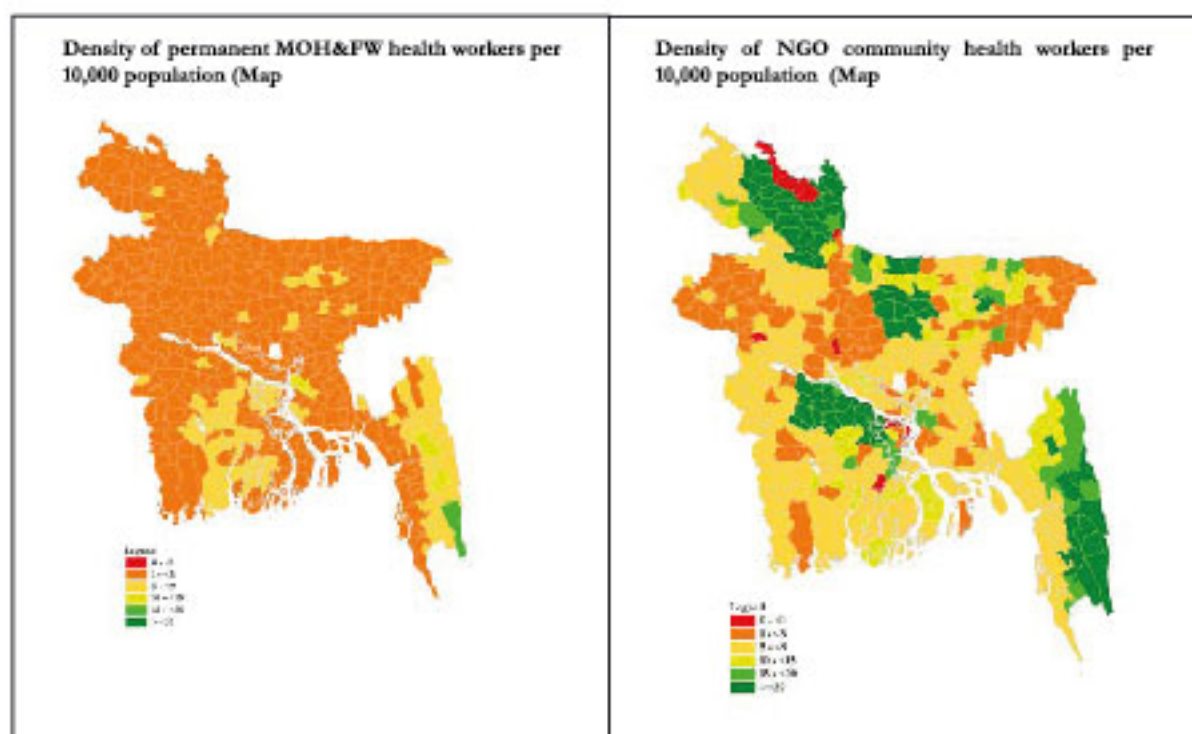
Community Health Workers Trained in Essential Newborn Care

Studies show that home based ENC can reduce neonatal mortality. In rural Bangladesh, around 67,000 community health workers are trained in ENC. As a result of NGO programs (e.g. BRAC) and government-led maternal and child health programs, 51,000 of these ENC trained health workers are concentrated mostly in Dhaka and Rangpur Divisions. Nationwide, only thirty-eight percent of CHWs in rural Bangladesh are trained in essential newborn care.
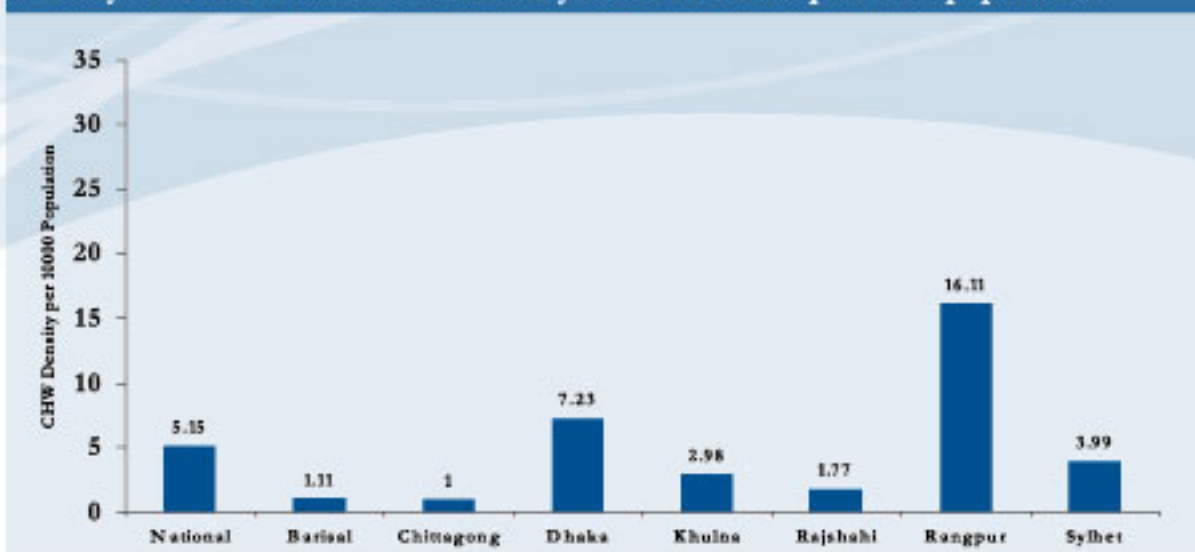
All Community Health Workers, Including Those Trained in Essential Newborn Care

The chart below provides a summary of the density of all community health workers in Bangladesh. There are 4.3 MOH&FW CHWs per 10,000 population. Taking into account programmtic, time-bound workers, this number climbs to 9.3 CHWs per 10,000, spread unevenly across rural Bangladesh. The density of MOH&FW health workers trained in ENC, at 1.2 workers trained in ENC per 10,000 is relatively low. When factoring in time-bound, programmic health workers, this number rises to 3.9 ENC trained CHWs per 10,000.

Community Health Worker Density
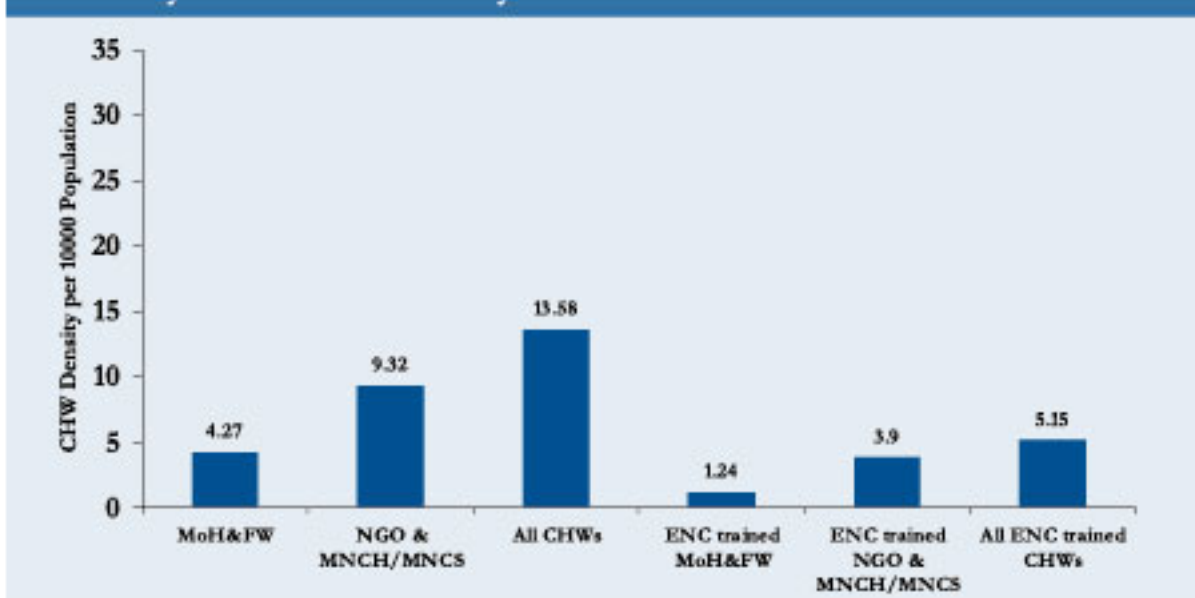
Recommendations

**The Status of Community Based
Health Workers in Rural Bangladesh**

Recommendations

The Status of Community Based Health Workers in Rural Bangladesh constitutes an initial attempt to quantify the availability of community based health workers in Bangladesh. It provides only a snap shot of the current status of health worker deployments; as programs change over time the practical value of these data will diminish. Based on the findings of this report, Save the Children makes the following recommendations to take immediate action, and to make future analyses more meaningful.

To move the issue of community based health workers forward, the Government should take a leadership role, in collaboration with stakeholders, to:

- Ensure that the commitments made by the government to provide ENC and other community based services are operationalized as part of implementation of HPNSPD
- Routinely track the availability of community based health workers (Government and NGO), by supporting future health worker mapping and integrating CHWs into other mapping exercises conducted in Bangladesh
- Develop operational definitions/categories of CHWs, with respect to capacity and services provided, so that future analyses and geographic comparisons are more meaningful
- Develop a standard optimal coverage of HWs per population, and set targets for HW availability
- Develop guidance/strategy for equitable, needs-based deployment of HWs to achieve equity of health outcomes throughout Bangladesh
- Conduct similar mapping exercises for other sectors (e.g. nutrition)

Immediate actions for Government and Development Partners:

- Conduct a needs assessment of lowest density upazilas, and target the poorest performing for immediate deployment of CHWs in partnership with NGOs in coordination with MOH&FW
- Prioritize lowest density upazilas for future comprehensive maternal newborn child health program implementation and resources allocation.
- Review HW job descriptions and terms of reference to ensure adequate performance of home based ENC, ANC/PNC
- Plan for ENC in-service training for existing untrained health workers
- Ensure ENC is integrated into pre-service for new HWs

Future health worker mapping should include:

- Urban analysis
- Distinction between health positions and actual deployments on the ground
- Gender distribution among health workers

Abbreviations and Acronyms

AusAID	Australian Government Overseas Aid Program
CHW	Community health worker
DFID	UK Department for International Development
DGFP	Directorate General Family Planning
DGHS	Directorate General Health Services
ENC	Essential newborn care
FWA	Family welfare assistant
GoB	Government of Bangladesh
HA	Health assistant
IMCI	Integrated management of childhood illnesses
MNCH	Maternal, neonatal and child health
MNCS	Maternal, neonatal and child survival
MDG	Millennium development goal
MoH	Ministry of Health
MOH&FW	Ministry of Health and Family Welfare
NGO	Non-governmental organization
PHD	Partners in Health & Development
SNL	Saving Newborn Lives Program
SSFP	Smiling Sun Franchise Program
SVRS	Sample Vital Registration System
UNICEF	United Nations Children's Fund
WHO	World Health Organization

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(2) Olds DL, Kitzman H. Can home visitation improve the health of women and children at environmental risk? Pediatrics. 1990;86(1):108–16.

(3)   http://whqlibdoc.who.int/hq/2009/WHO_FCH_CAH_09.02_eng.pdf

(4) 2010 Bangladesh Maternal Mortality and Health Care Survey

(5) Olds DL, Kitzman H. Can home visitation improve the health of women and children at environmental risk? Pediatrics. 1990;86(1):108–16.

(6) Bang AT et al. Effect of home-based neonatal care and management of sepsis on neonatal mortality: field trial in rural India. Lancet, 1999

(7) Baqui AH et al. Projahnmo Study Group. Effect of community-based newborn-care intervention package implemented through two service-delivery strategies in Sylhet district, Bangladesh: a cluster-randomised controlled trial. Lancet, 2008

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Density of Community health workers per 10000 population by Upazilas, Districts and Divisions

Division	District	Upazila	MOH&FW CHWs Density/10000 Population	NGO CHWs Density/10000 Population	All CHWs Density/10000 Population
Barisal					
	Barguna				
		Amtali	6.43	8.70	15.13
		Bamna	8.19	10.11	18.30
		Barguna Sadar	5.59	9.42	15.01
		Betagi	5.68	8.08	13.76
		Patharghata	4.98	7.93	12.92
	Barguna Mean		5.97	8.77	14.74
	Barisal				
		Agailjhara	4.58	8.33	12.91
		Babuganj	4.48	15.79	20.27
		Bakerganj	4.57	14.75	19.31
		Banaripara	5.12	7.81	12.93
		Barisal Sadar	4.61	5.18	9.79
		Gaurnadi	4.33	7.83	12.15
		Hizla	4.34	6.53	10.86
		Mehdiganj	4.34	6.77	11.11
		Muladi	4.53	15.20	19.73
		Wazirpur	4.35	7.62	11.97
	Barisal Mean		4.51	9.60	14.11
	Bhola				
		Bhola Sadar	4.55	13.64	18.19
		Burhanuddin	4.26	12.01	16.27
		Char Fassion	3.75	6.48	10.23
		Daulatkhan	4.20	13.13	17.34
		Lalmohan	4.66	14.64	19.31
		Manpura	2.98	6.10	9.08
		Tazumuddin	4.66	11.66	16.32
	Bhola Mean		4.23	11.23	15.46
	Jhalakati				
		Jhalakathi Sadar	6.92	0.00	6.92
		Kanthalia	5.20	6.65	11.85
		Nalchity	4.82	7.07	11.89
		Rajapur	2.95	6.86	9.81
	Jhalakati Mean		4.98	5.18	10.16
	Patuakhali				
		Bauphal	4.75	7.10	11.86
		Dashmina	4.96	8.66	13.62
		Dumki	0.00	6.55	6.55

	Galachipa	4.26	8.88	13.14
	Kalapara	4.25	10.62	14.87
	Mirzaganj	5.14	7.75	12.89
	Patuakhali Sadar	5.93	5.02	10.96
Patuakhali Mean		4.59	7.79	12.38
Perojpur				
	Bhandaria	4.75	6.06	10.81
	Kawkhali	4.67	7.01	11.69
	Mathbaria	5.54	8.22	13.75
	Nazirpur	5.09	6.63	11.72
	Nesarabad	5.44	7.07	12.51
	Pirojpur Sadar	7.24	10.84	18.08
Perojpur Mean		5.53	7.71	13.24
Barisal Mean		4.80	8.91	13.71
Chittagong				
Bandarban				
	Alikadam	6.64	25.63	32.27
	Bandarban Sadar	9.68	37.56	47.24
	Lama	8.14	21.46	29.59
	Naikhongchhari	6.23	17.78	24.02
	Rowangchhari	10.62	33.38	44.00
	Ruma	9.79	31.34	41.14
	Thanchi	17.36	39.33	56.69
Bandarban Mean		8.66	26.32	34.98
Brahmanbaria				
	Akhura	5.06	6.62	11.68
	Banchharampur	4.73	7.57	12.30
	Brahmanbaria Sadar	3.94	5.73	9.67
	Kasba	4.20	3.48	7.68
	Nabinagar	4.69	6.93	11.62
	Nasirnagar	4.00	6.77	10.77
	Sarail	4.16	7.33	11.49
Brahmanbaria Mean		4.31	6.26	10.57
Chandpur				
	Chandpur Sadar	4.64	4.98	9.62
	Faridganj	4.34	4.91	9.25
	Haimchar	6.22	4.28	10.50
	Hajiganj	5.12	5.44	10.56
	Kachua	2.20	2.75	4.94
	Matlab	10.38	15.65	26.03
	Shahrasti	4.41	5.99	10.41
Chandpur Mean		4.47	5.33	9.80
Chittagong				
	Anowara	3.88	5.69	9.57
	Banskhali	2.78	5.67	8.45

	Boalkhali	3.75	6.23	9.98
	Chandanaish	4.60	5.73	10.33
	Fatikchhari	3.34	6.09	9.43
	Hathazari	2.37	5.33	7.71
	Lohagara	2.60	6.22	8.82
	Mirsharai	3.36	7.39	10.75
	Patiya	4.63	8.05	12.69
	Rangunia	3.92	6.13	10.06
	Raozan	2.99	6.07	9.06
	Sandip	3.52	5.16	8.68
	Satkania	3.02	5.39	8.41
	Sitakunda	2.56	6.60	9.16
Chittagong Mean		3.29	6.14	9.43
Comilla				
	Barura	4.09	5.89	9.98
	Brahman Para	4.73	5.91	10.64
	Burichang	4.55	6.34	10.89
	Chandina	3.99	8.02	12.01
	Chauddagram	4.17	4.78	8.95
	Comilla Sadar	4.70	7.73	12.42
	Daudkandi	4.54	6.65	11.19
	Debidwar	3.71	6.76	10.47
	Homna	4.22	4.09	8.30
	Laksam	2.67	5.42	8.09
	Muradnagar	4.49	5.09	9.57
	Nangalkot	3.93	4.21	8.14
Comilla Mean		4.09	5.98	10.07
Cox's Bazar				
	Chakaria	2.33	6.97	9.30
	Cox's Bazar Sadar	3.07	7.82	10.89
	Kutubdia	4.58	7.69	12.27
	Maheshkhali	4.22	6.80	11.02
	Ramu	4.20	7.47	11.68
	Teknaf	3.37	6.65	10.02
	Ukhia	4.01	8.18	12.20
Cox's Bazar Mean		3.37	7.27	10.63
Feni				
	Chhagalnaiya	4.55	6.86	11.41
	Daganbhuiyan	4.36	7.22	11.58
	Feni Sadar	4.26	7.68	11.94
	Parshuram	6.50	7.54	14.04
	Sonagazi	4.71	6.82	11.54
Feni Mean		4.81	7.27	12.08
Khagrachari				
	Dighinala	3.97	11.91	15.88
	Khagrachhari Sadar	9.29	22.02	31.31
	Lakshmichhari	8.76	19.03	27.79

	Mahalchhari	6.29	14.99	21.28
	Manikchhari	4.26	14.09	18.36
	Matiranga	3.92	11.12	15.04
	Panchhari	5.84	13.37	19.21
	Ramgarh	6.95	12.21	19.16
Khagrachari Mean		5.61	13.96	19.57
Lakshmipur				
	Lakshmipur Sadar	4.81	7.83	12.64
	Ramganj	4.32	6.32	10.65
	Ramgati	4.47	6.80	11.27
	Roypur	5.05	7.95	13.00
Lakshmipur Mean		4.66	7.27	11.93
Noakhali				
	Begumganj	3.18	4.63	7.81
	Chatkhil	4.56	5.50	10.07
	Companiganj	3.65	6.46	10.12
	Hatiya	4.23	4.35	8.59
	Noakhali Sadar	3.44	5.86	9.30
	Senbagh	3.56	7.53	11.09
Noakhali Mean		3.60	5.50	9.10
Rangamati				
	Baghaichhari	6.93	16.84	23.77
	Barkal	6.38	23.22	29.60
	Belaichhari	7.39	20.23	27.62
	Juraichhari	9.09	18.88	27.98
	Kaptai	6.45	17.95	24.41
	Kawkhali	5.32	18.30	23.63
	Langadu	6.71	19.66	26.38
	Naniarchar	7.12	19.21	26.33
	Rajasthali	7.77	22.59	30.36
	Rangamati Sadar	11.12	63.83	74.96
Rangamati Mean		7.08	22.18	29.27
Chittagong Mean		4.11	6.98	11.09
Dhaka				
Dhaka				
	Dhamrai	4.20	5.41	9.62
	Dohar	3.88	6.26	10.14
	Keraniganj	2.09	3.55	5.63
	Nawabganj	4.72	7.50	12.22
	Savar	2.91	6.87	9.78
Dhaka Mean		3.26	5.60	8.86
Faridpur				
	Alfadanga	4.93	30.43	35.36
	Bhanga	5.27	20.32	25.59

	Boalmari	3.99	21.07	25.06
	Char Bhadrasan	5.49	22.42	27.91
	Faridpur Sadar	4.23	21.42	25.65
	Madhukhali	4.01	22.88	26.89
	Nagarkanda	4.31	22.58	26.89
	Sadarpur	4.43	20.79	25.22
Faridpur Mean		4.45	22.10	26.55
Gazipur				
	Gazipur Sadar	3.42	6.42	9.84
	Kaliakair	4.08	5.50	9.58
	Kaliganj	4.58	5.75	10.33
	Kapasia	5.09	9.74	14.82
	Sreepur	4.56	9.05	13.61
Gazipur Mean		4.27	7.38	11.65
Gopalganj				
	Gopalganj Sadar	7.52	12.35	19.88
	Kashiani	5.62	14.11	19.73
	Kotalipara	4.98	4.10	9.08
	Muksudpur	5.15	14.09	19.23
	Tungipara	5.05	19.23	24.28
Gopalganj Mean		5.80	12.05	17.85
Jamalpur				
	Bakshiganj	4.04	5.01	9.05
	Dewanganj	3.85	4.54	8.39
	Islampur	4.76	3.44	8.19
	Jamalpur Sadar	4.33	6.20	10.53
	Madarganj	4.25	3.93	8.18
	Meladaha	4.02	3.79	7.81
	Sarishabari	4.24	3.38	7.62
Jamalpur Mean		4.24	4.42	8.66
Kishoreganj				
	Austagram	4.09	11.92	16.01
	Bajitpur	4.76	13.83	18.59
	Bhairab	4.36	4.47	8.83
	Hossainpur	4.58	6.26	10.84
	Itna	4.74	10.93	15.67
	Karimganj	4.46	9.64	14.09
	Katiadi	3.83	9.45	13.29
	Kishoregonj Sadar	4.60	4.39	8.99
	Kuliar Char	3.85	5.05	8.90
	Mithamain	3.52	2.64	6.16
	Nikli	5.47	2.91	8.38
	Pakundia	3.95	10.64	14.59
	Tarail	4.60	6.24	10.84
Kishoreganj Mean		4.34	7.88	12.22
Madaripur				
	Kalkini	5.07	18.05	23.11

	Madaripur Sadar	5.59	24.75	30.34
	Rajoir	4.85	20.81	25.66
	Shibchar	5.72	21.79	27.51
Madaripur Mean		5.34	21.39	26.73
Manikganj				
	Daulatpur	5.31	8.37	13.68
	Ghior	5.32	7.24	12.56
	Harirampur	4.64	6.76	11.40
	Manikganj Sadar	4.76	10.56	15.32
	Saturia	4.76	6.68	11.44
	Shibalaya	4.75	10.16	14.91
	Singair	4.39	7.61	12.00
Manikganj Mean		4.80	8.22	13.02
Munshiganj				
	Gazaria	4.08	7.85	11.93
	Lohajang	3.48	4.62	8.10
	Munshiganj Sadar	2.88	8.08	10.96
	Serajdikhan	4.42	5.92	10.34
	Sreenagar	3.64	5.77	9.42
	Tongibari	4.40	8.14	12.54
Munshiganj Mean		3.76	6.76	10.52
Mymensingh				
	Bhaluka	4.17	28.11	32.28
	Dhobaura	4.01	24.75	28.76
	Fulbaria	4.23	25.04	29.27
	Fulpur	3.79	12.49	16.28
	Gaffargaon	4.17	23.48	27.65
	Gauripur	4.29	23.74	28.03
	Haluaghat	3.88	24.68	28.56
	Ishwarganj	5.41	23.36	28.77
	Muktagachha	4.25	26.39	30.64
	Mymensingh Sadar	4.08	26.01	30.09
	Nandail	4.07	23.65	27.72
	Trishal	3.92	24.30	28.21
Mymensingh Mean		4.17	23.31	27.48
Narayanganj				
	Araihazar	3.57	3.45	7.02
	Bandar	2.64	4.19	6.82
	Narayanganj Sadar	1.86	6.04	7.90
	Rupganj	2.72	3.49	6.21
	Sonargaon	3.54	5.05	8.59
Narayanganj Mean		2.74	4.61	7.34
Narsingdhi				
	Belabo	4.71	6.21	10.92
	Manohardi	4.67	6.77	11.43

	Narsingdi Sadar	2.24	7.03	9.26
	Palash	3.49	6.30	9.79
	Roypura	3.85	4.59	8.44
	Shibpur	3.33	6.20	9.54
Narsingdhi Mean		3.45	6.14	9.58
Netrokona				
	Atpara	5.36	6.92	12.28
	Barhatta	4.34	2.83	7.17
	Durgapur	4.33	1.00	5.33
	Kalmakanda	4.58	5.04	9.62
	Kendua	5.23	4.38	9.61
	Khaliajuri	5.00	9.79	14.79
	Madan	4.50	12.86	17.37
	Mohanganj	4.93	13.42	18.35
	Netrokona Sadar	4.32	14.59	18.91
	Purbadhala	4.03	14.48	18.51
Netrokona Mean		4.60	8.58	13.18
Rajbari				
	Baliakandi	5.04	21.72	26.77
	Goalandaghat	3.99	16.12	20.11
	Pangsha	3.58	20.18	23.76
	Rajbari Sadar	4.18	27.69	31.88
Rajbari Mean		4.10	22.01	26.11
Sariatpur				
	Bhedarganj	4.55	0.66	5.21
	Damudya	5.45	1.46	6.91
	Gosairhat	4.77	1.41	6.18
	Naria	5.12	3.22	8.34
	Shariatpur Sadar	5.45	14.53	19.98
	Zanjira	5.48	0.84	6.32
Sariatpur Mean		5.10	3.49	8.59
Sherpur				
	Jhenaigati	3.64	21.73	25.37
	Nakla	4.65	6.96	11.61
	Nalitabari	3.41	13.99	17.40
	Sherpur Sadar	3.74	15.74	19.47
	Sreebardi	4.83	18.83	23.66
Sherpur Mean		4.01	15.42	19.43
Tangail				
	Basail	5.03	2.54	7.57
	Bhuapur	4.18	1.85	6.03
	Delduar	3.33	3.33	6.66
	Ghatail	4.85	2.02	6.87
	Gopalpur	4.05	3.18	7.23
	Kalihati	4.54	2.00	6.53
	Madhupur	4.29	2.05	6.34
	Mirzapur	4.53	3.00	7.53

		Nagarpur	4.64	2.90	7.55
		Sakhipur	4.85	4.13	8.99
		Tangail Sadar	3.78	2.82	6.60
	Tangail Mean		4.39	2.64	7.04
Dhaka Mean			4.20	10.77	14.97
Khulna					
	Bagerhat				
		Bagerhat Sadar	5.39	10.58	15.97
		Chitalmari	3.14	5.63	8.77
		Fakirhat	3.41	7.19	10.60
		Kachua	5.76	6.53	12.28
		Mollahat	6.62	6.27	12.88
		Mongla	5.54	7.42	12.96
		Morrelganj	4.61	5.10	9.71
		Rampal	5.15	4.45	9.60
		Sarankhola	5.45	5.52	10.97
	Bagerhat Mean		4.91	6.46	11.38
	Chuadanga				
		Alamdanga	4.24	8.42	12.66
		Chuadanga Sadar	3.96	8.94	12.90
		Damurhuda	3.82	6.79	10.60
		Jiban Nagar	5.55	7.07	12.62
	Chuadanga Mean		4.29	7.84	12.13
	Jessore				
		Abhaynagar	4.44	4.90	9.34
		Bagher Para	4.53	8.34	12.87
		Chaugachha	4.07	7.08	11.16
		Jessore	3.97	4.90	8.87
		Jhikargachha	4.02	6.50	10.52
		Keshabpur	4.02	8.30	12.32
		Manirampur	4.23	3.09	7.31
		Sharsha	3.36	5.52	8.88
	Jessore Mean		4.05	5.71	9.76
	Jhenaidah				
		Harinakunda	4.95	4.95	9.90
		Jhenaidah Sadar	4.54	6.46	11.01
		Kaliganj	4.40	6.59	10.99
		Kotchandpur	4.20	5.94	10.14
		Maheshpur	4.34	7.14	11.48
		Shalikupa	4.59	5.56	10.14
	Jhenaidah Mean		4.51	6.19	10.70
	Khulna				
		Batiaghata	5.98	13.19	19.17
		Dacope	4.88	5.98	10.86
		Dighalia	5.77	7.72	13.48
		Dumuria	5.75	7.12	12.87

		Fultala	6.65	9.29	15.94
		Koyra	4.29	2.92	7.20
		Paikgachha	4.92	6.42	11.34
		Rupsa	5.05	6.53	11.57
		Terokhada	6.41	6.71	13.11
	Khulna Mean		5.36	6.96	12.33
	Kushtia				
		Bheramara	4.05	7.10	11.15
		Daulatpur	3.25	6.86	10.11
		Khoksha	4.27	4.76	9.03
		Kumarkhali	4.42	4.22	8.64
		Kushtia Sadar	3.90	6.56	10.46
		Mirpur	4.26	5.02	9.28
	Kushtia Mean		3.92	5.90	9.82
	Magura				
		Magura Sadar	4.86	24.65	29.51
		Mohammadpur	4.77	21.69	26.45
		Shalikha	4.83	22.42	27.25
		Sreepur	4.81	22.42	27.23
	Magura Mean		4.82	22.97	27.79
	Meherpur				
		Gangni	4.49	6.78	11.26
		Meherpur Sadar	4.04	6.39	10.43
		Mujibnagar	4.68	7.79	12.47
	Meherpur Mean		4.36	6.81	11.18
	Narail				
		Kalia	5.69	8.04	13.73
		Lohagara	4.99	5.82	10.80
		Narail Sadar	5.01	5.89	10.90
	Narail Mean		5.21	6.51	11.71
	Satkhira				
		Assasuni	4.77	6.02	10.79
		Debihata	4.45	7.25	11.70
		Kalaroa	3.60	7.13	10.73
		Kaliaganj	4.43	6.89	11.32
		Satkhira Sadar	4.47	6.74	11.21
		Shyamnagar	4.42	7.11	11.53
		Tala	4.22	6.86	11.08
	Satkhira Mean		4.35	6.83	11.18
Khulna Mean			4.50	7.39	11.90
Rajshahi					
	Bogra				
		Adamdighi	4.31	7.09	11.40
		Bogra Sadar	4.06	8.20	12.26
		Dhunat	4.40	7.53	11.92

	Dhupchachia	4.74	8.03	12.77
	Gabtali	4.38	8.87	13.25
	Kahaloo	4.65	8.28	12.93
	Nandigram	3.38	6.61	9.99
	Sariakandi	4.47	6.16	10.63
	Sherpur	4.15	7.80	11.95
	Shibganj	4.31	9.45	13.76
	Sonatola	4.57	9.83	14.41
Bogra Mean		4.29	8.07	12.36
Joypurhat				
	Akkelpur	4.94	9.81	14.75
	Joypurhat Sadar	4.62	9.55	14.18
	Kalai	4.83	9.66	14.49
	Khetlal	4.41	7.61	12.02
	Panchbibi	4.44	5.61	10.04
Joypurhat Mean		4.62	8.25	12.87
Natore				
	Bagatipara	4.24	0.00	4.24
	Baraigram	3.86	8.50	12.36
	Gurudaspur	2.97	5.34	8.31
	Lalpur	4.08	5.07	9.15
	Natore Sadar	3.62	6.13	9.74
	Singra	3.61	4.28	7.90
Natore Mean		3.70	5.34	9.04
Nawabganj				
	Bholahat	4.06	9.83	13.89
	Gomastapur	3.41	4.85	8.26
	Nachole	3.74	6.85	10.59
	Sadar	4.66	3.77	8.42
	Shibganj	3.58	2.62	6.20
Nawabganj Mean		3.84	4.28	8.12
Noagoan				
	Atrai	4.80	4.07	8.87
	Badalgachhi	4.84	3.42	8.26
	Dhamoirhat	4.43	5.11	9.54
	Mahadebpur	4.27	2.94	7.20
	Manda	4.25	2.25	6.50
	Naogaon Sadar	4.27	4.37	8.64
	Niamatpur	4.00	2.35	6.35
	Patnitala	4.75	2.79	7.54
	Porsha	3.82	2.81	6.63
	Raninagar	4.20	3.17	7.37
	Sapahar	3.86	2.51	6.37
Noagoan Mean		4.33	3.19	7.52
Pabna				
	Atgharia	4.14	7.00	11.14
	Bera	3.53	5.32	8.85

	Bhangura	4.49	7.07	11.56
	Chatmohar	3.62	5.04	8.66
	Faridpur	4.78	5.05	9.83
	Ishwardi	4.01	5.69	9.70
	Pabna Sadar	3.65	5.61	9.26
	Santhia	3.58	4.24	7.81
	Sujanagar	3.94	3.41	7.35
Pabna Mean		3.84	5.15	8.99
Rajshahi				
	Bagha	3.94	4.18	8.12
	Baghmara	3.90	4.89	8.79
	Charghat	3.99	2.17	6.16
	Durgapur	3.90	3.94	7.84
	Godagari	4.05	4.38	8.43
	Mohanpur	3.83	5.72	9.55
	Paba	3.65	4.66	8.31
	Puthia	3.98	3.59	7.58
	Tanore	3.10	2.95	6.05
Rajshahi Mean		3.83	4.12	7.94
Sirajganj				
	Belkuchi	4.01	3.52	7.53
	Chauhali	3.82	0.64	4.45
	Kamarkhanda	4.20	6.14	10.34
	Kazipur	4.58	3.65	8.22
	Royganj	4.33	2.84	7.17
	Shahjadpur	3.92	3.69	7.61
	Sirajganj Sadar	4.19	7.02	11.20
	Tarash	4.04	5.76	9.79
	Ullapara	4.47	3.92	8.40
Sirajganj Mean		4.19	4.15	8.34
Rajshahi Mean		4.09	5.22	9.30
Rangpur				
Dinajpur				
	Biral	2.75	6.53	9.27
	Birampur	4.54	5.58	10.12
	Birganj	4.46	5.89	10.35
	Bochaganj	4.49	6.87	11.36
	Chirirbandar	4.07	17.45	21.52
	Dinajpur Sadar	4.48	12.46	16.94
	Fulbaria	5.14	22.71	27.85
	Ghoraghat	4.26	8.20	12.46
	Hakimpur	4.19	7.59	11.78
	Kaharole	4.34	19.84	24.18
	Khansama	4.16	8.80	12.96
	Nowabganj	4.27	8.66	12.92
	Parbatipur	4.28	16.77	21.05
Dinajpur Mean		4.22	11.55	15.76

Gaibandha				
	Fulchari	5.04	14.52	19.56
	Gaibandha Sadar	4.79	30.64	35.42
	Gobindaganj	4.10	26.34	30.44
	Palashbari	4.80	25.33	30.14
	Sadullapur	4.76	27.97	32.73
	Saghatta	4.72	24.39	29.10
	Sundarganj	4.62	27.69	32.31
Gaibandha Mean		4.61	26.35	30.96
Kurigram				
	Bhurungamari	3.94	23.43	27.37
	Char Rajibpur	5.08	0.00	5.08
	Chilmari	4.76	17.85	22.61
	Fulbaria	4.62	23.96	28.58
	Kurigram Sadar	3.95	28.39	32.34
	Nageshwari	3.97	21.04	25.01
	Rajahat	4.39	26.64	31.03
	Raumari	3.81	23.06	26.87
	Ulipur	4.66	21.22	25.88
Kurigram Mean		4.27	22.23	26.51
Lalmonirhat				
	Aditmari	4.06	0.37	4.43
	Hatibandha	4.48	0.88	5.37
	Kaliganj	4.43	0.65	5.07
	Lalmonirhat Sadar	4.49	0.98	5.47
	Patgram	4.57	0.51	5.09
Lalmonirhat Mean		4.41	0.69	5.10
Nilphamari				
	Dimla	4.05	26.00	30.05
	Domar	4.73	23.25	27.97
	Jaldhaka	4.41	27.29	31.71
	Kishoreganj	4.23	24.51	28.74
	Nilphamari Sadar	4.57	26.19	30.76
	Saidpur	4.17	22.27	26.44
Nilphamari Mean		4.39	25.27	29.66
Panchagharh				
	Atwari	4.80	7.93	12.74
	Boda	4.31	7.04	11.36
	Debiganj	4.28	8.02	12.30
	Panchagarh Sadar	4.15	5.75	9.90
	Tentulia	3.73	9.56	13.30
Panchagharh Mean		4.26	7.41	11.67
Rangpur				
	Badarganj	4.32	27.06	31.39
	Gangachara	3.97	25.37	29.35
	Kaunia	3.67	23.88	27.55

	Mithapukur	4.30	27.37	31.68
	Pirgachha	4.28	23.96	28.24
	Pirganj	4.50	28.52	33.02
	Rangpur Sadar	3.76	31.46	35.23
	Taraganj	5.29	27.15	32.44
Rangpur Mean		4.20	27.12	31.33
Thakurgoan				
	Baliadangi	4.43	8.92	13.35
	Haripur	3.82	10.32	14.14
	Pirganj	4.41	8.24	12.65
	Ranisankail	3.92	7.56	11.48
	Thakurgaon Sadar	4.19	8.05	12.24
Thakurgoan Mean		4.18	8.37	12.55
Rangpur Mean		**4.32**	**18.14**	**22.46**
Sylhet				
Habiganj				
	Ajmiriganj	4.08	5.32	9.40
	Bahubal	4.15	4.84	8.99
	Baniachong	4.49	3.99	8.48
	Chunarughat	4.48	3.21	7.70
	Habiganj Sadar	4.58	16.77	21.34
	Lakhai	5.31	5.52	10.83
	Madhabpur	4.37	3.94	8.31
	Nabiganj	4.26	3.74	7.99
Habiganj Mean		4.44	5.71	10.15
Moulvi Bazar				
	Barlekha	3.99	4.06	8.05
	Kamalganj	4.07	8.03	12.10
	Kiulaura	4.26	3.45	7.71
	Maulvibazar Sadar	4.05	1.97	6.02
	Rajnagar	4.72	3.73	8.46
	Sreemangal	3.80	3.86	7.66
Moulvi Bazar Mean		4.13	4.10	8.24
Sunamganj				
	Bishwambarpur	4.26	16.04	20.30
	Chhatak	3.73	12.03	15.77
	Derai	4.27	16.20	20.48
	Dharmapasha	4.28	6.54	10.83
	Dowarabazar	4.01	16.06	20.07
	Jagannathpur	4.49	14.97	19.47
	Jamalganj	4.28	12.77	17.05
	Sulla	4.80	24.10	28.90
	Sunamganj Sadar	4.13	7.64	11.77
	Tahirpur	4.20	8.45	12.65
Sunamganj Mean		4.18	12.52	16.70

Sylhet					
		Balaganj	4.50	4.76	9.26
		Beanibazar	4.28	1.49	5.77
		Bishwanath	4.31	4.26	8.57
		Companiganj	3.19	4.28	7.47
		Fenchuganj	4.24	5.78	10.02
		Golabganj	4.36	3.29	7.65
		Gowainghat	4.23	3.23	7.46
		Jointapur	3.80	4.08	7.88
		Kanaighat	4.26	1.80	6.06
		Sylhet	4.63	6.87	11.50
		Zakiganj	5.70	2.17	7.87
	Sylhet Mean		4.41	3.90	8.31
Sylhet Mean			4.30	6.62	10.92
Grand Mean			4.27	9.32	13.58

Annexure II

Density of Community health workers per 10000 population by Upazilas, Districts and Divisions

Division	District	Upazila	Density of ENC trained MOH&FW CHW/1000 Population	Density of ENC trained NGOs CHW/1000 Population	Density of Mean ENC trained CHW /1000 Population
Barisal					
	Barguna				
		Amtali	1.68	-	1.68
		Bamna	2.05	-	2.05
		Barguna Sadar	1.49	0.11	1.61
		Betagi	1.46	-	1.46
		Patharghata	1.32	-	1.32
	Barguna Mean		1.56	0.03	1.59
	Barisal				
		Agailjhara	1.54	-	1.54
		Babuganj	1.62	-	1.62
		Bakerganj	1.21	-	1.21
		Banaripara	1.08	-	1.08
		Barisal Sadar	1.41	-	1.41
		Gaurnadi	1.38	-	1.38
		Hizla	1.45	-	1.45
		Mehdiganj	1.06	-	1.06
		Muladi	1.48	-	1.48
		Wazirpur	1.39	-	1.39
	Barisal Mean		1.33	-	1.33
	Bhola				
		Bhola Sadar	0.78	-	0.78
		Burhanuddin	0.67	-	0.67
		Char Fassion	1.03	-	1.03
		Daulatkhan	0.76	-	0.76
		Lalmohan	0.53	-	0.53
		Manpura	0.39	-	0.39
		Tazumuddin	0.71	-	0.71
	Bhola Mean		0.77	-	0.77
	Jhalakati				
		Jhalakathi Sadar	0.76	-	0.76
		Kanthalia	0.79	-	0.79
		Nalchity	0.77	-	0.77
		Rajapur	0.74	-	0.74
	Jhalakati Mean		0.76	-	0.76
	Patuakhali				
		Bauphal	0.89	-	0.89
		Dashmina	1.05	-	1.05
		Dumki	0.56	-	0.56
		Galachipa	0.86	-	0.86
		Kalapara	1.72	-	1.72
		Mirzaganj	1.48	-	1.48
		Patuakhali Sadar	1.22	0.09	1.32
	Patuakhali Mean		1.11	0.02	1.13

Perojpur					
	Bhandaria	0.78	-		0.78
	Kawkhali	0.78	-		0.78
	Mathbaria	0.97	-		0.97
	Nazirpur	0.84	-		0.84
	Nesarabad	0.87	-		0.87
	Pirojpur Sadar	1.00	0.60		1.60
Perojpur Mean		0.89	0.10		0.99
Barisal Mean		1.09	0.02		1.11
Chittagong					
Bandarban					
	Alikadam	1.60	-		1.60
	Bandarban Sadar	2.13	-		2.13
	Lama	1.53	-		1.53
	Naikhongchari	0.91	-		0.91
	Rowangchhari	4.17	-		4.17
	Ruma	0.98	-		0.98
	Thanchi	1.53	-		1.53
Bandarban Mean		1.65	-		1.65
Brahmanbaria					
	Akhura	1.81	-		1.81
	Banchharampur	1.28	-		1.28
	Brahmanbaria Sadar	1.16	-		1.16
	Kasba	1.33	-		1.33
	Nabinagar	0.88	-		0.88
	Nasirnagar	1.04	-		1.04
	Sarail	1.40	-		1.40
Brahmanbaria Mean		1.20	-		1.20
Chandpur					
	Chandpur Sadar	0.82	-		0.82
	Faridganj	0.22	-		0.22
	Haimchar	0.47	-		0.47
	Hajiganj	0.31	-		0.31
	Kachua	0.22	-		0.22
	Matlab	1.32	-		1.32
	Shahrasti	0.45	-		0.45
Chandpur Mean		0.46	-		0.46
Chittagong					
	Anowara	0.92	-		0.92
	Banskhali	0.32	-		0.32
	Boalkhali	0.51	-		0.51
	Chandanaish	0.88	-		0.88
	Fatikchhari	0.90	-		0.90
	Hathazari	0.23	-		0.23
	Lohagara	1.05	1.21		2.26

	Mirsharai	1.09	-	1.09
	Patiya	0.36	-	0.36
	Rangunia	1.08	-	1.08
	Raozan	0.30	-	0.30
	Sandip	1.47	-	1.47
	Satkania	0.44	-	0.44
	Sitakunda	1.18	-	1.18
Chittagong Mean		0.75	0.07	0.82
Comilla				
	Barura	0.61	-	0.61
	Brahman Para	0.91	-	0.91
	Burichang	1.11	1.27	2.39
	Chandina	0.70	1.16	1.86
	Chauddagram	0.46	-	0.46
	Comilla Sadar	1.22	-	1.22
	Daudkandi	0.62	0.84	1.46
	Debidwar	0.43	-	0.43
	Homna	0.43	-	0.43
	Laksam	0.14	-	0.14
	Muradnagar	0.67	0.69	1.36
	Nangalkot	1.09	-	1.09
Comilla Mean		0.67	0.34	1.00
Cox's Bazar				
	Chakaria	1.33	-	1.33
	Cox's Bazar Sadar	1.15	-	1.15
	Kutubdia	1.55	-	1.55
	Maheshkhali	1.64	-	1.64
	Ramu	1.59	-	1.59
	Teknaf	1.07	-	1.07
	Ukhia	1.77	-	1.77
Cox's Bazar Mean		1.40	-	1.40
Feni				
	Chhagalnaiya	2.10	-	2.10
	Daganbhuiyan	1.43	-	1.43
	Feni Sadar	0.97	-	0.97
	Parshuram	1.50	-	1.50
	Sonagazi	1.76	-	1.76
Feni Mean		1.48	-	1.48
Khagrachari				
	Dighinala	0.81	-	0.81
	Khagrachhari Sadar	0.45	-	0.45
	Lakshmichhari	1.14	-	1.14
	Mahalchhari	0.93	-	0.93
	Manikchhari	0.98	-	0.98
	Matiranga	1.14	-	1.14
	Panchhari	0.65	-	0.65
	Ramgarh	1.08	-	1.08
Khagrachari Mean		0.89	-	0.89

Lakshmipur				
	Lakshmipur Sadar	0.82	-	0.82
	Ramganj	0.96	-	0.96
	Ramgati	0.82	-	0.82
	Roypur	2.02	-	2.02
Lakshmipur Mean		1.05	-	1.05
Noakhali				
	Begumganj	1.06	-	1.06
	Chatkhil	1.60	-	1.60
	Companiganj	1.08	-	1.08
	Hatiya	1.33	-	1.33
	Noakhali Sadar	0.73	-	0.73
	Senbagh	1.07	-	1.07
Noakhali Mean		1.05	-	1.05
Rangamati				
	Baghaichhari	0.59	-	0.59
	Barkal	1.74	-	1.74
	Belaichhari	0.96	-	0.96
	Juraichhari	1.05	-	1.05
	Kaptai	0.35	-	0.35
	Kawkhali	0.50	-	0.50
	Langadu	0.96	-	0.96
	Naniarchar	0.43	-	0.43
	Rajasthali	1.06	-	1.06
	Rangamati Sadar	3.18	-	3.18
Rangamati Mean		0.94	-	0.94
Chittagong Mean		0.92	0.09	1.00
Dhaka				
Dhaka				
	Dhamrai	1.19	-	1.19
	Dohar	0.30	1.42	1.73
	Keraniganj	0.12	0.37	0.49
	Nawabganj	1.35	0.84	2.19
	Savar	0.62	-	0.62
Dhaka Mean		0.65	0.39	1.03
Faridpur				
	Alfadanga	2.46	29.02	31.49
	Bhanga	2.19	19.03	21.22
	Boalmari	1.56	20.26	21.81
	Char Bhadrasan	1.87	21.43	23.30
	Faridpur Sadar	1.69	20.65	22.33
	Madhukhali	3.88	21.55	25.43
	Nagarkanda	1.56	21.89	23.44
	Sadarpur	1.52	19.72	21.24
Faridpur Mean		2.00	21.12	23.12

Gazipur				
	Gazipur Sadar	0.79	-	0.79
	Kaliakair	1.33	-	1.33
	Kaliganj	1.14	-	1.14
	Kapasia	1.53	-	1.53
	Sreepur	1.78	1.00	2.78
Gazipur Mean		1.28	0.21	1.49
Gopalganj				
	Gopalganj Sadar	1.63	-	1.63
	Kashiani	1.68	-	1.68
	Kotalipara	1.89	-	1.89
	Muksudpur	1.24	-	1.24
	Tungipara	1.91	-	1.91
Gopalganj Mean		1.62	-	1.62
Jamalpur				
	Bakshiganj	1.95	2.13	4.08
	Dewanganj	1.51	1.62	3.13
	Islampur	1.75	1.95	3.70
	Jamalpur Sadar	1.41	3.33	4.74
	Madarganj	1.84	1.56	3.40
	Meladaha	1.53	2.09	3.62
	Sarishabari	2.03	2.11	4.13
Jamalpur Mean		1.69	2.24	3.92
Kishoreganj				
	Austagram	1.31	-	1.31
	Bajitpur	1.38	-	1.38
	Bhairab	0.98	-	0.98
	Hossainpur	1.63	-	1.63
	Itna	1.45	-	1.45
	Karimganj	1.51	-	1.51
	Katiadi	1.16	-	1.16
	Kishoregonj Sadar	1.06	-	1.06
	Kuliar Char	1.55	-	1.55
	Mithamain	0.61	-	0.61
	Nikli	1.45	-	1.45
	Pakundia	1.22	-	1.22
	Tarail	2.38	-	2.38
Kishoreganj Mean		1.34	-	1.34
Madaripur				
	Kalkini	1.36	17.41	18.77
	Madaripur Sadar	1.03	24.38	25.41
	Rajoir	1.06	20.15	21.20
	Shibchar	0.67	21.09	21.76
Madaripur Mean		1.02	20.80	21.82
Manikganj				
	Daulatpur	2.21	-	2.21

	Ghior	1.97	-	1.97
	Harirampur	1.71	1.04	2.75
	Manikganj Sadar	1.29	0.36	1.65
	Saturia	1.02	-	1.02
	Shibalaya	1.93	1.60	3.53
	Singair	1.38	1.02	2.39
Manikganj Mean		1.61	0.61	2.22
Munshiganj				
	Gazaria	0.90	-	0.90
	Lohajang	0.35	-	0.35
	Munshiganj Sadar	0.15	2.35	2.49
	Serajdikhan	0.96		0.96
	Sreenagar	0.40	-	0.40
	Tongibati	0.39	-	0.39
Munshiganj Mean		0.50	0.53	1.02
Mymensingh				
	Bhaluka	1.34	27.47	28.80
	Dhobaura	0.96	24.36	25.32
	Fulbaria	1.28	24.58	25.86
	Fulpur	0.72	12.40	13.12
	Gaffargaon	0.79	23.30	24.09
	Gauripur	0.87	23.74	24.61
	Haluaghat	0.83	24.43	25.26
	Ishwarganj	1.31	23.13	24.44
	Muktagachha	1.18	26.14	27.32
	Mymensingh Sadar	0.96	25.87	26.83
	Nandail	0.87	23.45	24.32
	Trishal	0.86	24.21	25.06
Mymensingh Mean		0.98	23.08	24.07
Narayanganj				
	Araihazar	0.53	-	0.53
	Bandar	0.13	0.07	0.20
	Narayanganj Sadar	0.18	-	0.18
	Rupgaanj	0.45	-	0.45
	Sonargaon	0.81	-	0.81
Narayanganj Mean		0.40	0.01	0.41
Narsingdhi				
	Belabo	1.20	-	1.20
	Manohardi	1.12	-	1.12
	Narsingdi Sadar	0.24	2.13	2.37
	Palash	1.16	-	1.16
	Roypura	0.85	-	0.85
	Shibpur	1.00	-	1.00
Narsingdhi Mean		0.79	0.63	1.42

Netrokona				
	Atpara	1.74	1.93	3.68
	Barhatta	1.05	-	1.05
	Durgapur	2.04	-	2.04
	Kalmakanda	1.73	1.16	2.89
	Kendua	1.78	-	1.78
	Khaliajuri	0.83	-	0.83
	Madan	1.46	1.40	2.86
	Mohanganj	1.23	1.66	2.89
	Netrokona Sadar	1.30	0.65	1.94
	Purbadhala	1.06	0.94	2.00
Netrokona Mean		1.46	0.73	2.19
Rajbari				
	Baliakandi	0.84	21.72	22.56
	Goalandaghat	0.84	16.12	16.96
	Pangsha	0.40	20.18	20.57
	Rajbari Sadar	0.61	27.69	28.30
Rajbari Mean		0.60	22.01	22.61
Sariatpur				
	Bhedarganj	0.97	-	0.97
	Damudya	1.38	-	1.38
	Gosairhat	1.21	-	1.21
	Naria	0.77	-	0.77
	Shariatpur Sadar	0.80	11.60	12.40
	Zanjira	1.15	-	1.15
Sariatpur Mean		1.00	1.73	2.74
Sherpur				
	Jhenaigati	0.81	-	0.81
	Nakla	0.78	-	0.78
	Nalitabari	0.56	-	0.56
	Sherpur Sadar	0.49	-	0.49
	Sreebardi	0.70	-	0.70
Sherpur Mean		0.63	-	0.63
Tangail				
	Basail	1.16	-	1.16
	Bhuapur	0.92	-	0.92
	Delduar	0.18	-	0.18
	Ghatail	1.60	-	1.60
	Gopalpur	0.91	-	0.91
	Kalihati	1.14	-	1.14
	Madhupur	1.09	-	1.09
	Mirzapur	1.62	-	1.62
	Nagarpur	0.71	-	0.71
	Sakhipur	1.26	-	1.26
	Tangail Sadar	0.54	-	0.54
Tangail Mean		1.07	-	1.07
Dhaka Mean		1.10	6.12	7.23

Bagerhat				
	Bagerhat Sadar	0.89	5.12	6.01
	Chitalmari	0.89	-	0.89
	Fakirhat	0.88	-	0.88
	Kachua	0.86	-	0.86
	Mollahat	0.98	-	0.98
	Mongla	0.80	-	0.80
	Morrelganj	0.90	-	0.90
	Rampal	0.75	-	0.75
	Sarankhola	1.10	-	1.10
Bagerhat Mean		0.89	0.77	1.66
Chuadanga				
	Alamdanga	0.77	-	0.77
	Chuadanga Sadar	0.78	-	0.78
	Damurhuda	1.91	-	1.91
	Jiban Nagar	1.92	0.81	2.73
Chuadanga Mean		1.29	0.14	1.44
Jessore				
	Abhaynagar	1.63	-	1.63
	Bagher Para	1.52	1.61	3.13
	Chaugachha	1.53	-	1.53
	Jessore	1.41	0.22	1.63
	Jhikargachha	1.40	-	1.40
	Keshabpur	1.43	-	1.43
	Manirampur	1.34	-	1.34
	Sharsha	1.01	-	1.01
Jessore Mean		1.39	0.18	1.57
Jhenaidah				
	Harinakunda	1.12	-	1.12
	Jhenaidah Sadar	0.99	-	0.99
	Kaliganj	0.85	-	0.85
	Kotchandpur	0.79	-	0.79
	Maheshpur	0.99	1.24	2.23
	Shalikupa	0.87	-	0.87
Jhenaidah Mean		0.94	0.24	1.18
Khulna				
	Batiaghata	2.19	-	2.19
	Dacope	1.47	-	1.47
	Dighalia	1.66	-	1.66
	Dumuria	1.47	-	1.47
	Fultala	2.18	-	2.18
	Koyra	1.07	-	1.07
	Paikgachha	1.27	-	1.27
	Rupsa	1.84	-	1.84
	Terokhada	1.36	-	1.36

	Khulna Mean	1.53	-	1.53
	Kushtia			
	Bheramara	2.58	-	2.58
	Daulatpur	2.08	-	2.08
	Khoksha	2.06	-	2.06
	Kumarkhali	2.21	-	2.21
	Kushtia Sadar	1.35	-	1.35
	Mirput	1.05	-	1.05
Kushtia Mean		1.81	-	1.81
	Magura			
	Magura Sadar	1.46	24.04	25.50
	Mohammadpur	1.40	21.29	22.69
	Shalikha	1.52	21.91	23.43
	Sreepur	1.48	21.73	23.21
Magura Mean		1.46	22.42	23.88
	Meherpur			
	Gangni	2.17	-	2.17
	Meherpur Sadar	1.78	-	1.78
	Mujibnagar	1.65	-	1.65
Meherpur Mean		1.95	-	1.95
	Narail			
	Kalia	1.92	3.29	5.22
	Lohagara	1.59	2.27	3.85
	Narail Sadar	1.19	3.09	4.28
Narail Mean		1.54	2.87	4.41
	Satkhira			
	Assasuni	1.35	-	1.35
	Debihata	1.44	-	1.44
	Kalaroa	1.26	-	1.26
	Kaliaganj	1.66	-	1.66
	Satkhira Sadar	1.56	-	1.56
	Shyamnagar	1.75	-	1.75
	Tala	1.47	-	1.47
Satkhira Mean		1.52	-	1.52
Khulna Mean		1.40	1.58	2.98
Rajshahi				
	Bogra			
	Adamdighi	1.26	-	1.26
	Bogra Sadar	0.91	-	0.91
	Dhunat	1.24	-	1.24
	Dhupchachia	1.15	-	1.15
	Gabtali	1.08	1.14	2.22
	Kahaloo	1.10	-	1.10
	Nandigram	0.78	-	0.78

	Sariakandi	1.34	-	1.34
	Sherpur	0.92	-	0.92
	Shibganj	1.20	1.81	3.00
	Sonatola	1.43	2.07	3.49
Bogra Mean		**1.11**	**0.47**	**1.57**
Joypurhat				
	Akkelpur	2.69	-	2.69
	Joypurhat Sadar	2.24	0.38	2.62
	Kalai	1.87	-	1.87
	Khetlal	1.99	-	1.99
	Panchbibi	2.24	-	2.24
Joypurhat Mean		**2.22**	**0.10**	**2.32**
Natore				
	Bagatipara	0.99	-	0.99
	Baraigram	0.97	1.41	2.39
	Gurudaspur	0.17	0.97	1.14
	Lalpur	0.78	-	0.78
	Natore Sadar	0.31	-	0.31
	Singra	0.28	1.01	1.29
Natore Mean		**0.53**	**0.60**	**1.13**
Nawabganj				
	Bholahat	3.07	-	3.07
	Gomastapur	2.89	-	2.89
	Nachole	2.99	-	2.99
	Sadar	3.28	-	3.28
	Shibganj	2.89	-	2.89
Nawabganj Mean		**3.00**	**-**	**3.00**
Noagoan				
	Atrai	1.14	-	1.14
	Badalgachhi	1.15	-	1.15
	Dhamoirhat	1.02	1.95	2.97
	Mahadebpur	1.04	-	1.04
	Manda	1.07	-	1.07
	Naogaon Sadar	1.06	1.64	2.70
	Niamatpur	1.06	-	1.06
	Patnitala	1.06	-	1.06
	Porsha	0.80	-	0.80
	Raninagar	0.98	-	0.98
	Sapahar	0.99	-	0.99
Noagoan Mean		**1.05**	**0.32**	**1.37**
Pabna				
	Atgharia	1.77	-	1.77
	Bera	1.00	-	1.00
	Bhangura	2.00	-	2.00
	Chatmohar	1.25	-	1.25
	Faridpur	1.62	-	1.62
	Ishwardi	2.04	-	2.04

	Pabna Sadar	1.37	1.09	2.46
	Santhia	1.43	-	1.43
	Sujanagar	1.39	-	1.39
Pabna Mean		1.47	0.20	1.67
Rajshahi				
	Bagha	1.57	-	1.57
	Baghmara	0.96	1.17	2.13
	Charghat	0.67	-	0.67
	Durgapur	1.40	-	1.40
	Godagari	1.49	1.46	2.95
	Mohanpur	1.24	1.46	2.70
	Paba	1.38	1.16	2.55
	Puthia	1.58	-	1.58
	Tanore	0.86	-	0.86
Rajshahi Mean		1.23	0.67	1.91
Sirajganj				
	Belkuchi	1.63	-	1.63
	Chauhali	1.06	-	1.06
	Kamarkhanda	1.68	-	1.68
	Kazipur	1.30	-	1.30
	Royganj	1.58	-	1.58
	Shahjadpur	0.95	-	0.95
	Sirajganj Sadar	1.52	3.63	5.15
	Tarash	1.48	-	1.48
	Ullapara	1.49	-	1.49
Sirajganj Mean		1.38	0.50	1.89
Rajshahi Mean		1.37	0.39	1.77
Rangpur				
Dinajpur				
	Biral	-	-	-
	Birampur	1.37	-	1.37
	Birganj	1.18	-	1.18
	Bochaganj	1.19	-	1.19
	Chirirbandar	1.03	2.05	3.08
	Dinajpur Sadar	1.07	4.33	5.40
	Fulbaria	1.28	-	1.28
	Ghoraghat	1.13	-	1.13
	Hakimpur	1.60	-	1.60
	Kaharole	0.95	-	0.95
	Khansama	1.26	3.17	4.43
	Nowabganj	1.17	1.21	2.38
	Parbatipur	1.48	0.08	1.56
Dinajpur Mean		1.10	1.01	2.11
Gaibandha				
	Fulchari	0.84	14.52	15.36
	Gaibandha	1.19	30.64	31.83

	Sadar			
	Gobindaganj	0.95	26.34	27.29
	Palashbari	1.15	25.33	26.48
	Sadullapur	1.10	27.97	29.07
	Saghatta	1.06	24.39	25.45
	Sundarganj	0.85	27.69	28.54
Gaibandha Mean		1.02	26.35	27.37
Kurigram				
	Bhurungamari	0.42	23.43	23.85
	Char Rajibpur	0.55	-	0.55
	Chilmari	0.74	17.85	18.60
	Fulbaria	1.20	23.96	25.16
	Kurigram Sadar	0.73	28.39	29.12
	Nageshwari	0.44	21.04	21.47
	Rajahat	1.22	26.64	27.87
	Raumari	0.51	23.06	23.57
	Ulipur	1.10	21.22	22.32
Kurigram Mean		0.77	22.23	23.01
Lalmonirhat				
	Aditmari	1.34	-	1.34
	Hatibandha	1.96	-	1.96
	Kaliganj	1.53	-	1.53
	Lalmonirhat Sadar	1.58	0.56	2.14
	Patgram	1.54	-	1.54
Lalmonirhat Mean		1.59	0.13	1.71
Nilphamari				
	Dimla	0.95	25.05	26.00
	Domar	1.79	22.29	24.08
	Jaldhaka	1.77	26.48	28.25
	Kishoreganj	1.58	23.93	25.51
	Nilphamari Sadar	1.47	25.54	27.01
	Saidpur	1.28	21.88	23.16
Nilphamari Mean		1.50	24.53	26.03
Panchagharh				
	Atwari	1.75	-	1.75
	Boda	1.30	-	1.30
	Debiganj	1.87	-	1.87
	Panchagarh Sadar	1.18	-	1.18
	Tentulia	1.32	-	1.32
Panchagharh Mean		1.47	-	1.47
Rangpur				
	Badarganj	1.06	26.97	28.02
	Gangachara	0.95	25.34	26.30
	Kaunia	1.12	23.50	24.62
	Mithapukur	1.19	27.30	28.49
	Pirgachha	1.29	23.77	25.05

		Pirganj	1.45	28.16	29.61
		Rangpur Sadar	1.07	31.46	32.54
		Taraganj	1.25	26.94	28.19
	Rangpur Mean		1.18	26.97	28.15
	Thakurgoan				
		Baliadangi	1.84	1.39	3.24
		Haripur	1.34	1.02	2.36
		Pirganj	1.46	1.00	2.45
		Ranisankail	1.38	0.88	2.25
		Thakurgaon Sadar	1.55	1.75	3.30
	Thakurgoan Mean		1.52	1.33	2.85
Rangpur Mean			1.20	14.91	16.11
Sylhet					
	Habiganj				
		Ajmiriganj	2.08	0.33	2.41
		Bahubal	2.62	0.15	2.77
		Baniachong	2.15	0.18	2.33
		Chunarughat	2.84	0.12	2.97
		Habiganj Sadar	2.54	11.54	14.08
		Lakhai	2.90	0.71	3.61
		Madhabpur	2.67	0.21	2.88
		Nabiganj	2.69	0.12	2.81
	Habiganj Mean		2.58	1.65	4.23
	Moulvi Bazar				
		Barlekha	2.21	2.96	5.16
		Kamalganj	2.45	2.74	5.19
		Kiulaura	2.78	2.59	5.37
		Maulvibazar Sadar	2.01	4.54	6.55
		Rajnagar	2.79	3.15	5.94
		Sreemangal	2.42	2.39	4.81
	Moulvi Bazar Mean		2.47	2.99	5.46
	Sunamganj				
		Bishwambarpur	3.21	-	3.21
		Chhatak	2.16	-	2.16
		Derai	2.48	-	2.48
		Dharmapasha	2.35	-	2.35
		Dowarabazar	2.29	-	2.29
		Jagannathpur	2.85	-	2.85
		Jamalganj	3.03	-	3.03
		Sulla	3.14	-	3.14
		Sunamganj Sadar	2.82	-	2.82
		Tahirpur	3.16	-	3.16
	Sunamganj Mean		2.66	-	2.66

Sylhet					
		Balaganj	2.91	1.49	4.40
		Beanibazar	0.39	1.00	1.39
		Bishwanath	2.83	1.61	4.44
		Companiganj	2.18	1.38	3.56
		Fenchuganj	2.71	1.99	4.70
		Golabganj	2.76	1.76	4.52
		Gowainghat	2.63	1.44	4.07
		Jointapur	2.45	1.22	3.67
		Kanaighat	2.57	0.21	2.78
		Sylhet Sadar	0.55	6.82	7.37
		Zakiganj	1.08	0.42	1.49
	Sylhet Mean		1.97	1.98	3.95
Sylhet Mean			2.39	1.59	3.99
Grand Mean			1.24	3.90	5.15

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