Independent Evaluation of Community Based Health Services in Bangladesh
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Contributors and acknowledgements to the report

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All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise without the prior written permission of the publisher.
I am very much pleased to know that an independent evaluation on community-based health services commissioned by WHO, has been conducted and a report is ready for publication.

In 1998, Bangladesh introduced a well-structured Community Based Health Care programme in the Health, Population Sector Program (HPSP).

With a further change in government in 2009, the Ministry of Health and Family Welfare (MOHFW) revamped through the project “Revitalization of the Community Health Care Initiative in Bangladesh” (RCHCIB), 2009 - 2016.

Community Clinics (CCs) were established in order to extend Primary Health Care (PHC) at “the door steps of rural people” all over the country. Since its inception, having placed great efforts towards the physical expansion of services, the CBHC initiative now seeks to improve the quality of services and its closer alignment with the strategic directions of the health sector in order to establish a more effective and sustainable ‘one stop’ service outlet for the community people of Bangladesh.

Indeed, we welcome the effort of dissemination of report for better understanding of the situation for CCs regarding effectiveness in delivery of health services, alignment with policies, community engagement and high esteem patient satisfaction including perspectives of health managers.

In the report, various aspects of gaps and issues have been delineated with respect to effectiveness in implementation of essential service package, the readiness of services by which CCs will be able to contribute in achieving universal health coverage with immediate and long-term action plan.

Though the report has mentioned administrative and resource constraints for a very extensive assessment to conduct for community clinics, but within a constructive platform, it has described efficiently what needs to be required as usefulness for policy maker and health managers to extract guidance and solutions of various problems and challenges that the evaluation team has assessed and observed.

We are very much in debt to WHO and team consisted of reputed experienced international public health expertise and national experts for completing tasks and yielded very encouraging and substantive recommendations as way forward.

We are thankful to WHO and all experts and other technical staff involved in this very valuable document preparation for evaluation and also acknowledge experts of various fields of public health including facilities managers, health care providers and community group and support group for making contributions for the publication.

Professor Dr. Syed Modasser Ali
President
Community Clinic Health Support Trustee Board
Community-based health care initiative is considered one of the pragmatic strategies in delivering on the promise of universal health coverage (UHC) across the world. Community clinics in Bangladesh, a population-based grass-root level health care delivery network, has set up a model of increasing access to basic health care by the rural people, specially by the women and the children, with a remarkable improvement in equity. The model envisioned and introduced by Hon’ble Prime Minister Sheikh Hasina, long before the launching of SDGs and the target of UHC in 2015 has now become the core element of primary health care system in Bangladesh.

This Report is the outcome of an independent assessment of the organization and functioning of the community clinics undertaken with a view to making the system more effective and reaping its full potentials. The assessment followed a structured methodology and tends to make some important findings on the key challenges and impediments in various levels of operational management of the system. It has focused on the leadership and governance issues and more importantly, issues related to health workforce, coordination, and rational use of medicines.

These are the limitations in primary health care system elsewhere in the developing world, however, analysis of those from different perspectives will hopefully assist to figure out ways to establish linkages across different health interventions for synergetic actions and to optimize limited resources. It will also help in taking a fresh look into the efficiency gains. We are happy to have the findings and recommendations that the team attempted to make through the assessment and evaluation of all secondary data and literature available in the context.

I would like to congratulate Team that has carried out the assessment and also like to acknowledge the leadership of CBHC, and technical support of WHO to the whole process. I sincerely hope that the Report will serve an important document for deciding policy options on the further development of Community Clinics in our country.

Md Ashadul Islam
Secretary
Health Services Division
Ministry of Health & Family Welfare
Government of the People's Republic of Bangladesh
Bangladesh has committed to ensure ‘Health for All’-a declaration of the Alma-Ata made on Primary Health Care (PHC) that unanimously adopted by the member states forty years back. In line with the declaration, Bangladesh cherished to provide the right to access quality healthcare without facing financial hardship to all citizens particularly rural population to achieve Sustainable Development Goals (SDG) and Universal Health Coverage (UHC).

Under primary health care system, government in 1998 planned to establish 13500 Community Clinics (CC), one CC for around 10,000-12,000 population in rural Bangladesh, a great initiative evolved over the time in public health. This unprecedented initiative was highly welcome by the rural population through community participation which was ensured as CCs were constructed on community donated land. Through geolocations of CCs operating across the country, has been proven to be effective as one stop service delivery point and to provide basic health care to the rural people.

I am pleased to know that an independent evaluation has been conducted for primary health services from perspectives of its relevance, efficiency and effectiveness of present structure of community clinics management in health sector, through the involvement of international and national expertise supported by WHO. The report of evaluation is going to be published, has brought various issues in the research and highlighted areas of good works and stories of incurred benefits for the people under primary health care system and value for money in investing such a programme under the sector programme. The report depicted how the community based health care programme was efficient and effective in addressing essential health service aligned and close to the aspiration of population served.

We hope we will be able to derive guidance and directions from recommendations enumerated in the report for changing and adopting relevant policy decision to address constraints and challenges in a more pragmatic approach that puts barriers for rural population to enjoy health wellbeing.

We are confident that this a credible document and will serve as an instrument in solving many issues that requires immediate and a long-term solution.

We are thankful to WHO and all experts and other technical staff involved in this very valuable piece of work and acknowledge the valuable contributions of respondents interviewed during the evaluation.

Professor Dr. Abul Kalam Azad
Director General
Directorate General of Health Services
Under the health sector programme, Community Clinics have been proving enormous health services to a wider population across the country.

In 2001, with a change of national government, the service was kept in abeyance resulting deprivation of rural population of accessing primary health care. This did not last long and with the leadership of honourable Prime Minister, Sheikh Hasina the primary health care services were again renovated through the project ’Revitalisation of the Community Health Care Initiative in Bangladesh, 2009 - 2015.

The Community Clinic Project was introduced under the Ministry of Health and Family Welfare and the programme was subsequently, in 2011, mainstreamed within the Directorate General of Health Service, with implementation through the Community Based Health Care: Operational Plan. The current Health, Population and Nutrition Sector Development Program 2017 - 2022, describes the Community Clinics (CCs) as the basic unit for the Upazila Health System, to act as entry points to the system at the apex of the Upazila health system. Community clinic is the lowest tier of health facility in public health system in Bangladesh. It is a ’one stop’ service outlet for health, family planning, nutrition, focused on prevention and health promotion. The community clinic now has become a role model across the South-East Asia aligned with spirit of ’Health for All’-a declaration of the Alma-Ata made on Primary Health Care. It is now indispensable part of health care to provide quality healthcare services without facing financial hardship.

Family Welfare Assistant s (FWA) from DGFP, are also rendering services in community clinics along with Community Health Care Providers (CHCP) and Health Assistants (HA). They are providing services for three days in a week in the clinics and rest three days in the community, moving from door to door. Eligible couples are getting FP commodities especially oral pills, condoms and injectable from the Community Clinics.

It is a great privilege to learn that very recently external independent evaluation on the CCs has been carried out with the technical support of World Health Organization and the report is going to be disseminated soon.

I am encouraged by the work and considering this a valuable document for all level of health systems to use the findings for policy decision and take necessary measures to minimize gaps in the existing system.

I congratulate the Evaluation Team for this task which will prove useful for management of the community based health care programme for maximizing effort to achieve Universal Health Coverage.

Quazi A.K.M. Mohiul Islam
Director General
Directorate General of Family Planning (DGFP)
Message

It is a great honor for me that after a tedious effort an external independent evaluation has been completed with the technical support of World Health Organization very recently.

Community Clinic is the brain child of honorable Prime Minister Sheikh Hasina to extend quality Primary Health Care Services at the at the door steps of rural people all over country. It is one of the ten priority programmes of present government. It is a unique example of Public Private Partnership as community engagement is the most important pillar of Community Clinic. All CCs are established on community-donated land; service providers, medicines, equipments and necessary logistics are of government but management jointly by the community and government.

Community is the lowest tiler of health facility in public health system in Bangladesh. It is a ‘one stop’ service outlet for health, family planning, nutrition, focused on prevention and health promotion. In response to the current epidemiological trend of diseases, CC conducts screening of Non-Communicable Diseases (hypertension, diabetes, autism and, club foot etc.) with referral of emergencies and complicated cases to higher level facilities for proper management. In a substantial number of CCs, normal delivery started subjected to the availability of skilled health workers, local demand and dedicated upazila health management with referral facilities whenever necessary.

All the activities of community based health care programme are being implemented through CCs which are the lowest tier health facility in the Bangladesh Primary Health Care system.

The journey of Community Clinic was not even as it had to overcome a lot of hurdles of different types since its inception in 1998. The main source of inspiration is honorable Prime Minister Sheikh Hasina and highest commitment her government for pro poor and pro people health initiative. Thousands of villagers are taking free health care from the nearby CCs. They are happy with CC services and to them it is the most dependable health centre. They love and own CC. Many of them and local government representatives are coming forward with supports for development of CCs. Community Clinic has been recognized by the international community as the model for Primary Health Care particularly for the developing countries. It has contributed substantially in achieving MDG and will continue in SDG too.

I congratulate all national and international consultants and WHO team of health systems for completing this valuable document for future realigning management of community base health care programme for maximizing effort to achieve universal health coverage; and alleviating constrains and hardship of rural population while accessing health services.

Dr. Makhduma Nargis
Vice President
Community Clinic Health Support Trustee Board
We are approaching the time frame to fulfill our commitment to achieve universal health coverage by 2030. The commitment includes population access to the full spectrum of essential, quality health services, from health promotion to prevention, treatment, rehabilitation, and palliative care. Universal Health Coverage is the most powerful tool to ensure equitable access to quality health services that address their major causes of disease and death.

Primary health care (PHC) is a whole-of-society approach to health and well-being centered on the needs and preferences of individuals, families and communities. It addresses the broader determinants of health and focuses on the comprehensive and interrelated aspects of physical, mental and social health and wellbeing. Primary level of health systems should be the first level of contact, where individuals, families and communities receive most of their health care—from health promotion and prevention to treatment, rehabilitation and palliative care—as close as possible to where they live and work.

Strengthening the overall primary health care system with emphasis on the frontline health service delivery must be the national priority. Bangladesh demonstrates the highest level of commitment towards strengthening its frontline service delivery through the revitalized 13,000+ community clinics to improve access to essential primary health services to all, particularly for the population in the most remote and hard-to-reach areas ensuring “no one is left behind”. Yet, there is scope to and strengthen the community based health services in Bangladesh to better align its response to the current and future population needs determined by the epidemiological, demographic, economic and technology changes.

WHO Bangladesh, through our technical assistance to the DGHS, led the first ever independent evaluation of community based health services in Bangladesh to identify the best practices and success of community clinics in their role as the pillar of primary health services in the country.

The evaluation has captured different aspects of the community health services in Bangladesh and identified the relevance and effectiveness of the community-based health services in Bangladesh. While demonstrating the key barriers and challenges of the programme, the evaluation report also suggests key policy recommendations for improving the community based health services in Bangladesh.

WHO would urge the key policy makers to use the evidence from this study to inform strategic policy reforms in the frontline health service delivery in Bangladesh.

I appreciate the hard work of experts and reviewers for making this report available. Strengthening community clinics along with union sub-centres and upazila health complexes within the broader primary health care framework is essential to ensure the delivery of effective, efficient, equitable and integrated people-centered essential primary health services.

WHO stands alongside the Government of Bangladesh and other development partners for ensuring ‘health for all’ by 2030 by strengthening primary health care system. Together, we can improve the overall health of Bangladesh society, contributing to its development and wellbeing.

Dr Bardan Jung Rana
WHO Representative to Bangladesh
The government of Bangladesh took the initiative to establish community Clinic to provide quality Primary Health Care (PHC) services at the door steps of rural people who were so far deprived of essential health care. Under the leadership of the Ministry of Health & Family Welfare (MOHFW) the main objective of the initiative was to establish Community Clinics (CCs) near at hands of the grass root people all over country including hard to reach hilly, remote and isolated places with a distribution of one clinic for every 6000-8000 population.

I am pleased to know that with the support the World Health Organization an independent evaluation has been carried out very recently on community based health services with focus to CCs in primary health care system. This initiative has given scope for better understanding of management issues, effectiveness of health services delivery and perception from different service seekers and stakeholders.

In the report various aspects of gaps and issues came out for correlation in its relevancy to its mandate for increasing coverage, providing opportunity for access with equity and quality services, effective implementation of essential service package; depicted immediate and long-term action plan; and recommendations as an attempt to potential solutions for gaps and challenges identified through scientific methodology under limited resources for this evaluation.

One of the important observation which was also observed in other reports at national level evaluation conducted by National Institute of Population Research and Training (NIPORT), National Institute of Preventive and Social Medicine (NIPSOM) and Implementation Monitoring and Evaluation Division (IMED) where we observed high level of clients’ satisfaction to CC services in spite of various local and national level constraints and challenges.

We are confident that with collective endeavours of all of us, we will be able to address various issues that the evaluation team observed. Therefore, this report has been a very dynamic instrument to take action and mobilize necessary resources so that nobody will remain left behind when Bangladesh has a very strong and stable political commitment and administrative support and guidance to provide service to the population.

We should look for some immediate actions that can be executed with the span of present sector programme and revamp our way of distribution of resources of CBHC operational plan (OP) and other OPs having crosscutting issues.

We are thankful to WHO and all the involved experts and other technical staff in this very valuable document preparation for evaluation.

Professor Dr. Md. Abul Hashem Khan
Line Director, Community Based Health Care (CBHC)
Directorate of Health Services
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3.4 Limitations
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<td>BCC</td>
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In 1998, Bangladesh introduced a well thought-out and structured Community Based Health Care (CBHC) programme through the Health and Population Sector Programme (HPSP) 1998–2003. Under this, the community clinic (CC) concept was initiated to extend one-stop primary health care services to rural communities. During 1998–2001, of the 10 723 CCs constructed by the Directorate General of Health Service (DGHS) of the Ministry of Health and Family Welfare (MoHFW) about 8000 started functioning. In 2001, with the change in national government, support for CCs was withdrawn which led to abeyance of services until 2009 when the project “Revitalization of the Community Health Care Initiatives in Bangladesh” (RCHCIB), 2009–2015 was introduced. In 2011, this project was mainstreamed within the DGHS, with the incorporation of CBHC activities within the operational plan of the 3rd Health, Population and Nutrition Sector Development Programme (HPNSDP) as CBHC operational plan July 2011–December 2016. It has been continued through the CBHC operational plan January 2017–June 2022 under the 4th Health, Nutrition and Population Sector Programme (HNPSP).

In February 2018, WHO Bangladesh commissioned the hera–HAL consortium to conduct an independent evaluation of the CBHC programme in Bangladesh. This report presents the findings of that evaluation. While there were several community based health care programmes in the country led by nongovernmental organizations (NGOs), this report focuses on CCs as the main government vehicle for CBHC programme.

The objective of this independent evaluation was “to ascertain how community based health care is contributing towards achieving the programme objectives, and effective delivery of primary health care services in Bangladesh; by identifying its strengths and challenges with a view of contributing to the successful implementation of the Essential Service Package (ESP)”. The scope of the work was to assess the relevance, effectiveness, efficiency and community engagement aspects of the CBHC programme.

The evaluation followed a ‘policy analysis’ approach based primarily on documentary review and secondary analysis of routine Health Management Information System (HMIS) data of the DGHS captured through the online District Health Information System 2 (DHIS2) software, as well as national periodic survey data, such as the Bangladesh Health Facility Survey 2014 and 2017, the Bangladesh Health and Demographic Survey 2014, and the Bangladesh Maternal Mortality Survey 2016. The evaluation was enhanced by the collection of complementary primary data (both qualitative and quantitative) from a limited number of CCs that were used as case studies.

Findings

Relevance

Since its inception, CBHC services in Bangladesh have been **aligned with national policies**. The initial focus was on bringing services closer to the people, principally to rural populations with the establishment of CCs. Subsequently, the focus changed to improving access and utilization of services and ensuring the provision of ESP 2016. The current focus is on strengthening health systems with improved efficiency and quality of care and cultivating gender equality and equity in access to services to contribute to achieving universal health coverage.

Several government structures were involved in CBHC policy implementation, with scope for better coordination among them, particularly between the Directorate General of Health Services (DGHS) and the Directorate General of Family Planning (DGFP). The Upazila health system (UHS) comprised domiciliary services, services through outreach and satellite clinics, and services through fixed health facilities at ward, union and Upazila levels. At the union level, Union Health & Family Welfare Centres (UH&FWCs) and union subcentres/rural dispensaries were operating under the DGHS; some UH&FWCs were under the DGFP. The CC at the ward level was the lowest level fixed health facility. The CBHC
programme gradually strengthened ties within the UHS, despite some levels of services within it not being fully operational. The Upazila Health Complex (UHC) was progressively (and with constraints) taking on as the overall coordinator of UHS. Coordination between Upazila structures was not fully effective, particularly between health and family planning, leading to duplication of efforts and inefficiencies.

Development partners, as well as international and national NGOs provided substantial support to the Government of Bangladesh (GoB) for the implementation of CBHC policies since their inception, including support to CCs.

For several decades, and all over the world, community health workers (CHWs) have participated in the provision of primary health care. Experience has shown that CHWs can contribute significantly to efforts in improving the health of the population (including reducing maternal and child mortality rates), particularly in areas with the greatest shortage of health professionals. Across countries CHWs offer a wide variety of promotive, preventive and curative services. However, the coverage of these programmes and the overall progress towards achieving Millennium Development Goals is documented as low and varies across countries. Each country’s experience has specific features, tailored to country needs and available resources, which makes the CBHC programme unique to each country. A particularity of the Bangladesh CBHC programme was that a CC must be constructed on a plot or piece of land donated by the community.

Overall the CBHC approach has been relevant to the health needs of the population in Bangladesh, including alleviating the financial burden of ill health by reducing out-of-pocket expenditures on drugs at CCs. The CBHC approach, including CCs, have the potential to contribute to the achievement of both the sustainable development goals and universal health coverage.

Effectiveness

The 2011–2016 CBHC operational plan aimed to establish 13 500 CCs including those constructed during 1998-2001 throughout the rural areas of the country by 2016. Up to 30 September 2017, 13 442 CCs were reported to be in operation. However, at the end of 2017, routine MIS data of the DGHS showed that a smaller number of CCs – 13 079 – were reporting performance data.

CCs were fairly well distributed in all rural areas of the country. As expected, their concentrations varied with population density. With the exception of the availability of Internet services, infrastructure and amenities (electricity, water and toilets) were in poor condition. Similarly, there were important issues regarding the availability of basic equipment at CCs.

The reported number of visits to CC for services increased by 57% from 2014 to 2017. After an initial dramatic increase, the annual increase in utilization slowed to 2.5% and 1.5% in the last two years. It is likely that the observed overall increase in visits reflected increased reporting, rather than increased average activity and access per CC. As expressed by the number of visits per month per CC, the median decreased by 7% over the four years of the programme, slowing down to less than 1% in the last year. While at the population level the overall reported accessibility to CC services increased, use of services per clinic reached a monthly plateau of an average of 500–600 patients per clinic.

Several barriers to access to CC services were reported by those interviewed, such as lack of transport, poor roads, residing in remote areas, as well as religious and sociocultural barriers. Most users (90%) lived close to the CC, suggesting that the distance from the CC may not be a geographic barrier to using CC services for those living nearby, but seems to be a likely barrier for those living further away, particularly in remote areas. All age groups were represented as users, with a majority (42%) being 30–59 years old; 20% were below 20 years of age; 17% were older than 60 years of age; and 10% were below five years of age. All income quintiles were represented, with about half (48%) being poor or very poor. More than three quarters (77%) of users were female.

The survey suggested that most CCs were providing most of the service elements of ESP 2016. Reported curative care consultations increased between 2014 and 2017. During the evaluation period curative services represented the largest proportion of services provided by CCs (86%), while the demand for promotive and preventive services was low. Factors that may be influencing this demand included the availability of free medicines and the community health care provider (CHCP) (with primarily a curative
care profile) being available six days a week. Family planning services were yet to be provided by all CCs (the availability of these services was very much dependent on the availability of family welfare assistants (FWAs) and family planning commodities). An increasing number of CCs were providing normal child birth/delivery services.

Our study confirmed previous findings that almost all CCs had a CHCP post (10% vacancy rate). Health assistants (HAs; for vaccinations) and FWAs (for family planning) were available part-time at CCs, with staff not always on duty as per planned days and with many vacancies among these cadres, varying between 9% and 50%. Unless the CHCP was female and trained as a Community Skilled Birth Attendant (CSBA), maternal and neonatal health (MNH) services (including normal child birth) were not continuously provided by CCs. Users were aware of the opening hours of their CC, but only a small percentage (12%) was aware of which days in a week HAs or FWAs were available at the CC. **The shortage and part-time presence of HAs and FWAs hinders the availability and continuity of services at the CC.**

CC staff confirmed that their basic training prepared them adequately for the job, but ongoing refresher trainings were needed. Refresher trainings responded more to health programme needs and were not always in line with CC staff capacity assessment/training needs assessment. Job descriptions were not fully aligned with the CC concept (job descriptions for HAs and FWAs did not include work at the CC).

**Supervision** of CHCPs, HAs, FWAs was conducted by various cadres, using standard checklists. Coordination among supervisors was limited and supervisory visits primarily addressed managerial aspects and were not always perceived as supportive. Provision of feedback with a view to enable learning was not systematically provided.

Client’s perception of quality of services received and provider behaviour scored high to very high over the years. **Quality of care was constrained** by discontinuity of human resources, medicine shortages, lack of systematic quality improvement, and irregular or inadequate supportive supervision. The literature on quality of clinical care, from a technical perspective, provided at the CCs was scarce. More research in this area is needed.

Modalities for referral from CCs to higher level facilities were defined, but referrals often bypassed the next level of the health system. Feedback and counter-referral were not systematically done.

**Efficiency**

Government budget allocations to the CBHC programme (including recurrent and capital) **almost doubling over the last five years** (i.e. from BDT 3917.80 to BDT 7687.10 million between 2012–13 and 2017–18).

The total GoB recurrent expenditure budget for the CBHC programme for the fiscal year 2017–2018 was BDT 6373.7 million of which 95% was spent. The total budget of BDT 1313.4 million for capital components was almost entirely spent. Together, these constituted about 0.21% of the national budget and **3.84% of the health budget in 2017–18.** About half the budget was allocated for salary and allowances for CHCPs, while medicines expenses constituted nearly 30% of the budget. In 2017–18, the share of the budget allocated for training was less than 6%, of which 23% remained unspent. The budget share and spending on repairs and maintenance (about 1%), and supervision and monitoring were very low (0.21% and 0.22%, respectively).

Cost analysis showed that the **average cost of a visit to a CC (excluding family planning)** was BDT 85.52 (USD 1.02) of which medicines accounted for about 28%. While this was not comparable to the unit cost of CCs calculated by service category (1), it was significantly lower than the costs incurred for visiting an informal health care provider (BDT 275) (2).

The results of the cost–benefit analysis (CBA) showed that the **total accrued benefits outweighed total costs** and hence the net-benefit of BDT 1511.51 million (USD 18.00 million) was substantial. The benefit–cost ratio was 1.23, which implied that BDT 100 (USD 1.19) investment in CCs generated a benefit of BDT 123 (USD 1.46), which was higher than any conventional investment. **For receiving this return, quality services should be provided,** equipment and medicines should be available, staff competencies and skills should be enhanced by sufficient high frequency of contacts (such as for
nutrition, MNH), the provider should be available on a regular basis, adequate supply of medicine and supplies should be maintained, and proper maintenance of the equipment must be ensured. As CHCP is the main provider in the CC, her/his absence for any reason (such as medical leave, maternity leave, annual leave, attending meetings/trainings) will interrupt the service provision of CCs. This may affect the return as stated above. Ways need to be established to ensure uninterrupted service provision in CCs.

Community engagement

Community groups (CGs) and community support groups (CSGs) were organized across the country in support of CCs. CGs appear to be more active and were meeting more regularly than CSGs. There was limited follow up of the work of the CSGs. Most CG members perceived their role to be: to monitor the opening hours of their CC so that services could be provided according to schedule; to encourage the use of the CC by community members; to inform community members about available services; and to assist in addressing problems faced by the CC (payments for cleaners, guards, electricity bills, repairs) although, because of inadequate funds at their disposal, their ability to provide such support was limited. Many, but not all CGs perceived that their role was to be present when medicine supplies were received to ensure transparency over what supplies were available.

CGs were more constrained in their ability to support aspects of management that required funding (payments for electricity bills, cleaners) as the available resources were very limited. Having a good relationship with the Upazila or an NGO could provide access to additional resources. Some local government authorities were providing ad hoc support for certain expenses (payments for electricity bills, cleaners). In some CCs, these costs were covered either from CHCP’s own pocket or from service charges.

Conclusions

Overall conclusion

The CBHC approach is highly relevant, and the GoB has to be commended for the commitment and investments made. Effectiveness of the CBHC programme was however hampered by a number of constraints, including the nature of services provided, limited human resources, discontinuity of services, gaps in logistics, suboptimal support roles and suboptimal organization of community engagement (through CGs, CSGs), among others.

While the programme could be cost-efficient and a worthwhile investment (CBA 23%) with great potential to contribute to impact, numerous constraints led to its inefficient operation. However, all constraints can be addressed.

Relevance

Through the years, CBHC services in Bangladesh have been aligned with the national policies as defined in successive national health sector plans. The CBHC approach, including CCs, is relevant and has the potential to contribute to the achievement of both the Sustainable Development Goals and universal health coverage.

Bangladesh has made important progress in the implementation of CBHC policies. CBHC design is relevant to the health needs of the population. As the epidemiological profile changes and CCs become functional, there would be additional demands for broadening the scope of services and tasks to be conducted by the CC. Increasing the scope while ensuring quality services requires careful analysis and strategizing (such as for child birth, and maternal and neonatal care). Clear policy and guidance on these issues is of utmost importance.
Effectiveness

While the GoB has made great progress in establishing CCs throughout the country, implementation of the CHBC policy has yet to achieve its full potential. Effective implementation is constrained by gaps in human resources, infrastructure, equipment, supplies and supervision. In addition, greater focus on curative care compared to prevention and health promotion, as well as a limited public health/health system approach reduces potential effectiveness and impact. Poor coordination between the three health cadres at the CCs results in discontinuity of services.

Bangladesh’s target is to have 14 890 functioning CCs by 2022. As of December 2017, there were 13 079 CCs functioning and reporting services. This was a major achievement, with approximately 1 CC per 12000 people.

The CBHC concept is well developed, but implementation puts a greater focus on curative services than preventive and promotive services for the catchment population. Services provided by CCs tend to be more reactive to people's demands (such as for curative services to older clients) than to public health needs. The CC, as the first level static health facility of the CBHC approach, is yet to assume full responsibility for health, population and nutrition of their entire catchment area population and to conduct their work from a public health and health systems perspective. This requires a proactive (analysing the health situation, knowing the catchment population, adjusting strategies to prevent and deal with health problems) rather than a reactive approach (mainly providing curative care for minor ailments of older clients). Effective team work, coordination and coaching were lacking, as well as joint identification of main health problems, populations at risk, prioritization of services and targeted actions to address the health situation, were not ensuing in a systematic manner.

Efficiency

The average unit cost of a visit to a CC was substantially lower than the average cost of visiting a village doctor. Potentially, investment in a CC yielded a 23% return, benefits outweighing costs.

However, to ensure this level of return it is necessary to ensure the provision of quality services with the skills of providers being maintained and enhanced by sufficient frequency of patient contacts. It also requires the provision of uninterrupted services through regular supply of medicines and logistics, including the continuous presence of CHCPs or other suitable care providers.

Community engagement

Communities were engaged through CGs and CSGs. Their engagement could be optimized by clarifying respective roles, reviewing group composition and providing necessary support and access to local resources, among others.

It appears that beyond training, members of these groups need to be coached (on role in meetings, on support in planning and organizing) and empowered. There is a need to assess possible mechanisms that can be put in place to provide effective support to CGs and CSGs. NGOs played an important role in supporting the implementation of community health systems (through CGs and CSGs), building their capacities to operate and providing follow-up.

Recommendations

Several recommendations are presented in the report directed to the MoHFW, CBHC programme, the local government, development partners and NGOs.

Recommendations to MoHFW and CBHC programme include the need to conduct a study to review and better define the role and configuration of the CBHC as the first level of primary health care of the Upazila health system. Key issues to be addressed by this study include:
The mix and scope of preventive, promotive and curative services to be provided by the CC. Issues that should be clarified or developed include the following: For the provision of curative services, is there a need to go beyond dispensing of medicines based on a symptomatic approach? Which health promotion and preventive services should be provided, including for prevention of noncommunicable diseases (NCDs), prevention of ill effects of environment and of climate change on health? How should other actors (such as education sector, the local government) be involved in health promotion and prevention? How should outreach to communities be best conducted (for which purpose, who, how often)? How can adolescents be best reached? How can local public health priorities be set, and the health and socioeconomic profile of the local community be established? How should the ‘real’ catchment population of CCs be defined to facilitate planning and priority setting?

The mix, skills and number of staff required to provide the agreed mix of preventive, promotive and curative services. Assess if there is a need for a single cadre to provide all services to be delivered at the CC and its catchment population.

A revised job description for CHCPs, FWAs, HAs and multipurpose health volunteers, in line with the above.

Strategies and actions to increase the demand for specific CC services, in line with the above mix and scope of services. This would include strategies related to service provision and referral for MNH services (especially child birth), child care, adolescent health and NCDs.

Strategy to ensure that CCs implement a set of interventions targeted to health promotion, prevention and screening for NCDs, in line with the above points. Proper guidance should be given to CC staff to conduct these activities, including how to work across sectors and how to engage communities in promotion and prevention of NCDs. Furthermore, this strategy should include an assessment of the suitability of basic treatment and supply of medicines for specific NCDs, such as diabetes and hypertension, to be provided by the CC under supervision of a higher-level facility/supervisor.

A proposal for streamlining line of authority and responsibilities at all levels.

The evaluation team also recommends the elaboration and implementation of action plans for conducting effective monitoring and supervision, for strengthening of the referral system and for review and revitalization of CGs and CSGs. Furthermore, the development and use of the UHC dashboard at the monthly coordination meetings with the CHCP is suggested as a mechanism to improve data quality in terms of timeliness, completeness and accuracy, and to strengthen the capacities of both CC and UHC teams for analysing data and its use in decision making.

Recommendations to local governments include necessary steps to be taken to ensure a significant supportive role for CCs in an institutionalized way rather than in an ad hoc manner as has been the norm. Potential roles that could be incorporated include:

- earmarking yearly budget allocation for CCs;
- intensifying coordinated activities between the CC and standing committee responsible for education, health and family planning;
- disseminating information concerning CC activities in regular ward level meetings; ensuring that Union Parishads have a permanent agenda item on their CCs in their monthly coordination meetings;
- ensuring good road access to CCs and fencing of CCs (particularly in places where the CC is located in remote areas);
- providing support for the organization of behaviour change communication (BCC) activities.

Recommendations to development partners and NGOs include providing continued support to the implementation of community systems, CGs and CSGs on issues such as:

- performance monitoring of CCs, particularly in aspects related to improvements in the health situation of the catchment area of the CC; prioritization of services;
- identification of those most in need or at risk; process for preparing of social mapping and annual implementation plans;
- capacity building, coaching and empowerment of CGs and CSGs; and
- creation of structures within the UHS that could undertake the organization and follow-up of supporting the work of CGs and CSGs.
In 1998, Bangladesh introduced a well thought-out and structured Community Based Health Care (CBHC) programme through the Health and Population Sector Programme (HPSP) 1998–2003. Under this, the community clinic (CC) concept, conforming to the ‘Alma Ata Declaration’,¹ was initiated to extend one-stop primary health care services into rural communities. During 1998–2001, of the 10,723 CCs constructed by the Directorate General of Health Service (DGHS) of the Ministry of Health and Family Welfare (MoHFW) about 8000 started functioning. In 2001, the new national government withdrew support for CCs which led to CC activities being held in abeyance until 2009.

With further change in government in 2009, the MoHFW sought to reinvigorate primary care services through the “Revitalization of the Community Health Care Initiatives in Bangladesh” (RCHCIB), 2009–2015 project. In this initiative, the “community clinic project” was introduced along with other executing authorities under the MoHFW.² The programme was subsequently mainstreamed within the DGHS in 2011, with the incorporation of CBHC activities within the operational plan of the 3rd Health, Population and Nutrition Sector Development Programme (HPNSDP) as CBHC operational plan July 2011–December 2016 (3). The HPNSDP describes the CC as the basic unit for the Upazila health system (UHS) to act as the entry point to the system, feeding into the Union Health & Family Welfare Centre (UH&FWC) with the UHC at the apex of the system within an Upazila.³ The programme has continued through the CBHC operational plan January 2017–June 2022 (4) under the 4th Health, Nutrition and Population Sector Programme (HNPSP).

In February 2018, WHO Bangladesh commissioned a hera–HAL consortium to conduct an independent evaluation of the CBHC programme in Bangladesh. This report presents the findings of the evaluation. While there were several other community based health care programmes in the country led by nongovernmental organizations (NGOs), this report focuses on CCs as the main government vehicle for the CBHC programme.

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¹ The Alma-Ata Declaration of 1978 emerged as a major milestone of the twentieth century in the field of public health, and it identified primary health care as the key to the attainment of the goal of Health for All.

² These authorities included the Directorate General for Health Services, the Directorate General for Family Planning, Directorate General of Drug Administration, Directorate of Nursing Services.

³ Upazila represents a subdistrict level.
3 Objectives and Methodology

This chapter presents the objectives and methodology for the evaluation.

3.1 Objectives

The objective of the independent evaluation was “to ascertain how community based health care is contributing towards achieving the programme objectives, effective delivery of primary health care services in Bangladesh; by identifying its strengths and challenges with a view of contributing to the successful implementation of the Essential Service Package (ESP)”. As per the terms of reference, the specific issues to be addressed in the evaluation were:

- to document the history, structure, governance, and policy context of the CBHC programme with regards to the relevance of its policy goals;
- to assess the efficiency of services provided at CCs and ascertain how economically inputs (such as funds, times) have been converted into outputs;
- to assess how effective the CBHC programme was in terms of achieving the objectives formulated for it and producing the expected effects; specifically the, (i) analysis of the changes in accessibility, readiness, utilization and equity of services at the CCs (to the extent possible), and (ii) review of quality and responsiveness of health services delivered at the CCs;
- to explore the extent and nature of community engagement in the planning and operations of the CBHC programme;
- to document best practices and recommend improvements based on the findings with particular focus on better alignment with the ESP; and
- to identify the strengths and the challenges of the CBHC programme, so that its findings can contribute to the design of programme modifications leading to better access to care, a higher quality of these services and alignment of community health services with the ESP.

3.2 Methods

The evaluation followed a ‘policy analysis’ approach based on documentary review and secondary analysis of routine Health Management Information System (HMIS) data of the DGHS captured through the online District Health Information System 2 (DHIS2) software, as well as national periodic survey data, such as the Bangladesh Health Facility Survey 2014 and 2017, the Bangladesh Health and Demographic Survey 2014 (5), and Maternal Mortality Survey 2016. This was complemented by the collection of complementary primary data (both qualitative and quantitative) from a limited number of CCs used as nested case studies to meet the evaluation objectives. (Refer to Annex 1 for a detailed description of these issues.)

Documentary review

Document and literature reviews (see Annex 2) were the primary source of information for the evaluation. Data sources included: relevant national policy and strategic documents related to the programme, as well published literature and unpublished grey literature, particularly previous evaluation reports of the CBHC programme and available costing studies on community-based services.
Secondary analysis of HMIS and periodic survey data

Monthly aggregate level performance data from CCs were inputted through DHIS2 of the DGHS and were available online at any level of the system to visualize, analyse, interpret and provide feedback to improve the programme. Revitalization of the CBHC programme commenced in 2009, however, the DHIS2 data collection and management system started later with online data being available only from 2013. With the permission of the Line Director MIS, DGHS, aggregate level CC performance data were captured for 2014–2017 from the online DHIS2 for this evaluation.

This aggregate level data from CCs included service utilization variables in the following ESP areas: maternal health, family planning, child health, limited curative care, nutrition and community mobilization meetings. Service utilization reports included referrals from CCs disaggregated by: (i) maternal health complications, (ii) child health complications, (iii) family planning, and (iv) complicated NCDs, such as hypertension and diabetes mellitus. The variables examined as performance measures from DHIS2 are summarized in Table 1.

**Table 1: Quantitative variables examined through secondary analysis of routine MIS data**

<table>
<thead>
<tr>
<th>ESP component</th>
<th>Variable</th>
<th>Stratified</th>
<th>Assumptions</th>
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<tbody>
<tr>
<td>Maternal health</td>
<td>- Antenatal care (1, 2, 3, 4+ visits)</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>- Postnatal care (1, 2, 3 visits)</td>
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<tr>
<td></td>
<td>- Normal delivery at CC</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Referral due to complications</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Child health</td>
<td>- Integrated Management of Childhood Illness (IMCI) (pneumonia, diarrhoea, measles)</td>
<td>Division, district and year</td>
<td>Data quality may be affected by incompleteness of data and nonreporting</td>
</tr>
<tr>
<td></td>
<td>- Referral (male, female)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Limited curative care</td>
<td>- Total patients</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Referral reason (diabetes, hypertension)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community mobilization</td>
<td>- Community group meeting</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>- Community support group meeting</td>
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<tr>
<td>Family planning</td>
<td>- Condoms</td>
<td></td>
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<td></td>
<td>- Pills</td>
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<td></td>
<td>- Injectables</td>
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<tr>
<td></td>
<td>- Referral for family planning</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Referral for family planning complications</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total clients</td>
<td>- Total number of outpatients</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Evaluation team data

Primary data collection and analysis for CBHC evaluation

Primary data included both qualitative and quantitative data collected from 16 purposively selected CCs and seven Upazila health complexes (UHCs) (Table 2). The criteria for the selection of the CC included: remote/not-remote areas; high performing/low performing clinics (based on number of services provided as indicated in the DGHS dashboard); providing/not providing normal child birth service.
Table 2: Primary data collection scheme

<table>
<thead>
<tr>
<th>Division</th>
<th>District</th>
<th>Upazila</th>
<th>Name of Upazila Health Complex</th>
<th>Community clinic details</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Well performing CCs</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visited in June–July 2018</td>
<td></td>
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<tr>
<td>Dhaka</td>
<td>Dhaka</td>
<td>Dohar</td>
<td>Dohar UHC</td>
<td>Char Baita CC</td>
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<td></td>
<td></td>
<td>Auliyaabad CC</td>
</tr>
<tr>
<td>Khulna</td>
<td>Bagerhat</td>
<td>Rampal</td>
<td>Rampal UHC</td>
<td>Barakatalli CC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mongla</td>
<td>Mongla UHC</td>
<td>Biddar Bahon CC</td>
</tr>
<tr>
<td>Sylhet</td>
<td>Sunamganj</td>
<td>Derai</td>
<td>Derai UHC</td>
<td>Kaima CC</td>
</tr>
<tr>
<td>Chattogram</td>
<td>Rangamati</td>
<td>Kaptai</td>
<td>Kaptai UHC</td>
<td>Shilpa Alaka CC</td>
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<td></td>
<td></td>
<td>Khandakata CC</td>
</tr>
<tr>
<td>Rajshahi</td>
<td>Nilphamari</td>
<td>Dimla</td>
<td>Dimla UHC</td>
<td>Gachhbari CC</td>
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<td></td>
<td>Shaskandar CC</td>
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<td>Total</td>
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<td>7</td>
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</table>

*Source: Evaluation team data*

Quantitative primary data were collected through 77 client exit interviews, 16 health facility survey questionnaires, 80 clinic register reviews, as well as medicine pricing and consultation fees questionnaire from other health care providers (MBBS doctor, village doctor) in the locality. The facility survey was conducted to explore technical aspects of the quality of care provided at CCs. Client exit interviews were conducted among the CC users on the day of the evaluation team visit to explore perceived quality of care, along with background characteristics of users, such as age, sex, education and perceived socioeconomic status. Data collection tools were pilot tested in two CCs (not included in the final sample of 16 CCs) and adjusted based on the findings of this pilot test. All quantitative data were collected by two trained research assistants under the supervision of senior consultants. A protocol for the evaluation, including data collections forms, was developed and Institutional Review Board clearance was obtained from the Ethics Committee of the Institute of Health Economics, University of Dhaka. Qualitative primary data were collected through 78 key informant interviews (24 at national level and 54 at UHC and CC levels) and 16 focus group discussions (one at each CC visited) in which 213 community group (CG)/community support group (CSG) members participated. A one-day consultative workshop was held with representatives from NGOs to share their experiences in supporting the CBHC programme. The workshop also discussed observations from the evaluation’s field work.

### 3.3 Data analysis

The evaluation was primarily based on a policy analysis that explored, from a macro level perspective, the policy relevance of the CC approach in Bangladesh context to provide an understanding of its effectiveness, efficiency and degree of community involvement in alignment with the ESP. Data from interviews with key informants, focus group discussions and the literature/document reviews relating to the assessment of relevance and community engagement were entered and coded using MAXQDA software. Excel databases were created for data from client exit interviews and health facility questionnaires. These data were then analysed using SPSS 20. Secondary data from the Management Information System (MIS) of the DGHS was downloaded and analysed using SPSS 20. Data from other sources were also analysed and triangulated.
The assessment of relevance focused on summarizing the background and history of CBHC services in Bangladesh, analysis of policy goals behind the formation of the CBHC programme, structure and governance systems in which the CBHC approach operates and how it fits the sector programme, including the ESP.

The efficiency assessment relied upon: (i) documentary review of existing costing studies, (ii) secondary analysis of financial data provided by the CBHC programme, and (iii) analysis of limited primary quantitative data collected from 16 sampled CCs through facility surveys, medicine pricing questionnaire and data on consultation fees from other providers practicing in the ward/union/Upazila of the sampled CCs. The efficiency analysis included calculating the unit costs of services provided by the CC and the estimation of the overall cost of CCs. The average cost of treatment of a patient visiting a CC was estimated using service utilization data from DHIS2 and expenditure data from CBHC programme headquarters in Dhaka. This information, along with both operational and investment costs of the CC, allowed the estimation of benefit–cost ratio of the CC.

For the assessment of community engagement, data from various sources were analysed and triangulated. Literature review provided some relevant information on the involvement of communities in their local CCs while key informant interviews, facility surveys and focus group discussions provided a glimpse of how community engagement was being implemented in practice. The functioning of CGs/CSGs was studied to document the actual role of these bodies, compared to the role envisaged for them in their terms of reference (ToR); design, operation and management of CC services; as well as in generating community support, both financial and in-kind, for the CC.

### 3.4 Limitations

Due to resource constraints, primary data collection was limited to 16 CCs. The use of a purposive sample for the selection of these sites ensured that a wide variety of CCs were chosen. The sample was not intended to be representative and the intention was to use the primary data collected to confirm or complement the findings from the literature review and interviews. The limited number of CCs in the sample constrained our ability to make conclusive remarks about quality, use, equity and responsiveness of the services provided by CCs.

The variables captured from the routine MIS may suffer from an upward-bias as these were reported by the service providers themselves.

All CCs were aware beforehand that the survey was to be conducted. Thus, the ‘known knowledge effect’ could possibly have affected their responses. ‘Known knowledge effect’ was minimized by using a well piloted questionnaire; with the option of instant probing of follow-up questions being asked.

Several gaps in the DHIS2 data made their interpretation difficult. As this was a rather recent modality for reporting, not all health facilities, including CCs, submitted complete reports. Reporting rates varied across all regions and data collection forms. Data accuracy and reliability (among others) were affected by issues such as the recent introduction of the DHIS2 system and electronic reporting, numerous data collection forms, CC staff not being used to data collection and reporting, and the generation of data by the providers themselves.

Due to resource constraints the study could not observe the technical quality of clinical services provided, nor could it fully explore equity issues through primary data collection, and instead had to rely on limited literature. Similarly, key informants at the division or union levels were not interviewed.

### 3.5 Ethical considerations

Ethical approval for the whole study was requested by the WHO and obtained through the Institute of Health Economics, University of Dhaka on 14 February 2018.\(^4\) Before starting interviews, researchers made sure that the respondents understood the purpose of the study, that their participation was voluntary, and that any information provided would be confidential. Participants were informed of their right to refuse or withdraw from the interview and their consent was requested. Signed informed consent was requested from health staff interviewed at the UHC and CCs. Verbal consent was requested from key informants at the central level, clients that responded to client exit interviews and those participating in focus group discussions. Recording permissions were also requested from those participating in focus group discussions. Recordings and records were to be deleted after the completion of the study.

This subsection presents the findings of the evaluation.

4.1 Relevance

This section presents a summary of the assessment of relevance.

4.1.1 BACKGROUND AND HISTORY OF COMMUNITY BASED HEALTH CARE IN BANGLADESH

Bangladesh has a long history (since the 1960s) of community-level health interventions with the introduction of a variety of programmes for smallpox eradication, control of malaria, diarrhoea, night-blindness, acute respiratory infections and vaccine preventable diseases, along with family planning and maternal and child health (MCH) care services (6). Health workers, with 10–12 years of education and 3–6 months of professional training, were key stakeholders in the delivery of ESP at the community level. Important among them were family welfare assistants (FWAs) from the Directorate General of Family Planning (DGFP) and health assistants (HAs) from the DGHS. The service delivery strategy was, by and large, for domiciliary (door-to-door) visits supported by mobile Expanded Programme on Immunization (EPI) outreach for vaccination and satellite clinics for family planning distribution.

The core objective of the CBHC programme was to improve the health status of the rural people through ensuring access to and utilization of high quality ESP. In 1998, the country adopted a massive health sector reform agenda, the Health Sector and Population Sector Programme (HPSP 1998–2003) (7). This earmarked 60% of the health budget for an ESP (7). It planned to establish one CC for every 6000–10 000 population, each with active support from community members. Land for establishing the CC was to be donated by community members and CGs were to be formed to manage and operate the clinic. According to the plan, existing FWAs and HAs would provide services from the new CC. In 1998, the MoHFW established within the DGHS, the CC project to extend primary health care into rural communities.

In 2001, the new national government withdrew support to CCs and the programme was stopped. With a further change in government in 2009, the project “Revitalization of the Community Health Care Initiative in Bangladesh” (RCHCIB) 2009–2015 was implemented with the aim to strengthen human resources, physical infrastructure of the clinics and community engagement with health services. In the revitalization phase, one community health care provider (CHCP) (male or female), from the same community where each CC was located was to be recruited and trained. The CHCP was to be an additional cadre to the existing cadres of FWAs and HAs.

Up to 2011, the RCHCIB did not fall under the general health sector programme but was implemented as a separate project of the MoHFW, and financing was not stable or sustainable. In 2011, this programme was mainstreamed with implementation of the CBHC operational plan (July 2011–June 2016 (3) under the 3rd HPNSDP. The programme has continued through the CBHC operational plan (January 2017–June 2022 (4) under the 4th HPNSP as the responsibility of the Line Director for CBHC.

4.1.2 POLICY GOALS BEHIND THE FORMATION OF THE CBHC PROGRAMME

Concept and policies of the CBHC programme have evolved over time. The initial policy focus was to bring services closer to the people, particularly the rural population, with the establishment of static health facilities (i.e. the CC).

The National Health Policy 2011 (8) acknowledged health as a right and its stated objectives were: to
strengthen primary and emergency health care for all; to expand availability of client centred, equity-focused and high-quality health care services, and to motivate people to seek care based on their right to health. This was followed by a focus on improving access and utilization and ensuring the provision of ESP. The current emphasis is on health systems strengthening and integration into the health system, concern for efficient systems, quality of care and a greater focus on equity and gender equality. The focus on provision of ESP continues. Accordingly, the scope of responsibilities and activities to take place as part of CBHC programme has changed over time, resulting in a wider scope of services, responsibilities and tasks to be performed, such as more emphasis on screening for NCDs (diabetes mellitus and hypertension) were added, and maternity services were introduced in some CCs. Initiatives were being undertaken to introduce disability and child development service elements (9).

### Box 1. CBHC policies

Bangladesh has a long history of implementing community level health interventions. In these efforts, community health workers have been key for the delivery of ESP at the community level. Through the years the CBHC approach have been aligned with national policies. The initial focus was on bringing services closer to the people, principally to rural population with the establishment of CC. Subsequently, the focus changed to improving access and utilization of services and ensuring the provision of ESP. The current focus is on strengthening of health systems, efficient systems, quality of care, gender and equity.

#### 4.1.3 STRUCTURES AND GOVERNANCE SYSTEMS IN WHICH THE CBHC PROGRAMME OPERATES

**National level**

In Bangladesh, primary health care services are ‘governed’ by various directorates within the MoHFW; core activities are managed under a revenue budget and several operational plans are implemented through various public facilities, public–private partnerships as well as NGOs. Operational plans that focused on actual delivery of primary health care services at the Upazila level and below included: Maternal Neonatal Child and Adolescent Health (MNC&AH), NNS, CDC and CBHC programmes. Coordination among these was suboptimal, leading to duplication and inefficiencies.

**The local government**

The local government was involved in the implementation of the CBHC programme including the CCs. The Union Parishad (UP)\(^5\) Chairperson is the overall patron for all CCs of the union. Additionally, the Union Parishad, Upazila Parishad, Zila Parishad\(^6\) provide ad hoc support in cash or in kind (i.e. for repair and maintenance of CCs, provision of furniture and equipment, electric installation, construction of new rooms, payment for cleaner and security guard) (10). The participants in the focus group discussions indicated that the local UP member was the president of the CG.

Our interviewees suggested that: (i) in addition to the yearly budget allocation, CCs should be paid for certain items (i.e. repairs and maintenance, electricity bill, payment for cleaner, refreshments for CG meetings); and (ii) the local government should also share information about the poor in the CC catchment area in order to better target services to them, provide a maternity allowance to poor pregnant women, ensure good road access to the CC and fencing of CC (particularly in places were the CC is located in remote areas).

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\(^5\) Union councils (or Union Parishads or rural council or Unions) are the smallest rural administrative and local government units in Bangladesh. Each Union is made up of nine wards. Usually one village is designated as a ward. There are 4554 unions in Bangladesh. A Union Council consists of a chairman and twelve members including three members exclusively being women. Union Parishads are formed under the Local Government (Union Parishads) Act, 2009.

\(^6\) There are 8 divisions and 64 districts in Bangladesh, each district is further subdivided into Upazilas (subdistricts). The second tier of rural local government in Bangladesh is the Upazila Parishad (formerly Thana). District Council (or Zila Parishad) is a local government body at the district level. The Bengali word parishad means council and Zila Parishad translates to district council. The deputy commissioner (popularly abbreviated to “DC”) is the executive head of the district.
The Upazila health system

The UHS comprised domiciliary services, services through outreach and satellite clinics, and services through fixed health facilities at ward, union and Upazila levels. The CC at the ward level was the lowest level fixed health facility in the public health system. There were fixed health facilities at union and Upazila levels also.

HPNSDP described the CC as the basic unit for the UHS (3), to act as entry points to the system, feeding into the UH&FWC with the UHC at the apex of the system within an Upazila.

At the ward level, domiciliary services were provided by both the health and family planning departments for the same catchment population in parallel. This implies that proper coordination would be necessary to ensure effective and efficient service delivery. Preventive and health promotion services were provided through a network of FWAs and HAs through domiciliary home-visits. Additionally, they also organized immunization outreach sessions, satellite clinics and CCs to provide immunization, health education, and antenatal, postnatal and family planning services. HAs and FWAs should provide services three days a week at the CC. The CHCP, based at the CC, provided limited curative, preventive, promotive and health education services and was not involved in community or domiciliary visits. According to the interviewees, there was insufficient coordination between these three cadres, resulting in missed opportunities to increase coverage with promotive, preventive and curative services, and reduce duplication of efforts and inefficiencies in the use of resources.

The HAs provided domiciliary MCH services, community IMCI, adolescent health, social awareness creation, EPI (outreach site), couple and pregnancy registration, death notification and referral (11). The FWAs were involved, through both household visits and the CC, in providing family planning information and counselling, undertaking registration of eligible couples, and distributing condoms, oral pills and injectables to acceptors during domiciliary home visits and at the CC (11). Ever since domiciliary workers (FWAs, HAs) were assigned with multiple tasks (EPI outreach, satellite clinic, CC), they hardly undertook domiciliary visits. Sometimes, due to insufficient numbers of HAs and FWAs, they were assigned to cover more than one CC and therefore were not able to comply with the required three days-a-week presence at each CC. With universal knowledge of family planning, high uptake of immunization and improvement in communications, the continuation of routine domiciliary visits remains uncertain (4).

The MoHFW was in the process of introducing a new cadre to work at the CC – the multipurpose health volunteers (MHV) – to improve demand, access and utilization of health, nutrition and family planning services at grass-root level. The MHV will primarily work at the community and domiciliary levels. They will conduct a range of promotion, prevention, health education and data gathering activities in various areas including: (i) disease control (such as identification and referral of malaria cases, verbal and social investigation of rabies death, referral of TB and leprosy patients, information collection during epidemics); (ii) maternal newborn, child and adolescent health (such as identification and referral of measles cases, fistula patients, identification and referral of pregnant women for antenatal care (ANC), identification and referral of high risk pregnancies, sending mothers for postnatal care (PNC) within 48 hours of home delivery); (iii) NCDs (such as referral of patients for blood pressure and diabetes screening, identification of cases of mental health and differently abled children); and (iv) nutrition (such as home identification of moderate and severe malnourished children). They will also collect information for issuing identity cards and health cards for everyone as well as information required for the community-based information system. Additionally, they will support the CHCP in holding monthly CG meetings and will be responsible for organizing CSG meetings. The MHVs will be contracted on an annual basis and will receive a monthly incentive after successful completion of the specified work and targets. Each CC will have five MHVs, with each MHV assigned to 250–300 households (12). The introduction of the MHV will require considerable improvements in the coordination among the various cadres working at the CC, with clear definition of their respective roles, specific job descriptions, definition of clear targets and performance monitoring mechanisms in order to avoid duplications and use them to their full potential.

“We usually coordinate for the EPI day, report preparation or for conducting the monthly meeting of the CG”

(Community health care provider)
At the union level, 302 UH&FWCs and 884 union subcentres/rural dispensaries) were operating under the DGHS. Additionally, 3131 UH&FWCs were operating under the DGFP. Of the 4550 unions in the country, 358 did not have a health facility. A total of 185 unions had a UHC located within the union (12,13). In addition to family planning services, UH&FWCs included ANC, safe child birth/delivery care, postnatal care and child health services. During the study period, UH&FWCs were moving towards provision of services on a 24-hours a day, seven days a week basis (24/7) (13). Some interviewees reported that many of the union level facilities were not working to their full potential due to lack of staff or unavailability of equipment, and therefore CCs did not often refer patients to these facilities, even if union level facilities were supposed to be the referral facilities for CCs. In 2016, the DGFP with support from United States Agency for International Development (USAID)-funded MaMoni – Maternal Newborn Care Strengthening project, conducted a nationwide assessment of union level health facilities to determine the readiness of these facilities to provide round-the-clock normal child birth and essential newborn care services. For the 3590 facilities functioning as UH&FWCs, the assessment assigned scores against set criteria to determine the overall readiness of each facility to provide normal child birth and essential newborn care services and categorized these facilities. Overall, 14% (489) were in category “A” – already functional or needing minimum resources to make them fully ready; 69% (2480) were in category “B”, – needing medium to moderate level of inputs; and 17% (621) were in “C” category – needing major inputs in several areas, including physical renovation, staffing, supplies and equipment. Staff posted at union level facilities conducted supervision of CC staff, for example, HAs were supervised by the Assistant Health Inspector, while FWAs were supervised by the Family Planning Inspector.

In the Upazilla, 414 UHCs (a UHC is a 31–50 bed hospital) operated under the authority of the DGHS and an additional 424 MCH units were under the DGFP and operated within the UHC (11). The UHC played an important role for the CC: it served as a referral centre for patients, conducted monitoring and supervision of the CC, organized training for the staff; and acted as a central data gathering point for CC service provision reports (see Section 3).

**Development partners and not-for-profit private organizations/NGOs**

Development partners have provided support to the GoB for the implementation of CBHC policies since their inception. These partners – Department for International Development (DFID), Global Alliance for Vaccines Initiative– Health System Strengthening, Japanese International Cooperation Agency (JICA), United Nations Children's Fund (UNICEF), USAID and WHO – provided technical assistance, supported programme review and assessments, trained CHCPs, built capacity of CGs and CSGs, and provided monitoring and supervision.

Over the years, international and national NGOs have played an important role as well in supporting the GoB in the implementation of national health policies and programmes at the primary level of care. Consequently, it was natural for them to become very active in the implementation of the CC, the RCHCI and subsequently the CBHC programme. NGO support included: training and capacity building (technical and managerial skills) of CHCPs, CGs, CSGs and local government representatives; facilitating organization and follow-up to CGs and CSGs; strengthening supervision of CCs; improving institutional deliveries by strengthening family welfare centres; procuring equipment; and supporting repair or construction of CCs.

In several cases, experiences from projects supported by NGOs were developed into strategies by the GoB and scaled up, such as the creation of CSGs (from a JICA financed project, implemented by Cooperative for Assistance and Relief Everywhere (CARE)). NGOs contributed to the involvement of the local government in support of CCs by strengthening supervision and referral systems.

NGOs that supported CBHC services in various Upazilas and districts all over the country included CARE Bangladesh, Plan International, Caritas, Save the Children, Partners in Health and Development, Action on Disability and Development (ADD), Terres des Hommes, Development Association for Self-Reliance, Communication and Health (DASCOH), World Vision, Walk for Life and Orbis.
Box 2. Governance structures in which the CBHC programme operates
Several lines of authority and responsibility persist among the governance structures in which the CBHC programme operates, contributing to difficulties in integration and coordination of services, as well as some duplications and inefficiencies.

4.1.4 AN UNIQUE APPROACH OR COMPARABLE TO THOSE IN OTHER COUNTRIES?
For several decades, and all over the world, community health workers (CHWs) have participated in the provision of primary health care. Experience has shown that they can contribute significantly to efforts in improving the health of the population, particularly in areas with the greatest shortage of health professionals.

WHO and the Global Health Workforce Alliance published a study on the global experience of CHWs for the delivery of health-related Millennium Development Goals (14). The report included a global analysis and country case studies, which revealed that CHWs offered a wide variety of promotive, preventive and curative services. The analysis also reported that globally health services provided by CHWs have helped in health care, such as to reduce maternal and child mortality rates (14). However, the coverage of these programmes and the overall progress towards achieving Millennium Development Goal targets was low and varied across countries. Country case studies included several aspects by which CHW programmes could be compared, including training, tasks to be performed and supervision (see Table 3).

Table 3: COMMUNITY HEALTH WORKERS IN VARIOUS COUNTRIES

<table>
<thead>
<tr>
<th>Country CHW scheme</th>
<th>Duration of training</th>
<th>Tasks for CHWs</th>
<th>Strength of supervision</th>
<th>Strength of health system</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uganda Village Health Teams</td>
<td>10 days</td>
<td>Prevention and basic curative</td>
<td>Relatively strong</td>
<td>weak</td>
</tr>
<tr>
<td>Pakistan’s Lady Health Workers Programme</td>
<td>15 months</td>
<td>Promotional, preventive and basic curative</td>
<td>Relatively strong</td>
<td>weak</td>
</tr>
<tr>
<td>Ethiopia Health Extension Programme</td>
<td>3 months</td>
<td>Preventive and basic curative</td>
<td>Relatively weak</td>
<td>weak</td>
</tr>
<tr>
<td>Mozambique Agentes Polivalentes Elementares</td>
<td>6 months</td>
<td>Preventive and basic curative</td>
<td>Relatively weak</td>
<td>weak</td>
</tr>
<tr>
<td>Bangladesh CHCP</td>
<td>3 months</td>
<td>Promotional, preventive and basic curative</td>
<td>Relatively weak</td>
<td>weak</td>
</tr>
</tbody>
</table>

Sources: Evaluation team data and (14).

Elements of the Ethiopia Health Extension Programme are comparable to the Bangladesh CBHC programme. Both programmes were initiated with a high level of political commitment. While they both were the bottom level of care within the national health system, they differed in other aspects, for example, in Ethiopia, health extension workers (HEWs) were female civil servants. Two HEWs were deployed in every village with a population of 5000; they dedicated 25% of their time at a health post conducting facility-based services and spent about 75% of their time outside the health post delivering
family and community packages (14). In Bangladesh, CHCPs were project staff with one CHCP serving a population of 6000–10 000 and providing only facility-based services, complemented by outreaches, as well as community and home visits provided by FWAs and HAs.

**Box 3. Is the Bangladesh CBHC programme an unique approach or comparable to those in other countries?**

Community-based health services have been implemented in many countries. A common feature in all is the provision of primary care services and use of community health workers. However, each country’s experience has specific features, tailored to the country’s needs and available resources, which makes each programme somewhat unique to each country. A particularity of the CBHC programme in Bangladesh is that the construction of a community clinic is to be made on a plot or piece of land that must be donated by the community.

**4.1.5 TO WHAT EXTENT WERE THE OBJECTIVES OF THE CBHC PROGRAMME CONSISTENT WITH THE EXPECTATIONS OF BENEFICIARIES, COUNTRY NEEDS AND GLOBAL PRIORITIES?**

CBHC approach seems to be relevant to the health needs of local communities. The participants of the focus group discussions confirmed that the most common health problems in their communities included fever, cough, diarrhoea, hyperacidity, skin problems, pregnancy related problems, generalized weakness and pain (back pain, knee/joint pain). When asked how the CC contributed to solve these problems, beneficiaries indicated that the CHCP provided free medicines, health advice and immunizations (EPI, tetanus toxoid). CC was seen as a one-stop service outlet (health, family planning, nutrition) for all ages, especially for the poor through the provision of doorstep health care (i.e. with no transport costs).

The provision of free medicines may contribute to alleviating the financial burden of ill health by reducing out-of-pocket expenditures on drugs. The National Health Accounts revealed that in 2015, 67% of the total expenditure on health was household out-of-pocket payments. Of this, 64% was spent on medicines, meaning that households endured a large burden of financing for medicines. Of the total health spending in the country 43.3% corresponded to expenditure on medicines and medical products (15).

In the past 20 years, Bangladesh has experienced both demographic and epidemiological transitions with the burden of disease undergoing remarkable changes: infant and under-five mortality rates and maternal mortality ratio decreased significantly; population growth rate declined and life expectancy at birth increased (16). The burden of disease shifted from primarily communicable diseases to primarily noncommunicable diseases (NCDs) (see Figure 1). In alignment with this shift, the 4th HPNSP 2017–2022 included screening of NCDs in the list of services that should be available at the CC. The NCD control operational plan of the 4th HPNSP included the implementation of activities at the primary health care level related to promotion of healthy lifestyles and healthy behaviours, as well as increasing community awareness of the health consequences of climate change. CCs could play an important role in implementing some of these actions.

Bangladesh is committed to achieving both the Sustainable Development Goals for health and universal health coverage by 2030. The CBHC programme, including CCs, are an unique instrument having the potential to contribute to the achievement of both goals. However, effective and efficient operation of CCs is required to realize this potential.

**Box 4. CBHC programme response to population, country and global needs**

Overall CBHC has been relevant to the health needs of the population. As the epidemiological profile changes and CCs become more functional, there would be additional demands for broadening the scope of services and tasks to be conducted by the CC. The extent to which new services and tasks can be added to the CBHC requires careful review of the mix of services, providers and skills, and other resources. The CBHC, including CCs, have the potential to contribute to the achievement of both the Sustainable Development Goals and universal health coverage.
4.2 Effectiveness

This subsection presents a summary of the assessment of effectiveness.

4.2.1 ACCESSIBILITY AND USE: TO WHAT EXTENT WERE PEOPLE IN THE COMMUNITY ABLE TO ACCESS COMMUNITY CLINIC SERVICES?

The 2011–2016 CBHC operational plan aimed to establish 13 500 CCs including those constructed during 1998-2001 throughout all rural areas of the country by 2016. Up to 30 September 2017, according to the Annual Health Bulletin 2017 of the DGHS, 13 442 CCs were in operation. However, at the end of 2017, routine MIS data of DGHS showed that 13 079 CCs were reporting performance data using the online DHIS2 system. CCs operated under the CBHC operational plan of the HNPSP of the MoHFW. CCs were supposed to cover 80% of the people living within 30 minutes walking distance from the CC and the ESP package included EPI, IMCI, family planning, health education, nutrition and treatment of common ailments such as pneumonia, fever, cough, skin disease and peptic ulcers.

Figure 2 shows that CCs were fairly well distributed across all rural areas of the country. However, their concentration was found to vary with population density in rural areas. CCs were located centrally (78%) in the area, were well connected and 90% service recipients were within walking distance from the CC (17).
In a Western district of Bangladesh, CCs were the key service providers and the catchment population was increasingly using their services (18). MIS reports of the DGHS indicated an increase in the total reported number of visits from 56 million to 88 million between 2014 and 2017 (a 57% increase in three years (Figure 3)).

However, the largest increase (54% in absolute numbers) took place between 2014 and 2015, suggesting a substantial increase in reporting rates, although the average number of visits per month per CC did not increase; in fact the number of visits per CC per month showed a slight decrease in the median number of visits to CCs from 590 to 533 (Figure 4) over the reporting period.

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7 Percentage increase of absolute number of users, not corrected for population growth.
Independent Evaluation of Community Based Health Services in Bangladesh

Figure 4: Trends in use of community clinics. Median number of clinic visits per month, per clinic, 2014–2017

The National Institute of Population Research & Training (NIPORT) (19) reported that for 60% of CC users, the distance to the CC from their homes was less than 0.8 kilometre and for another 30% it was less than one kilometre. The remaining 10% came from a distance beyond one kilometre.

**Barriers to access services**

Barriers to access services reported by interviewees included: lack of transport, poor roads, residing in remote hilly areas, or rural and hard-to-reach areas. People residing in areas located far from CCs did not seek services from these clinics, instead they attended health satellite centres organized by HAs and FWAs. The services offered in the satellite health centres were limited and could not meet all priority health needs of remotely placed people for whom sometimes these services were the only option.

*“There are CCs that are far from the mainland, which are not easily accessible; some community clinics are in flood prone areas, and accessing these CCs becomes a problem during floods.”*

(Upazila health and family planning officer)

Social and religious norms were also mentioned as barriers to access services, such as pregnant women not being allowed to visit the CC. This affects mainly married adolescent girls, who are subject to the views of their mothers-in-law or husbands and thus remain isolated within the boundary of their house without any ANC/PNC care. Our interviewees reported that emergency patients did not attend CCs, as they knew these services were not available at the CC and that the referral service was not working properly. Adolescent girls may not seek services at the CC when the CHCP is male.

*“There are families where ignorance and patriarchal mindset of the husband and in-laws sometimes pose barriers for wives to receive services”*

(Family welfare assistant)

Other barriers mentioned included poor or not well-maintained infrastructure, and a shortage of medicines at the CC. In some places, community members were not fully aware of the services offered by the CC or had not yet visited them. Other interviewees reported not seeking services at the CC, because there was no medical doctor available. Additionally, sociocultural aspects, social prejudices and superstitions were also mentioned as barriers to access CC services.

“Payment for services or for medicines did not seem to be a barrier to access services. Exit interviews showed that 78% of respondents did not pay any fees to obtain a service. Those who paid (22%) voluntarily BDT 2 or BDT 5. These payments had been agreed by the CGs, and exemptions from payment were in place. The majority of the respondents (95%) indicated that they received free medicines.”

Source: MIS reports, DGHS
Payment for services or for medicines did not seem to be a barrier to access services. Exit interviews showed that 78% of respondents did not pay any fees to obtain a service. Those who paid (22%) voluntarily BDT 2 or BDT 5. These payments had been agreed by the CGs, and exemptions from payment were in place. The majority of the respondents (95%) indicated that they received free medicines.

Box 5. Access and utilization of CC services

The reported number of visits to CCs increased by 57% from 2014 to 2017. Over the past two years, the annual increase slowed down to 2.5% and 1.5%, respectively. It is likely that the observed overall increase in visits reflected increased reporting, rather than increased average activity and access per CC. The median, expressed by number of visits per month per CC, decreased by 7% over the four years, slowing down to less than 1% in the last year. While at the population level, the overall reported accessibility to CC services increased, use of CC services reached a monthly plateau of 500 to 600 per clinic. The central location of the CC might facilitate access to services. In 2013, 90% of CC users reported that the distance from their homes to the CC was less than one kilometre. These findings may indicate decrease in the demand for CC services that mainly served people living nearby.

Issues related to not being able to access services reported by those interviewed included lack of transport, poor roads, residing in remote areas, as well as religious and sociocultural barriers.

4.2.2 EQUITY: TO WHAT EXTENT WERE SERVICES EQUITABLY ACCESSIBLE TO PEOPLE BASED ON GENDER, GEOGRAPHIC DISTRIBUTION, WEALTH AND CULTURE? WHAT WERE THE BARRIERS IN ACCESSING COMMUNITY CLINIC SERVICES?

The literature on equity of access to services provided by CCs in Bangladesh is limited, particularly due to lack of population based studies that addressed this issue specifically. A NIPORT study (19) reported that 90% of CC users belonged to low and low-middle asset quintiles. Our evaluation reported the socioeconomic status of service users as perceived by themselves in relation to other people in their community – 52% of service users perceived themselves as middle class, 30% as poor and the rest 18% as very poor (Figure 5).

Figure 5: Perceived socioeconomic status of users (N=77)

Source: Client exit survey data from our independent evaluation of CBHC services, 2018
Other national level surveys, such as Bangladesh Demographic Health Survey (BDHS) 2014 (5) and Bangladesh Maternal Mortality and Health Care Survey (BMMS) (20), showed that, in relative terms, peripheral level maternal, neonatal and child health (MNCH) services, such as ANC, provided by CHWs, were more equitably accessible\(^a\) compared to ANC services provided by doctors (Table 4).

### Table 4: Distribution of ANC services from different service providers by wealth quintiles

<table>
<thead>
<tr>
<th>Wealth Quintile</th>
<th>Qualified doctor</th>
<th>Medical Assistant/Subassistant</th>
<th>Community Skilled Birth Attendant</th>
<th>Community Health Worker</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowest</td>
<td>43.4</td>
<td>0.2</td>
<td>7.3</td>
<td>0.5</td>
</tr>
<tr>
<td>Second</td>
<td>60</td>
<td>0.2</td>
<td>5.9</td>
<td>0.3</td>
</tr>
<tr>
<td>Middle</td>
<td>72.8</td>
<td>0.1</td>
<td>5.1</td>
<td>0.2</td>
</tr>
<tr>
<td>Fourth</td>
<td>78.2</td>
<td>0.2</td>
<td>4.7</td>
<td>0.2</td>
</tr>
<tr>
<td>Highest</td>
<td>90.1</td>
<td>0.1</td>
<td>3.1</td>
<td>0.1</td>
</tr>
<tr>
<td>Rich/poor ratio</td>
<td>2.08</td>
<td>0.50</td>
<td>0.42</td>
<td>0.20</td>
</tr>
</tbody>
</table>

Source: (20)

The NIPORT study also reported that among CC users, on average, more than two thirds were female (77% in our survey), and around 14% were children and adolescents (14% and 9% respectively in our survey). In our 2018 survey, 18% of CC users were in their 20s, 42% were 30−59 years old and 17% were above 60 years of age. 43% of the interviewees had attained secondary education (36%) or higher (7%); 25% had primary education, and 32% had never gone to school (Figure 6). More research is needed to better understand the equity dimensions of CCs.

### Figure 6: Community clinic user profile by gender, age and literacy

#### Gender profile
- 77% Female
- 23% Male

#### Age profile
- 0-5: 17%
- 6-9: 17%
- 10-19: 18%
- 20-29: 16%
- 30-39: 9%
- 40-49: 9%
- 50-59: 17%
- 60+: 13%

#### Education profile
- No education: 7%
- Primary education: 32%
- Secondary education: 25%
- Higher secondary and above: 36%

Source: Client exit survey data from our independent evaluation of CBHC services, 2018

\(^a\) Calculated as the ratio of ANC services provided by health staff to highest and lowest wealth quintiles.
4.2.3 READINESS: TO WHAT EXTENT WERE CLINICS READY TO PROVIDE SERVICES IN TERMS OF BASIC AMENITIES, BASIC EQUIPMENT, STANDARD SAFETY MEASURES, MEDICINES AND COMMODITIES, STAFF TRAINING?

The following elements were analysed for the assessment of CC readiness to provide services: condition of the infrastructure, equipment, availability of ESP services, human resources, supplies and laboratory facilities.

Infrastructure

A study of 464 CCs reported that about 11% were constructed in low lying lands, more than 80% had no electricity, 68% had no functioning tube wells, 19% had broken doors or windows, and over 38% were not constructed at locations as per guidelines of the MoHFW (21). This revealed the often poor condition of the infrastructure of CCs at the time the revitalization initiative was started (2010).

In 2017 (22), 46.5% of CCs were connected to the national electricity grid and 41.1% had regular electricity supply. This was an improvement from 2014, when only 21.2% of CCs were connected to the national electric grid and 9.1% had regular electricity (23). However, more than 50% CCs were still not connected to the electricity grid. A minor improvement was observed in the availability of improved water source in CCs (88% CCs had access to improved water source in 2017 versus 84.6% in 2014). Availability of latrines at CCs also improved from 68.2% in 2014 to 76.6% in 2017. In 2014, 41.5% of CCs had computers with Internet connections that were significantly better than at the UH&FWC (5.8%). In 2017, 67% of CCs had computers with access to Internet. Despite these improvements, the important gaps remained in ensuring availability of all six basic amenities at the CCs (22). There was no change in the availability of all six basic amenities in CCs (improved water source, client latrine, privacy during consultation, computer with Internet access, regular electricity, communication equipment (land/mobile phone)) between 2014 and 2017 with only 1% of CCs having all six amenities (22). In contrast, a 2013 study (18) reported that all 225 CCs examined in the western district of Rajshahi, were infrastructurally sound and receiving incremental support from the UP.

A rapid assessment of water, sanitation and hygiene in CCs (24) there was deficiencies in water and sanitation facilities. Piped water supply through taps was functional in 588 CCs and nonfunctional in 806
CCs. Of the latrines located within buildings, 7800 were functional and 3700 were nonfunctional. Regarding hand washing arrangements, 85.8% (10 009 CCs) had hand washing arrangements, whereas 14.2% (1653 CCs) did not, which has implications for infection prevention and control.

Our facility survey (2018) showed that 56% of CCs had electricity supply; 75% had tube well or piped water supply connections within their vicinity; 50% had Internet connection; and 75% had a functioning laptop/tablet.

Building conditions seem to have improved substantially in the period of our facility survey compared to the 2009 assessment. Only 19% CC buildings got excellent ratings as assessed by researchers and service providers (CHCPs), while 44% scored building conditions as medium, 37% scored it as below standard.

**Box 7. Conditions of infrastructure**

Most previous studies (20–22, 24) confirmed that infrastructure amenities (electricity, water, toilets) were insufficient, with the exception of the availability of Internet services, which scored better than at UH&FWCs. This survey confirmed unsatisfactory conditions in up to half of the facilities, but noted an improvement compared to 2009. Some improvements to electricity and water supplies were also noted.

**Equipment**

The Bangladesh Health Facility Survey (BHFS) provided a basic list of equipment necessary for initial service readiness within the CC (23). All CCs must have the following instruments required for proper service provision: adult scale, child scale or infant scale, thermometer, stethoscope, blood pressure apparatus and light source.

The Bangladesh Health Facility Surveys of 2014 and 2017 reported the following provisions (Table 5):
- thermometer, stethoscope, blood pressure machine and adult scale available in 80% or more CCs;
- child nutrition monitoring equipment less frequently available (22,23).

All these pieces of equipment were available in 22.8% CCs (22).

Our health facility survey 2018 showed that only two items of the list of seven essential instruments were available in all CCs at the time of the visit, indicating an important issue with basic equipment (Table 5).

**Table 5: Availability of basic equipment at community clinics**

<table>
<thead>
<tr>
<th>Basic equipment</th>
<th>BHFS 2014</th>
<th>BHFS 2017</th>
<th>Basic equipment in functional condition available on the day of the visit – health facility survey 2018 (N=16 CCs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult scale</td>
<td>84%</td>
<td>88.2%</td>
<td>75%</td>
</tr>
<tr>
<td>Child scale</td>
<td>47%</td>
<td>60%</td>
<td>75%</td>
</tr>
<tr>
<td>Infant scale</td>
<td>21%</td>
<td>62.5%</td>
<td>87.5%</td>
</tr>
<tr>
<td>Thermometer</td>
<td>98%</td>
<td>91.6%</td>
<td>100%</td>
</tr>
<tr>
<td>Stethoscope</td>
<td>91%</td>
<td>93.0%</td>
<td>100%</td>
</tr>
<tr>
<td>Blood pressure apparatus</td>
<td>80%</td>
<td>82.0%</td>
<td>100%</td>
</tr>
<tr>
<td>Light source</td>
<td>33%</td>
<td>46.8%</td>
<td>25%</td>
</tr>
<tr>
<td>Glucometer</td>
<td>No data</td>
<td>No data</td>
<td>75%</td>
</tr>
<tr>
<td>Acute respiratory inspection timer</td>
<td>No data</td>
<td>No data</td>
<td>12.5%</td>
</tr>
<tr>
<td>Stadiometer</td>
<td>No data</td>
<td>No data</td>
<td>50%</td>
</tr>
<tr>
<td>Growth monitoring chart</td>
<td>No data</td>
<td>No data</td>
<td>87.5%</td>
</tr>
</tbody>
</table>

Sources: BHFS 2014 (23), BHFS 2017 (22), Client exit survey from our independent evaluation of CBHC services, 2018
Standard precautions for infection control were better in CCs than at UH&FWCs or rural dispensaries (i.e. safe disposal of sharp waste was found in 81.8% CCs; safe disposal of infectious waste was in 82.9%; and use of latex gloves was in 61.5%) (18). Our health facility survey did not record any information on basic items for infection control in the service delivery area.

**Box 8. Availability of equipment**
Existing data indicated serious issues regarding availability of basic equipment at CCs.

### Availability of ESP services

ESP service components provided by CCs assessed during various surveys (22,23) and for this evaluation are presented in Table 6.

<table>
<thead>
<tr>
<th>ESP service element</th>
<th>% of community clinics providing services</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BHFS 2014</td>
</tr>
<tr>
<td>Limited curative care</td>
<td>92.70%</td>
</tr>
<tr>
<td>ANC</td>
<td>98.80%</td>
</tr>
<tr>
<td>Normal child birth/delivery</td>
<td>7.2%</td>
</tr>
<tr>
<td>Family planning</td>
<td>&lt;80%</td>
</tr>
</tbody>
</table>

**Child health services**

- Curative care for sick children | 93% | 98.8% | No data |
- Growth monitoring | 61% | 90.1% | 100% |
- Vaccinations | 86% | 95.8% | 100% |
- All (above) three children health services | 54% | 86.8% | No data |

| Vitamin A capsule distribution | 80% | 72.1% | No data |

Sources: BHFS 2014 (23); BHFS 2017 (22), Health facility survey data from our independent evaluation of CBHC services, 2018.

* Percentage offering any modern family planning (including emergency contraceptives).
** This percentage may be influenced by our purposive sample that included having CCs where child births/deliveries were performed.

Our evaluation revealed a better provision of services, as apart from normal child birth services (which CCs were not obligated to perform), most CCs also provided ESP services. Only 6% CCs did not provide family planning services. 31% of visited CCs reported providing screening of NCDs (particularly diabetes) and detection of respiratory conditions.

The CHCP is required to provide health education daily for an hour at the CC; however, this was not a systematic practice. On the day of the visit to the health facilities, the research team confirmed the availability of information, education and communication (IEC) materials related to ANC/PNC/family planning, common diseases, nutrition and primary health care. 24% of interviewed clients confirmed having received behaviour change communication (BCC) materials during the waiting time. HAs and FWAs who were interviewed reported that they conducted interpersonal communication activities during their visits to the community.
Services demanded

A rapid field assessment of 192 CCs found that the majority of patients at a CC sought care for general ailments (70.1%) followed by MCH (24%), family planning (2.3%) and nutrition (1.7%) (17).

Our exit interview data showed similar results – 86% of CC users received curative care services (general ailments), and 9% received care for maternal health services (excluding deliveries). Family planning, PNC, nutrition and adolescent services were used more exceptionally (Figure 7). In our review, the 90 registered CCs reported taking care of the following ailments during CC visits: abdominal pain, allergy, anaemia, articular pains, asthma, back pain, blood pressure problems, cough, common cold, diabetes suspicion, diarrhoea, eczema, eye problem, gastric problem, headache, peptic ulcer, respiratory problems, skin rash, scabies, stomach acidity, teeth pain, vaginal infection and weakness.

Diagnostic service provision at CC

Measurement of diagnostic service readiness of CCs, using basic health assessment methodology and basic laboratory tests (haemoglobin, blood glucose, urine protein, urine glucose and urine pregnancy tests) revealed that capacity for blood glucose tests improved from 8.3% in 2014 to 20.9% in 2017 (22,23).

Box 9. Availability of ESP services in community clinics

Our survey revealed that most CCs were providing most of the service elements of the ESP. All CCs were providing limited curative care, ANC, vaccination and growth monitoring services. Family planning services and family planning commodities were yet to be provided by all CCs (the availability of these services was very much dependent on the availability of FWAs and of family planning commodities). There was an increasing number of CCs providing normal child birth/delivery services (19%). Some of our key informants expressed concerns in relation to the lack of proper guidance for decision on whether or not a CC should provide child birth services. Concerns were also expressed regarding the effectiveness and efficiency implications of this investment, including human resource implications and rising client expectations, while not providing a 24-hour service.

Box 10. Services demanded from CCs

The population primarily demanded curative services from CCs (86%), followed by maternal care (9%). Family planning, adolescent health and nutrition services represented only a small proportion of services demanded from CCs. Factors influencing this demand included the availability of free medicines, and CHCP (with primarily a curative care profile) being the only local provider available six days a week.
Independent Evaluation of Community Based Health Services in Bangladesh

There was a small improvement in the capacity of CCs for provision of pregnancy tests from no capacity in 2014 to 4.3% of CCs offering urine pregnancy test. Among the CCs offering ANC, the availability of diagnostic facilities was low, though it improved slightly from 3.3% to 9.2% for haemoglobin tests in 2014 and 2017, respectively; 12.3% for urine protein in 2014 versus 19.4% in 2017; 12.9% for urine glucose in 2014 increased to 17.1% in 2017 (22, 23).

An ESP study showed that rapid diagnostic tests for malaria, urine test strip and urine pregnancy test should be performed in selected CCs (25). Our facility survey found nine CCs (56%) providing some diagnostic tests, 25% (four out of 16) performing haemoglobin test, 56% performing blood glucose test, and 19% performing pregnancy test. None of the CCs visited provided services for HIV or TB diagnostic tests. Our survey did not inquire about diagnostic capacity for urine protein test or urine glucose.

**Box 11. Diagnostic service provision**

Diagnostic service provision at CCs was limited both in coverage and range of diagnostic tests available.

**Availability of providers**

All CCs were intended to have CHCPs as the key service providers, who were full time staff providing mainly curative services. A female CHCP also provided ANC, PNC and growth monitoring services. When the CHCP was male, the FWA provided ANC and PNC services. If the CHCP was trained as a Community Skilled Birth Attendant (CSBA), she would also conduct child birth services in the CC.

In our study, HAs and FWAs were present only one or two days a week and not as expected per official instruction (three days per week at the CC for both cadres). Some of the FWAs reported that because they were taking care of more than one CC, plus the need to visit the communities, it was not possible for them to spend two or more days a week at a CC. Family planning services were not available if the FWA was absent. ANC/PNC was only provided when FWAs were present, unless the CHCP was female in which case she would provide ANC/PNC services. HAs provided routine vaccination services once a month in the CC; on other days they worked at EPI outreach sites and performed domiciliary field visits.

A rapid field assessment of CCs confirmed that 94.2% were open with a CHCP present in 86.5% on the day of visit to the CC (17). All CCs in a Western District of Bangladesh had CHCPs, while the HAs and FWAs varied across CCs (18). Our findings were similar, with the universal presence of CHCPs at the CCs and irregular attendance of HAs and FWAs. In three of the 16 CCs visited the post for FWA was vacant.

A shortage of FWAs and HAs hampers availability of full range of services at the CC. Overall part-time staff at a CC resulted in the lack of continuity of MNC&AH/family planning care.

For the CC to be fully functional, it is important to ensure that staff are present and performing their duties.

The CHCP was the only cadre trained to provide curative care, which made it difficult for a CHCP to take vacations (some of our interviewees reported not having taken vacations in several years). If they had to leave the CCs such as for training or meetings at the UHC, when possible, they coordinated with the FWAs and HAs to ensure that the CC remained open.

Some of the key informants interviewed expressed concerns regarding the contractual arrangements for CHCPs, which did not provide job security or additional benefits available to other public servants.

NIPORT reported that 2% of CHCP posts were vacant while vacancy rates varied between 9% and 50% for

“I work six days in the clinic, I cannot take leave. I cannot hand over any task to be performed in my absence. If I go on leave, I have to close the clinic during my leave period”

(Community health care provider)

“I struggle a lot for leave approval. There is no formal mechanism for this. I have to take permission from three people: Assistant Health Inspector, Health Inspector and the Upazila Health and Family Planning Officer”

(Community health care provider)
FWAs and HAs (19). Vacancy rates were highest in the Sylhet region. In our study areas there were no CHCP or HA vacancies but three CCs did not have a FWA assigned. As of November 2018, the total sanctioned posts for CHCPs was 13 491; 90% (12 181) of these were filled (52% female and 48% male) which meant a 10% vacancy rate.9

Six of the 16 CCs visited had one support staff (cleaner/guard) employed by the CG.

**Box 12. Availability of providers**

Our study confirmed previous findings that almost all CCs having a CHCP (10% vacancy rate). HAs (vaccinations) and FWAs (family planning) were present on a part-time basis, with staff not always on duty as per planned days; vacancies varied between 9% and 50%. Unless the CHCP was female and trained as CSBA, MNH services (including normal birthing and family planning services) were not continuously provided. Users were aware of their CC’s opening hours. Of the CC users interviewed, only a small percentage (12%) was aware which days a week the HA or FWA were available at the CC. The shortage of FWAs and HAs hindered the availability of specific services at the CC. The continuity of services was threatened by part-time staff, who were often less present than expected, at the health facility.

**Awareness of opening hours and services provided**

Our field survey showed that community members were aware of the existence of the clinic in their area and of its opening hours. All CCs visited reported that they opened six days a week for six hours a day. However, of the CC clients interviewed, only a small percentage (12%) was aware of the days when the HA or the FWA were available at the CC.

**Waiting time**

In the CCs visited, overall waiting time for accessing services was not perceived as a problem.

**Staff training and skills**

All three cadres at the CCs received their respective basic training with different durations. The CHCP received a basic training of 12 weeks (six weeks theory and six weeks practical). To be eligible for the training programme, they were required to have 12 years of schooling as well as computer literacy. Over the years, some of these three cadres underwent an intensive six-month training as **skilled birth attendants**, which provided them with the skills to conduct normal child birth services.

According to the CHCPs, FWAs and HAs interviewed, basic training prepared them to perform their duties well. However, they expressed the need for additional training to improve service delivery. Some of the training topics suggested were: functioning of CCs, working with CGs and CSGs, communication skills, managerial skills, clinical skills, record keeping, reporting and computer skills.

Refresher training for CHCPs was planned every two years and that the last refresher training was conducted in 2014. Key informant interviews revealed that CC staff often participated in short training events (of one or two days) organized by the various programmes. These trainings seemed to respond more to the perceived needs of the programmes than to an individual training needs assessment. Not all staff participated in all trainings; several of those interviewed had their last training in 2015.

To respond to the local demand, six (37.5%) of the CHCPs interviewed were trained as CSBAs, but only two of them were performing child birth services.

There is a need to review and update the job description for the various cadres. For example, job description for both FWA and HA does not include work at the CC. At the time of our evaluation, the MoHFW was developing a capacity building plan for CHWs. As part of this work, an effort was being made to redefine and harmonize the roles, responsibilities and authorities of CHWs at operational levels (26). The current CBHC operational plan has an option to revise the ToR for FWAs and HAs.

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Availability of medicines

Key informant interviews with health service providers revealed that medicines, commodities and logistics support for CCs were available from four various sources (CBHC, EPI, family planning data, Institute of Public Health Nutrition), and were as follows:

- medicines/instruments procured by CBHC from Essential Drug Company Limited supplied to the Upazila health office which the CHCP collected;
- contraceptive materials from DGFP supplied to FWAs through Upazila Family Planning Officer;
- nutritional necessities from NGOs and Institute of Public Health and Nutrition supplied directly to the CC;
- vaccines from the central EPI store supplied directly to the UHC & then to respective HAs.

Our evaluation did not assess the effectiveness or efficiency of these systems. However, some efficiency could likely be gained from having a less fragmented system.

A rapid field assessment of CCs found that 96% of patients received medicines during their visits (17). While 60% received all medicines they had been prescribed, 36.1% received only some of the medicines prescribed. Reported availability of essential medicines was around 80% (18).

In our facility survey, medicine supplies were reported to be regular. Some medicine shortages were noted and reported during informant interviews. Proper store keeping and inventory control mechanisms for medicines and supplies were not available.

Of the 27 available medicines supplied to CCs on the day of the visit (Table 7), 11 (including four available in all CCs) were available in 90% or more CCs; nine were available in 81%–87% of CCs; and seven were available in 56%–75% of CCs.

Table 7: Percentage of community clinics having medicines in stock on the day of the visit

<table>
<thead>
<tr>
<th>Name of medicine</th>
<th>Responses N=16 CCs</th>
<th>Percent of CCs having medicines in stock on the day of the visit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albendazole tablet 400mg</td>
<td>14</td>
<td>87.50%</td>
</tr>
<tr>
<td>Amoxicillin 125 mg (15ml)</td>
<td>14</td>
<td>87.50%</td>
</tr>
<tr>
<td>Amoxicillin 125 mg (100ml)</td>
<td>15</td>
<td>93.80%</td>
</tr>
<tr>
<td>Amoxicillin 250 mg capsule</td>
<td>12</td>
<td>75.00%</td>
</tr>
<tr>
<td>Antacid 650 mg</td>
<td>16</td>
<td>100.00%</td>
</tr>
<tr>
<td>Benzyl benzoate application</td>
<td>11</td>
<td>68.80%</td>
</tr>
<tr>
<td>Benzoic and salicylic acid ointment</td>
<td>9</td>
<td>56.20%</td>
</tr>
<tr>
<td>Chloramphenicol eye drop</td>
<td>14</td>
<td>87.50%</td>
</tr>
<tr>
<td>Chlorpheniramine maleate syrup</td>
<td>15</td>
<td>93.80%</td>
</tr>
<tr>
<td>Chlorpheniramine maleate tablet</td>
<td>12</td>
<td>75.00%</td>
</tr>
<tr>
<td>Cotrimoxazole 120 mg</td>
<td>16</td>
<td>100.00%</td>
</tr>
</tbody>
</table>
### Name of medicine

<table>
<thead>
<tr>
<th>Name of medicine</th>
<th>Responses N=16 CCs</th>
<th>Percent of CCs having medicines in stock on the day of the visit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cotrimoxazole 960 mg</td>
<td>14</td>
<td>87.50%</td>
</tr>
<tr>
<td>Calcium lactate 300 mg</td>
<td>14</td>
<td>87.50%</td>
</tr>
<tr>
<td>Ferrous fumarate and folic acid</td>
<td>16</td>
<td>100.00%</td>
</tr>
<tr>
<td>Gentian violet topical solution</td>
<td>12</td>
<td>75.00%</td>
</tr>
<tr>
<td>Neomycin/bacitracin 10 gm tube</td>
<td>13</td>
<td>81.20%</td>
</tr>
<tr>
<td>Metronidazole 400 mg (Nos)</td>
<td>10</td>
<td>62.50%</td>
</tr>
<tr>
<td>Hyoscine butyl-bromide 10 mg tube</td>
<td>13</td>
<td>81.20%</td>
</tr>
<tr>
<td>Oral rehydration saline</td>
<td>14</td>
<td>87.50%</td>
</tr>
<tr>
<td>Paracetamol suspension</td>
<td>13</td>
<td>81.20%</td>
</tr>
<tr>
<td>Paracetamol 500 tablet</td>
<td>16</td>
<td>100.00%</td>
</tr>
<tr>
<td>Penicillin V 250 mg (Nos)</td>
<td>12</td>
<td>75.00%</td>
</tr>
<tr>
<td>Salbutamol tablet 2 mg (Nos)</td>
<td>15</td>
<td>93.80%</td>
</tr>
<tr>
<td>Salbutamol syrup 2 mg</td>
<td>15</td>
<td>93.80%</td>
</tr>
<tr>
<td>Vitamin B complex tablet</td>
<td>15</td>
<td>93.80%</td>
</tr>
<tr>
<td>Vitamin A 2 Lac IU capsule</td>
<td>15</td>
<td>93.80%</td>
</tr>
<tr>
<td>Zinc dispersible tablet 20 mg</td>
<td>15</td>
<td>93.80%</td>
</tr>
</tbody>
</table>

Source: Facility survey data from our independent evaluation of CBHC services, 2018

### 4.2.4 WHAT WAS THE QUALITY AND RESPONSIVENESS OF THE SERVICES PROVIDED AT THE COMMUNITY CLINIC?

**Perceived quality of care**

Most respondents (80%) were satisfied with the behaviour of the service providers and 88% reported that the services provided by the CCs were of good quality (27). However, 63% considered the CC premises to be inadequate to provide quality ESP services. 56% felt that the service providers were adequately trained.

About 80% of clients were satisfied with service provider behaviour, but medicines were not adequate (19). Our study found that 96% of the participants (N=77) of the client exit survey got free medicines (one to four medicines).

Our client exit survey also showed that most of the respondents (92%) were satisfied with the services received: 66% satisfied and 26% very satisfied. 7% scored the service as average and only 1% of the respondents felt that the service was not good (Figure 8).

As to service provider behaviour, approximately 73% of users were satisfied with the behaviour of the provider during provision of services and 25% were very satisfied. Also, approximately 99% of the users reported that service providers treated them in a friendly and respectful manner; and 95% of the users confirmed that service providers gave them enough time.
BCC materials are generally considered a significant approach in public health to raise awareness on behavioural change towards improving quality of child health (27). All survey respondents confirmed that their CC had BCC materials displayed on the walls.

Our facility survey confirmed that the cleanliness of CCs was satisfactory. All CCs had color-coded bins for medical disposals. In addition, all CCs had good seating arrangements for waiting patients with sheds to provide shelter from sun and rain. Of the 16 CCs visited, two (12%) had no toilets, three (19%) had toilets with conditions rated as excellent by the researchers, and in 11 (69%) toilet conditions were rated as poor.

**Box 14. Perceived quality of care and satisfaction**
Client perception of quality of services received and provider behaviour scored “high” to “very high” over the years. Quality of care was constrained by discontinuity and vacancy in human resources; some medicine shortages; lack of systematic quality improvement; and irregular or inadequate supportive supervision. The literature on the quality of clinical care provided at the CCs was scarce.

**Monitoring and supervision**
Key informant interviews with Upazila Health and Family Planning Officers (UH&FPOs) and frontline service providers suggested that a team from the UHC be assigned the role of monitoring and supervision of CHCPs, HAs and FWAs. However, there was little coordination among all supervisors. These supervisors followed a monthly monitoring plan and used supervisory checklists primarily comprising of managerial aspects. Supervisory visits to the various cadres at CCs focused primarily on filling out the checklist, and not on assessing competency levels, or providing necessary feedback. The staff interviewed did not describe the supervision received as being supportive.

Monthly meetings of CC cadres were held at the UHC to discuss overall activities of health facilities at Upazila and CC levels. A separate monthly meeting with all CHCPs also took place. These meetings discussed technical issues (patient treatments), as well as issues about medicines and other supplies, and provided feedback on reporting.

**Quality of care provision in community clinics**
The quality of care provided in the CC in a study area in Western Bangladesh (18) was reported to be poor; diagnostic accuracy and rational use of drugs could improve. The frequency and quality of supportive supervisory visits remained inadequate. Irrational drug supply and administration regimens were found at the CCs, especially for antibiotics prescribed for children, which was reported to need urgent attention (18). Evaluators recommended standardized diagnostic and referral protocols for the CHCPs (21).
4.2.5 UTILIZATION: WHAT WAS THE PATTERN OF UTILIZATION OF SERVICES AT THE COMMUNITY CLINICS BY THE COMMUNITY?

Our analysis showed that the reported number of total patients seeking care at CCs increased over time. In 2017 more than 88 million patients sought care from CCs for minor ailments, compared to 55 million in 2014 (see Figure 3, Section 4.2.1). However, this was mainly due to an increase in reporting over the period. This trend was noted among all divisions (Figure 9).

An effective system for referral and counter-referral (bi-directional referral) was not in place. However, an overall referral pathway was in place:

- Community clinics (CCs): Referrals were first made to CCs from the field by HAs and FWAs for ANC/PNC, under-five children nutrition, health consultations for adult men, women, counselling service for adolescent girls/boys and for short term contraceptives (pill, condom).
- Family welfare centres (FWCs): Referrals were made to FWCs for contraceptive care (especially injectables, intra uterine devices), menstrual regulation and women with complicated pregnancies.
- Upazila Health Complex (UHC): Referrals were made from CCs to UHCs with a referral slip for advance level treatment; and for long term/permanent contraceptive requirements.
- Maternal and Child Welfare Centre (MCWC; under DGFP): Referrals were made to MCWC by FWAs for long term and permanent contraceptive, child delivery, menstrual regulation and ANC/PNC services.

CCs often referred patients to higher level facilities, particularly to the UHC, bypassing Union level facilities. A referral slip was not always used. Often the receiving facility was overloaded and did not have a system in place to receive referred patients in a prioritized way.

In March 2018, a pilot initiative for receiving CC referrals was launched at the UHC (CC corner at UHC). CHCPs at the UHC were responsible for receiving referred patients from CCs and for referring them to the proper service provider at the UHC. This CC corner was piloted in one of the visited UHCs, acting as gatekeepers for clients referred from CCs and directing them to specific consultants at the UHC (according to the assessment of the health problem). It was too early to assess the full potential of this initiative.

Follow-up of cases referred by HAs and FWAs was often done during field work and over the phone.

The challenges in building an effective referral and counter-referral system is summarized in Box 16.
Independent Evaluation of Community Based Health Services in Bangladesh

2014 (see Figure 3, Section 4.2.1). However, this was mainly due to an increase in reporting over the period. This trend was noted among all divisions (Figure 9).

Figure 9: Total number of patients treated by year and division (2014–2017)

![Graph showing total number of patients treated by year and division (2014–2017)]

Source: MIS, DGHS

As expected, more patients were treated in Dhaka and Rajshahi divisions, because of higher population density. When the average number of patients seen per month was computed, a decreasing trend was observed in terms of median number of patients per clinic per month, overall and in all divisions (Figure 10). On an average 43–62 clients per day received services at a CC (19). Recent DHIS2 data showed 500 to 600 contacts per month per CC, or 25 to 30 contacts per day.

Figure 10: Trends in median number of patients per month treated by community clinics

![Graph showing trends in median number of patients per month treated by community clinics]

Source: MIS, DGHS
Our client exits interviews showed that approximately 86% CC users got a service from a CHCP, 7% from an HA and 3% from a FWA (Figure 11).

**Figure 11: Service providers by category**

![Chart depicting service providers by category.]

Source: Team elaboration. Results of the client exit survey conducted as part of this independent evaluation of CBHC services, 2018; *Others: Community Skilled Birth Attendants (CSBA)

Our study confirmed curative care to be the most frequent service at 86% of the total followed ANC services that came second at a relatively low 8%. Utilization of other services was between only 1% (PNC, nutrition, adolescent health) and 3% (family planning). Most service users were women (77%). More information is needed about the health needs of men and whether CCs would be addressing those needs. Similarly, more information is needed on health seeking behaviour of the male population and the elderly (Figure 12).

**Figure 12: Percentage of community clinic visits per category of services**

While daily attendance at CCs was considerable (mainly for curative care), its importance in providing MNH services was limited as confirmed in a study reporting that only 1.3% of pregnant women received ANC services from CCs during their last pregnancy within the last three years of the survey while, overall, only 0.1% of child births were conducted by CHCPs (5). It appears that the irregular presence of HAs and FWAs at the CC may play a role in this utilization pattern, however an assessment of health seeking behaviours for visiting CCs was not addressed in this evaluation.
4.2.6 ACHIEVEMENT OF TARGETS OF THE CBHC OPERATIONAL PLAN

The achievement of targets and indicators of the CBHC programme, as defined in the 2011–2016 CBHC operational plan, is presented in Table 8. Most input indicators were on track; output and purpose indicators were lagging behind the set targets. The CBHC contributed to the achievement of goal indicators.

Table 8: Achievement of targets and indicators of the CBHC operational plan 2011–2016

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Achieved</th>
<th>Date, source</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Goal indicators</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduced infant mortality rate from 52 to 31/1000 live births by 2016</td>
<td>28.2</td>
<td>SVRS 2016</td>
</tr>
<tr>
<td>Reduced neonatal mortality rate from 37 to 21/1000 live births by 2016</td>
<td>19</td>
<td>SVRS 2016</td>
</tr>
<tr>
<td>Reduced prevalence of underweight children from 41% to 34% by 2016</td>
<td>33%</td>
<td>BDHS 2014</td>
</tr>
<tr>
<td><strong>Purpose indicators</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increased utilization of CCs, by about 200% by 2016 (from 19 to 40 patients day)</td>
<td>533 visits/month, approximately 22 per day (median for the year 2017)</td>
<td>2017 estimation from data provided by MIS, DGHS (Independent evaluation of CBHC services, 2018)</td>
</tr>
<tr>
<td>Increased number of patients referred to higher level health services with valid reason, by about 150% by 2016 (from 47 to 75 referrals per month).</td>
<td>(30 800 referrals in 2017 or one referral per 3000 contacts)</td>
<td>2017 estimation from data provided by MIS, DGHS (Independent evaluation of CBHC services, 2018)</td>
</tr>
<tr>
<td>Increased percentage of children, 6–24 months of age, fed with all infant and young children feeding practices from 41.5% to 52% by 2016</td>
<td>Not available</td>
<td></td>
</tr>
<tr>
<td><strong>Output indicators by 2016</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Established 13 500 CCs located in rural areas of Bangladesh with at least one trained CHCP and requisite medicines</td>
<td>13 079 CCs reporting</td>
<td>End of 2017 DHIS2/MIS/DGHS</td>
</tr>
<tr>
<td>13 500 CCs rendered services of MCH, essential service delivery, nutrition, family planning, geriatric care by participation of community people</td>
<td>13 442 (MCH, essential service delivery, nutrition, family planning services)</td>
<td>September 2017 Health Bulletin</td>
</tr>
<tr>
<td>13 500 CC management committee meetings held per quarter (at least 4 meetings/year) with participation of nominated local community; meeting minutes recorded and implemented</td>
<td>CGs meet once a month + minutes recorded</td>
<td>Facility survey (Independent evaluation of CBHC services, 2018)</td>
</tr>
<tr>
<td>100% of CCs provide growth monitoring services</td>
<td>100%</td>
<td>MIS, DGHS 2018</td>
</tr>
</tbody>
</table>
### 4.3 Efficiency

#### 4.3.1 UNIT COST OF SERVICES PROVIDED BY THE COMMUNITY CLINICS

The only study that calculated the unit cost of services at CC level, and the unit cost (drug, supplies and labour cost) of services across different delivery channels including CCs in Bangladesh applied an ingredient based costing approach using the One Health tool, which was customized to the context of Bangladesh (1). Information was collected from: purposively selected ESP delivery facilities, officials from national and subnational levels, as well as existing survey data, reports and documents.
Table 9 shows the unit cost of various services provided by CCs as calculated by the study. The cost of four ANC visits was about BDT 964, i.e. on average BDT 241 per ANC visit. The cost for family planning methods was BDT 165 and the cost of emergency care was BDT 154.

Table 9: Unit cost (in BDT) of services provided by community clinics

<table>
<thead>
<tr>
<th>Service</th>
<th>Components</th>
<th>Cost (in BDT)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Antenatal care (ANC)</strong></td>
<td>Daily iron and folic acid supplementation for four ANC visits</td>
<td>475.3</td>
</tr>
<tr>
<td></td>
<td>Calcium supplementation during four ANC visits</td>
<td>308.9</td>
</tr>
<tr>
<td></td>
<td>Tetanus toxoid</td>
<td>48.6</td>
</tr>
<tr>
<td></td>
<td>Screening, diagnostic tests and counselling for four ANC visits</td>
<td>112.9</td>
</tr>
<tr>
<td></td>
<td>Subtotal of ANC (only four components)</td>
<td>945.8</td>
</tr>
<tr>
<td></td>
<td>Identify and manage hypertension during ANC</td>
<td>9.3</td>
</tr>
<tr>
<td></td>
<td>Identify and manage pregnancy complications</td>
<td>9.3</td>
</tr>
<tr>
<td></td>
<td>Subtotal of ANC (all components)</td>
<td>964.4</td>
</tr>
<tr>
<td><strong>Normal child birth/delivery</strong></td>
<td>Personal and obstetric history, examination – fetal position and heartbeat, partograph, bimanual compression to stop uterus atony, institutional delivery and episiotomy</td>
<td>545.5</td>
</tr>
<tr>
<td></td>
<td>Third stage of labour management</td>
<td>85.9</td>
</tr>
<tr>
<td></td>
<td>Subtotal of normal delivery and episiotomy (institutional)</td>
<td>631.4</td>
</tr>
<tr>
<td><strong>PNC</strong></td>
<td>Counselling, postnatal clinical history, identification and management of postnatal anaemia</td>
<td>208.2</td>
</tr>
<tr>
<td></td>
<td>Maternal sepsis case management</td>
<td>9.4</td>
</tr>
<tr>
<td></td>
<td>Subtotal of PNC</td>
<td>217.6</td>
</tr>
<tr>
<td><strong>Neonatal health</strong></td>
<td>Immediate new-born care</td>
<td>71.2</td>
</tr>
<tr>
<td></td>
<td>New-born care</td>
<td>13.1</td>
</tr>
<tr>
<td></td>
<td>Subtotal of new-born care</td>
<td>84.3</td>
</tr>
<tr>
<td></td>
<td>Neonatal emergencies</td>
<td>266.1</td>
</tr>
<tr>
<td><strong>Child health and EPI</strong></td>
<td>Diarrhoea management</td>
<td>24.6</td>
</tr>
<tr>
<td></td>
<td>Acute respiratory infection</td>
<td>34.7</td>
</tr>
<tr>
<td></td>
<td>Other IMCI activities</td>
<td>29.3</td>
</tr>
<tr>
<td></td>
<td>Subtotal of IMCI</td>
<td>88.6</td>
</tr>
<tr>
<td></td>
<td>Subtotal of EPI activities</td>
<td>1925.1</td>
</tr>
<tr>
<td><strong>Adolescent health</strong></td>
<td>Counselling on puberty, safe sexual behaviour, mental health, HIV/AIDS, substance abuse, family planning information and provision, and prevention of early marriage</td>
<td>48.3</td>
</tr>
<tr>
<td></td>
<td>Subtotal of adolescent health</td>
<td>48.3</td>
</tr>
</tbody>
</table>

1 USD was equivalent to BDT 82.
<table>
<thead>
<tr>
<th>Service</th>
<th>Components</th>
<th>Cost (in BDT)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Child nutrition</strong></td>
<td>Subtotal of child nutrition</td>
<td>119.2</td>
</tr>
<tr>
<td><strong>Adolescent nutrition</strong></td>
<td>Assessment of nutritional status, and iron and folic acid supplementation</td>
<td>38.4</td>
</tr>
<tr>
<td><strong>Maternal nutrition</strong></td>
<td>Subtotal of maternal nutrition</td>
<td>91.0</td>
</tr>
<tr>
<td><strong>Diabetes mellitus</strong></td>
<td>Diagnosis, identification and referral of long-term complications</td>
<td>27.9</td>
</tr>
<tr>
<td><strong>Breast cancer</strong></td>
<td>Awareness and screening</td>
<td>56.8</td>
</tr>
<tr>
<td><strong>Chronic obstructive pulmonary disease</strong></td>
<td>Counselling on smoking cessation</td>
<td>18.8</td>
</tr>
<tr>
<td><strong>Sexual and gender based violence</strong></td>
<td>Case identification and recognition</td>
<td>27.9</td>
</tr>
<tr>
<td><strong>NCD screening and management based on total risk assessment</strong></td>
<td></td>
<td>37.2</td>
</tr>
<tr>
<td><strong>Arsenicosis</strong></td>
<td>Counselling on the consumption of safe water</td>
<td>9.3</td>
</tr>
<tr>
<td><strong>Hypertension</strong></td>
<td>Promote healthy lifestyle for hypertension and other NCD control</td>
<td>27.9</td>
</tr>
<tr>
<td></td>
<td>Diagnosis of hypertension</td>
<td>18.6</td>
</tr>
<tr>
<td></td>
<td>Identify and refer cardiovascular disease</td>
<td>9.3</td>
</tr>
<tr>
<td></td>
<td>Subtotal of hypertension</td>
<td>55.9</td>
</tr>
<tr>
<td><strong>Family planning and Reproductive health</strong></td>
<td>Subtotal of preconception care</td>
<td>42.8</td>
</tr>
<tr>
<td></td>
<td>Subtotal of family planning</td>
<td>164.6</td>
</tr>
<tr>
<td><strong>Management of other common conditions</strong></td>
<td>Eye care</td>
<td>26.8</td>
</tr>
<tr>
<td></td>
<td>Ear care</td>
<td>35.8</td>
</tr>
<tr>
<td></td>
<td>Dental care (promotion of oral hygiene)</td>
<td>9.3</td>
</tr>
<tr>
<td></td>
<td>Treatment of common skin diseases</td>
<td>75.1</td>
</tr>
<tr>
<td></td>
<td>Emergency care</td>
<td>153.7</td>
</tr>
</tbody>
</table>

*Source: (1)*
4.3.2 UNIT COST OF SERVICES PROVIDED BY OTHER COMMUNITY PROGRAMMES IN BANGLADESH

Few programmes in Bangladesh or elsewhere were directly comparable with CCs. Grameen Kalyan Micro Health Insurance scheme, where the health care provider was a paramedic, could be comparable to some extent. However, there was no costing study of this scheme. Smiling Sun clinics, especially vital ones, were also distantly comparable to CCs to some extent. Only two studies had calculated unit cost of services of Smiling Sun clinics based on a standard protocol, one was for urban clinics and other was mainly for rural clinics.

We reviewed the findings of the rural clinic costing study, as all CCs were based in rural areas. The primary goal of this earlier study was to assess the economic resources needed to provide essential services and estimate per unit costs of providing those services among NGO clinics. A stratified sampling method was used to select 18 static clinics (12 from rural and 6 from urban) of a list of 330 clinics under the Smiling Sun network in Bangladesh. The sample stratification was done by place (rural versus urban), size (large versus small), and type (ultra versus vital) of clinic. The cost estimated from the providers’ perspective employed a mixed costing method (both bottom-up and top-down methods). The costing approach developed by USAID’s Health Finance and Governance project was adopted, considering costs of both direct (i.e. labour, laboratory tests, medicines and supplies) and indirect resources (i.e. supporting staff, building, utilities and equipment) at both the NGO and clinic levels to deliver a service. The cost components included costs of direct labour, overheads, laboratory tests, and medicine and supplies. There were 1115 observations (clients) in total from 18 static clinics for 13 primary care services.

Table 10 shows the estimated unit cost of Smiling Sun clinics in the rural study. The average cost of all types of services, apart from family planning, was higher in Smiling Sun clinics compared to those found in CCs in an earlier study (as shown in Table 8). The average cost of an ANC visit was BDT 555 in Smiling Sun clinics compared to BDT 241 at CCs.

Table 10: Unit costs of services (in BDT) in Smiling Sun clinics

<table>
<thead>
<tr>
<th>Service</th>
<th>Unit cost in BDT per visit (on an average)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antenatal care</td>
<td>555±425</td>
</tr>
<tr>
<td>Postnatal care</td>
<td>360±343</td>
</tr>
<tr>
<td>Control of diarrhoeal diseases</td>
<td>104±71</td>
</tr>
<tr>
<td>Acute respiratory infection</td>
<td>121±76</td>
</tr>
<tr>
<td>Integrated management of child illness</td>
<td>159±229</td>
</tr>
<tr>
<td>Sexually transmitted infection</td>
<td>371±327</td>
</tr>
<tr>
<td>Reproductive tract infection</td>
<td>281±229</td>
</tr>
<tr>
<td>Tuberculosis</td>
<td>3288±1786</td>
</tr>
<tr>
<td>Limited curative care</td>
<td>339±297</td>
</tr>
<tr>
<td>Expanded programme on immunization</td>
<td>176±24</td>
</tr>
<tr>
<td>Family planning</td>
<td>57±23</td>
</tr>
<tr>
<td>Child birth/delivery</td>
<td>2325±800</td>
</tr>
<tr>
<td>Caesarean section</td>
<td>9063±676</td>
</tr>
</tbody>
</table>

Source: (29)

11 The Smiling Sun clinics, a USAID funded scheme, offered comprehensive ESP that included maternal health care, child health care, family planning services, and limited curative care including diagnosis and treatment of communicable diseases. The vital clinics (employing both static and satellite clinics) offered ESP with basic laboratory services excluding child birth services. Some vital clinics had ultrasound services. The ultra clinics offered the full range of ESP services with 24 hours emergency obstetric care services, i.e. normal and C-section births/deliveries, extended laboratory services, and ultrasonography. A vital static clinic consisted of the following full-time providers: one MBBS doctor, 1-2 paramedics, one counselor, one laboratory technician, and one service promoter. An ultra-static clinic consisted of 3-5 full time MBBS doctors, 3-4 paramedics, and 4 labor room attendants. In addition, a gynaecologist, an anaesthesiologist, and one sonologist provided services on an on-call basis.
4.3.3 COMPARISON OF UNIT COST OF SERVICES PROVIDED BY COMMUNITY CLINICS WITH OTHER COMMUNITY PROGRAMMES IN BANGLADESH

It is not rational to compare the unit cost of services between the results of the two studies depicted in Tables 9 and 10 for two reasons. First, compared to a CC which is run by a CHCP, Smiling Sun clinics were better staffed with MBBS doctors, paramedics, nurses, laboratory technicians, among others. Second, the methodology of the two studies is widely different: the cost calculated for CCs was not protocol based (11) while the cost calculated for Smiling Sun clinics was based on a standard protocol (29). The former study considered only drug supply and labour cost whereas the latter considered costs of overheads, direct labour, laboratory tests, and medicine and supplies. Also, the operational definition of these services may have been different in these studies.

4.3.4 AVAILABILITY OF BASIC EQUIPMENT AND MEDICINES ON THE DAY OF THE SURVEY

Table 5 in subsection 4.2.3 presents assessment of availability of basic equipment on the day of the visit. Uninterrupted supply of crucial medicines is important for services provided by CCs. Primary data also showed that some common medicines were not available at least in 25% of CCs (Table 11).

Table 11: Availability of medicines in community clinics on the day of the survey

<table>
<thead>
<tr>
<th>Medicine</th>
<th>% of CC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzyl benzoate application (25% w/v) (100 ml bottle)</td>
<td>68.75</td>
</tr>
<tr>
<td>Benzoic and salicylic acid ointment 1 kg (benzoic acid 6% + salicylic acid 3%) jar</td>
<td>56.25</td>
</tr>
<tr>
<td>Chlorpheniramine maleate tablet 4 mg (nos)</td>
<td>75</td>
</tr>
<tr>
<td>Gentian violet 2o/o topical solution 10 ml (bottle)</td>
<td>75</td>
</tr>
<tr>
<td>Metronidazole tablet 400 mg (nos)</td>
<td>62.5</td>
</tr>
<tr>
<td>Penicillin-V tablet 250 mg (nos)</td>
<td>75</td>
</tr>
</tbody>
</table>

Source: Primary data collected during field work by the team.

4.3.5 OVERALL COSTS OF COMMUNITY CLINICS

The breakdown of the recurrent costs for fiscal year 2017–18 from our study illustrates the cost structure of CCs based on available data received from CBHC programme headquarters (Table 12). The total recurrent expenditure budget of the CBHC programme was BDT 6373.7 million of which 95% was spent. The total budget for capital components of BDT 1131.4 million was almost entirely spent. Together, these constituted about 0.21% of the national budget and 3.84% of the health budget in the fiscal year 2017–18. About half of the budget was allocated for salaries and allowances for CHCPs while medicines constituted nearly 30% of the share. Budget allocated for training was 5.39%. However, 23% of the allocated budget for training remained unspent. As CHCPs received only three months of basic training, they would need to undergo further trainings including refresher training at regular intervals to maintain and increase their capacity. Thus, the allocated budget for training needs to be spent properly so that all CHCPs receive training, including regular refresher trainings. The CBHC programme was very reluctant to spend on supervision and monitoring. This lack of adequate budget may lead to poor supervision and monitoring, which eventually could render the programme inefficient and ineffective. The budget share for repairs and maintenance was also miniscule (about 1%).

An increasing trend in apportionment of government budget to the CBHC was observed with allocation almost doubling during the last five-year period (from BDT 3917.80 million in 2012–13 to BDT 7687.10 million in 2017–18). The total allocation for the CBHC programme was still a small proportion of both the national budget (0.21%) and overall health budget (3.84%). Given the growth in GDP and a board of trustees recently formed to operate the CCs, the GoB can continue spending for the CBHC programme. As a trust can accept donations from domestic and international sources, it has given additional impetus to
CCs to further move towards institutional as well as financial sustainability. Even during the period of our evaluation, unlike other public facilities, CCs could accept funds from the community. CCs used this fund for the payment of electricity and other utilities bills, repairs and maintenance, cleanliness, among others. Although the contribution was still infinitesimal (about BDT 211 lakhs or 0.27% of government allocation) (Table 12), there is scope for increasing this contribution by making CGs and CSGs more functional.

Table 12: Overall recurrent costs of CBHC programme for year 2017–18

<table>
<thead>
<tr>
<th>Item</th>
<th>Budget</th>
<th>Expenditure</th>
<th>Balance</th>
<th>Portion of budget</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BDT (million)</td>
<td>%</td>
<td>BDT (million)</td>
<td>%</td>
</tr>
<tr>
<td>Salary of the head office level staff</td>
<td>2.50</td>
<td>0.04</td>
<td>0.79</td>
<td>0.01</td>
</tr>
<tr>
<td>Salary of CHCP</td>
<td>1810.00</td>
<td>28.40</td>
<td>1748.69</td>
<td>28.81</td>
</tr>
<tr>
<td>Allowance</td>
<td>1387.60</td>
<td>21.77</td>
<td>1341.44</td>
<td>22.10</td>
</tr>
<tr>
<td>Medicine</td>
<td>1812.79</td>
<td>28.44</td>
<td>1812.07</td>
<td>29.86</td>
</tr>
<tr>
<td>Medical and surgical supplies</td>
<td>213.61</td>
<td>3.35</td>
<td>203.34</td>
<td>3.35</td>
</tr>
<tr>
<td>Training (local)</td>
<td>343.50</td>
<td>5.39</td>
<td>264.01</td>
<td>4.35</td>
</tr>
<tr>
<td>Training (foreign)</td>
<td>30.00</td>
<td>0.47</td>
<td>29.98</td>
<td>0.49</td>
</tr>
<tr>
<td>Survey/ supervision and monitoring</td>
<td>13.50</td>
<td>0.21</td>
<td>13.50</td>
<td>0.22</td>
</tr>
<tr>
<td>Other supplies and services</td>
<td>695.67</td>
<td>10.91</td>
<td>592.34</td>
<td>9.76</td>
</tr>
<tr>
<td>Repair and maintenance</td>
<td>64.54</td>
<td>1.01</td>
<td>62.73</td>
<td>1.03</td>
</tr>
<tr>
<td>Total</td>
<td>6373.70</td>
<td>100</td>
<td>6068.90</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Data from our independent evaluation of CBHC services, 2018

4.3.6 COST PER SERVICE DELIVERED BY COMMUNITY CLINICS

Our survey estimated the average cost of treatment of a patient visiting a CC using service utilization data from DHIS2 and expenditure data from CBHC headquarters. CHCP, as the single provider in a CC, served all the patients attending the CC. As CCs provided basic primary care, it was assumed that there would not be much variation among the patients regarding time spent by the CHCP as well as in the medication and supplements provided. Cost of supply of medicines, vaccines and supplements to CCs varied considerably, depending on the distance from the CC to the supply centre. However, these costs were taken as average across all facilities, independent of distance. Thus, irrespective of the type of services provided by CCs, expenses incurred for a patient, on average, were presumed to be similar.

Health services utilization data obtained from DHIS2 showed a sharp increase in the total reported number of patients visiting CCs: from 10 million in 2014 to 80.7 million in 2015. Utilization of services continued to increase steadily in the following years: 86.9 million in 2016 to 88.4 million in 2017. About 15% of total visits were related to family planning services (this was much higher than our survey findings from client exit interviews). Total visits for health services were about 75.05 million, after deducting 13.38 million visits for family planning. As the cost of family planning services (both human resources and family planning products) was not borne by the CBHC programme, family planning visits were excluded for calculating the unit cost of services. Instead, visits for health services were considered as the denominator for calculating the unit cost of services delivered by CCs.

For calculating expenditure, both recurrent and capital investments were considered – actual value for the former and annualized value for the latter. Recurrent expenditure included salary and allowances for CHCPs, salary and allowances for the staff of CBHC headquarters, remuneration of CBHC programme
consultants, expenses for the procurement of medicines and supplies, both local and foreign training, utilities and other services, as well as for repair and maintenance (Table 12). Capital investment comprised motor vehicles, machinery and other equipment, computer accessories and software, furniture and fixtures, electrical equipment and installations, among others. The total recurrent cost plus annualized capital cost was BDT 6418.18 million. Hence the average cost of a visit was BDT 85.52 (USD 1.02) of which medicines accounted for about 28% of the cost. This was not comparable to the unit cost found in an earlier study (1) the unit cost of CCs was calculated by service category; but it was significantly lower than the costs incurred for visiting an informal health care provider, i.e. BDT 275 (USD 3.27) (2).

4.3.7 COST–BENEFIT ANALYSIS OF COMMUNITY CLINICS

For calculating benefit–cost ratio of services delivered by CCs, direct medical cost savings and direct nonmedical cost savings were considered. However, indirect costs, such as loss of work time for patients and attendants visiting a CC, were not included because significant expense would not be associated with this as CCs are located very close to the households. The value of health outcomes generated by services delivered by CCs were also not included.

Direct medical cost savings were derived from the difference in accrued expenses on medicines of the CBHC programme and expenditure that would actually be incurred by the beneficiaries if CCs were not revitalized (Table 13). In the absence of CCs, presumably, people would seek health from somewhere else (such as a pharmacy, village doctor, UHC, private MBBS doctor, private hospitals/clinics). For this the patient would pay the maximum retail price for medicines, which is usually 10–20% higher than for government procurement expenses (28). We collected data of all medicines (by type and volume) procured in 2017–18 from CBHC programme headquarters, and unit prices of medicines from local medicine stores located near the 16 CCs.

Table 13: Cost savings from medicines

<table>
<thead>
<tr>
<th>Name of medicine</th>
<th>Procurement plan for CBHC 2017–18*</th>
<th>Average unit price in BDT (maximum retail price)**</th>
<th>Total cost (BDT)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>a</td>
<td>b</td>
<td>c</td>
</tr>
<tr>
<td>Albendazole tablet 400 mg (nos)</td>
<td>10 582 800</td>
<td>5</td>
<td>52 914 000</td>
</tr>
<tr>
<td>Amoxicillin 125 mg / 5 ml powder for suspension (bottle)</td>
<td>881 900</td>
<td>47.5</td>
<td>41 890 250</td>
</tr>
<tr>
<td>Amoxicillin 125 mg/ 1.25 ml powder for paediatric drop,(bottle)</td>
<td>1 058 280</td>
<td>47.5</td>
<td>50 268 300</td>
</tr>
<tr>
<td>Amoxicillin 250 mg capsule (nos)</td>
<td>44 095 000</td>
<td>3.5</td>
<td>154 332 500</td>
</tr>
<tr>
<td>Antacid chewable tablet 650 mg (aluminium hydroxide 250 mg + magnesium hydroxide 400 mg) (nos)</td>
<td>264 570 000</td>
<td>2</td>
<td>529 140 000</td>
</tr>
<tr>
<td>Benzoic and salicylic acid ointment 1 kg (benzoic acid 6% + salicylic acid 3%) jar</td>
<td>88 190</td>
<td>20</td>
<td>1 763 800</td>
</tr>
<tr>
<td>Benzyl benzoate application (25% w/v) (bottle)</td>
<td>529 140</td>
<td>32.07</td>
<td>16 969 519.8</td>
</tr>
<tr>
<td>Calcium lactate tablet 300 mg (nos)</td>
<td>132 285 000</td>
<td>1</td>
<td>132 285 000</td>
</tr>
<tr>
<td>Chloramphenicol eye drop 0.5%, (bottle)</td>
<td>2 116 560</td>
<td>35</td>
<td>74 079 600</td>
</tr>
<tr>
<td>Chlorpheniramine maleate syrup (2 mg/5 ml) (60 ml bottle)</td>
<td>2 116 560</td>
<td>21.85</td>
<td>46 246 836</td>
</tr>
<tr>
<td>Chlorpheniramine maleate tablet 4 mg (nos)</td>
<td>132 285 000</td>
<td>0.5</td>
<td>66 142 500</td>
</tr>
<tr>
<td>Cotrimoxazole tablet 120 mg (sulfamethoxazole 100 mg + trimethoprim 20 mg) (nos)</td>
<td>44 095 000</td>
<td>1.5</td>
<td>66 142 500</td>
</tr>
<tr>
<td>Cotrimoxazole tablet 960 mg (sulphamethoxazole 800 mg + trimethoprim 160 mg) (nos)</td>
<td>8 819 000</td>
<td>2</td>
<td>17 638 000</td>
</tr>
<tr>
<td>Ferrous fumarate and folic acid tablet 200.40 mg (ferrous fumarate 400 mg + folic acid 0.40 mg) (nos)</td>
<td>264 570 000</td>
<td>1</td>
<td>264 570 000</td>
</tr>
<tr>
<td>Gentian violet 2o/o topical solution 10 ml (bottle)</td>
<td>881 900</td>
<td>10</td>
<td>8 819 000</td>
</tr>
<tr>
<td>Hyoscine butyI-bromide tablet 10 mg</td>
<td>4 409 500</td>
<td>1.8</td>
<td>7 937 100</td>
</tr>
<tr>
<td>Metronidazole tablet 400 mg (nos)</td>
<td>66 142 500</td>
<td>1.5</td>
<td>99 213 750</td>
</tr>
</tbody>
</table>
3.27) significantly lower than the costs incurred for visiting an informal health care provider, i.e. BDT 275 (USD 3.27) found in an earlier study (1).

The annualized capital cost was BDT 6418.18 million. Hence the average cost of a visit was BDT 85.52 (USD 1.14) comprised motor vehicles, machinery and other equipment, computer accessories and software, furniture and fixtures, electrical equipment and installations, among others. The total recurrent cost plus government procurement expenses (such as a pharmacy, village doctor, UHC, private MBBS doctor, private hospitals/clinics). For this the CBHC programme and expenditure that would actually be incurred by the beneficiaries if CCs were not revitalized, and the difference between the two is considered as savings.

Direct medical cost savings were derived from the difference in accrued expenses on medicines of the patient. The CHCP, as the single provider in a CC, served all the patients attending the CC. As CCs provided basic primary care, it was assumed that there would not be much variation among the patients regarding time spent by the CHCP as well as in the medication and attendants visiting a CC, were not included because significant expense would not be associated with them. This assumption is supported by the findings of our survey that 86.9% of the patients in CCs used the service three times or more and 4.3% used it up to 2 times in 2017–18.

Costs incurred if CCs were not revitalized (in million) ****

<table>
<thead>
<tr>
<th>Type of service providers</th>
<th>Choice of provider by rural people* %</th>
<th>Distribution of the total visits in CCs in 2017–18, by choice of provider</th>
<th>Average consultation fees per visit**</th>
<th>Total costs that would incur</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>b</td>
<td>c = b*75046046</td>
<td>d</td>
<td>e = c*d</td>
</tr>
<tr>
<td>Pharmacy/dispensary/compounder</td>
<td>32.79</td>
<td>24 607 598</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Nonqualified doctor’s chamber/kabira/hekim/ayurved/Other traditional peer/fakir/tantric/ojha/boidaya</td>
<td>28.3</td>
<td>21 238 031</td>
<td>59</td>
<td>1 253 043 830</td>
</tr>
<tr>
<td>Public***</td>
<td>11.89</td>
<td>8 922 975</td>
<td>27</td>
<td>240 920 321.5</td>
</tr>
<tr>
<td>Private and NGOs</td>
<td>23.81</td>
<td>17 868 464</td>
<td>239</td>
<td>4 270 562 789</td>
</tr>
</tbody>
</table>

Costs incurred if CCs were not revitalized (in million) ****

5 764 526 941

Costs incurred if CCs were not revitalized (in million) ****

5 764.53

Source:
* CBHC headquarters data;
** Data collected by the evaluation team, from local drug stores using structural questionnaire

Table 14: Cost savings from consultation fees

<table>
<thead>
<tr>
<th>Name of medicine</th>
<th>Procurement plan for CBHC 2017–18*</th>
<th>Average unit price in BDT (maximum retail price)**</th>
<th>Total cost (BDT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neomycin and bacitracin skin ointment (10 gm tube)</td>
<td>881 900</td>
<td>15</td>
<td>13 228 500</td>
</tr>
<tr>
<td>Oral rehydration solution (for 0.5 litre solution) (sachet)</td>
<td>38 803 600</td>
<td>5</td>
<td>194 018 000</td>
</tr>
<tr>
<td>Paracetamol suspension (120 mg/5 ml) (bottle)</td>
<td>5 291 400</td>
<td>20</td>
<td>105 828 000</td>
</tr>
<tr>
<td>Paracetamol tablet 500 mg (nos)</td>
<td>264 570 000</td>
<td>0.8</td>
<td>211 656 000</td>
</tr>
<tr>
<td>Penicillin-V tablet 250 mg (nos)</td>
<td>8 819 000</td>
<td>2.2</td>
<td>19 401 800</td>
</tr>
<tr>
<td>Salbutamol syrup (2 mg/5 ml) (bottle)</td>
<td>2 116 560</td>
<td>22</td>
<td>46 564 320</td>
</tr>
<tr>
<td>Salbutamol tablet 2 mg (nos)</td>
<td>44 095 000</td>
<td>0.3</td>
<td>13 228 500</td>
</tr>
<tr>
<td>Vitamin-A 2 lac IU capsule (nos)</td>
<td>1 763 800</td>
<td>7</td>
<td>12 346 600</td>
</tr>
<tr>
<td>Vitamin-B-complex tablet (thiamine b1) 5 mg + riboflavin 2 mg + nicotinamide (b3) 20 mg + pyridoxine (86) 2 mg (nos)</td>
<td>264 570 000</td>
<td>0.5</td>
<td>132 285 000</td>
</tr>
<tr>
<td>Zinc dispersible tablet 20 mg (nos)</td>
<td>44 095 000</td>
<td>2.75</td>
<td>121 261 250</td>
</tr>
<tr>
<td>Total value</td>
<td>2 500 170 626</td>
<td>2 500.17</td>
<td></td>
</tr>
<tr>
<td>Total in cost price (procurement costs of medicines for all CC) (see Table 11) (in million)</td>
<td>1 812.07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost savings from medicines (in million)</td>
<td></td>
<td>688.10</td>
<td></td>
</tr>
</tbody>
</table>

Source:
* Household Income and Expenditure Survey (HIES) 2016
** Independent evaluation of CBHC, primary survey of provider using a questionnaire
*** Drugs and other expenses
**** People using CCs now would have otherwise visited other facilities that charge consultation fees
Direct nonmedical cost savings were derived from avoidance of travel costs (Table 15). Patients, other than referral cases, who visited CCs would not need to travel to distant health facilities. Hence, revitalization of CCs leads to savings in any travel costs.

**Table 15: Cost savings from travel expenses**

<table>
<thead>
<tr>
<th>Type of service providers</th>
<th>Choice of provider by rural people* %</th>
<th>Distribution of the total visits to CCs in 2017–18, by choice of provider</th>
<th>Average travel cost per visit**</th>
<th>Total travel costs that would incur</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>b</td>
<td>c = b*75046046</td>
<td>d</td>
<td>e = c*d</td>
</tr>
<tr>
<td>Pharmacy/dispensary/compounder</td>
<td>32.79</td>
<td>246,075,98.48</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Nonqualified doctor’s chamber/kabiraj/hekim/ayurbed and other traditional peer/fakir/tantric/qjha/boidya</td>
<td>28.3</td>
<td>21,238,031.02</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Public</td>
<td>11.89</td>
<td>8,922,974.86</td>
<td>75</td>
<td>669,223,115.2</td>
</tr>
<tr>
<td>Private and NGOs</td>
<td>23.81</td>
<td>17,868,463.55</td>
<td>60</td>
<td>1,072,107,813</td>
</tr>
<tr>
<td>Costs incurred if CCs were not revitalized</td>
<td></td>
<td>1,741,330,928</td>
<td></td>
<td>1,741.33</td>
</tr>
<tr>
<td>Costs incurred if CCs were not revitalized (in million) ***</td>
<td></td>
<td>1,741.33</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source:
* Household Income and Expenditure Survey (HIES) 2016
** (28)
*** As CCs were located very close to patients’ homes, little or no travel cost was required. In the absence of CCs, people would visit other providers and hence would incur some travel costs

For calculating costs, the contribution of the GoB to the CBHC programme in the fiscal year 2017–18 (both recurrent and annualized value of capital costs), fees charged to beneficiaries in some CCs and contribution of the community (Table 16) were mainly considered. Some NGOs provided supplementary care to the community. However, expenses incurred by the NGOs due to not having a direct link to the services provided by CCs were not included. Information about expenditure incurred by NGOs was also not available.

The results of the cost–benefit analysis showed that total accrued benefits outweighed total costs and, hence, the net-benefit of BDT 1511.51 million (USD 18.00 million) was a substantial figure. The benefit–cost ratio was 1.23, which implied that BDT 100 (USD 1.19 USD) investment in CCs generated a benefit of BDT 123 (USD 1.46) which was higher than any conventional investment. Thus, investment in CCs can yield 23% financial benefit subject to equipping the CHCPs with adequate medical training and necessary equipment.

**Table 16: Results of the cost–benefit analysis**

<table>
<thead>
<tr>
<th>Type of benefit</th>
<th>Magnitude BDT (in million)</th>
<th>Magnitude USD (in million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost savings from medicines *</td>
<td>688.10</td>
<td>8.19</td>
</tr>
<tr>
<td>Cost savings from consultation **</td>
<td>5764.53</td>
<td>68.63</td>
</tr>
<tr>
<td>Cost savings from travel costs ***</td>
<td>1741.33</td>
<td>20.73</td>
</tr>
<tr>
<td>Total cost savings</td>
<td>8193.96</td>
<td>97.55</td>
</tr>
</tbody>
</table>
in most cases, CG membership was self-selected with only few community individuals being involved; in most CGs the UP member was the CG chair, while in the remainder, the land owner or his/her representative was the chair; only 8% had less than four female members; most (70%) CGs had 17 members while the remaining had 10–16 members; CGs and CSGs were formed in almost all of the CCs surveyed (23):

The literature review provided the following information about the formation and functioning of CGs/CSGs:

4.4.2 HAVE CGS AND CSGS BEEN FORMED AND WERE THEY OPERATING AS PER THE GUIDELINES?

Members held on a monthly basis the roles and responsibilities and meetings of the CG and CSG members were to be trained in their roles and responsibilities and meetings of the CG and CSG representatives were to be held on a monthly basis.

The main functions of CGs and CSGs were to: generate a degree of ownership of the services provided by CCs; act as links between service providers and users; promote community health; and assist communities through a public–private partnership.

Most CCs were built, was donated by the local government. The local health authorities were appointed to run each CC, and the CHCP was appointed to run each CC. The CHCP was appointed to run each CC, and the CHCP was appointed to run each CC.

For calculating costs, the contribution of the GoB to the CBHC programme in the fiscal year 2017–18 (both recurrent and annualized value of capital costs), fees charged to beneficiaries in some CCs and contribution of the community (Table 16) were mainly considered. Some NGOs provided supplementary care to the community. However, expenses incurred by the NGOs due to not having a direct link to the services provided by CCs were not included. Information about expenditure incurred by NGOs was also not available.

The results of the cost–benefit analysis showed that total accrued benefits outweighed total costs and, hence, the net-benefit of BDT 1511.51 million (USD 18.00 million) was a substantial figure. The benefit–cost ratio was 1.23, which implied that BDT 100 (USD 1.19 USD) investment in CCs generated a benefit of BDT 123 (USD 1.46) which was higher than any conventional investment. Thus, investment in CCs can yield 23% financial benefit subject to equipping the CHCPs with adequate medical training and necessary equipment.

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4.4 Community engagement

4.4.1 POLICY GUIDELINES FOR COMMUNITY ENGAGEMENT

The CC policy defines mechanisms for engagement between each CC and the community it serves through the CGs and CSGs. The CG concept was introduced since the inception of the CC, initially called management committee. The CSG concept was introduced in 2013 based on the experience of a JICA supported project (30).
CGs were to be made up of at least 12 of the following members (23):

- President: Elected UP member.
- Vice President: Land donor or his/her representative. Among the President and Vice-president, one must be female.
- Treasurer: Selected by CG members.
- Member Secretary: CHCP was to be Member Secretary (without voting power).
- Members (eight): Selected/elected from different groups of people of the CC catchment areas, such as the poor, landless, freedom fighter, social worker, female UP member, religious leader, adolescents.¹²

Each CG was to be supported by three CSGs each with 13–17 members (23) with at least one third women members. CG members were given training by local health authorities on security, cleanliness and day-to-day maintenance issues before the opening of a clinic. The CHCP, appointed to run each CC, acted as the member secretary to convene monthly CG meetings. The land, upon which most CCs were built, was donated by the local community, through a public–private partnership.

The main functions of CGs and CSGs were to: act as links between service providers and users, promote community health, and assist with maintenance of the CC. This strategy was expected to motivate communities and generate a degree of ownership of the community (6).

CG and CSG members were to be trained in their roles and responsibilities and meetings of the CG members held on a monthly basis (31). CSGs were to meet bi-monthly.

### 4.4.2 HAVE CGS AND CSGS BEEN FORMED AND WERE THEY OPERATING AS PER THE GUIDELINES?

The literature review provided the following information about the formation and functioning of CGs/CSGs:

CGs and CSGs were formed in almost all of the CCs surveyed (23), and the majority were formed according to RCHCIB project guidelines:

- most (70%) CGs had 17 members while the remaining had 10–16 members;
- only 8% had less than four female members;
- in most CGs the UP member was the CG chair, while in the remainder, the land owner or his representative was the chair;
- in most cases, CG membership was self-selected with only few community individuals being involved;

---

¹² Other documents describe slightly different CG compositions, such as: each CC with one managing body, i.e. community group (CG), which is formed with the participation of the local community including women, teachers, adolescents, representatives of poor landless and local representatives. Community clinics in Bangladesh: Bringing health care to the doorstep of rural people. Geneva: World Health Organization (http://www.searo.who.int/mediacentre/events/community-clinic-bangladesh-story.pdf, accessed 14 August 2019).
most (62%) of the CGs had met within the past month, while 19% had met one to two months previously; in 11% it was over three months since the last meeting;

- 80% of CGs kept proper records of meetings, 10% kept incomplete records while the remainder kept no records;

- only 30% of clinics had formed all three of the recommended CSGs, while 11% had formed one or two CSGs, suggesting that most CCs had not formed any CSGs;

- while CG members received a half day training about the purpose of the CG and their role, most did not consider this training adequate and felt unsure about their role in the CG.

CCs performed better when there were well-functioning CGs and CSGs, active participation of a UP member facilitated good performance of CGs, and a well-functioning CG made CC health workers more accountable (32).

In Godagari (18,33) and throughout Rajshahi (18) where DASCOH was providing support to the project, the following was observed:

- all 10 CCs in Godagari had established a CG and three CSGs. 75% of these CGs had the right balance of gender and socioeconomic strata as indicated in the CC policy. Not all clinics had the right number of females reportedly because there was no eligible candidate;

- in Rajshahi, on average there were 16 members per CG with around one third of members being female;

- in Rajshahi, 64% of all clinics had CSGs with three CSGs per CC catchment area, in most cases;

- the average number of CSG members in Rajshahi was eight with just under a quarter of members being female;

- all CG/CSG members had received training;\(^{13}\)

- in the quarter prior to the assessment, all seven of the 10 Godagari CGs had met on a monthly basis as recommended by the CC policy; while the remaining three had met twice;

- in Rajshahi 50% of the CG meetings were reported to be held “regularly” but the data suggested that 42 CCs had not held meetings in the past six months;

- around 90% of Rajshahi CGs kept minutes of their meetings.

The project completion report of a project managed by Plan International at two Upazilas of Lalmonirhat district\(^ {14}\) indicated that it is important to ensure continued capacity building support to CGs, CSGs, and local government offices for smooth operation of CCs. This report also mentioned that while CGs and CSGs were formed to work closely, they actually worked in isolation.

A rapid assessment of CCs showed that CGs and CSG were in place in all CCs but that CGs were more active than CSGs (17). CGs were found to play an active role in local resource generation and supported day-to-day management activities in the CC. CSG members were unclear about their role and CSGs tended to work in isolation from the CG.

A nationwide rapid assessment of over 400 CCs (21) found that 95% had a functioning CGs that reported regular meetings. Most CG members had received some training. The most common reason cited for the absence of a functioning CG was a lack of funds.

Findings from our facility survey regarding the formation and functioning of CGs/CSGs were as follows:

\(^{13}\) The training consisted of modules on: the importance of CCs; structure of a CG and formation process; roles and responsibilities of CG members; information collection, resources and problem identification and preparation of annual plan of CC area; support group formation and community mobilization; fund generation, its use and maintenance; monitoring and evaluation and overall supervision of CC activities.

\(^ {14}\) Project completion report of the community managed health care programme implemented by Eco-Social Development Organization, managed by Plan International at two Upazilas in Sadar and Aditmari of Lalmonirhat district from 2013 to 2015.
All CCs had a CG to support the CC. There were 15–17 members in each group. All but one of the 16 CCs surveyed reported having three CSGs with an overall average of 13 members. The CG met every month. The evaluation team was not able to gather information on the frequency of CSG meetings. All CCs had registers in which monthly CG minutes, as monthly resolution, were noted by the CHCP. However, CSG bi-monthly meeting resolutions were not found anywhere. Of the 268 CG members in our sample, 38% (102) were female. The number of female members in the CGs varied between three and 12 per CG (Table 17).

Table 17: Number of female community group members supporting community clinics

<table>
<thead>
<tr>
<th>Number of Female CG members supporting community clinics</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of Female CG members</td>
</tr>
<tr>
<td>Number of CCs</td>
</tr>
</tbody>
</table>

Source: Facility survey: Independent evaluation of CBHC services, 2018

There were no reported problems in the establishment of either the CG or CSG (UH&FPO took the initiative for their creation). In most cases some CG members had received training on their roles and responsibilities of one or two days.

Box 18. Community groups and community support groups

Of the CGs and CSGs organized across the country, CGs appear to be more active and are meeting more regularly than CSGs.

Most respondents felt that it was important to involve adolescents in the work of CGs/CSGs, as recommended in the guidelines. Their participation was felt to be beneficial for a number of reasons: (i) adolescents had more free time to dedicate to the work of the groups (such as helping organize EPI camps) and (ii) adolescents would find it easier to access their peers with messages about drugs and sexual health, rather than older health workers. Only one reported having no adolescents participant in the CG.

Detailed data on the management and operation of CGs and CSGs was scarce. Assessments from the early introduction of CCs, referred to limited community involvement. “The overall picture is of limited community involvement. CGs were set up late, and they have responsibility but feel that they have too little power. CGs have not been effective in monitoring service delivery and quality, and (probably correctly) see themselves as being at risk of blame from the local population for problems not of their making. The lack of knowledge of their membership, roles and powers suggests limited engagement from the communities with this attempt at participation” (34). Some of the same challenges faced by CGs in the early days were also observed in the later years, such as the need for additional capacity building and better understanding of their roles.

4.4.3 WHAT ACTIVITIES WERE THE CGS/CSGS ACTUALLY UNDERTAKING?

Annual work plans were developed by CGs, but in less than a third of CCs; and since the establishment of CGs, its members considered that the opening hours of the clinics they supervised had improved and become more regular (19).

All 10 Godagari CGs were involved in local annual planning exercises for their CCs, however there was less evidence of involvement in local plans in other parts of Rajshahi (18,33). While members of 76% CGs in Rajshahi reported that they visited their CCs ‘regularly’, members of all Godagari CGs and 93% CGs overall in Rajshahi attended the CC each time a new medicines kit arrived. Despite this, there was poor performance in the maintenance of medicines registers. There was no formal mechanism for the monitoring and evaluation of CCs although informal periodic monitoring visits by CG members did take place. There was no monitoring or evaluation of community participation as this was perceived to be the responsibility of CSGs.

The establishment of CCs allowed rural people, even from remote rural areas to avail health, family planning and nutrition services under one roof in which CG members actively participated in their management (35).
Findings from our facility survey regarding roles and responsibilities of the CGs/CSGs were as follows:

The commonest activity for both CGs (87%) and CSGs (75%) was to pass on messages to the community to build awareness within the community on the services provided at the CC. Other reported activities included: maintenance and minor repairs to CCs (CG – 10 CCs); fundraising, cleaning the CC compound and keeping the CC building safe and secure (CG – 5 CCs), and paying for a cleaner and/or electricity bills (CG – 3 CCs). CSGs were much less involved in the above listed activities (only at 1 CC).

Services to be provided at each CC were determined by national policy and consequently the CG had a very limited role in determining what services would be available at each CC or participating in definition of service priorities. However, with support from CGs and the local government, some CCs established provision of child birth/delivery services. CGs in some cases contributed to improving delivery of services through minor infrastructure improvements and ensuring that funds were available for electricity bills and minor repairs.

What do CG/CSG members perceive as their role?

In our survey, CG/CSG members put forward a variety of roles and responsibilities as they understood them to be:

- Monitor activities of the CHCP to ensure that the CC was open for the agreed time (most frequently cited activity).
- Inform community members about CC services and encourage sick people to attend the clinic\(^{15}\) (second most frequently cited activity).
- Manage medical supplies received by the CC. Many members confirmed that they would assist in transporting medicines to the clinic, but mainly that they were present when the medical supplies were unpacked and assisted in record keeping of the medical supplies (third most frequently cited activity).
- Less frequently cited responsibilities included: paying for cleaners, maintenance of the clinic, paying utility bills, seeking the views of community members about CC services, attending monthly meetings, organizing local community volunteers to participate in national campaign events (such as Vitamin A Campaign, national immunization days), supporting the referral of impoverished community members to attend the UHC when referred by the CC.

There was no evidence of any of the CGs surveyed being involved in any planning exercises, such as resource mapping in their Upazila.

Most respondents felt that the CC project was now well embedded and would continue. Two respondents felt that a change in government could put the programme at risk, as had happened previously.

What do the health workers think of as the benefits of CGs/CSGs?

Health workers (CHCPs, FWAs, HAs) views on functioning of CGs were mixed. Around half mentioned experiencing difficulties in organizing meetings but also felt that their services benefitted from the involvement of the CG. The other half reported significant difficulties in gaining cooperation. The difficulties experienced were mostly among CG members not attending meetings and not providing assistance in solving problems.

The roles of CG members, as reported by the CHCP were: (i) being present when medicine supplies were received, opened and recorded, (ii) fund raising, (iii) CC maintenance and minor new works, (iv) explaining the role of the CC to community members, particularly in relation to the use of medicines,\(^{16}\) and (v)

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\(^{15}\) When pressed specifically on this issue, almost all CG/CSG respondents indicated that they saw motivating clients to attend the CC as one of their roles.

\(^{16}\) When there was stock-out of medicines at CC, clients sometimes got irritated and misbehaved. In such situations, the CG members helped by explaining about the real situation to the clients.
motivating people, particularly pregnant women, to attend the CC. But CHCPs felt that many CG/CSG members did not fully understand their roles or lacked the necessary education to undertake their role of supervising a CC. In a number of instances, CG/CSG members were seen to use their position in the group to gain preferential access to free medical supplies.

The active involvement of an interested-UP member seemed to be very beneficial as this facilitated access to UP funds to help in the running of the clinic.

Another benefit of an active CG/CSG was found to be improved security.

More difficulties were experienced in organizing CSG meetings as it was felt that CSG members had less of an understanding of their roles and that the members had other priorities.

There is some evidence \((18, 19, 33)\) that CG members were involved in the preparation of local plans. In one Upazila in Rajshahi, where an NGO had been active in supporting the formation and operation of CGs and CSGs, all CCs were involved in planning, but this was less common in other Upazilas in the division. Only one third of the sampled CCs had the CG involved in annual planning exercises. In our study, none of the CGs mentioned involvement in planning exercises as being one of their roles.

### 4.4.4 COMMUNITIES INVOLVED IN LOCAL FUND GENERATION (CASH AND IN KIND) AND FUND UTILIZATION

<table>
<thead>
<tr>
<th>Box 19. Roles of CGs and CSGs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literature reviews and results from our study suggest that CG/CSG members see their primary roles as one of assisting with the operation and management of CCs, including monitoring their activities:</td>
</tr>
<tr>
<td><strong>Most CGs perceived their role to be:</strong></td>
</tr>
<tr>
<td>➢ monitoring the opening hours of their CC to ensure that services were provided according to schedule;</td>
</tr>
<tr>
<td>➢ encouraging the use of the CC by community members and to inform community members about available services;</td>
</tr>
<tr>
<td>➢ assisting in addressing problems faced in the CC (paying for cleaners, guards, electricity bills, repairs) although, because of inadequate funds at their disposal, their ability to provide such support was limited;</td>
</tr>
<tr>
<td>➢ being present when medicine supplies were received to ensure transparency over what supplies were available (many, but not all CGs considered it as their role).</td>
</tr>
</tbody>
</table>

In our study, CGs and CSGs were primarily involved in raising awareness within the community on services provided at the CC. Other reported activities conducted by CGs included: maintenance and minor repairs; fundraising; cleaning the CC compound; keeping the CC building safe and secure; paying for a cleaner and/or electricity bills; being present when medicines supplies arrived at the CC.

CGs were more constrained in their ability to support aspects of management that required funding (such as for electricity, cleaners) as the resources they had available were very limited.

CG members were more likely to become involved in the preparation of local plans in places where NGOs had supported the formation and operation of CGs and CSGs or supported Upazila and Union level health services.

While the government was responsible for CC staff salaries, the provision of medicines as well as the various CC forms and registers and a laptop computer for the CC, all other costs were the responsibility of the CC. These costs could include that for electricity for clinic lighting, employment of a cleaner and security guards, soap and other cleaning products, as well as costs associated with the routine running of CGs and CSGs.

One role of the CGs, with the help of the CSGs, was to support local fund generation for CCs and ensure the transparent use of any funds raised.

Evidence on income generation by CGs provided in the literature is presented below.

➢ The initiative for revitalization of CCs was able to mobilize resources and support both from the public (i.e UP) and private sectors, NGOs as well as individuals. Support was provided in cash or in kind for
rehabilitation and repair of infrastructure, provision of furniture and equipment (36) It was also reported that 93% (12 283/13 117) of CCs generated local funds that were kept in bank accounts and used for development of the CC as per decision of the CG.

่า About, 95% respondents manifested having a management committee (which later became the CG) at the CC (21). Approximately half of the respondents (53%) were in favour of the management committee raising money, while 40% disapproved it. The money raised was used for buying medicines for the poor and women (8%), for cleaning and maintenance (6%) and for repairs (2%). Only 5% reported that people were not interested in giving money. On the other hand, 25% thought that raising one taka per patient was acceptable.

่า In NGO-supported CCs in Rajshahi most members focused on obtaining funds from their supporting NGO and were unclear on the need to generate additional funds to sustain the CC (18,33). An aborted initiative to generate funds (from patients) in one clinic seems to have discouraged other initiatives elsewhere.17

่า Godagari CG meetings were successful in gaining UP level support for: the provision of CC caretakers in a number of CCs, successfully facilitating electricity connections to some clinics, and construction for a boundary wall for one clinic.

่า A quarter of CGs raised their own funds of BDT 130–BDT 13 000 through donations from both CG members and the community (19). Support in kind, through gifts of office equipment, maintenance and minor construction as well as cleaning of the clinic were reported from many CCs.

่า Only 4% CGs had previously raised funds for the CC that were used for purchasing medicines for the poor, and for cleaning and maintenance (21). A small majority of respondents (53%) felt that CGs should raise funds for CCs, while a significant minority (40%) felt such activities were inappropriate. A charge of one BDT per patient was thought to be an appropriate charge by a quarter of respondents. Nearly 72% respondents felt shortage of funds to be the greatest problem faced in the work of the CG.

### Community clinic local financing

All 16 CCs had opened bank accounts, but four reported that their accounts were either closed or in abeyance as they had no funds. The reported sources of funds for clinic activities are shown in Table 18.

**Table 18: Source of funds for community clinics**

<table>
<thead>
<tr>
<th>Source of funds</th>
<th>Number of clinics reporting (N=16)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Membership fees (from CG members)</td>
<td>4</td>
</tr>
<tr>
<td>CG member donations</td>
<td>2</td>
</tr>
<tr>
<td>Patient registration fees</td>
<td>4</td>
</tr>
<tr>
<td>User fees from patients</td>
<td>5</td>
</tr>
<tr>
<td>fees for tests*</td>
<td>1</td>
</tr>
<tr>
<td>Community donations</td>
<td>5</td>
</tr>
<tr>
<td>Union Parishad local government support programme</td>
<td>2</td>
</tr>
<tr>
<td>From staff contributions</td>
<td>1</td>
</tr>
<tr>
<td>From training allowances</td>
<td>2</td>
</tr>
<tr>
<td>Not known</td>
<td>4</td>
</tr>
<tr>
<td>Do not raise revenue</td>
<td>8</td>
</tr>
</tbody>
</table>

Source: Facility survey from our independent evaluation of CBHC services, 2018.

* Small amount of funds were collected from blood sugar, pregnancy check payments.

17 This initiative had been stopped by the UH&FPO
From the 16 CCs, 13 (93%) responded that the CG took a decision on ad hoc basis and established routine charges of BDT 2 or BDT 5 to be paid by the patient.

Several CCs were charging for registration or services, usually with some ad hoc exemption scheme for the poor. Our evaluation found that the charges levied were low; CHCP and CG members felt that the charges would be affordable for most people.

Nine CGs with funds in their bank accounts reported holding BDT 1036–BDT 18 300 (USD 12–220) with an average of BDT 6000 (five had less than BDG 6000, three had between BDT 6000–9000 while one had over BDT 9000).

Many CG members felt that it should be the government’s responsibility to fund CC functions, such as the UP Local Government Support Programme (UP-LGSP); the Social Welfare Fund and the ‘Government’ were mentioned as potential sources of funds for the CC. A number of CCs were successful in obtaining support from their UP–LGSP. On the whole, CG/CSG members considered CCs as a government responsibility and consequently there was little motivation to raise funds for the clinic.

Only one CG was able to describe a process for the expenditure of CG funds: the CG bank account was managed by three signatories (president, cashier, CHCP). Expenditure decisions were made in the CG monthly meeting with decisions reported in the CG register. Most CGs that had available funds, reported that spending decisions were made on an ad hoc basis with no formal procedures to approve expenditures. Reporting and accountability mechanisms were absent.

Most CG respondents reported that their CGs assisted, on an ad hoc basis, in the transport of poor patients who were referred from the CC to the UPC or to the hospital. In many cases the funds for this support were not from CG funds, but from CG members either paying for or providing the transport.

Similarly, it would appear that, in some cases, CC staff paid for refreshments as an incentive to attract CG/CSG members to attend meetings.

How were the funds spent at the surveyed community clinics?

Table 19: Use of funds generated at community clinics

<table>
<thead>
<tr>
<th>Use of funds</th>
<th>Number of clinics reporting (N=16)</th>
</tr>
</thead>
<tbody>
<tr>
<td>To provide medicines for the poor and women</td>
<td>1</td>
</tr>
<tr>
<td>To employ cleaner</td>
<td>2</td>
</tr>
<tr>
<td>Refreshment budget for CG/CSG meetings or CC visitors</td>
<td>2</td>
</tr>
<tr>
<td>To pay electricity bill</td>
<td>1</td>
</tr>
<tr>
<td>To pay for CC maintenance</td>
<td>6</td>
</tr>
<tr>
<td>Tube well construction</td>
<td>1</td>
</tr>
<tr>
<td>No funds</td>
<td>8</td>
</tr>
</tbody>
</table>

Source: Facility survey from our independent evaluation of CBHC services, 2018.
4.5 Discussion: Posthoc theory of change

Evaluation findings were used to develop a posthoc theory of change. In this section, the posthoc theory of change has been used to assess how inputs and outputs led to outcomes and impact in the CBHC programme.

The original CBHC concept and policies focused on improving access to, utilization of and ensuring the provision of ESP. During our evaluation, the focus of the CHBC programme was on health systems strengthening and integration into the health system, concern for efficiency and efficient systems, and quality of care with greater focus on gender and equity to achieve universal health coverage.

The CBHC concept is well developed, but implementation puts a greater focus on curative services than on preventive and promotive services for a well-established catchment population. Services provided by CCs tend to be more reactive to people's demands (such as for curative services to older clients).

Compared to the 2014 BHFS (23), our survey suggests that the provision of ESP services has improved substantially. Key services included in the ESP were available in most CCs. Curative services represented the largest proportion of services provided at the CC. The provision of other services, such as MNCH, family planning, adolescent health, nutrition services and other promotive and preventive services were rather limited. This was in part due to CHCP bring present six days a week in the CC, while the other two cadres (the FWAs and the HAs) were not present in the CCs as intended (three days a week each) due to demands of their outreach and field work. This arrangement had implications for continuity of services at the CC. Quality of services can be potentially compromised as skills can be lost due to low provision of certain services. The presence of these three cadres could be optimized, e.g. if the FWA and HA are visiting the same communities for different purposes, it would require adjustments to their professional profile and job descriptions. There is a need to question if the field work of the FWAs and HAs providing the expected outputs and impact.

Over the years, for a streamlined set of agreed outputs the portfolio of services and tasks to be performed at the CC has increased. For example, normal child birth services were conducted in some CCs where the CHCP was trained as CSBA. As of March 2018, 3058 CCs were conducting child birth services (38). CCs also started screening for diabetes and hypertension. Caution is advised to ensure that the CC portfolio remains feasible, effective and efficient, and responsive to emerging needs, such as NCDs. The establishment of maternity services at CCs merits a more in-depth reflection, to take into consideration among others resource implications and quality of this endeavour.
CHBC concept and policies focus on improving access to, utilization of and ensuring the provision of the ESP. Current focus is on health system strengthening and integration into the health system, conceiving for efficiency and efficient systems, quality of care, greater focus on gender and equity, with a view to achieve universal health coverage.
Table 20: Posthoc theory of change, assessment of inputs and outputs

<table>
<thead>
<tr>
<th>Inputs</th>
<th>Outputs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Construction of new CCs or renovation and maintenance of existing CCs (including provision of basic amenities)</td>
<td>1. CCs in place and operational</td>
</tr>
<tr>
<td>2. Adequate job descriptions and training programmes for CHCPs, FWAs, HAs</td>
<td>II. Effective CHCPs, FWAs and HAs employed at CCs. Agreed equipment, IEC materials and medicines continuously available for use</td>
</tr>
<tr>
<td>3. Training, coaching, empowering and employment of CHCPs, FWAs, HAs</td>
<td>Refresher training was provided, but it was fragmented, primarily responding to the needs of the various programmes (i.e. EPI, family planning, MNH, national events and others), and not necessarily to a training needs assessment of the various cadres to fully cater to ESP and NCDs. Coordination between these cadres towards joint plans, targets and priorities for service provision can be enhanced. There was limited revenue budget for training and refresher training with a low budget execution. Alternative options for more effective capacity building can be explored, such as coaching. CHCPs expressed concern over being contracted as project staff and not under the revenue budget (as would be preferable as this would allow them to receive the same benefits as other</td>
</tr>
</tbody>
</table>

The country target is to have 14,890 functioning CCs by 2022. As of December 2017, there were 13,079 CCs functioning and reporting services, i.e. approximately 1 CC per 12,000 people, which is a major achievement. For the operation of CCs, the central government provided salaries, medicines, equipment, and there was a minor budget line for maintenance. Recurrent costs for water, electricity, minor repairs, additional cadres (such as cleaner, guard) were covered by fundraising activities organized by CGs and CSGs. The CGs had difficulties in mobilizing resources for CCs.

Most previous studies (21,23–25) confirmed that infrastructure, including amenities (electricity, water, toilets), was inadequate, except for Internet services that scored better than that at UH&FWC. Our facility survey confirmed the unsatisfactory conditions in up to half of the facilities surveyed, but noted some improvements compared to 2009, especially regarding electricity and water supply. Poorly maintained or serviced facilities constrain the quality of services provided.
| 3. Training, coaching, empowering and employment of CHCPs, FWAs, HAs | public employees). For some of them this created insecurity and demotivation. Some CHCPs decided to leave the system. There were vacant posts in all these cadres (but less so for CHCP), which has implications for continuity and quality of services. The introduction of a new cadre – “multipurpose health volunteer (MHV)” – added to this complexity. |
| 4. Procurement and distribution of agreed medicines to CCs as per needs | There were several channels for procurement and distribution of medicines that could be streamlined. Medical supply improved; 27 different drugs were supplied regularly, however shortages of medicines were experienced. Medicines were dispensed at no cost to those demanding services. The same medicine kit was being provided to all facilities, disregarding the health profile, which has the potential for a mismatch between supply and demand and an accumulation of drugs of low demand. |
| 5. Procurement and distribution of essential equipment and IEC materials | Basic equipment was not always available, which hindered the readiness of CCs to provide services. IEC materials were available at the CC (i.e. we observed posters, flyers, were informed of availability of television in some CCs). Our evaluation did not explore issues regarding the use of this material and the effectiveness of communications tools and activities available to CC staff. |
| 6. Training, coaching and empowering of CGs and CSGs for each CC | III. Functioning CGs and CSGs undertake agreed roles in support of CCs |

CGs and CSGs were created at all CCs. A one-time training for CG and CSG members took place but was not tailored to the educational level of the participants. Over time new members were integrated and others left the groups. Therefore, as expected some CG and CSG members had limited knowledge and understanding of their roles and responsibilities.

CGs were functioning better than CSGs; in part due to the involvement of the CHCP as the Secretary of the CG and the role of the Chair of the CG (the local member of the UP). CSGs were formed in communities belonging to the catchment area of the CCs. As the CHCP does not conduct field work, it was not possible for him/her to support these groups effectively. Furthermore, most of the CHCPs did not have the skills or experience to work as a community organizer/mobilizer, and were therefore not well equipped for this task.

Members of these groups need to be coached (i.e. role in meetings, support in planning and organizing) and empowered. There is a need to assess what possible mechanisms can be put in place to provide effective support to CGs and CSGs. NGOs have played an important role in supporting the implementation of community health systems (CGs and CSGs), building their capacities to operate and providing follow-up.

Our study revealed that CG/CSG members see their primary role as one of assisting with the operation and management of CCs including: to ensure services were provided according to schedule by monitoring the opening hours of their CC; to encourage the use of the CCs by community members and to inform community members about available services; to assist in addressing problems faced in the CC (paying for cleaners, guards, electricity bills, repairs) although, because of inadequate funds at their disposal, their ability to provide such support was limited. Many, but not all CGs saw it as their role to...
be present when medicine supplies were received to ensure transparency over what supplies were available.

CGs and CSGs could play a social audit role and be pro-active in holding the government accountable for the provision of health services.

### 7. Development of effective referral system
Referrals of patients were taking place, but the number of referrals was very low (at 1 per 3000 visits, all services included). Modalities for referral to the higher level have been defined, but referrals often bypassed the next level of the health system. Feedback and counter-referrals were not systematically done; and an effective referral system is yet to be established. All CC staff were referring patients to higher level facilities. From our field work it appears that CCs mostly referred patients to the UHC or district hospitals. Union level facilities were often by-passed as they were perceived as not being fully operational. The use of referral slips was not generalized. Usually the receiving facilities were not ready to receive referred patients.

The CC corner at the UHC was an initiative being tested at some UHCs to facilitate referred patients from CCs to have a contact point that could guide them to the required service within the UHC.

While referrals for family planning increased from 2016 to 2017, all other referrals (hypertension, diabetes, children) decreased, and referrals for pregnancy and child birth plateaued. For all causes (30,800 referrals nationwide in 2017) the referral rate was 0.035% of all contacts or one referral per 3000 contacts. The overall number of referrals was so low because of the inability of the CCs to provide adequate care. Where the patient understands that his/her condition is critical, s/he may by-pass the CC.

### 8. Development of effective supervisory system for CCs
CHCPs met monthly at the UHC. Supervision was being carried out by a mix of cadres, focusing on management issues and not technical or clinical issues. Standard checklists were used during supervision. These visits were not always perceived as supportive, and feedback with a view of learning was not systematically provided.

### 9. HMIS/DHIS2 established for CC
MIS was well established using online DHIS2 software, and data were displayed through dashboards and annual health bulletins at different tiers of the system. As of December 2017, 13,079 CCs were reporting. Availability of Internet at a CC was sometimes a problem and CHCPs had to use their phones to transfer data from home. Much more needs to be done to ensure accuracy, completeness and reliability of data. There were concerns over the number of registers that had to be filled out every month. Interviewees estimated that recording and reporting consumed approximately 30% percent of the CHCP time.

The data available were not analysed regularly and not yet being used for decision making at CC level.

Absence of demographic data on the CC catchment area was a constraint to conduct some necessary analysis, such as service coverage.
Laptops/tablets were procured. BDHS 2014 reported that 41.5% of CCs had computers with Internet connection (5). 75% of the CCs visited had a laptop/tablet/ipad. While CHCPs were trained in data recording and reporting using the DHIS2 software, FWAs and HAs were not trained in the use of the software. They expressed interest in receiving this training.

As indicated above in the discussion on concept, inputs and outputs, although the functioning of the CCs improved during 2014–2017, there were numerous constrains. All those issues can however be addressed or mitigated to achieve the ultimate outcomes mentioned below. The main concern, from a conceptual point of view, is the added value of the CC as first contact point for people, which is operating with a greater emphasis on reactive curative care services than on proactive promotive and preventive services, dealing with the main public health issues affecting the catchment population. There is a need for revitalization of the union level facilities for curative services and strengthening of promotive, preventive and public health functions for CCs. From an operational point of view, the greatest risk was ensuring employment conditions, remuneration and motivation of CHCPs. From an efficiency point of view, effective coordination of the three main cadres would greatly improve services with available resources. The cost–benefit analysis showed that investment in CCs yields 23% return with benefits outweighing costs; but only if all inputs are correctly provided and quality services are delivered.

**Ultimate outcomes**

**Increased demand for and utilization of preventive, promotive and curative services from CCs**

Demand for promotive and preventive services from CCs was low. Curative care consultations, as reported in HMIS, increased over the four-year period. The major increase occurred between 2014 and 2015, suggesting improved reporting. Curative services represented the largest proportion of services provided by CCs (86%); and the average client was older (43% were 30–59 years old and 17% were above 60 years of age; while 23% were 35–44 years old and 26% were 45+ years of age (19). Factors that may be influencing this demand included the availability of free medicines and because the CHCP (with primarily a curative care profile) was the only provider available six days a week. More efforts are needed to understand care seeking behaviour in the wider community and also to implement BCC activities to foster demand for promotive and preventive services.

**Increased provision of ANC, child birth, PNC, neonatal, child, adolescent health and family planning services**

4.5.1 Total reported ANC consultations, child birth services and family planning consultations increased over the four-year period. Most of the reported increase for all services occurred between 2014 and 2015, plateauing thereafter from 2015 to 2017, suggesting improved reporting. Child birth services were provided only where there was a trained CSBA. The number of annual normal child births provided at CCs more than doubled from 6094 conducted in 2014 to 14 934 conducted in 2017 (37). This represented an average of five child birth services per year per CC. There was a doubling of reported family planning consultations for all three methods (oral contraceptives, condoms and injectables) between 2014 and 2017, caused again by improved reporting during 2014–2015.
4.5.2 Except for curative care (and to some extent family planning), the median number of specific services reported (from MIS and DGHS, 2017) as provided by the average CC was low; at six ANC1, three ANC4 per month; nine children with diarrhoea, four children with pneumonia or one child with measles per month; one referred case per 3000 patients contacts. Underreporting or mistakes in reporting to MIS could hide some higher level of services provided by the CC. Low frequencies of provision of specific services (including child births) raises a question about maintaining specific skills and quality of service provision.

Our study did not inquire into health care seeking behaviour of the population or the reasons for people to use the CC. More research on these aspects is needed.

Increased provision of preventive and promotive services from CCs

Preventive services provided at the CC included EPI services, growth monitoring and provision of micronutrients. Promotion services include health education talks in schools, at the CC waiting area, health counselling during patient–client encounters and interpersonal communication activities during field work.

Without the knowledge of the size, composition and profile of the catchment population it was difficult for CC staff to effectively plan the coverage of these services.

Increased referrals for NCDs (hypertension and diabetes) and high-risk pregnancies

These services were not yet being widely provided at the CC. The number of screened patients increased since 2014, with a larger increases in 2016 and 2017. There was an increase in the number of referrals for hypertension and diabetes between 2015 and 2016, and a decline in 2017 as compared to 2016. Data on the number of referrals for high-risk pregnancies was not available to the team.

Impact

| Increased life expectancy. Reduced prevalence of underweight children. |
| Reduced maternal and infant mortality rates |

Impact was not assessed by the evaluation team. From the above it is clear that CCs, as a first line primary health care provider, have the potential to contribute substantially to increasing life expectancy, especially through health promotion and prevention, and reducing mortality and malnutrition. This could however be strongly enhanced by optimizing all inputs, ensuring continuity of quality service provision and establishing the right balance between preventive, promotive and selected curative care.
Conclusions and lessons learnt

5.1 Conclusions

Overall conclusion

CBHC is highly relevant, and the GoB has to be commended for the commitment and investments made (although history has shown that discontinuity of government support resulted in substantial waste of invested resources). CBHC effectiveness was hampered by a number of constraints such as: (i) nature of services provided (mix of promotive/preventive/curative/care); (ii) availability of human resources (lack of clarity between roles of the three cadres of staff; lack of substitutivity between staff; numbers of staff and skills available; CC lead staff not much involved in preventive/promotive outreach, domiciliary tasks); (iii) discontinuity of services; (iv) gaps in logistics; (v) suboptimal support roles (UHC, union level facilities, referral system); (vi) suboptimal organization of community engagement (CGs, CSGs).

While the programme could be cost-efficient and a worthwhile investment (cost–benefit analysis (CBA) 23%) and has great potential to contribute to impact, some constrution make it a bit ineffective in the way it operates today. But all constraints can be easily addressed.

Relevance

Through the years, CBHC services in Bangladesh have been aligned with national policies as defined in successive national health sector plans. The country has made progress in the implementation of CBHC policies, but full implementation faces challenges. In 1998, the CC concept was introduced to implement the policy to provide ESP at the doorstep. The implementation of the RCBHCIB responded to the policy’s need for increasing access and utilization of health services (2009–2015). Later on, the CBHC operational plan struggled to effectively contribute to the delivery of quality and equitable health care (2011–2016). The current policy challenge for 2017–2022 is to continue improving on equity and access to quality health care and to improve efficiency and effectiveness in service delivery as the country moves towards universal health coverage.

The 2017–2022 CBHC operational plan of the 4th HPNSP emphasizes the strengthening of the UHS. Currently, linkages within the various levels of care within the UHS are not fully operational. Furthermore, several lines of authority and responsibility persist, contributing to difficulties in integration and coordination, leading to some duplication and inefficiencies.

CBHC design is relevant to the health needs of the population. As the epidemiological profile changes and CCs become functional, there would be additional demands for broadening the scope of services and tasks to be conducted by the CCs. Increasing the scope while ensuring quality services requires careful analysis and strategizing (such as for child birth care). Clear policy and guidance on these issues is of the utmost importance (see lessons learnt).

Effectiveness

Established CCs were functioning as the first point of contact for an integrated ESP package for rural people in Bangladesh. The CCs were mostly centrally located and generally widely accessible by paved roads. The majority of CC users belonged to lower socioeconomic groups in the community and were female. Overall, users were satisfied with the quality of services provided.

The large majority of users attended CCs for selected curative care and to some extent MNCH care and family planning services. The other ESP components, such as nutrition, child health, adolescent health, BCC, NCDs, provided not up to the desired level. Child birth care services were available in 6.5% of all CCs, but actual child births were rare (on average five child births per year in CCs providing this service). Essential equipment and logistics were inadequate. Basic laboratory facilities were not always available. The MIS is operating through an online system in half of the facilities. While the total number of reported CC users doubled from 2014 to 2017, the main increase was from 2014 to 2015, suggesting that the
increase is mainly due to the increased numbers of CCs and improved reporting. Referrals were minimal. Domiciliary visits by HAs and FWAs, EPI outreach and satellite clinics took place. However, presence of HAs and FWAs in the CCs was irregular and less than expected in the CC design, which affected continuity of services. There is scope for improving coordination between HAs, FWAs and CHCPs to ensure better continuity in the provision of essential services. More needs to be done to ensure that the population in the CC catchment area is fully aware of when and what services are available at the CC.

Quality of care in the CC was constrained by discontinuity of human resources and staff vacancies; medicines shortages; lack of systematic quality improvement systems; and irregular or inadequate supportive supervision.

Efficiency

The lack of adequate literature on efficiency issues of CCs and similar programmes restricted us in finding answers to some issues the evaluation was required to address. Dissimilarity in methodology and definitions used by different studies also restricted us in comparing the cost parameters of CCs with other schemes in a similar setting.

Nevertheless, we found that revitalization of CCs created an opportunity for the rural population to access essential health services as well as to reduce out-of-pocket payment for health care by reducing visits to village doctors or drugstores while ensuring quality medicines. The average unit cost of a visit to a CC was substantially lower compared to the average cost of visiting a village health doctor. Investment in a CC could yield 23% return, if quality services are provided and skills of providers are enhanced or maintained by sufficient frequency of contacts. It also requires the provision of uninterrupted services through regular supply of medicines and materials including the presence of a CHCP or any other suitable alternative provider.

Community engagement

CGs at the CC were more active than CSGs who were also less visible, probably due to their location in parts of the community away from the CC. There was limited monitoring and supervision of the work carried out by the CSGs.

Evidence regarding community engagement in the design of services provided at the CCs was limited, however it was more likely to happen where an NGO supported the Upazila and Union health services in the formation and operation of CGs/CSGs. CG/CSG members considered providing support for the operation and management of their CC as their main role. A well-functioning CG with a good relationship with the CHCP can work well with the CG monitoring the operating hours of the clinic as well as the receipt of medicines and liaising with community members. CGs were more constrained in their ability to support aspects of management that required funding (such as electricity, cleaners) as the resources they had available were very limited in most cases. Having a good relationship with the Upazila or an NGO may provide access to additional resources.

Some local government authorities were providing ad hoc support for certain expenses (such as electricity, cleaners). In certain cases, these costs were covered either from the CHCP’s own pocket or from service charges.

5.2 Lessons learnt

The UHC is increasingly taking over its role as overall coordinator of the Upazila health system. The UHC plays an important role in supporting the operation and functioning of the lowest level of this system, i.e. the CC and its catchment population. Important functions of the UHC regarding CCs included training and capacity building, distribution of medicines, supervision, reporting, patient referral centre, overall coordination and monthly meetings with CHCPs. Coaching and motivation of CC staff were essential for achieving and maintaining quality. There is a need to ensure that the UHC has sufficient staff, skills and resources to take on this additional function. Without a well-performing UHC taking on key responsibilities towards the CC, performance at the CC will remain a challenge. Further integration of activities from both directorates (DGHS and DGFP) is required.
Union level facilities have the potential to provide normal child birth and essential newborn services, and function as referral centers for CCs, if they are provided with the required inputs to be fully operational. As indicated in Section 3.1.3, 69% of union level (2480) facilities need medium-to-moderate level of inputs to be ready to provide these services.

The CC as the first level static health facility of the CBHC is yet to assume full responsibility for health, and nutrition of the entire catchment area population and to conduct their work effectively from a public health and health systems perspective. This would require a proactive (analysing the health situation, knowing the catchment population, adjusting strategies to prevent and deal with health problems) rather than a reactive approach (mainly providing curative care for minor ailments). Also, effective team work, coordination and coaching were lacking, and joint identification of major health problems, populations at risk, prioritization of services and targeted actions to address the health situation were not taking place in a systematic manner.

As CCs become functional, there is an increasing demand for enlarging the scope of services and tasks to be conducted. The CHCP mainly focuses on the provision of curative services allowing less time for promotive and preventive services. Changes in the epidemiological profile of the population will bring in new demands for service provision (beyond MNCH and reproductive services), particularly for chronic NCDs, or other focus areas (such as mental health, disability, child development, adolescent health). Increasing the scope of services while ensuring quality services (which also requires being sufficiently exposed to/aware of to the specific health problem), requires careful analysis and strategizing. For example, the optional opening of child birth services in CCs was not always the result of a careful analysis. Clear policy and guidance on such issues is of the utmost importance.

A proper balance between facility-based work and outreach work should be established for the cadres working at the CCs. It is time for the country to re-assess whether these three cadres and their current profiles are the requirement for the future, based on the scope of services to be covered and how the country can progress towards more professionally qualified cadres at this level (such as public health nurses). Is there still a need for a separate cadre for the provision of family planning and health services? Is this the most effective and efficient use of these cadres?

The local government is playing a role in supporting the work of the CC, however, mostly on an ad hoc basis. This ad hoc role needs to be institutionalized. In fact, there were several standing committees within the local government structures related to health that did not include health among their activities (such as the Health and Education Standing Committee). Experiences from the country show that stronger linkages with the CC were created where NGOs support the local government.

The link between the CC and the local community is key to the success and acceptance of the CC. However, functioning of CGs and CSGs require some strengthening and resources. Based on experiences and lessons learned in providing support to UHS, including to the functioning of CCs across Bangladesh, this evaluation identified some key issues that affected the functioning of the CGs/CSGs. The following issues were identified during the NGO workshop conducted with this evaluation:

- the organization and follow-up of CSG work requires a facilitator. This role needs to be taken over by one or a group of persons placed either at the UHC or district level;
- CG and CSG members were not aware of their roles and responsibilities with regard to CC functioning;
- the selection criteria for members of CGs and CSGs needs to include respected local people having a good track record in social work;
- for better management, group size of both CGs and CSGs needs to be reduced from 17 to 12;
- capacity building training should be designed based on the educational background of CG and CSG members and as per a training needs assessment;
- a demotivating factor was that expectation of benefits for being a member of a CG and CSG was not happening in practice;
- CG and CSG members expect refreshments during monthly and bi-monthly meetings, however, there was no budget provision for it;
- only a few members participated in scheduled CG/CSG meetings as there was lack of ownership; also not all members participated in the discussions because they were lacking the capacity or confidence to contribute.
The following recommendations are suggested for consideration.

6.1 Recommendations to the MoHFW and CBHC programme

1. **Conduct a study to review and better define the role and configuration of the CBHC programme as the first level of primary health care of the Upazila health system.** Bangladesh is at a cross-roads, which needs to be reviewed to better define the role and configuration of the CBHC programme as the first level of primary health care within an UHS. Key issues to be addressed include:

   - **The mix and scope of preventive, promotive and curative services to be provided by the CC.** For the provision of curative services, is there a need to go beyond dispensing of medicines based on a symptomatic approach? Which health promotion and preventive services should be provided, including for prevention of NCDs, and for prevention of ill effects of the environment and climate change on health? How should other actors, such as the education sector and the local government, be involved in health promotion and prevention? How is outreach to the communities best conducted (for which purpose, who, how often)? How can adolescents be best reached? How can local public health priorities be set, and the health and socioeconomic profile of the local community established? How should the ‘real’ catchment population of the CC be defined to facilitate planning and priority setting?

   - **The mix, skills and number of staff required to provide the agreed mix of preventive, promotive and curative services.** Assess if there is a need for a single cadre able to provide all services to be delivered at the CC and its catchment population.

   - **A revised job description** for CHCPs, FWAs, HAs and MHVs, in line with the above.

   - **Strategies and actions to increase the demand for specific CC services**, in line with the above mix and scope of services. This would include strategies related to service provision and referral for MNH services (especially child birth), child care, adolescent health and NCDs.

   - **Strategy to ensure that CCs implement a set of interventions targeted for promotion, prevention and screening for NCDs**, in line with the above points. Proper guidance should be given to CC staff to conduct these activities, including how to work across sectors and how to engage communities in health promotion and prevention of NCDs. Furthermore, this strategy should include an assessment on the suitability of basic treatment and supply of medicines for specific NCDs, such as diabetes and hypertension, to be provided by the CCs, under the supervision of a higher-level facility/supervisor.

   - **A proposal for streamlining the line of authority and responsibilities** at all levels.

     *Suggested implementation: within the ongoing health sector programme*

2. **Develop and implement an action plan for conducting an effective monitoring and supervision system for CCs.** Supervision should be streamlined and harmonized at the local level. It should include technical as well as managerial aspects (currently the former are neglected). Clear standards and protocols should be available to be used for supervision. Consideration should be given to undertake capacity building activities to strengthen the ability of supervisory cadres to conduct supervision, and to introduce mentoring schemes and supportive supervision. Adequate budget and time should be allocated for this purpose and the supervisory system monitored for enhancing the efficiency and effectiveness of CCs.

   *Suggested implementation: immediately*
3. **Develop a training needs assessment for CHCPs, HAs and FWAs, and based on this assessment implement a capacity building plan.** Full utilization of current budget allocations for training should be ensured. If necessary, additional resources could be allocated for implementation of the resulting training plans. Consider the introduction of other capacity building techniques such as mentoring.

*Suggested implementation: within the ongoing health sector programme.*

4. **Develop and implement an action plan for strengthening the referral system.** Referrals are in place but not up to the expectation yet. The referral system needs to link the various tiers of service providers/facilities from the community to tertiary levels. Under the 4th health sector programme, a CC corner was going to be established within the premises of the UHC in a number of subdistricts. Lessons should be drawn from this initiative with a view to improve the referral and counter-referral system. This action plan should include activities targeted to improve the readiness of union level facilities to take up referrals from CCs. This may require investments in physical renovation, staff, supplies and equipment for union level facilities.

*Suggested implementation: immediately.*

5. **Establish a pool of CHCPs at the subdistrict level** who can be deployed to ensure uninterrupted service provision at the CCs in the absence of the CHCP (due to medical leave, maternity leave, annual leave, attending meeting/training).

*Suggested implementation: within the ongoing health sector programme.*

6. **Develop and implement an action plan to revisit and revitalize CGs and CSGs.** There is a need to revisit and revitalize the activities of different committees at the community and union levels. The following actions could be considered for implementation.

- Review the existing community engagement strategy with the purpose of making necessary adjustments, such as:
  - reconsider the size and composition of CGs and CSGs with the purpose to improve participation;
  - consider reducing the number of members and review the selection criteria for membership;
  - include persons with experience in social work and people that are respected by the community.

- Ensure all CG and CSG members have received basic training on their roles and responsibilities, with periodic refresher training. When conducting training, adjust training modalities and materials to the educational background of the participants. Refresher training should be based on training needs assessments of the respective CGs and CSGs.

- Identify a dedicated person or team to organize and follow-up the work of CGs and CSGs. Fostering community engagement is an important component of the CBHC. The organization and follow-up of the work of the CSG requires a facilitator. CHCPs, HAs and FWAs seemed to neither have the proper skills to work as facilitators nor sufficient time available to dedicate to this effort. CHCPs especially lacked exposure to community work. This specific responsibility needs to be taken over by an individual or a team. Possibly the formation of a core resource team involving Upazila and district level officials could be considered or perhaps the Medical Officer Disease Control (MODC) at the UHC could assume this function.

*Suggested implementation: within the ongoing health sector programme*
9. **Ensure that an annual budget is allocated for regular replacement of essential equipment**
   *Suggested implementation: within the ongoing health sector programme.*

10. **Conduct regular assessment of the availability of essential medicines and other supplies necessary for the operation of the CC.** Implement necessary corrective measures to ensure their optimum availability at CCs.
    *Suggested implementation: within the ongoing health sector programme*

11. **Assess the suitability of moving from a push to a pull or mixed system for essential medicines and supplies.**
    *Suggested implementation: within the ongoing health sector programme*

12. **Develop and implement a proper stock management system for medicines kept at CCs.** The functioning of this system should be supervised regularly.
    *Suggested implementation: immediately*

13. **Arrange to progressively deploy graduate pharmacists** at the central and district levels to support CC needs for quantification, forecasting and rational use of drugs.
    *Suggested implementation: within the ongoing health sector programme*

14. **Develop and use UHC dashboards at monthly coordination meetings with CHCPs** to analyse and monitor performance of CCs, and define and implement corrective measures to improve the quality of data in terms of timeliness, completeness and accuracy.
    *Suggested implementation: immediately*

15. **Conduct monthly meetings of CHCPs, FWAs, HAs and MHVs to review and analyse all performance data,** and determine and implement corrective actions accordingly.
    *Suggested implementation: immediately*

16. **Conduct further studies.** Our evaluation identified a number of issues that require further study, such as, evaluation of the quality of clinical services provided by CHCPs, analysis of health seeking behaviour of adolescents, male and elderly population, and a study on equity of provision of health services by CCs.
    *Suggested implementation: within the ongoing health sector programme*

17. **Introduce catchment population for CCs into the DHIS system** to facilitate generation of service coverage data.
    *Suggested implementation: within the ongoing health sector programme*

### 6.2 Recommendations to local government authorities

18. **Institutionalize supportive role of the local government to CCs.** Take necessary steps to ensure that the local government continues to play an important supportive role for CCs, but in an institutionalized way. Potential roles that could be incorporated include the following:
   - earmark yearly budget allocation for CCs;
   - intensify coordinated activities between CCs and the standing committee responsible for education, health and family planning;
   - disseminate information concerning CC activities in regular ward level meetings;
   - ensure a permanent agenda item on CCs in the Union Parishad monthly coordination meetings;
   - ensure good road access to CCs and fencing of CCs (particularly in places where the CC is located in remote areas);
6.3 Recommendations to development partners and NGOs

19. Continue providing support to the implementation of community systems including support to CGs and CSGs on:
   - performance monitoring of CCs, particularly in aspects related to improvements in the health situation of the catchment area of the CC, prioritization of services, and identification of those most in need or at risk;
   - information on how to prepare social mapping and annual plan implementation.
   - capacity building of CGs and CSGs;
   - coaching and empowerment of CGs and CSGs;
   - creation of structures within the UHS that could assume the organization and follow-up for supporting the work of CGs and CSGs.

   *Suggested implementation: within the ongoing and next health sector programme.*

20. Continue providing evidence on successful practices piloted by NGOs (such as on strengthening referral linkages between government facilities from CCs to FWCs, Union subcentres). Support scaling-up of these good practices if the government decides to do so.

   *Suggested implementation: within the ongoing and next health sector programme.*

21. Support the CBHC programme in conducting public engagement activities to strengthen transparency and accountability, such as for organizing sessions to inform the public on the work conducted, investments made, and utilization of resources.

   *Suggested implementation: within the ongoing and next health sector programme.*
ANNEX 1. EVALUATION METHODS

METHODS

The evaluation was primarily based on the use of secondary data – both quantitative (from HMIS data, DHIS2, the Bangladesh Health Facility Survey) and qualitative (from available documents and literature) – predominantly complemented by collected qualitative primary data.

Review of secondary data: Document and literature review was the primary source of information for the evaluation and included:

- relevant documentation related to the programme, as well as grey literature;
- quantitative data for the analysis of programme effectiveness; and
- cost and financial data for the assessment of programme efficiency.

Collection and review of primary data: Primary data were collected through: (i) interviews with key informants, and (ii) quantitative and qualitative data collected from 16 purposively selected community clinics (CC) and seven Upazila Health Complexes (UHCs) (see Table 2) the main text.

Data collection tools were pilot tested in two CCs (not included in the final sample of 16 CCs) and adjusted based on the results of this pilot test. A protocol for field work, also comprising revised data collection forms, was developed and included in the interim report for the evaluation. The protocol included:

- Key informant interviews. A total of 78 key informants were interviewed including 24 at the national level and 54 at UHCs and CCs. National level informants included Government of Bangladesh officials as well as representatives from bilateral agencies and nongovernment organizations (NGOs). At the UHC level, key informants included the Upazila Health and Family Planning Officer and consultants receiving referrals from CCs. At the CC level community health care providers (CHCPs), family welfare assistants (FWAs) and health assistants (HAs) were interviewed.

- Focus group discussions. Data were also collected from 16 focus group discussions held (one in each CC visited) with members of community groups (CGs) and community support groups (CSGs). A total of 213 persons participated in these focus group discussions.

- Client exit interviews. Additional quantitative primary data were collected from 77 client exit interviews (we planned to conduct five client exit interviews in each CC), 16 health facility questionnaires, 80 clinic register reviews (registers for five patients in each CC visited), medicines prices, and consultations fees from other providers.

A one-day consultative workshop was held with representatives from NGOs to share their experiences in supporting community based health care. The workshop also discussed observations from the evaluation’s field work.

ANALYSIS

The evaluation was primarily based on a policy analysis that investigated, from a macro level perspective, the policy relevance of the “community clinic” approach in Bangladesh to provide an understanding of its effectiveness, efficiency and degree of community involvement. Data from key informant interviews, focus group discussions, literature and document reviews related to the assessment of relevance and community engagement were entered and coded in the MAXQDA software. Excel databases were created for data from client exit interviews and health facility questionnaires. These data were then analysed using SPSS 20. Secondary data from the Management Information System (MIS) of the Directorate.
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General of Health Services (DGHS) was also conducted. Data from the various sources were analysed and triangulated.

Numerous gaps in DHIS2 data made interpretation difficult. Reporting rates varied across regions and data collection forms. There were also issues with the reliability and accuracy of data, most likely resulting from the introduction of a new system, numerous data collection forms, staff not being used to data collection and reporting, generation of data by the providers themselves, among others.

The assessment of relevance was based on analysis and triangulation of data from document and literature reviews and key informant interviews.

The effectiveness component was evaluated by how effective the CBHC programme was in terms of achieving the objectives and producing the expected results. Specifically, the evaluation objectives of this component were to (i) analyse the changes in acceptability, readiness, utilization and equity of services at CCs (to the extent possible); and (ii) review the quality and responsiveness of services at CCs.

To meet these objectives, we relied mostly on:

- **Analysis of secondary data** from routine MIS of the DGHS. Monthly aggregate performance data were inputted through the DHIS2 system that was available online at any level of the system to capture, analyse, use and provide feedback to support management decisions for improving quality and coverage. The aggregate data from CCs included service utilization variables in the following Essential Service Package (ESP) areas: maternal health care, family planning, child health care, limited curative care, nutrition and community mobilization meetings. Service utilization reports include referrals from CCs disaggregated by: (i) maternal health complications, (ii) child health complications, (iii) family planning, and (iv) complicated noncommunicable diseases (NCDs) such as hypertension and diabetes mellitus. The variables investigated as performance measures from the DHIS2 system are summarized in Table 1 in the main text.

- **Documentary review.** Relevant published and grey literature as well as policy and programme documents were identified in consultation with key stakeholders in this area, such as the WHO programme office, Community Based Health Care (CBHC) programme office, other experts in the DGHS and technical assistants working in development projects and NGOs. We undertook an extensive documentary review of previous evaluations of CCs, national level surveys and other national health policy and programme documents to capture findings from earlier reviews of CCs by various national and international organizations. The documentary review also included analysis of other survey reports as well, such as the Bangladesh Demographic Health Survey (BDHS), Bangladesh Maternal Mortality Survey (BMMS), Annual Health Bulletin of the DGHS and existing policy and programme documents including programme implementation plans (PIPs) and strategic investment plan (SIPs) of ongoing health sector programmes.

- **Analysis of primary data from exit Interviews, facility survey questionnaires and key informant interviews.** A facility survey and an exit interview survey were organized to complement the information collected through documentary review and secondary analysis of MIS data. A total of 16 CCs were surveyed using a structured checklist and an exit interview questionnaire was administered to 77 clients (CC users or their guardians in case of children) from five major divisions of the country (Chattogram, Dhaka, Khulna, Rajshahi and Sylhet). Additionally, key informant interviews including that of CHCPs, FWAs, HAs, Upazila Health and Family Planning officers, consultants, CBHC staff, representatives from NGOs were also conducted.

Findings from various primary and secondary sources were presented with a descriptive approach that would provide an opportunity to examine: changes in use, characteristics of clientele, service readiness and overall quality of care (both perceived and technical).

The efficiency assessment relied on: (i) documentary review of existing costing studies; (ii) secondary analysis of financial data provided by the CBHC programme; and (iii) analysis of limited primary quantitative data collected from the 16 sampled CCs through facility surveys, medicine pricing questionnaire and data on consultation fees from other providers practicing in the ward/union/Upazila of the sampled CC.
The efficiency analysis included calculation of unit cost of services provided by the CC, followed by a cost comparison with the unit cost of services provided by other CCs with other community programmes in the country, particularly the Smiling Sun clinics network in Bangladesh.

Using data collected from the sampled clinics we estimated the availability of basic equipment with functional conditions in the CCs as well as of medicines in the CC on the day of the survey. This data enabled a comparison of costs to patients: (i) when obtaining the same medicines privately, and (ii) when offered through the CC. This provided an estimate of direct cost savings to the patient through use of the CC, which was used in the estimation of the overall cost of CCs.

The overall cost of CCs was estimated using budget data for CBHC for 2017–2018. We attempted to estimate the average cost of treatment of a patient visiting a CC by obtaining service utilization data from the DGHS website and expenditure data from CBHC programme headquarters. Along with CC costs (mainly salaries and medicines), this information allowed to estimate the benefit–cost ratio of the CC.

For community engagement assessment, data from various sources were analysed and triangulated. The literature review provided relevant information in relation to the involvement of communities in their local CC, while key informant interviews, facility surveys and focus group discussions provided a snapshot of how community engagement was being implemented in practice in the visited CCs. The functioning of CGs/CSGs was studied to document their actual role – compared to the role envisaged in their terms of reference – in design, operation and management of CC services, as well as their role in generating community support, both financial and in-kind, for the CC.

**LIMITATIONS**

Due to resource limitations and bearing in mind the nature and scope of the evaluation, the selection of sites to be visited for primary data collection was obtained through purposive sampling. Therefore, the sample was not intended to be representative. The primary data collected through these visits was meant to confirm or complement data available through secondary sources. The following criteria were used in the selection of our sample of CCs:

i. A purposive sample selection, from each of the four ‘old’ divisions (Chattogram, Dhaka, Khulna and Rajshahi) to capture as far as possible the geographic diversity (‘hoar’ lands, ‘char’ lands, hill country, coastal areas) of Bangladesh.

ii. Within each of the four geographic areas, and in order to ensure that the logistics was not too difficult given the time that was to be available, a cluster of two Upazilas were selected on the basis of the estimated time required to reach the Upazila from the main town that was to be the field team’s access point to the division. A maximum two-hour driving time to the Upazila was considered to be the maximum practical distance.

iii. From the two Upazilas selected, in Khulna and Rajshahi, four CCs (two from each Upazila) were selected.
   a. Because of the higher population in Chattogram, five CCs were selected, two from one Upazila and three from the second.
   b. Because of the higher population in Dhaka, five CCs were selected, of which two were those that had been visited in the inception period for field testing, and thus three further CCs were selected, all from one Upazila.

iv. The parameters for selection of the CC within this framework were:
   - Two CCs in each Upazila to be supervised from the same higher tier health facility with, in order of selection if possible:
     - one of the four CCs should provide delivery services.\(^{19}\)

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\(^{18}\) ‘Hoar’ lands = wetlands with large bodies of water, ‘char’ lands = dry areas.

\(^{19}\) Less than 10% of CCs provided delivery services and consequently it was not possible to identify such clinics in each Upazila cluster.
● one of the four CCs (excluding child birth/delivery services CCs) should be a well-performing CC (based on the DGHS dashboard website).
● one of the four CCs (excluding child birth/delivery services CCs) should be a poorly performing CC (based on the DGHS dashboard website).

v. Collectively, the sites selected needed to be practical for the field visit team to reach all the selected facilities in the time that was available.

vi. Parts of Chattogram were excluded from the process to avoid areas affected by the migrant crisis.

The limited number of CCs was a major constraint in deriving any conclusive interpretation about quality, use, equity and responsiveness of the services provided by CCs. We used variables captured from routine MIS, which may have suffered from an upward-bias as these were reported by the service providers themselves.

As the 16 sampled CCs were aware beforehand that the survey was to be conducted, the ‘known knowledge effect’ could have affected their responses. The ‘known knowledge effect was minimized’ by using a well-piloted questionnaire, with instant probing question options. In the CCs, some services were provided on specific days of the week, which may have been on the day when our interviews were held.

Several gaps in DHIS2 data made interpretation difficult. As this was a rather recent modality for reporting, not all health facilities, including CCs, submitted complete reports. CC reporting rates varied across all regions and in data collection forms. Data accuracy and reliability were affected by the recent introduction of the DHIS2 system and electronic reporting, numerous data collection forms, staff of CC not being used to data collection and reporting, and the generation of data by the providers themselves.

The evaluation did not consider the technical quality of clinical services provided, nor was it able to fully investigate equity issues through primary data collection, and had to rely on limited literature. Similarly, key informants at the division or union levels were not interviewed.

**ANNEX 2. DOCUMENTS REVIEWED**


Independent Evaluation of Community Based Health Services in Bangladesh

- Claquin P. An assessment of the SRC/DASCOH Community Clinic Project in Godagari Upazila of Rajshahi District; 2012 (draft).
- Final technical report. Assessment of staffing need through workload analysis in two selected districts (Jhenaidah and Moulvibazar) in Bangladesh. Dhaka: BRAC James P Grant School of Public Health; 2017.
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Hossain S, Rahman M. External evaluation on improvement of women’s sexual and reproductive healthcare through community mobilization in Dinajpur, Bangladesh (WHCM). Plan International; 2015.


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ANNEX 3. BANGLADESH ESSENTIAL SERVICE PACKAGE

The Bangladesh Essential Health Service Package – Core Services Components

1. Maternal, neonatal, child and adolescent health care
   - Maternal and newborn care
     - Maternal care: preconception, antenatal, delivery, postnatal
     - Newborn care: during delivery, after delivery
     - Obstetric and neonatal care
   - Child health and immunization
     - Integrated Management of Child Illnesses (IMCI)
     - Expanded Programme of Immunization (EPI)
   - Adolescent friendly health services
     - Adolescent sexual and reproductive health
     - Adolescent nutrition
     - Adolescent mental health
     - Risk taking behaviour

2. Family planning
   - Preconception
   - Postpartum
   - Postabortion
   - Postmenstrual regulation

3. Nutrition
   - Child nutrition: assessment of nutrition status, prevention of malnutrition management of malnutrition
   - Maternal nutrition
   - Adolescent nutrition

4. Communicable diseases
   - Tuberculosis
   - Malaria
   - HIV/AIDS
   - Neglected tropical diseases: kala-azar, lymphatic filariasis, leprosy, dengue, rabies, intestinal parasites
   - Other communicable diseases

5. Noncommunicable diseases (NCDs)
   - Hypertension
   - Diabetes mellitus
   - NCD screening and management based on total risk assessment
   - Cancer: breast, cervical
   - Other NCDs: arsenicosis, chronic obstructive pulmonary disease (COPD)
   - Mental health, autism and neurodevelopment disorder
   - Sexual and gender-based violence (SGBV)

6. Management of other common conditions
   - Eye care
   - Ear care
   - Dental care
   - Skin care
   - Emergency care
   - Geriatric care

The three support (nonclinical) services are:
1. Laboratory diagnosis
2. Radiology and other image tools
3. Pharmacy
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