



# Community HMIS e-Newsletter

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## HMIS Initiative in Hard-to-Reach Districts

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Figure 1. Map of three selected hard-to-reach districts

## Community HMIS Initiative in Hard-to-Reach Districts

Bangladesh received United Nations (UN) Millennium Development Goal (MDG) award on digital health for digital development on 2011. UN introduced a Commission on Information and Accountability for Women and Children (CoIA) with 11 indicators to assess the progress of MDG 4 & 5. With the vision to reach and serve every woman and every child, Ministry of Health and Family Welfare (MoHFW) Bangladesh is implementing countrywide web based (District Health Information System, version 2- DHIS2) individual tracking of women and under five children. Several UN organizations and other development partners are also supporting this initiative. With the support from UNICEF and Canada's Department of Foreign Affairs, Trade and Development (DFATD), MoHFW is implementing monitoring for bottleneck analysis in addition to the 11 CoIA indicators in 3 low performing and hard to reach districts of Bangladesh named Bandarban, Cox's Bazar and

Netrokona (Figure 1). MIS-DGHS has included Tracer (special intervention for Full Vaccination, Thermal Care, Pneumonia and Diarrhea for Under 5 children and Active Management of Third Stage of Labor for pregnant mother) based indicators in web based individual tracker software. The tracers are designed for not only service utilization monitoring but also availability and accessibility assessment, adequate coverage and effective coverage monitoring according to the well-known Tanahashi model of bottleneck analysis.

Table1. Demography of three selected hard-to-reach districts

	Bandarban	Cox's Bazar	Netrokona
Population (2013)	399,048	2,353,166	2,291,153
Area (sq. km.)	4,479	2,492	2794
No of Upazila's	7	8	10
Number of Households	80,102	415,954	479,146

Above data are based on BBS Census 2011

The program focuses on reduction of maternal, neonatal and under-five mortality and morbidity, and improve child growth and development in selected hard to reach districts through increasing and sustaining vaccine coverage, introducing new vaccines and strengthening health system with increased availability & access to quality Maternal, Neonatal, Child Health (MNCH) and nutrition services.

Figure 2 & 3 explains a focused decentralized approach to planning, implementation, data collection, monitoring and supervision of activities which is the key strategy to identify the capacity gaps, institutional/human resources constraints and effective means to address those. DGHS has introduced Community HMIS in Community Clinics (CC) to identify the key bottleneck in achieving the results and applied in local level planning, which is building block of Health System Strengthening, is contributing to the sustainability of health system.



Figure 2. Progress wheel driven by HMIS



Figure 3. Approaches to improve HMIS situation

Strong Community HMIS is specifically contributing to strengthen the planning and M&E of MNCH and EPI programme. Independent reviews of various MNCH initiatives have also recommended strengthening the capacity of the HMIS to harmonize between different MNCH initiatives and develop/strengthen a web-based MIS for key maternal, neonatal and child health indicators.

Community Healthcare Provider's (CHCP) are now capturing data into the system for each individual mother and under five children. These data are automatically processed by DHIS2 and reports are produced instantly with CoIA and Tracer indicators for all tier. The system ensures consistency of services by listing the upcoming appointments of patients and tracking defaulters who missed an appointment.

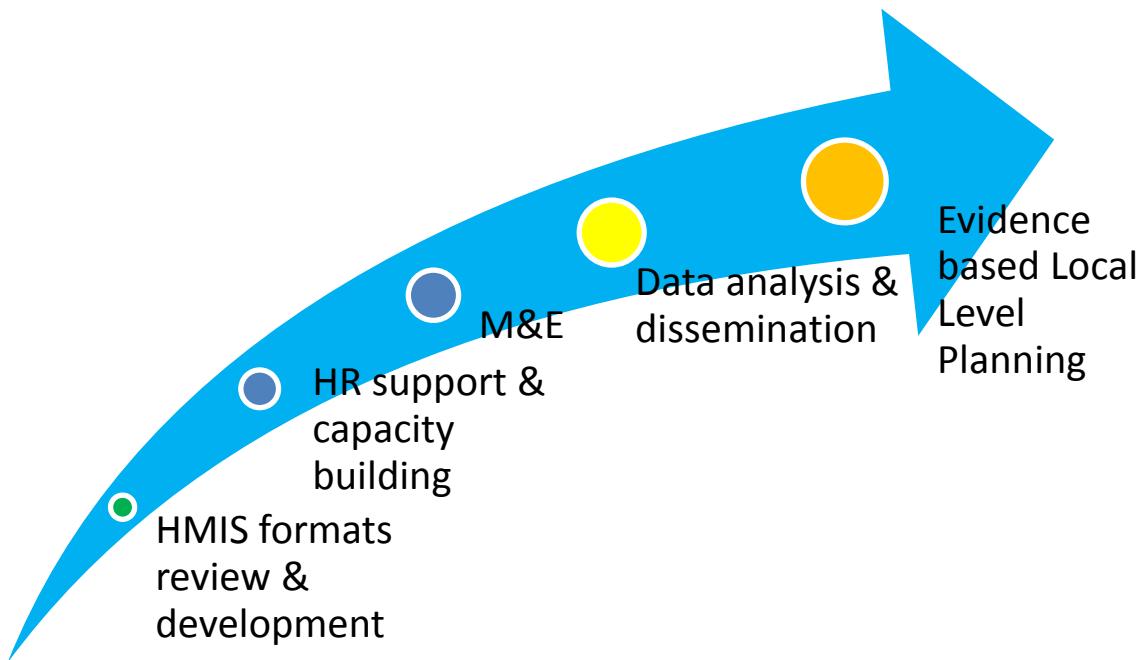


Figure 4. Intervention plan to strengthening health system through HMIS

## Why and How Community HMIS was Developed?

Country HMIS Situation Analysis and next plan of action was shared with the relevant GoB and other Stakeholders on 27<sup>th</sup> February 2014, at MIS-DGHS with the technical support of UNICEF-Bangladesh. The findings from district HMIS Situation Analysis has selected as a baseline by all the participants in the program. Revitalization of Community Health Care Initiatives Bangladesh (RCHCIB) introduced re-designed CHCP data collection and reporting formats for Maternal & Child Health. These formats were re-designed on the light of the CoIA & bottleneck analysis indicators. Participants did critical analysis on the field activities. Everyone agreed to re-check the available data collection formats and reports in the field and take necessary action to remove/abolish the irrelevant formats/registers.

For a precise measurement and decision making thereof the Line Director of MIS-DGHS instructed capturing individual service records of each maternal and u5 child health service provided at community level. To carry out the ambitious record capturing drive formats for data collection was first prepared and tested to make sure all

required indicators are covered adequately. The Community HMIS intervention plan was designed keeping in mind to strengthen the Health System (Figure 4). Data server of MIS-DGHS was made ready to preserve the data that will be received directly from the community. The application software was also tuned to process and plot the received data with easy to comprehend diagrams and aggregated form of information which is compliant with CoIA and Tracer indicators. Users' friendly web-enabled interfaces were designed to ensure error free use by healthcare providers with their existing knowledge on computer.

*"We should emphasize more on individual record based maternal and child health tracking. It will provide us good quality data to understand community maternal and child health situation, which is a prerequisite for planning, decision making and implementation of interventions for improvement of MNCH"*

**- Professor Dr. Abul Kalam Azad**  
ADG (Planning & Development) & Director MIS-DGHS

## Creation of Enabling Environment in Central Level

A rapid assessment of HMIS situation was performed at three selected hard-to-reach districts with the support from UNICEF and Canadian DFATD to ensure smooth data capturing of maternal and u5 child healthcare services. Despite number of shortcomings and constraints with regards to infrastructural and logistic requirements, CHCPs were trained on using web-enabled application based on a CHCP Computer Training Guideline (Figure 5) prepared for registering women and u5 children of their catchment areas and recording services provided to them. Prior to the training most of the CHCPs computer skills were at very elementary stage and during the three day training they were also briefed on kind of anticipated troubles they might encounter due to poor internet coverage and hardware-software malfunctions. Apart from capturing individual records they were also trained on submitting four types of monthly data reports on maternal/child/general patients and data on managerial inputs.

Enthusiasm among CHCPs were observed as they received such kind of training for the first time in their lives and the advancement of computer and internet technology enchanted them with delight and on the other hand visibility of their inputs had

put them in obligations to perform better. CHCPs who merely know about statistics felt empowered by being oriented on CoIA and Tracer indicators. Due to the requirement of the purpose RCHCIB revised the maternal & child health registers for the CHCP. In relation to that RCHCIB and MIS-DGHS was also being facilitated by UNICEF to adapt the online data collection formats for the individual records to cover all the indicators to be collected from the community. MIS-DGHS also update the training manual in light of new registers and online data collection format.

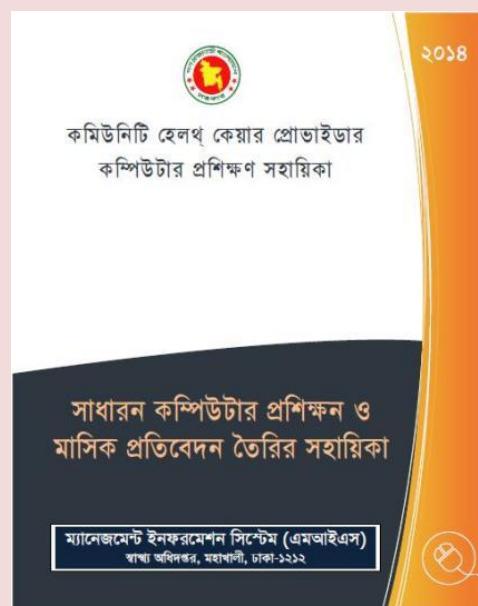


Figure 5. CHCP computer training guideline produced by MIS-DGHS for reporting

## Software Allied Tracking

DHIS2 enables to collect, manage and analyze transactional, case-based data records. It stores information about individuals and track these persons over time using a flexible set of identifiers. It captures information about anonymous events and cases as well. DHIS 2 also tracks (track patients using identifiers, age, gender, father/mother National ID, date of birth, address or mobile number) missed appointments and generate visit schedules, create dynamic reports based on cases and generate on-the-fly statistical reports, summaries on participation and completeness (Figure 6). It also allows producing visit schedule for the defaulter patients who missed the schedule and upcoming visit schedule of patients (Figure 7).

Figure 6. Tracking facilities in DHIS2



Figure 7. DHIS2 screenshot- Patient visit schedule in DHIS2 for M&E activities

## CHCPs of Hard-to-Reach Districts are Now More Capable in HMIS

A month long training program was conducted to build the capacity of almost all the CHCPs of the 3 districts. CHCPs received the 3 days training in separate batches in their respective Upazila. The aim of this training was to train the CHCPs to be able to use the DHIS2 as a platform to produce their monthly reports along with generating individual records for MNCH program from the community level. CHCPs learned what type of data to be collected, what data to be reported through DHIS2, data entry for maternal and child health services, how to register every mother and child in DHIS2, how to input their service data of a particular patient, how to search for find existing patient in the database and follow-up, and record maternal and child deaths. According to one CHCP after completion of this comprehensive training,

they have improved reporting skills using the DHIS2. They also acquired substantial knowledge in using laptop and internet modem to login to the online software.

Prior to the CHCP training, a separate Training of Trainers (ToT) for the upazila and district statisticians was also conducted in the district level, so that they could assist the resource persons while the CHCP training program in their respective Upazila.

Table2. Training statistics of CHCPs in three districts

	Bandarban	Cox's Bazar	Netrokona
No. of CC	58	169	209
No of CHCP	62	179	226
Trained	54	172	207
Not Trained*	8	7	19

\*CHCPs were involved in other training and in maternity leave



Figure 8. HMIS training program for all CHCPs in Moheshkhali Upazila of Cox's Bazar

## Health & Family Planning Managers of Hard-to-Reach Districts are More Capable to Monitor Community MNCH and Evidence Based Planning

Under the coordination of the ADG of MIS-DGHS from central level, supervision of Civil Surgeon and Deputy Director Family Planning (DDFP) in the district level with the support from UNICEF and Canadian DFATD, all the Upazila Health and Family Planning Managers of these three districts received orientation on the Community HMIS and its monitoring tools to better manage the relevant activities in the local level. A separate batch was also organized to orient the Upazila ICT Focal (Medical Officer), MO-MCH and the health statisticians on the same theme. Their active engagement during different sessions ensured better knowledge dissemination on the different indicators of COIA and Tracer interventions. According to the participants, it was a better opportunity for them to learn the use of HMIS as a monitoring tool to improve the community health care services in their work area.



Figure 9. Health & FP managers' orientation at district level

## Community Health Reporting Performance Enhanced

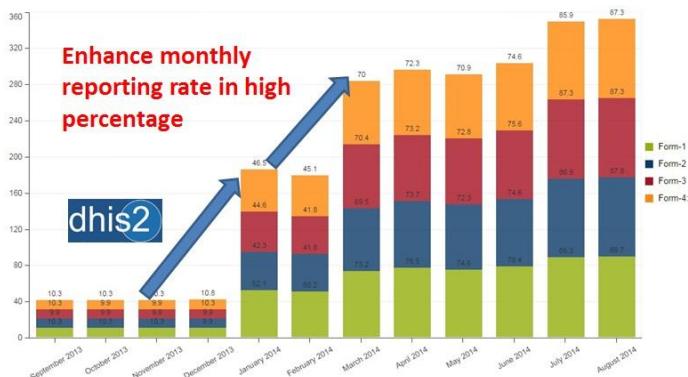


Figure 10. DHIS2 screenshot- overall community clinics reporting rate increased.

## Challenges and Intervention Opportunities

### Coordination among Field Staff

Lack of coordination among CHCP, Health Assistant (HA) and Family Welfare Assistant (FWA) is resulting in under reporting from community. In addition to this, the Community Group and Community Support Group in general are less functional.

For a fully functional community HMIS (ideal scenario in Figure 11), it is necessary to ensure regular flow of data from the community. Thus the capacity building on DHIS2 for HA and FWA are needed as well as orient them to collect the CoIA & Tracer specific data from field.

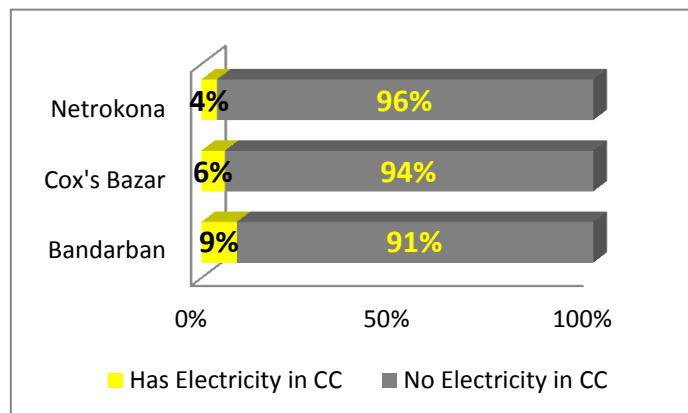


Figure 12. Status of electricity supply in community clinics

Continuous M&E and QA activities were carried out by the local managers (March-August) to ensure regular collection of data from the community by keeping the quality of MNCH requirement. Previously CHCPs were facing difficulty in reporting regularly in DHIS2. After the intensive HMIS training of the CHCP, a gradual improvement of the monthly reporting is being observed (Figure 10). This improvement is encouraging the local managers to continuously strive for excellence in collecting routine data for the community HMIS.

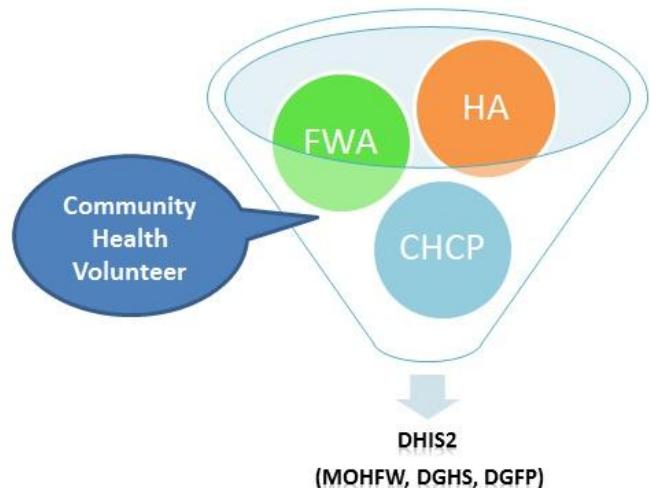


Figure 11. Community level coordination between HA-FWA-CHCP with assistance from the community health volunteer

### Infrastructure and Communication

One of the major constraint in data collection from community level is inadequate internet coverage especially at community level in hard to reach areas. MIS DGHS procures internet service from Grameen Phone mostly while in many parts of these three districts Robi and Teletalk have better internet coverage. Unavailability of power supply in 91% CC's in Bandarban, 94% CC's of Cox's Bazar and 96% CC's of Netrokona (Figure 12) along with some malfunctioning computing devices (laptop & modem) are also a threat for HMIS activities.

Routine Community MNCH data can be ensured from the remotest.

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