

Project Completion Report

**Project for
The Capacity Building of Nursing
Services Project
in Bangladesh**

Dhaka, March 2021

Japan International Cooperation Agency (JICA)

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JR
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Abbreviations

ACC	Academic Core Committee
BNMC	Bangladesh Nursing and Midwifery Council
BSc	Bachelor of Science
CBNS	Capacity Building of Nursing Services
CN	Clinical Nurses
CNT	Clinical Nurse Teacher
COVID-19	Corona Virus Disease-2019
CP	Clinical Practices
CPTOT	Clinical Practice Trainer's Training
DAC	Development Assistance Committee of OECD
DGNM	Directorate General of Nursing and Midwifery
DMCH	Dhaka Medical College Hospital
DNC	Dhaka Nursing College
FD	Faculty Development Sub-committee
FM	Faculty Members
GOB	Government of Bangladesh
HPNSDP	Health Population and Nutrition Sector Development Program
HSC	Higher Secondary Certificate
IC	Internal Committee
JCC	Joint Coordinating Sub-committee
JD	Job Description
JICA	Japan International Cooperation Agency
MEFWD	Medical Education and Family Welfare Division
MoHFW	Ministry of Health and Family Welfare
M/M	Minutes of Meetings
MT	Master Trainer
NCEMS	Nursing College Education Management System
NCMS	Nursing College Management System
NCGM	National Center for Global health and Medicines
NTF	National Task Force
OECD	Organization for Economic Cooperation and Development
OJMT	On the Job Management Training
PCR	Project Completion Report
PIC	Project Implementation Committee
PDM	Project Design Matrix
PMIS	Personnel Management Information System
QA	Quality Assurance Sub-committee
R/D	Record of Discussion
RSC	Research Sub-committee
TBLMS	Think Board Learning Management System
ToT	Training of Trainers
WIC	Ward In Charge

I. Basic Information of the Project

1. Country

Bangladesh

2. Title of the Project

The project for Capacity Building of Nursing Services (CBNS)

3. Duration of the Project (Planned and Actual)

Planned: January 2016- December 2020 (5 years)

Actual: January 2016- March 2021 (with an extension of 3 months)

The first Record of Discussion (R/D) of CBNS project was signed by both the parties i.e. MoHFW and JICA on 30 June, 2015 for 5 years starting from January 2016 till December 2020. First amendment was made on R/D on 2 October, 2017 after upgrading Director of Nursing Services (DNS) to Directorate General of Nursing and Midwifery (DGNM) with little modification of project duration i.e. 6 January 2016 to 5 January 2021¹. This project period was further extended to March 2021 due to delay in project implementation, security reason of terrorist attack in Dhaka on 1 July, 2016 and spread of Corona virus COVID-19 in March 2020 which is still continuing as high risk in Bangladesh and throughout the world.

4. Background (from the Record of Discussions(R/D))

Health services in Bangladesh are highly inadequate in terms of quality and coverage. Government of Bangladesh gave special emphasize on modernization and upgrading of all medical, nursing and medical technology education as per need of the country². Development objective of 4th Health Population and Nutrition Sector Program (HPNSP) focused on improvement in increasing access to quality health care including ensuring the implementation of a comprehensive health workforce development and action plan as a strategy³. Bangladesh suffers from a shortage and mal-distribution of health workers. Health worker density per 10,000 populations stood at 7.4 in 2016. Physician, nurse and health technologist are distributed in the proportion 1:0.5:0.2 indicating imbalances in the composition of the workforce. Now, the density has increased to 8.3 per 10,000 populations and the distribution is 1:0.56:0.40 (HRD Unit, HRH Country Profile, 2017, MoHFW)⁴. According to World Health Organization (WHO) report⁵ there are 674 health professional education institutions in Bangladesh of which 541 (82%) belonged to the private/ nongovernment sector and the remaining 18% belonged to the public/government sector. In those institutions a total of 50,808 seats belonged to 658 health professional education institutions under the MoHFW of which 6% seats belong to BSc nurse professional category. The report also shows that during 2007–2016, 7639 BSc in Nursing students were admitted, 3280 students graduated, and 2436 graduates received licenses. According to the registration authority Bangladesh Nursing and Midwifery Council (BNMC), 20 public colleges and 102

¹ Amendment of the Record of Discussions on CBNS project dated October 02, 2017

² National Health Policy 2011, Government of Bangladesh 23 January 2012

³ Program Implementation Report [PIR] Jan.-June 2017 of 4th Health Population and Nutrition Sector Program (HPNSP)

⁴ Sustainable Development Goals Bangladesh Progress Report 2020 (page-77)

⁵ Mapping of Health Professional Education Institutions in Bangladesh, WHO DGHS October 2018 (page-18)

private colleges offering BSc nursing course till December 2020. Until December 2020 a total of 5595 BSc graduated nurse received licenses⁶.

Nursing service is the part of the total health organization which aims at satisfying the nursing needs of the patients/community. In the nursing service, nurse works with the doctors, pharmacy, medical social service, dietetics etc. The prime responsibility of nurse is to provide all necessary physical care and mental support to the patient for early recovery. Unfortunately, nursing services were not considered as important in Bangladesh for last few decades. Thus, nurses in Bangladesh are facing a lot of problems including their status, dignity, work benefits, working environment, service guaranty and social stigma. Risk of nursing service is high and nurses have no defined work policies. As a profession, existing condition of nursing in Bangladesh remains poor with below-average standards. A chronic shortage of nurses and an insufficient quality of nursing education have been recognized as challenges in the efforts of increasing the quality of nursing services in Bangladesh. The present doctor to nurse ratio is 2:1 and population to nurse ratio is 5,000:1⁷. To ensure the quality of nurses in the clinical care provision and social status need to be addressed. The status of nursing services has recently been viewed as an important and valuable profession. To tackle these challenges, in 2013, the Government of Bangladesh (GOB) increased the number of entries to the nursing education organizations and created new posts for nurses in the public hospitals. In order to raise the academic and practical standard of nurses, GOB introduced the 4-year Bachelor of Science (BSc) Degree in Nursing in 2008. The entry requirement for both BSc and Diploma in nursing course was also raised as the Higher Secondary Certificate (HSC) level with science major. While the majority of the nurses in the current human resources are the Diploma holder nurses, it is assumed that the new graduates of BSc courses have an aspiration as well as expectation for becoming the standard in nursing in future.

In May 2013, a delegation of Japanese nursing experts led by Dr. Hiroko Minami visited Bangladesh and met with the Prime Minister of Bangladesh, the Secretary of MoHFW and other high-level officials and nursing professionals of Bangladesh. During delegations' visit, both sides mutually agreed to explore an opportunity where nursing experts of the two countries can contribute to enhancement of nursing each other. In July 2013, the GOB submitted a formal request for Japanese Technical Cooperation titled "Enhancing Clinical Practices and Service Delivery at Public Hospitals". This request was subsequently accepted by the Government of Japan. JICA then organized the Surveys and dispatched teams consisted of the experts in nursing education, nursing administration and clinical practice in March and May 2014 to hold discussions for the project formulation. As a result of discussion between GOB and JICA, Minutes of Meeting (M/M) was signed and exchanged in May 27, 2014.

Project Design Matrix (PDM) version 1 developed on 28 May 2015. Amendment of R/D between MoHFW and JICA was signed on 2 October 2017 with PDM version 2 on 12 January 2017. Final version (version 3.1) of PDM was developed on 09 November 2020 (Annex 1-1). In the original RD (June 2015) project sites were mentioned as Dhaka (MoHFW, DNS, BNC, Dhaka Medical College and Hospital) and selected Nursing Colleges and their clinical training hospital without mentioning names of the nursing colleges and hospitals. But in the amended RD of 2 October 2017 Dhaka (MOHFW, DGNM, and BNMC) and the name of DNC and

⁶ Data received from BNMC on January 2021

⁷ Health Population and Nutrition Sector Development Program [HPNSDP] 2011-2016

DMCH were mentioned as specific project site. Thus, the project worked only on DNC and DMCH but no other nursing colleges. Plan of Operation (PO) was also amended accordingly in line with PDM (Version 3.1) and latest version of PO (version 3.1) made available on 09 November 2020.

JICA is enhancing health systems strengthening through the cooperation with the GOB based on the analysis that human resources for health especially nurses have issues in number, quality and unequal distribution in urban and rural areas. In consideration of the overall improvement of nursing in Bangladesh, the project aims to improve nursing education in BSc since it is still early and critical phase for effective and sustainable system establishment.

5. Overall Goal and Project Purpose (from the Record of Discussions(R/D))

The overall goal and purpose as stated in the Record of Discussion (R/D) is “The graduates of BSc in Nursing improve the nursing quality at their working place”. While project purpose is, “the quality of education for BSc in Nursing is improved”⁸.

6. Implementing Agency

Implementing agencies are, Directorate General of Nursing and Midwifery (DGNM), Bangladesh Nursing and Midwifery Council (BNMC), Dhaka Nursing College (DNC), Dhaka Medical College Hospital (DMCH) and Japan International Cooperation Agency (JICA).

II. Results of the Project

1. Results of the Project

1-1 Input by the Japanese side (Planned and Actual)

Item	Planned input (as per R/D)	Actual input
(1) Amount of input	420 million YEN for 5 years in 2016	Total 425 million YEN (approx. 33 crore TK) estimated cost up to March 2021
(2) Dispatch of Experts	Total-5 1) Chief Advisor-1 2) Nursing Policy/Administration-1 3) Nursing Faculty Development-1 4) Nursing Clinical Training-1 5) Project Coordinator-1	Total-7 (including 3 replaced) 1) Chief Advisor-1 (+ 1 replaced) 2) Nursing Policy/Administration-0 3) Nursing Faculty Development/ Education-1 4) Nursing Clinical Training-1 (+2 replaced) 5) Project Coordinator-1
(3) Receipt of Training participants in Japan	1) Nursing Policy/Administration 2) Nursing education	FY 2016: Title of training & participants 1) Strengthening the ability of clinical nursing instructors for the People's Republic of Bangladesh by NCGM: 3 2) Strengthening Maternal and Child Health (MCH) through public health activities: 2

⁸ Amendment of the Record of Discussions of CBNS project; October 2, 2017

Item	Planned input (as per R/D)	Actual input
		<p>3) Nursing Education and Policy: 12</p> <p>FY 2017: Title of training & participants</p> <p>1) Nursing Clinical Practices (1st): 6</p> <p>2) Quality Improvement of Health Services through KAIZEN approach: 1</p> <p>3) International Nursing Research Conference 2017, Thailand: 6</p> <p>4) Nursing Clinical Practices (2nd): 6</p> <p>FY 2018: Title of training & participants</p> <p>1) Health System Management: 1</p> <p>2) Nursing Clinical Practices: 9</p> <p>3) 10th AAAH Workshop (The Asia Pacific Action Alliance on Human Resources for Health), Vietnam: 2</p> <p>FY 2019: Title of training & participants</p> <p>1) Nursing Management: 9</p> <p>2) Nursing Administration: 6</p> <p>3) Quality Improvement of Health Services through KAIZEN approach: 1</p> <p>4) Public Health Activities for Strengthening Maternal and Child Health: 1</p> <p>5) Health Policy Development: 1</p> <p>FY2020: All planned training postponed due to COVID-19 pandemic</p>
(4) Equipment provision	<p>Equipment: 8 million YEN (Source: JICA HQ)</p> <p>Mentioned in R/D in June 30, 2015;</p> <p>-Training and Technical Equipment</p> <p>-Vehicle</p>	<p>Total Equipment: 30.5 million YEN (approx. TK 2.4 crore, Source JICA HQ)</p> <p>Major items of the equipment are as below;</p> <p>(DGNM)</p> <ul style="list-style-type: none"> • IT items (Laptop PC, Desktop PC, Printer, Scanner, UPS) • PPE items (Gowns, Gloves, Goggles, N95 Masks, Hand sanitizer) etc. <p>(DNC)</p> <ul style="list-style-type: none"> • Books and bookshelf for DNC library • Furniture of class room and library • Beds, furniture, medical items and equipment for clinical practice lab room • White boards • IT Items (Laptop PC, Projector etc.) • Installation of sound system • English lab equipment • Provision of router and internet installation • Installation of hand washing basin

Item	Planned input (as per R/D)	Actual input
		<ul style="list-style-type: none"> • Air conditioners • Curtain Cloth for class/teacher rooms and dormitory • Water purifier for dormitory • PPE items (Cap, Face shield, Hand soap, Shoe cover, Gowns, Gloves, Goggles, N95 Masks, Hand sanitizer) etc. (DMCH) <ul style="list-style-type: none"> • Books, bookshelf, file cabinet, furniture for clinical practice room • Furniture for training room • Medical items and equipment, sanitary items, stationery for training for nurses and clinical practice for students • Printer, and printer toner • IT Items (Laptop PC, Projector etc.) • Installation of sound system, and provision of portable amplifier and speaker • White boards and notice boards • Installation of hand washing basin • PPE items (Cap, Face shield, Hand soap, Shoe cover, Gowns, Gloves, Goggles, N95 Masks, Hand sanitizer) etc. -Vehicle: 9 million YEN
(5) Overseas activities cost in Bangladesh	Activity budget: 1.1 hundred million YEN (Source: JICA HQ)	89.6 million YEN (approx. TK 7.0 crore Source: JICA HQ)

Dispatch of JICA experts: As stated above a total 7 JICA experts were involved directly under long-term contract and four of them were working in 2020. In early April 2020 all of four long-term JICA experts were called back to Japan temporarily due to the global pandemic of COVID-19 in the middle of their terms. All of them kept working as the Project experts for CBNS Project communicating closely with the Project national staff and the counterpart nurses and nursing FMs and officers via the remote communication and meeting tools. Meanwhile, Dr. Yoko Yamamoto, JICA expert on clinical Nursing completed her tenure in the middle of April and Ms. Hiroko Oishi, the successor of Dr. Yamamoto, started work from the end of March 2020 though she also stayed in Japan as the other experts.

Plan of JICA Headquarters to conduct Advisory mission in June 2020 to discuss the plan of the final year's Project activities also postponed due to the spread of COVID-19.

1-2 Input by the GOB side (Planned and Actual)

Item	Planned input ⁹	Actual input
(1) Counterpart assignment	MoHFW planned to provide f MOHFW's counterpart personnel and administrative personnel.	MoHFW provided the following 122 counterparts at DGNM, BNMC, DNC, and DMCH. 1) DGNM:10 DG, Director Admin and Education, DD of Admin. and Education, Nursing Officers (3), PMIS Unit staff (4). and officials of DGNM; 2) BNMC: 4 3) Registrar, Deputy Registrars (2), IT Officer. 4) DNC:33 Principal, Teachers (28), Admin. Staff (5). 5) DMCH: 73 Director, Deputy Director, Assistant Director, Nursing Superintendent, Deputy Nursing Superintendent, Master Trainers (5), Clinical Nurse Teachers (63).
(2) Provision of offices, etc.	<ul style="list-style-type: none"> • Suitable office space with necessary equipment; • Supply or replacement of machinery, equipment, instruments, vehicles, tools spare parts and any other materials necessary other than equipment provided by JICA; 	Project office rooms at DNC and DGNM (former building at Sher-E-Bangla Nagar), Clinical Practice Room for Clinical Nurse FMs, DMCH, and project car space at DNC premise are given to CBNS project. Entry card of former DGNM is also provided.
(3) Other items borne by the counterpart government	<ul style="list-style-type: none"> • Information as well as support in obtaining medical service; • Credentials or identification cards; • Available data (including maps and photographs) and information related to project; • Running expenses necessary for the implementation of the project; • Expenses necessary for transportation within Bangladesh of the equipment of JICA as well as for the installation, operation and maintenance thereof. 	Electricity and water of project office at DNC and DGNM, and training rooms/spaces at DNC and DMCH are provided by counterparts respectively.

⁹ Amendment of the R/D between MoHFW and JICA on 2 October 2017

1-3 Activities (Planned and Actual)

The project has made some changes in its planned and actual activities with the amendment of the Record of Discussions (R/D). The project was running smoothly as per plan of operation. However, delay in accomplishing some initial activities other interrelated activities was also delayed. On the other hand COVID-19 pandemic situation has collapsed the steady progress of the project activities almost 10 months in 2020, which was crucial year to accomplish all major activities of the project as per Plan of Operation (PO). All Japanese experts were called back to Japan as safety measure and local project team continued work with all stakeholders including Japanese experts through distant communication and virtual meetings staying at home. Some practical activities like training in Japan, workshops and seminars were cancelled. To overcome the time loss both the parties have agreed to extend project period for three more months from January to March 2021.

Output 1: Policy and strategy to improve BSc. Nursing Education are implemented

Administrative improvement for BSc nursing education at DGNM and BNMC

Activities Planned	Activities accomplished
Update and refine roles and responsibilities of nursing professions	<ul style="list-style-type: none"> Project assisted MoHFW/DGNM financially/ logistically as well as giving technical input for the NTF to formulate the 24 recommendations in four areas in nursing development which were approved by the Ministry in 2018. JICA team planned to assist DGNM/BNMC for updating the existing JDs of the government nursing professions. However, the plan was cancelled.
Develop and promote a holistic career path for BSc Nurses	<ul style="list-style-type: none"> A report on the recruitment and promotion of the government nursing professions was made and submitted to DGNM and MoHFW in August 2019. Plan to develop holistic nursing career path guidelines was cancelled due to absent of JICA experts caused by COVID-19.
Update and refine the standards regulation for establishing Nursing Colleges	<ul style="list-style-type: none"> There has not been any clear standard regulation for establishing public nursing colleges. Nursing College Management System (NCMS) is expected to contribute for making the standard regulation of public nursing college establishment. The project initiated the development of NCMS and two modules (Faculty portfolio and Student's evaluation) out of the planned ten modules of the systems were made and operated at DNC.
Develop Monitoring, supervision and Evaluation mechanism for accreditation of nursing colleges	<ul style="list-style-type: none"> The project assisted BNMC to conduct first BSc nursing college accreditation at DNC. Evaluation report by the reviewers was submitted to the National Committee of the Nursing College Accreditation but final judgment has not been done yet due to outbreak of COVID-19.
Strengthen management capacity of DGNM	<ul style="list-style-type: none"> The project provided 8 Personal Computers and related equipment to operate PMIS at the division levels. Project initiated On-the Job Management Training for the nursing officers but the training program was halted after completion of six sessions as DGNM modified it more in a systematic manner.

Note: Due to current COVID-19 situation and absence of Japanese experts in Bangladesh, sufficient discussions between the new DGNM management and JICA team were not properly made for reviewing the previously planned Output 1 activities defined at the last PIC meeting in September 2019, which caused the cancellation of many activities.

1.1 Revision of the recruitment/promotion regulations for nursing college FMs

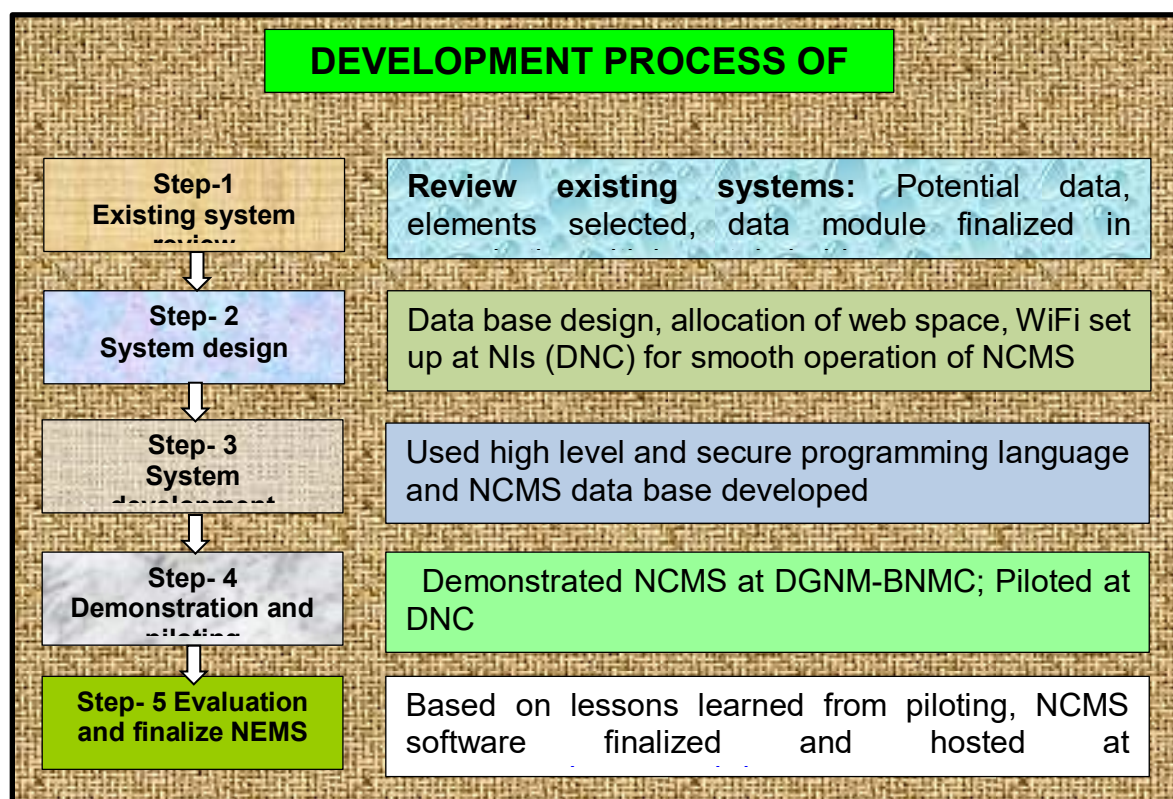
CBNS Project assisted financially/ logistically as well as giving technical input for the National Task Force (NTF) to formulate the 24 recommendations in four areas in nursing development which were approved by the Ministry in 2018. As per Plan of Operation, JICA project team participated in the NTF committee meeting to review and update Job description (JD) of nursing profession after reviewing all relevant documents. The project submitted “Recommendation Report on Career ladder/ promotional path for Public sector nurses in Bangladesh” with identified gap between MoHFW and Ministry of Finance (MOF) on the recruitment regulations of nursing college FMs causing stagnant promotion. The report contributed for the discussion on the holistic nursing professions career path development. Secretary (ME&FW) took swift action to request Ministry of Finance for the revision of MOF vetting order published in 2017.

Due to the absence of the Japanese experts and the cancellation of the Japan trip of Bangladesh members the JD and organogram update work was solely continued and completed by DGNM, as the new DGNM management had made dynamic efforts to call up the excellent nursing officers from various institutes to formulate a strong working group for the tasks.

As stated in the monitoring report of the project, no standard regulations for establishing public nursing colleges exists other than private colleges. Project members realized the needs of grasping the present status and conditions of all the public nursing colleges prior to the formulation of the standard regulations and concluded to work on the development of a database of the basic information of all nursing colleges. From this background, Project started the development of the basic design of Nursing College Management System (NCMS) contracting with a consultant who has good experiences of developing similar Information system for nursing institutes in Bangladesh. A five-step process has been made for the development of NCMS (Diagram 1). NCMS consists of ten management modules which relate to the total management of nursing colleges, namely; Faculty Portfolio, E-learning, Students management, Student survey, Academic calendar, Library, Laboratory, Hostel, Exam result, Store/ inventory.

As part of the basic design of NCMS two modules have been developed out of ten i.e. Faculty portfolio and Student’s survey. In faculty portfolio development all 36 FMs entered their portfolios that include 28 FMs of BSc Nursing education and 8 FMs of Midwifery. First and second year students of BSc nursing of DNC already conducted survey on subject based FMs in 2018, 2019 and 2020. Data of the student’s survey has been compiled by JICA expert and given to the Academic Core Committee (ACC) through Principal of DNC for review and to give feedback to the concern subject FMs.

Diagram 1 Five step development process of NCMS



1.2 Nursing college accreditation first time in Bangladesh

In collaboration with UNFPA and WHO, JICA project team supported BNMC on the first nursing college accreditation practice in Bangladesh at Dhaka Nursing College (BSc Nursing and Diploma Midwifery courses) with the approved tools and procedure by the Ministry of Health and Family Welfare (MoHFW). The accreditation practice was done by a review team under the supervision of BNMC. Evaluation report by the reviewers was submitted to the National Committee of Nursing College Accreditation in March 2020. Due to the outbreak of Covid-19, the final judgment has not been done yet. The project felt the necessity of capacity building of reviewers, refinement of accreditation tools and development of Nursing College Management System (NCMS) to develop the accreditation system. Therefore the project will provide further support to BNMC for smooth operation of the nursing college accreditation once NCMS is developed and considering its limited human and financial resources.

1.3 Strengthening of the Nursing administration

JICA team supported the progress monitoring of the Yen Loan Program on facility improvement of the nursing colleges. As part of the capacity building of DGNM, JICA team organized six sessions of On-the Job Management Training (OJMT) for the Nursing officers of DGNM since December 2019. On January 2020 the OJMT stopped with the decision of the then DG in-charge of DGNM to shift it for more systematic implementation.

On the Job Training completed for nursing staffs of DGNM by CBNS project

Batch	Title of the training	No. of participants	Date of training
1	Management (Skill & role of manager)	32	25/11/2019
2	Supervision, Role of Supervisor (Supportive supervision)	31	2/12/2019
3	Team building (Committee)	34	9/12/2019
4	Decision making	35	27/1/2020
5	Motivation	34	3/2/2020
6	Communication + Assertion	30	2/3/2020
Total:		196	Multiple attendance

The project provided 28 Personal Computers and assigned an IT consultant to support strengthening of the PMIS management at PMIS Unit. However, the team feels the necessity of appointing a regular senior staff at PMIS unit as soon as possible. The basic design of the NCMS and two modules i.e. *FM Portfolios* and *Student's evaluation* out of the planned ten modules have been developed and operated at DNC.

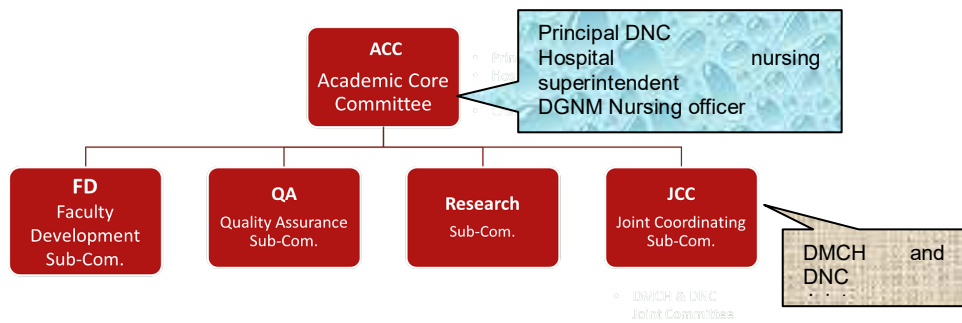
Output 2: Quality of management and faculty member for BSc Nursing education is improved

Activities Planned	Activities accomplished
2-1. Assure the quality of assigned Faculty Members by Monitoring and Evaluation	Academic Core Committee (ACC), Faculty Development Sub-committee (FDSC), Quality Assurance Sub-committee (QASC), Research Sub-committee (RSC) and Joint Coordination Sub-committee (JCC) with DMCH in April 2017. Sub-committee activities are reported at ACC and Faculty Member's Meeting. 1st-year and 2 nd –year students evaluated subject-based teaching through online. Outcome of student's evaluation shared with the FMs with necessary feedback for improvement.
2-2. Secure Subject-Based teaching as per curriculum	All 28 FMs of BSc nursing education at DNC has been assigned for specific subjects considering their skills, experience and interest on the respective subject(s). Subject based teaching along the new curriculum was made by making teaching materials, subject-based FMs list, academic calendar, subject information and lesson plan for lectures, clinical practice guidebook for fundamentals of nursing, clinical practice guide books for the students 1 st & 2 nd year (2018 curriculum) and 3 rd & 4 th year students (2006 curriculum), reorganized English lab, clinical practice lab, classroom etc. for the new academic building, library rearrangement is ongoing.
2-3. Ensure appropriate trainings of Faculty Members	Need based capacity building training and technical training on IT and CPs were organized for the FMs. All FMs gained skills in conducting online classes during COVID-19 pandemic.
2-4. Promote research activities by Faculty Members according to their subject specialty	Six research groups were organized, and started study sessions on research methods in 2018. Two research groups got ethical approval from IRB and started research in 2019. Two groups completed writing manuscript, and submitted to journals 2020 and those are still under the reviewing process due to COVID-19.

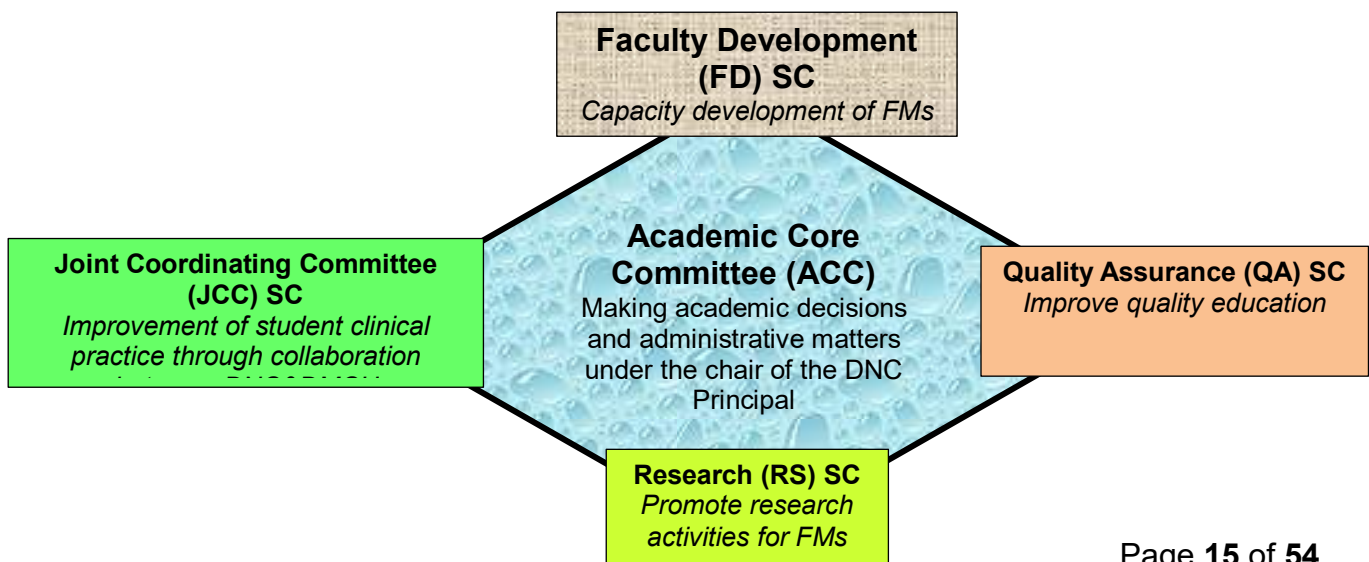
Activities Planned	Activities accomplished
2-5. Motivate students through mentoring system	In 2019 DNC assigned 25 FMs as mentors for group of students of four different years of BSc nursing. These mentors provided all necessary Psychological and mental support and cooperation to the students to make their study successful in all aspects.

2.1 Assure quality of faculty members by monitoring and evaluation

Academic Core Committee (ACC) has been formed by 7 FMs with Principal of Dhaka Nursing College (DNC) as chair to assure the quality of Faculty Members (FM) with the opinion of FMs and through formation of four sub-committees in April 2017 i.e. Faculty development (FD), Quality Assurance (QA), Research (RC) and Joint Coordination Committee (JCC) between DNC and Dhaka Medical College Hospital (DMCH). Each sub-committee consists of 5-6 FMs as members with one chairperson.



All these sub-committees are functioning smoothly under the guidance of Principal of DNC. Each sub-committee meets fortnightly and discuss on related issues. Activities accomplished by the sub-committees are presented below.



Faculty development sub-committee (FDSC) formed with 8 FMs to improve the quality of faculty by providing appropriate training and education and pedagogy; organize training of the FM by identifying their individual needs; develop and improve the leadership capacity among the FMs; maintain portfolio including individual activities and keep training records of the FMs; set and maintain the participant selection criteria for the training; share information and disseminate the acquired knowledge and monitor the progress of the action plan of the training participants.

Faculty development sub-committee (FDSC): Major activities

- Develop and maintain profile of Faculty members (FMs) in Faculty Portfolio
- Organize and conduct need based trainings for the FMs on different issues.
- Evaluate training outcome and organize follow up.
- Select themes on student's mental health.
- Organize training to FMs on zoom to conduct online classes during COVID-19 pandemic.
- Organize IPC training for the FMs and students.

Quality Assurance sub-committee (QASC) formed by 8 FMs to assure quality of assigned Faculty members by monitoring and evaluation.

Quality Assurance sub-committee (QASC): Major activities

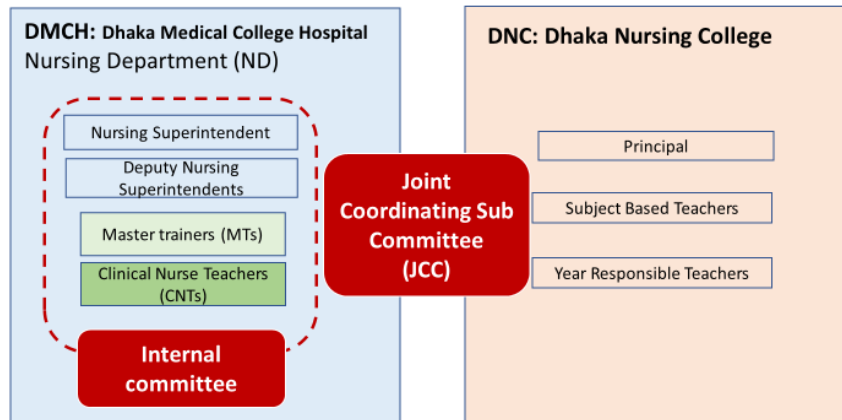
- Set Monitoring and Evaluation mechanism and organogram.
- Conduct a questionnaire survey to Faculty members about their subject preference.
- Specify and implement Subject-based teaching.
- Evaluate Subject-based teaching by the online students' evaluation.
- Monitor and guide FMs to prepare lesson plans with expertise support of JICA experts.
- Support BNMC in curriculum revision with technical suggestions.
- Monitor proper implementation of the Syllabus and Curriculum.
- Assign and train Student Mentors from the Faculty members.
- Evaluate subject based FMs through student's online survey.

Research sub-committee (RSC): Major activities

- Support FMs to receive Institutional Review Board (IRB) training.
- Conduct study sessions among RSC members.
- Formulate 6 research groups among the FMs.
- Two groups have completed data collection and are now writing manuscripts. One group completed research and waiting for ethical approval. One group groups has been completed writing research proposal for IRB approval.

Joint Coordinating Committee (JCC) formed by 12 members from DNC (6) and DMCH (6) to conduct clinical practice properly by the BSc nursing students with the support of MTs and CNTs. A clinical practice coordination system has been developed involving DMCH to ensure proper clinical practice by the BSc students in the DMCH. An **internal committee** also formed in the DMCH for better coordination among the nurses.

Clinical Practice Coordination System



Joint Coordinating Committee (JCC): Major activities

- Created Master Trainers (MT) and Clinical Nurse Teachers (CNTs)
- Developed training module and material using e-learning software
- Provided 5-weeks training of trainers (CP TOT) for 66 CNTs from 49 selected wards of DMCH.
- Supported B.Sc. nursing students' clinical practice in the clinical areas.
- Supported to create CP manual

Internal Committee(IC): major activities

- Conducted In-service training to 245 clinical nurses (target 400 till March 2021)
- Developed and utilized CP manual

2.2 Secure subject-based teaching as per curriculum

With the support of the CBNS project DNC has conducted an assessment of the FMs and their interest on subjects. All 28 FMs of BSc nursing have been assigned to teach respective subjects of their interest. One teacher has been assigned for minimum 1 to maximum 6 subjects depending on the skills and experience in teaching the subjects. However, list of FMs shows that 18 out of 28 FMs were attached from outside and 10 are posted at the DNC. Eight external guest lecturers have been assigned to overcome shortage of experience FMs.

The project prepared the faculty portfolio database of FMs for monitoring and evaluation through designing website for DNC. Necessary training has been provided to the FMs by the project to manage new website and faculty's Portfolios. DNC conducted evaluation activities on quality of management and faculty members jointly with the accreditation team.

New curriculum (2018) for BSc in Nursing has been applied in DNC in 2019. BSc nursing students of year 2019 and 2020 (current 1st and 2nd year) have been covered under new curriculum. Students of 3rd and 4th years are studying under old syllabus. Subject-based FMs were set for the new curriculum. The preparation of necessary teaching materials such as clinical practice guidebooks and online lectures is ongoing.

All classes of DNC remain suspended since 18 April and most lectures classes were behind the schedule. Therefore FMs started sending lecture sheets and education materials to the students by e-mail from May 2020 during closing of college for COVID-19 pandemic situation. Subject based teacher's organized on-line lectures using zoom. Students of first and second year conducted online subject evaluation in 2018-2020. Feedbacks of the student's evaluation were given to the subject FMs. But due to limited access to internet and lack of android mobile phone almost 50% students could not attend on-line classes. QA committee started reviewing lectures and lab classes. The committee also monitors the class schedule of the zoom online lectures.

The project provided support to reorganize laboratory and library facilities of DNC with necessary materials and equipment. Guiding documents for Clinical Practices (CP) guidebook on 18 subjects completed. Nursing student's guide to clinical practice (220 copies) provided to 1st-3rd year students. Allocation of responsible FMs on clinical practice for each subject is still in process. Clinical Nurse Teachers (CNTs) provide support to students in ward based bed-side clinical practice at DMCH. However, clinical practice has stopped since April 2020 due to COVID-19 pandemic.

Reorganized DNC facilities	Improvement made
Practice laboratory	Equipped 10 beds for practice Lab with necessary equipment; Made equipment list of the practice lab
English Lab	Reorganized English Lab (Fixed monitors, hardware, sound system)
Library	Set 13 desks, 50 chairs, 140 books, 5 book shelves
Classrooms	Set classrooms (Audio visual system, screens, 4 laptops in classroom, AC for 6 rooms, 100 chairs with desks)
Clinical practice at DMCH	Provided tables, chairs and white board for the training room.

2.3 Ensure and appropriate training of faculty members

All preparatory works for organizing and conducting training were completed which includes set criteria for selecting training participants, conduct training need assessment, plan to conduct training based on need assessment and assign trainers from inside/ outside DNC. Two training sessions of Faculty members were postponed due to COVID-19 pandemic situation. Instead of that training on Clinical practice and zoom operations were provided to the FMs. Training also provided to FMs and administrators on maintaining portfolio and database.

The project organized 16 different training and workshop for the FMs and nurses on teaching and technical skill development. In addition, conducted some training for the FMs and 4th year students i.e. Infection Prevention & Control (IPC) training for COVID- 19 (Theory), the zoom training for conducting online lectures and Follow up online training (Zoom). The project also conducted training on Mental Health for the 1st year students, training for new FMs on 'Nursing processes' and 'Clinical practices'. CBNS assigned good number of trainers and specialists from inside and outside DNC to conduct the training. In 2018 FMs analyzed video of training for self-evaluation. Quality Assurance sub-committee periodically monitored lectures and lab teaching by using evaluation format.

Training organized by CBNS project for faculty development of DNC

Title of training	No. of FMs & others participated	Remarks
A. Teaching skills development		
Capacity Building Training for Faculty (19 sessions)	34	2weeks
Capacity Building Training for Faculty (Follow up training)	8	
(1) Leadership (2) Active learning	30	
(3) Understanding Psychological Needs (4) Mental health management for 1st year students and mentors	30	
Training on English Laboratory (FMs)	27	
(1) Theoretical session (2) Lab Practice session		
Training on development of lesson plans:	30	
(1) Lesson plan for lectures (2) Lesson plan for lab practices		
B. Technical skills development		
1. Infection Prevention Control (IPC) (COVID19)	30	
2. Infection Prevention Control (COVID19; PPE practice)	30	
3. IPC training (COVID19-PPE) for students	86 students	4 th year students
4. Zoom training (to conduct online classes)	30	3 sessions
5. PC skill training (Follow up after Laptop distribution)	15	
6. Data management training (Subject evaluation survey by students, Teacher's portfolio)	32 personnel	FMs and administrative staffs
7. Training Course on Clinical Practices and Nursing Management in Japan	11 FMs	

2.4 Promotion of Research activities

After formation of Research Sub-committee, workshop was conducted by the FMs. Training on research methodologies also organized and research proposal was written. Research team started writing research results. Six selected participants attended the International Nursing Research Conference in Bangkok, Thailand in 2017. Six research groups were organized, and started study sessions on research methods in 2018. Two research groups got ethical approval from IRB and started research in 2019. Two groups completed writing manuscript, and submitted in the journals 2020. Review process of the research not yet completed due to COVID-19.

2.5 Motivate students through mentoring system

DNC gave due attention to develop mentoring system in the DNC. Quality assurance sub-committee discussed and made plan for the activities. Mentoring handbook developed for the FMs in 2018. All FMs of DNC were oriented on mentoring system. In 2019 25 FMs have been assigned as mentors to support 8-18 students per FMs. Mentoring was provided to the first year students in 2018 and 10 mentors started mentoring. Mentoring for rest of the students was started in 2019. Mentoring session was not implemented in 2020 due to COVID-19 pandemic. Mentoring evaluation by the first-year students was conducted in 2018 and 2019 and submitted to all FMs and ACC. Feedback was given to the 1st year mentors. Students took initiative of the procurement of necessary materials for hostel management as they were motivated through the mentoring system and involved in the evaluation of the hostel environment. The subcommittee analyzed the evaluation result and reported to ACC.

Output 3: Management of Clinical Practice (CP) system is working effectively and efficiently

3.1 Develop the framework of CP system

Joint Coordinating Committee (JCC) was formed by DMCH and DNC to plan, implement, monitor and supervise clinical practices of BSc nursing students as well as to improve nursing services and care in DMCH. JCC consists of 12 members of which 6 from DMCH and the other 6 from DNC. The committee has been organizing the meetings fortnightly since May 2017. JCC meeting was temporarily suspended from March 2020 due to the COVID-19 pandemic, but online meeting resumed once a month since July 2020. Till December 2020 JCC conducted 48 meetings.

An **Internal Committee (IC)** has been formed consisting of senior nurses from DMCH responsible to provide management support to BSc nursing students carrying out clinical practices. The committee also supports in capacity building of Clinical nurses to teach and support students in ward based bed-side practice. IC meets every week since April 2017 to discuss and plan for weekly CP activities. No meeting held since April 2020 as all clinical practice of BSc students suspended during COVID-19 pandemic. Until December 2020 IC conducted 120 weekly meetings.

Director of DMCH designated 9 nurses as **Master trainers (MTs)** who were working exclusively for clinical practice and sent them to the Japan for training in 2017. The MTs guide Clinical Practice (CP) activities in DMCH. Currently only 5 MTs exist due to promotion or changes.

Clinical Practice Training of Trainers (CPTOT) module was developed by the JCC members based on the needs assessment by MTs of DMCH and FMs of DNC who participated in Japan training. The training module consists of 44 topics by theory and practice parts. They conducted two batches of CPTOT in 2018 and 2019. CP TOT was organized to develop **Clinical Nurse Teachers (CNT)** from the senior staff nurses of DMCH. CNTs are responsible to provide support to nursing students at ward based bed-side practice. In January 2020, 6 days refresher training was conducted, where 34 CNTs (1st batch of CPTOT) participated. The project team continuously reviewed MT's and CNT's performance and provided them necessary feedback for improvement.

Training provided by CBNS project to Nurses of DMCH

Title of Training	No. of participants	Remarks
1. Clinical Practices and Nursing Management training in Japan	19	
2. Training of Clinical Nurse Teachers (CNTs) CP TOT	66	Current CNTs- 63 (2 left job and 1 promoted and transferred)
3. Clinical Nurse Training	400	Till January 2021, 295 participated; another 105 will be completed by 8 March 2021.

As stated by the Nursing Superintendent there is no specific room in DMCH for conducting training of nurses. She has to plea the doctors to allocate room for training. Director of DMCH allocated one room for the MTs and CNTs as a working place for Clinical Practice of the nursing personnel.

3.2 Ensure adequate number of CNTs

CP system: Since September 2018, Nursing Department of DMCH has operated the CP system for accepting the Clinical Practice for nursing students of DNC.

Ward selection for CP by students: The JCC selected 20 wards for 1st year and 2nd year students of DNC for CP placement in 2017. Furthermore 29 wards for 3rd and 4th year students were added in 2019. A total of 66 nurses who trained on the CPTOT have been assigned as CNTs in selected 49 wards of DMCH for CP sites. During clinical practice, MTs and Nursing Department supervise CNT's performance.

MTs organized 9 days nursing skill test for the CNTs in January 2020. MTs are providing continuous supervision support to CNTs and doing performance evaluation survey and feedback is given to the CNTs in the internal committee meeting. This process has been suspended due to COVID-19. Results of performance evaluation survey will be shared with JCC and ACC after COVID-19 pandemic situation is over.

Currently there are 63 CNTs remaining at DMCH and 46 CNTs are working for the selected 35 wards after reallocation of duties due to COVID-19 situation. Clinical practice suspended since April 2020 due to COVID-19 pandemic. With the confirmation of the resumption of clinical practice, allocation of 63 CNTs duty sites will be decided after reallocation of clinical practice site.

3.3 Ensure trained clinical nurses with CP skills

CN Training module development: Clinical Nurse Training (CN training) program and relevant modules were developed. CN training modules were reviewed and revised based on the 2nd CPTOT in January 2020 and again in March 2020 based on the 1st and 2nd CP training.

CN Training: CN training program and modules were prepared by the JCC members based on the 2nd CPTOT. The project provided basic medical equipment to DMCH for clinical practice. CN Training started from February 2020 and after the suspension for 5 months from April to August due to COVID-19, it resumed in September and is continuing till March 2021. By January 2021 the project conducted the training for 295 CNs in 12 batches. The project plans to provide training to targeted 400 nurses during the project period. In the beginning, the training consisted of 10 days with 40 participants in each batch. However, after suspending due to COVID-19, the training was modified to shorten the period to 6 day and minimize the attendance to 20 as measures of infection prevention. The total training will be completed by 15 batches. A pre and posttest were set in each training batches and supplementary test was carried out for CNs who failed the post test.

Installation of CP tool: CP tools installed/ provided to 57 selected wards that contains hand wash basins, white boards, trollies and other medical equipment.

Introduce e-learning system: The CBNS project introduced e-learning system "Think Board Learning Management System (TBLMS)" to 15 participants among MTs, CNTs of DMCH and FMs of DNC during June to December 2019. The project organized one day follow up training for 2 MTs and 2 FMs. Participants of the training developed 38 videos on different topics as training material for CN training.

3.4 Develop a CP manual

Due to the delay of the national "Faculty Guideline" and "Handbook for Students" for clinical practice, the development of the CP manual for DMCH was also delayed. Nursing Department developed the CP manual based on the drafted "Faculty Guideline" and "Student Handbook" for CP. The manual refers to the CP system in DMCH including selection criteria and roles of MTs and CNTs. Though the finalization was

delayed due to COVID-19 pandemic and suspension of clinical practice at the hospital, the draft version of CP manual has completed and distributed to the CNTs and the selected wards of DMCH in January 2021.

3.5 Improve the capacity of nursing department for CP

Develop and introduce CN Training modules: Throughout the implementation of the CPTOT, Clinical Nurse Training (CN training) program and its' training modules were developed. Firstly, draft version of the modules was provided to 50 wards, and 500 copies of the finalized modules were printed in November 2020 containing 33 topics of nursing skills including IPC measures on COVID-19. All the CNs participated in the CN training will be provided the modules for their daily work as well as supporting nursing students for their clinical practices in DMCH.

2. Achievements of the Project

2-1 Outputs and indicators

(Target values and actual values achieved at completion)

CBNS project assisted in overall improvement of BSc nursing education. Technical Working Group (TWG) formed by the National Task Force (NTF) for future of nursing presented 24 recommendations on five major areas¹⁰ of improvement of nursing sector in Bangladesh. Among those this project worked on three major areas i.e. nursing education, Nursing administration and Regulations. The achievement level of outputs and outcomes against objectively verifiable indicators are summarized and presented below.

2.1.1 Output-1

Achievement level of Output-1 is “Fair” as a whole due to the late start of the main activities and difficult circumstances caused by long lasted pandemic of Covid-19.

Output 1 Policy and Strategies to improve BSc Nursing education are implemented		
Objectively Verifiable Indicators (OVI)	Achievement (Output based)	Achievement (Outcome based)
<p>Three indicators were set officially for the Output-1 as follows:</p> <ol style="list-style-type: none"> 1) Number of monitoring of nursing colleges with the establishment standards authorized by the government 2) Number of accreditations practiced at nursing colleges 3) Number of career path guidebooks distributed to public nursing colleges and their collaborating hospitals. <p>Beside the above three indicators shared on the official PDM, JICA team set the detailed activity level indicators as follows:</p> <p>Output 1-1. -Number of Guidelines/ guidebooks edited by</p>	<ol style="list-style-type: none"> 1) Monitoring was not practiced as it was realized that the governmental standard was existed only for private nursing colleges and not for the governmental colleges (achievement 0%). The Project changed the direction to develop information system (NCMS) to collect basic updated information of government nursing colleges. Project developed two modules out of the total ten modules of the whole NCMS and practically used them at DNC (achievement 40%). 2) The Project carried out the accreditation only at DNC (achievement 50%) 3) The Project could not make guidebook officially approved by MoHFW. However, the team made “<i>Recommendation Report on Career Ladder/Promotion Path for Public Sector Nurses in Bangladesh</i>” and submitted the report to MOHFW. 4) Beyond the above three indicators’ achievements, the following 	<ol style="list-style-type: none"> 1) Though it was a partial development of whole system, practical use of the basic school information database system (NCMS) will contribute as the initial step for the future work of developing the basic standards on establishing nursing colleges and applying them for the monitoring work. (Fair) 2) The accreditation practiced at DNC as the first nursing college accreditation in the country gave various hints of improving the quality of nursing education and the administrative management of nursing colleges. (High) 3) The report made the ministry officials aware of

¹⁰ Draft report of Technical Working Group (TWG) formed by the National Task Force (NTF), 27 Aug. 2017

<p>the Project and approved by MoHFW -Review document on Nursing Job Description is made.</p> <p>Output 1-2. -Monitoring system on Establishment Standards on Nursing Colleges is developed.</p> <p>Output 1-3. -Number of accreditation review at DNC.</p> <p>Output 1-4. -Completion of the Holistic Career path Guidebook and number of its distribution.</p> <p>Output 1-5. - Number of the training sessions and attendance rate of DGNM nursing staff.</p>	<p>achievements were observed with the detailed activities</p> <ul style="list-style-type: none"> ● OP1-1: The first national “Faculty Guideline on Supervising Nursing Students in Clinical Area”, and “Nursing Students Guide to Clinical Practice (Handbook)” were made. ● OP1-2: NCMS was partially developed. ● OP1-3: The first accreditation was done at DNC. ● OP1-4: Holistic career path guidebook was not made. ● OP1-5: Six sessions were conducted with more than 85% of available DGNM nursing staff. 	<p>the defect on the government regulations regarding the recruitment and promotion of nursing teachers. Secretary took action for the revision of the regulation which contributed for the future work on the development of a holistic career path guidebook for nurses (Lower Fair).</p> <p>4) All those detailed activity level achievements contributed to the overall achievement of Output-1 in a fair level. (Fair)</p>
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Output-1 solely lies on nursing administration, which was one major area of recommendation made by the TWG to review and develop policies and strategies for BSc nursing education. In total seven outputs achieved by this project under nursing administration. JICA team assisted in preparing recommendation report on career ladder/promotion path public sector nurses in Bangladesh. The planned Japan Training on Nursing Administration was cancelled due to COVID-19 pandemic, with which Project expected to deepen the discussions on Career Path development between the key Bangladesh counterpart officials and Japanese supporting committee members. Current status of development of career ladder/promotion path is not known to the JICA team as they are not involved by the TWG. Meanwhile JICA team submitted report on the recruitment and promotion of the government nursing professions to the MoHFW. The Project initiated the On-the-Job Management Training program for the nursing/ midwifery officers of DGNM. After the six sessions were conducted until 3 March 2020 with 35 participants, DGNM revised the Program in more systematic ways.

Responding the request from DGNM in September 2019, project recruited an IT consultant for the purpose of strengthening Personnel Management Information System (PMIS) and Nursing College Education Management System (NCEMS) at DGNM and BNMC. The consultant also worked for the Divisional Assistant Director (nursing) for their familiarization to PMIS system and to strengthen their capacity of the nursing human resource management at the divisional level. JICA team put all its efforts to develop and operate two modules i.e. faculty portfolio and student’s survey in the DNC out of ten modules (Faculty Portfolio, E-learning, Students management, Student survey, Academic calendar, Library, Hostel, Exam result, Store/Inventory) as part of NCEMS. Now DGNM is working on

revision and fine tuning of the information system. The project conducted accreditation exercise in DNC, the first time with any nursing colleges in Bangladesh now waiting for final judgment by the accreditation board.

2.1.2 Output-2

Achievement level of Output-2 is high as the internal committee made by the Project functioned effectively even the time when the Japanese experts worked remotely from Japan.

Output 2 Quality of management and Faculty members for BSc nursing education is improved		
Objectively Verifiable Indicators (OVI)	Achievement (Output based)	Achievement (Outcome based)
<p>2.1 Nursing education fulfilling the standards is being carried out at DNC</p> <p>Beside the indicator above, JICA team set the detailed activity level indicators as follows:</p> <p>Output 2-1.</p> <ul style="list-style-type: none"> - Faculty member's profile availability and updating data (% of teachers) - Organogram (Planned VS existing Post), Student/ teacher ratio <p>Output 2-2.</p> <ul style="list-style-type: none"> - Subject teacher list availability - Class conducted in B.Sc. courses (Implementation rate of the class by teachers) → No data - Lesson plan by subject teachers (% of subjects' teachers) - Clinical practice guidebook (subject base including placement table) (% of subjects) - Students completed B.Sc. courses by year (% of students by batch) Attendance rate (students), Dropout rate, - Students' performance evaluation (test score, pass rate) - Students' evaluation of the class, in-school practice, clinical practice - School evaluation (Students' satisfaction survey) <p>Output 2-3.</p> <ul style="list-style-type: none"> - No. of training (% training participation of teachers) <p>Output 2-4.</p> <ul style="list-style-type: none"> - Research conducted by the FMs (No. published, oral/ poster presentation) - Completed Ethics training for research (% of teachers) <p>Output 2-5.</p> <ul style="list-style-type: none"> - No. of assigned mentors - Mentor evaluation by students 	<p>OP2-1: (achievement 80%) All 28 FMs' updated portfolio data were stored in NCMS System of DNC, but most of the FMs remained in unofficial posts.</p> <ul style="list-style-type: none"> • OP2-2: (achievement 90%) -Subject-based FM list was developed. -89% FMs made subject-base lesson plan. -Student attendance rate 60-80%. -Students pass rate from 96% (base) to 94% (end.) - Students' evaluation (the class, in-school and clinical practice) was done. - Students' satisfaction point was improved from 2.4 to 3.7 • OP2-3: (achievement 90%) -80 to 100% of all 28 DNC teachers attended the trainings • OP2-4: (achievement 70%) -Out of six research groups formulated by the Project, two groups completed research work and applied to an academical journal. - All teachers participated and completed the ethics trainings • OP2-5: (achievement 100%) -Out of all 28 FMs, 25 were appointed to be a mentor. 	<p>All these activities supported DNC in carrying out Nursing education fulfilling the standards and ensuring the sustainability.</p> <ol style="list-style-type: none"> 1) Provided support in implementing BSc nursing curriculum as per need; (High) 2) CP, English labs and other labs of DNC are reorganized; (High) 3) Subject based FMs engaged; FMs are trained, ACC developed to monitor and supervise courses and other related activities; (High) 4) The first accreditation practice has been done with DNC. (Fair)

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Output 2 focused on improvement of quality of management and faculty members for BSc education. Achievement of output is highly impressive. Revised curriculum of BSc nursing 2018 implemented by DNC in 2019. All labs of DNC and physical facilities have been reviewed and renovated to fit with the modern education standard of BSc nursing. Need based training provided to all FMs to gain knowledge and skills in teaching BSc nursing students. Handbook and guideline developed for clinical practice by BSc students. DNC has done accreditation exercise first time in Bangladesh. Report by the reviewers was submitted the National Committee of Nursing College Accreditation in March 2020. Due to the outbreak of Covid-19, the final judgment has not been done yet.

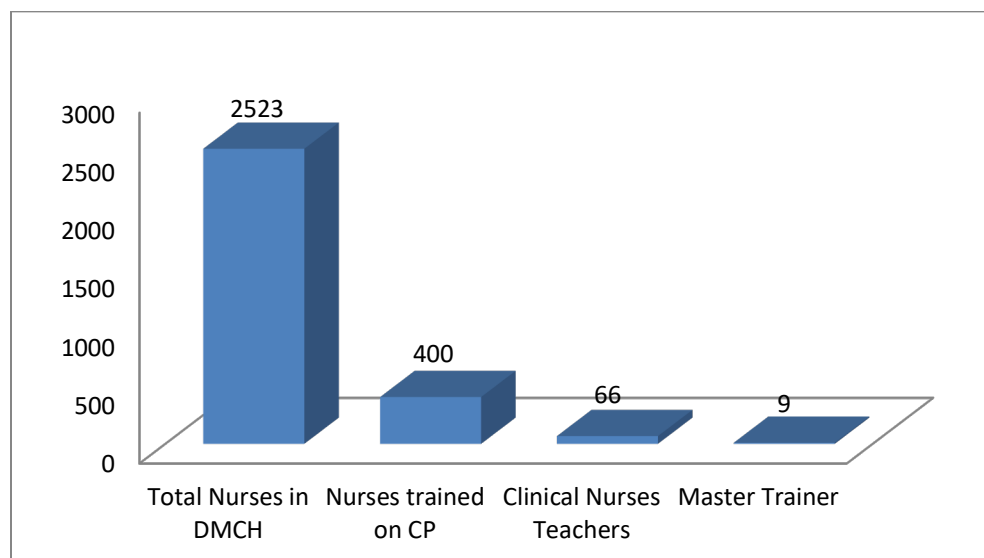
2.1.3 Output-3

Output 3: Management of CP system is working effectively and efficiently		
Objectively Verifiable Indicators (OVI)	Achievement Output based	Achievement Outcome based
3-1. Ratio of trained Clinical Nurse Teachers (CNTs) among all clinical nurses at DMCH	63 (2.57%) CNTs among total 2523 clinical nurses (including CNTs and MTs).	Enough number of CNTs were trained to carry out the CN training. (high)
3-2. Ratio of trained CNTs for students	Ratio of CNTs and BSc nursing students is 1:6 CNTs number in DMCH is 63 and total students in DNC is 384 (in 2020).	Enough number of CNTs were trained supervise the nurses for the clinical practice in the designated wards. (high)
3-3. Ratio of trained clinical nurses among all clinical nurses	Until Dec. 2020, 245 (10%) clinical nurses have been trained. By end of March 2021 total trained clinical nurses will be 400 (16%) out of 2455 nurses in DMCH. Project targeted to cover all nurses working in the wards designated to the clinical practice of 1 st and 2 nd year students (22 wards with 395 nurses), which was fully completed (100 % achieved).	All the nurses who work in the designated words for the student clinical practice became ready to receive the students. (high)
Beside the above three indicators, JICA team set the detailed activity level indicators as follows: <u>Output 3-1:</u> Number of committee meetings conducted <u>Output 3-2:</u> % of trained CP nurses, % of clinical practice sites assigned CP nurses <u>Output 3-3:</u> % of trained clinical nurses with CP skills	<u>OP3-1:</u> 120 meetings for the Internal committee, 48 meetings for the Joint Coordination Committee. (100 % achieved) <u>OP3-2:</u> Total 63 CNTs for 384 DNC nursing students (1:6) were trained. (100 % achieved) <u>OP3-3:</u> 400 clinical nurses out of total 2455 nurses (excluding 68 CNTs and MTs) in DMCH (16%) participated the CN training. (100 % achieved)	(high)

<p><u>Output 3-4:</u> CP Manual is developed, % of dissemination of CP Manual, Utilization of CP Manual at clinical practice sites.</p> <p><u>Output 3-5:</u> CP Training Module is developed, % of dissemination of CP Training Module, Utilization of CP Training Module at clinical practice sites, Number of CP Training organized by Nursing Department</p>	<p><u>OP3-4:</u> Development and usage of CP Manual have done. (100 % achieved)</p> <p><u>OP3-5:</u> - CP Training Module was developed and distributed to all 400 nurses who attended the CP training. Totally, 15 batches of the CP Training were carried out to cover all 400 targeted participants. (100 % achieved)</p>	
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Output-3 mainly emphasized on effective and efficient management of clinical practices at DMCH. Currently 5 Master Trainers (MTs) out of 9 trained and 63 Clinical Nurse Teachers (CNTs) out of 66 trained are available among the Senior Staff Nurses of DMCH to support BSc nursing students on ward based bedside clinical practice. The present ratio of CNTs and BSc nursing students is 1:6 which is manageable. In addition, the project provided training to 400 clinical nurses as part of their in-service training and provided equipment and furniture for training room at DMCH.

Current status of nurses trained by CBNS project in DMCH (January 2021)



The overall progress of the project greatly hampered due to delay in implementation and COVID-19 pandemic. Frequent changes of Project Director and Director Nursing Education in the DGNM slowed down the progress in achieving output-1. On the other hand even long delay in starting the project and COVID-19 challenging situation, progress in output-2 and 3 are remarkable. Activities related to capacity building of DNC faculty members, physical improvement of DNC facilities and establish clinical practice system in the DMCH completed as per Plan of operation. The project has successfully completed all activities under output 2 and 3 except some limitations on implementation of activities under output 1.

2.1.4 Additional activities performed by the CBNS project as emergency responses

- 1) **Infection Prevention and Control (IPC) Activities:** As part of the infection prevention control activities JICA through CBNS project provided 760 gowns, 650 N95 masks, 650 pair gloves, 650 pair goggles and 650 bottle sanitizers to DGNM for distribution to different hospitals during COVID-19 pandemic. Accordingly, DGNM distributed those to 8 hospitals in Dhaka and Narayanganj¹¹ including DMCH. DMCH selected 5 MTs as members of the IPC team taking advantage of their experience since COVID-19 pandemic. They round and supervise among wards in the hospital regularly and ensure safety of the patient and staffs of DMCH.
- 2) **Pre-dispatch training of nurses to work in Rohingya Refugee Camp:** CBNS Project provided pre-dispatch training for 85 nurses who worked in Rohingya Refugee camp in Cox's Bazaar District in 2017.

2-2 Project Purpose and indicators

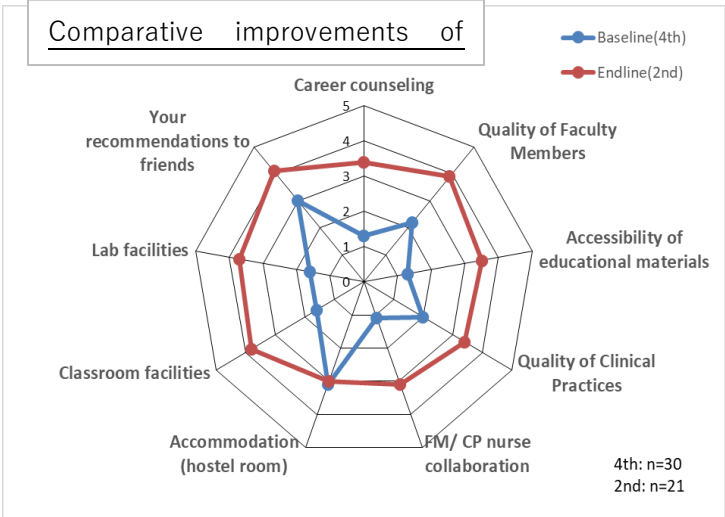
(Target values and actual values achieved at completion)

Project purpose: the quality of education for BSc in Nursing is improved

¹¹ DGNM letter no. 45.03.0000.001.19.020.20-354; dated 10/06/2020

Objectively Verifiable Indicators (OVI)	Achievement
<p>The evaluation score on education by college students are improved. The Project set the target average score to be 4.0 or more expecting the students mark 4 or 5 for all the inquiry items.</p>	<p>The average course evaluation score on college education has improved significantly from 2.4 during baseline to 3.7 in end-line survey in Likert's scale even during lock down situation of COVID-19 pandemic. (Higher Fair)</p> <p>Due to the close down of the school, students could not fully attend the classes at the college and clinical practices at the hospital. As the students responded the inquiry based on their experiences in the previous year without observing the actual latest change and improvement of every item, it might have reflected the lower score than expected.</p> <p>However, most of the Outputs and activity indicators showed high attainment of the target levels. Therefore, it is concluded the Project purpose was achieved with Higher Fare level.</p>

Evaluation score of students shows a remarkable improvement within limited time period. Students found satisfied with the allocation of subject based FMs, improvement of physical facilities classrooms, lab with necessary equipment, library with furniture and books, and engagement of mentors for providing support to students. They expressed their utmost satisfaction on the improvement of Clinical practices in the DMCH assigning MTs and CNTs for ward base bed-side practices. On the contrary, they expressed their worriedness on merging of subjects without reducing contents of the subjects, reduction of hours and marks which might affect their future career path and higher education. Students mentioned about their frustration on closed down of college and CP due to COVID-19 pandemic. This problem has minimized somehow organizing 2 online classes per day out of 4; but they are totally deprived from clinical practices which they may not be able to overcome in the remaining years of study.



3. History of PDM Modification

The first Project Development Matrix (PDM) (Version 1) was developed during first Record of Discussions (R/D) on 28 May 2015. That has been changed and modified during first amendment of R/D (Version 2) on 12 January 2017 due to delay in implementation of the project and changes in government structure; Directorate of Nursing Services (DNS) upgraded as Directorate General of Nursing and Midwifery Services (DGNM). PDM Version 2 was further modified as PDM version 3.1 on 09 November 2020 in a joint meeting of both JICA and MoHFW. Major changes in PDM 3.1 were extension of project period from 5 years (60

months) to 5 years and 3 months (63 months). Other minor changes made in the revised PDM version 3.1 are;

- Dropping one word “utilization” in output-1
- Added 2 more indicators in output 3.
- “Project survey” as the only means of verification for all 3 outputs.
- One new activity added and 2 activities merged together and rephrased some activities
- Under input from Japan side “Training in Japan on Nursing Management” added.
- Plan of Action version 2 has been changed to version 3.1 in accordance with the activities set in PDM Version 3.1

All these were redefined based on the discussion during Project Implementation Committee (PIC) meeting in September 2019 and approved in the joint meeting between JICA and MoHFW on 09 November 2020 just five months before completion of the project period March 2021. Details of changes made in PDM version 3.1 are presented in Annex-2.

4. Others

4-1 Results of Environmental and Social Considerations

CBNS project has responded in the nationwide outbreak of COVID-19 pandemic situation. Government has declared Dhaka Medical College Hospital (DMCH) as one of the largest hospital for treatment of Corona patient. In consequence all health service providing staffs were serving with high risk. The project has provided some Personal Protection Equipment (PPE), medical equipment, sanitizer, goggles, Masks and technical support to the nurses working at the hospital.

4-2 Results of Considerations on Gender/Peace Building/Poverty Reduction (if applicable)

Majority of the beneficiaries and target groups of this project are female. Most of the students of DNC are female (89%) with very few male (11%). Among the clinical nurses received training, out of 245 only 22 (9%) are male. Out of 63 Clinical Nurse Teachers only 2 are male. A total of 19 nurses from DMCH and 11 FMs from DNC attended training in Japan and all of them were female. The reason of such high variation in number is that in nursing education and service sector majority are female. However, the project gives due importance to both male and female.

III. Results of Joint Review

1. Results of Review based on DAC Evaluation Criteria

1.1 Relevance (High)

Bangladesh advances on achieving Sustainable Development Goals (SDGs) health indicators, with important progresses on under-five mortality that persistently declined from 36 per 1,000 live births in 2015 to 29 in 2018 and the neo-natal mortality rate that decreased to 16 per 1,000 live births in 2018 from 20 in 2015. Both these achievements represent achievements of the SDG targets of 2025. The country has aligned the 4th Health, Population and Nutrition Sector Program (4th HPNSP) - with the SDGs and this is the first of the three successive phases in realizing the SDGs and achieving Universal Health Coverage (UHC) by 2030. Bangladesh has prepared first Voluntary National Review (VNR) on SDGs in 2017, and the second VNR in 2020. WHO remains committed in supporting the Ministry of Health and Family Welfare to achieve the Health SDGs and to improve health services as well as strengthening the systems to support overall development of health sector.

The country has made significant progress in achieving some of the SDGs especially in reducing poverty, education for all, gender equality, improved sanitation. However, little progress has been made in providing proper health care with skilled human resources that is under SDG3 i. e. good health and wellbeing. Lack of adequate and skilled health care personnel, poor and inadequate health facilities, lack of quality health education are acting as barriers to success. Bangladesh government introduced 4th Health Nutrition and Population Strategic Plan (2017-2022) to improve health services with skilled human resources and facilities¹². Still there is long way to go. In the 4th HNPSP Operational Plan government has identified 14 issues and challenges in ensuring quality human resources in health sector. Most of the challenges are related to quality medical education and researches. Unfortunately, the OP has put little emphasis on quality education and research of nurses. In the HNPSP OP three major activities are a) Expansion of public health education covering different levels and disciplines; b) Support in establishing autonomous accreditation body and c) Updating curriculum to meet the need for the 21st century's patients and communities. National Health Policy 2011 of Bangladesh also emphasized on the need for modernization of all medical, nursing and medical technology education as one of the important objectives in health services development. Outcome of the objective is to develop trained and skilled human resources in health sector.

As stated above, nursing education in the country suffered from the lack of an international standard education system. Bangladesh government took some initiatives to improve quality of nurses ensuring quality of education in nursing, revising BSc nursing curriculum, upgrade nurse position and other development issues.

CBNS project is in line with the government policies and focused directly on the improvement of nursing education ensuring quality that will directly contribute in rendering high quality health services and care to the patient. The project covered three major concerns of BSc nursing education, those are; improve policy strategy to improve BSc nursing education, improve quality of management and faculty members for BSc nursing education and improve Clinical practice management system.

¹² HNPSP Operation Plan (2017-2022), Medical Education and health Manpower Development; April 2017

The project is unanimously regarded by the stakeholders (MoHFW, DGNM, BNMC, DNC and DMCH) as being very relevant to GoB development needs despite initial delay and disrupted by COVID-19 pandemic. In conclusion it could be said that activities of CBNS project is highly relevant and in consistent with development policies as well as development needs of Bangladesh. The project is supporting and contributing in government efforts towards improvement of nursing education and services in Bangladesh.

1.2 Effectiveness (High)

Dhaka Nursing Institute (DNT) was established for diploma nurse in 1977 and upgraded as Dhaka Nursing College (DNC) in 2006. Almost nothing was changed after upgrading the institute except increasing number of human resources (FMs) without considering quality. Thus, DNC was suffering seriously lack of offering quality education for BSc nursing students.

“The quality of education for BSc in nursing is improved” is the purpose of the CBNS project. The objectively verifiable indicator states that “The evaluation score on education by the college students are improved”. To achieve the project purpose the project set three outputs i. e. administrative improvement of BSc nursing education; quality improvement of BSc nursing education at DNC and improvement of Clinical practice system at DMCH. During first phase, the project concentrated most of its activities to DNC and DMCH as pilot that can be replicated to other nursing colleges of Bangladesh.

Need assessment conducted by the CBNS project showed serious need for improvement of BSc nursing education ensuring revision of curriculum to fit with the international standard education system, improvement of quality of Faculty members and capacity building of DNC to run BSc nursing education. Comparative analysis of baseline and end-line survey shows a tangible progress that has been made by the project even in critical COVID-19 pandemic situation and long delay in implementation of the project which consumed almost 20% of the total project period. Data collected from the BSc nursing students show a remarkable improvement in the BSc nursing course with the intervention of CBNS project though most of the project activities were greatly disrupted by COVID-19 pandemic and no ward-based bed-side clinical practices were held in the DMCH during 2020 which was vital for BSc nursing education¹³. CBNS project organized necessary training in Bangladesh and in Japan for the FMs of DNC and senior nurses of DMCH to improve their knowledge and skills. The project also provided training and PCs to all FMs on IT to learn about computer operation, conduct online classes using zoom, send handouts and reading materials to the students and online data collection from students.

Compared to the baseline situation some major improvements have been made as stated by the students are; development of FM’s portfolios and subject based instructors, conduct online classes using zoom during COVID-19 pandemic, improvement of labs with necessary equipment, classroom facilities with sound system and furniture, libraries with books and reading table etc. Introduction of subject evaluation by the students created scope to evaluate subjects and FMs which is highly praised by the students. Now students can comment on the performance of the FMs for necessary improvement. Students also expressed their deep satisfaction on the improvement of Clinical practice (CP) in the DMCH with the support of CBNS project. CP system was not existed and left uncared during baseline in 2018 and students did not get any scope to do CP properly. DMCH in collaboration with DNC and technical support of CBNS

¹³ End-line survey report of CBNS 2021

project developed CP system introducing Master Trainers (MTs), Clinical Nurse Teachers (CNTs), manual for CNTs and students as well as equipment support for Clinical practices.

DNC faced some problems in conducting online classes during COVID-19 pandemic. Numbers of classes per day have been reduced from 4 to 2 due to technical limitations and inability of student's in using uninterrupted internet facilities in the remote rural area. No clinical practice was conducted in 2020 and examination schedules held up for long time. These limitations will have some adverse effect on the future of the students and DNC will face session jam. Frequent change of DG (PD of this project) and Director of Nursing education in DGNM and lack of proper orientation by the JICA team to the new DG and director on nature and operation modalities of the project created misunderstanding among the newly joined counterparts. This gap in understanding has impacted directly on output 1 and made the cooperation crumbly.

The project purpose focused on the improvement of quality of education for BSc nursing that is to be assessed by three outputs i.e. administrative improvement of BSc nursing education; quality improvement of BSc nursing education at DNC and improvement of Clinical practice system at DMCH. The logical relation shows that if all three outputs are attained then project purposed will be realized. CBNS project has rightly identified the outputs. Administrative improvement has made DNC to make the FMs technically skilled and physical facilities fit to run the BSc nursing course. Need based training with close monitoring and supervision by the CBNS team helped FMs to improve their teaching skills in theory and practical. Development of clinical practice system helped BSc nursing students to do clinical practice with close support of CNTs. The indicator for the purpose of the project is well on the way to being fully achieved by the end of the project. Thus, it can be said that the project purpose was highly effective to achieve the goal.

The project organized exposure visit, training, workshop and conference for the officials of MoHFW, DGNM, BNMC, DMCH and DNC in Japan, Thailand and Vietnam during the project period (2016-2019).

FY	Event organized abroad (Japan, Thailand, Vietnam)	No. of participants
2016	Strengthening the ability of clinical nursing instructors for the People's Republic of Bangladesh by NCGM (Training)	3
	Strengthening Maternal and Child Health through public health activities	2
	Nursing Education and Policy	12
2017	Nursing Clinical Practices (1 st)	6
	Quality Improvement of Health Services through KAIZEN approach	1
	International Nursing Research Conference 2017, Thailand	6
	Nursing Clinical Practices (2 nd)	6
2018	Health System Management	1
	Nursing Clinical Practices	9
	10th AAAH Workshop (The Asia Pacific Action Alliance on Human Resources for Health), Vietnam	2
2019	Nursing Management	9
	Nursing Administration	6

FY	Event organized abroad (Japan, Thailand, Vietnam)	No. of participants
	Quality Improvement of Health Services through KAIZEN approach	1
	Public Health Activities for Strengthening Maternal and Child Health	1
	Health Policy Development	1
2020	All planned events were cancelled due to COVID-19 pandemic	

Equipment and other materials provided by the project to DGNM, DNC and DMCH are presented below.

Equipment and materials provided to DGNM, DNC and DMCH under JICA CBNS project

Institutes	Equipment and materials provided
DGNM	<ol style="list-style-type: none"> 1) IT items (Laptop PC, Desktop PC, Printer, Scanner, UPS) 2) PPE items (Gowns, Gloves, Goggles, N95 Masks, Hand sanitizer) etc.
DNC	<ol style="list-style-type: none"> 1) Books and bookshelf for DNC library 2) Furniture of class room and library 3) Beds, furniture, medical items and equipment for clinical practice lab room 4) White boards 5) IT Items (Laptop PC, Projector etc.) 6) Installation of sound system 7) English lab equipment 8) Provision of router and internet installation 9) Installation of hand washing basin 10) Air conditioners 11) Curtain Cloth for class/teacher rooms and dormitory 12) Water purifier for dormitory 13) PPE items (Cap, Face shield, Hand soap, Shoe cover, Gowns, Gloves, Goggles, N95 Masks, Hand sanitizer) etc.
DMCH	<ol style="list-style-type: none"> 1) Books, bookshelf, file cabinet, furniture for clinical practice room 2) Furniture for training room 3) Medical items and equipment, sanitary items, stationery for training for nurses and clinical practice for students 4) Printer, and printer toner 5) IT Items (Laptop PC, Projector etc.) 6) Installation of sound system, and provision of portable amplifier and speaker 7) White boards and notice boards 8) Installation of hand washing basin 9) PPE items (Cap, Face shield, Hand soap, Shoe cover, Gowns, Gloves, Goggles, N95 Masks, Hand sanitizer) etc.

Events organized and equipment provided by the project to different levels of counterpart organizations was highly effective considering their practical need.

On the other hand support of Bangladesh counterpart include assignment of MoHFW counterpart personnel, project office space, identification card and running expenses for implementation of the project.

1.3 Efficiency (Fair)

The project period was five years (January 2016- December 2020) as per original RD with the planned budget of 522.1 million yen. This was further extended for three months i.e. up to March 2021 to overcome the loss due to COVID-19 pandemic situation with the final total expenditure of 425 million yen. JICA assigned skilled nursing education and clinical practice experts to implement the project activities with the support of local experts from Bangladesh. As stated before that the project started delay due to taking long time in getting approval from the GoB side. On the other hand, COVID-19 has slowed down the implementation process. After the outbreak all planned trainings and workshops in Japan have been cancelled and all face to face meeting with counterparts were cancelled as well due to COVID-19 pandemic. Even though most of the planned activities completed successfully and the rest will be completed during extension period of March 2021. The delay of the main project activities at the early stage of the project and the restraints of activities under the emergency situation of the pandemic heavily affected on the smooth disbursement of the planned budget. In addition, difficulty of the procurement of medical equipment in the country gave an additional burden to the Project team's activities.

Achievement of output 1 is not satisfactory because of communication gap between and the parties during COVID-19, misunderstanding of GoB counterpart about project activities, role of JICA in CBNS and lack of understanding of JICA team about Bangladesh culture of handling technical project. JICA team could not participate and contribute in all activities that have link directly with the project activities such as career path development of nursing services which could help CBNS project to develop Job descriptions for nurses and related organogram mainly due to lack of interest shown by the counterpart to invite JICA team for participation. Similarly, no decision has been made by the DGNM yet on the development of Nursing College Education Managements System (NCEMS) by the CBNS project. However, JICA team were ready to provide all necessary support to DGNM and BNMC to complete the remaining activities that are linked with the project activities if partner feel the need for assistance.

Under output 2 all major planned activities accomplished by December 2020 and the rest will be completed by March 2021. Activities related to output 2 were mostly the improvement of quality of BSc nursing education in the DNC which means improvement of FMs skills in teaching, prepare teaching materials/ lecture handouts, lecture delivery, skills in conducting online classes, rephrasing teaching topics for better understanding by all students, support students in lab practices, demonstrate lessons in clinical practice, guide students as mentor etc. The project has completed all activities efficiently within project period. However, physical performances of the improvement were not properly exposed due to suspension of all classes and lab practices for COVID-19 pandemic.

In output 3 the project put all its effort in the establishment of clinical practice system in the DMCH. The project had to develop the whole system from scratch. Development of MTs, CNTs and manual for clinical practices has ensured smooth ward-based bed-side clinical practice by the BSc students. On the other hand in-service training of 400 nurses will help DMCH to serve the patient professionally with due care. Before intervention of CBNS project nurses in the DMCH were deprived from all types of skill development training to improve their skills in rendering services with care. This project has created scope for the nurses to receive training in Japan and Bangladesh and learn modern nursing knowledge. MTs, CNTs and other

trained nurses praised the project highly for its contribution to develop their knowledge, skills and proper CP system for the BSc nursing students.

The contribution of CBNS project is beyond of our expectation for the improvement of B.Sc. nursing education. JICA CBNS project team is always being with us to develop our nursing profession, like as shade tree **from 2016 to till now.** – Stated by Nasrin Akter, Co-Chair JCC, DNC

The inputs were both quantitatively and qualitatively appropriate. The long-term experts recruited from Japan were highly skilled and did their best to deliver the activities in a timely manner even working from Japan and keeping regular contact with local experts during COVID-19 pandemic situation. Expenditure of the project against total budgeted amount until December 2020 shows that the project has spent slightly more than the budgeted amount during the project period. Though there was budget surplus due to non-accomplishment of some planned activities but at the same time the project conducted some additional activities not in the PO.

1.4 Impact (Fair)

The overall goal of the project was “The graduates of BSc in Nursing improve the nursing quality at their work place”. The project set one purpose and three outputs to achieve the goal. However, achievement of the goal depends on many other external factors which are beyond control of this project and positive attitude of the counterpart towards the project outcome. Performance record of the project shows that it has achieved output 2 and 3 rightly. In case of output 1 it did not bring desired result due to some limitations as stated above. As a whole the project has achieved about 80% of the overall desired goal. The project has developed an approach in carrying out modern BSc nursing course in the DNC, established quality CP system in the DMCH and established unique monitoring system involving students. The accreditation exercises had done in the DNC which is also first time in Bangladesh will help BNMC to carry out the accreditation in other public nursing colleges improving the system. All these initiatives of the project will have an impact and contribute in the overall improvement of knowledge of graduate BSc nurses in their work place. MoHFW has duly acknowledged the contribution of JICA team in improvement of BSc nursing education in DNC, which can be further reviewed and replicated in other public nursing colleges of Bangladesh.

The 4th HPNSP Operational Plan (2017-2022) identified 14 issues and challenges that need to be addressed to improve skills of the health professionals. Among those two are very important i.e. ensure quality medical education establishing accreditation body and make career progression available. CBNS project considered those two challenges as most important and included in their project under output 1. The accreditation exercise in DNC has created scope for BNMC in further refining the process and tools to fit with all other public nursing colleges. BNMC appreciated the support of JICA team greatly. The project is highly appreciated by DNC and DMCH for its contribution in improvement of BSc nursing education. Though JICA team could not assessed some of the activities with DNC and DMCH due to COVID-19 lockdown situation but end-line survey with students, FMs of DNC and nurses of DMCH shows a high level impact of the project. Students observed a dramatic change in the DNC both in quality and quantity. FMs are happy with their skill development training and learn to conduct online classes using zoom/internet.

Nurses are affluent with the training they received from JICA to support BSc nursing students in clinical practice and serve the patient with proper care.

CBNS project will contribute directly in running other health education related project by development partners. This project is contributing to Yen loan program (BD83) which is supporting in the infrastructure development of 7 nursing institutes of Bangladesh. Experience gained and lessons learned from this project will help other health education projects to capitalize the learning. Students of DNC also expressed their interest in the end-line survey to advocate for BSc nursing courses to their friends.

1.5 Sustainability (Fair)

Considering the capacity and capability of the counterpart organizations at the ending time of the Project, sustainability of the Project achievement will be judged as “Fair”. DGNM is required to have more supportive leadership to the implementation institutions with long term vision of the development of nursing sector. BNMC needs to have more management capacity of coordinating accreditation of nursing colleges. DNC may be able to improve the teachers’ quality as long as the proper FMs are retained. But, for the dissemination of the DNC model to other nursing college it still requires support from the authority and development partners. For DMCH, continuation of the strong leadership of the Director of the hospital and further strengthening of Nursing Department management capacity are required for the establishment of the firm in-house training system. To secure the sustainability of the project achievements, MoHFW needs to manage the proper and full disbursement of the current NMES program budget till 2023 and allocate the budget for the next phase of NMES Program.

Sustainable development is the organizing principles for meeting the human development goals. Sustainability of any donor driven development project is highly challenging. The general norm is that when the donor fund is exhausted, the initiative also comes to an end. One important reason is that most of the project is developed without assessing need of the sector and without making any logical link with the policy and long-term development plan of the host country. The super goal of this project is “Nursing education is standardized and quality of nursing service is improved in Bangladesh” is a long vision situation that will take numbers of project phases to achieve. Current phase of CBNS project was a pilot initiative for improvement of BSc nursing education in Bangladesh which cannot achieve its desired goal within such a small period of time. On the other hand, lack of proper understanding of partners about nature of the project and its periphery of work, made the cooperation complex. For instance, changes made in the project site during amendment of RD was not clearly understood by the new DG and Director of Nursing education of DGNM, which made them confused about project activity concentrated in DNC and DMCH only.

In the 4th HNPSP Operational Plan (2017-2022) and National Health Policy 2011 of Bangladesh government duly endorsed the need for improvement medical and related education to ensure skilled human resources in health sector. CBNS project will directly contribute to the need of the government sectoral policy by improving BSc nursing education. Experiment done in the DNC on improvement of BSc nursing education need further review to develop it as a model for Bangladesh. There is ample scope to expand

this model after necessary review and adjustment in other 6 nursing colleges at divisional level where Yen loan program (BD83) was implemented for infrastructure development.

For sustainability of the project effect the MoHFW has to take ownership of the project. The decision on whether to scale up the project initiatives to the national level, when to do and how, needs to be discussed at higher level of the MoHFW. In most cases host government does not like to scale up the initiatives of a successful project due to resource limitations, budgetary constraints and setting low priority. In that case host government may engage JICA to continue next phase of the project, bank on their lessons learned and experience or can invite other development partners to be involved.

At implementation level, the role of DGNM is vital as it is the main executing body in managing and improving all nursing education in Bangladesh. Government of Bangladesh is now giving priority on four years BSc Nursing education subsidizing three years Diploma in nursing. In such a transit situation DGNM need to come forward to capitalize the good practices and other initiatives of the project for scaling up. This could be done through dialogue between JICA and DGNM.

BNMC is the licensing and registration authority of all nursing and midwifery professions in Bangladesh. The Project team headed by accreditation expert assisted BNMC, with the collaboration of UNFPA and WHO. The team conducted all process of the Accreditation including the two days orientation to the review team on self-assessment tools for DNC faculties. The evaluation report by the reviewers was submitted to the National Committee of Nursing College Accreditation in March 2020. Due to the outbreak of Covid-19, the final judgment has not been done yet. BNMC should follow up the outcome of the review and take necessary steps to develop accreditation process common for all public nursing colleges of Bangladesh. This process will remain sustainable and Bangladesh can claim international standard of BSc nursing education.

DNC was the main experiment ground for CBNS project to develop the college as model for other nursing colleges of Bangladesh. Initiatives taken by the project in faculty development, quality assurance, improvement of labs, develop skills of FMs in conducting research, subject evaluation by the students, conduct online classes during COVID-19 disaster and development of infrastructure will give a tangible results to declare DNC as model for others. DNC management should continue project initiative ensuring quality and establish participatory monitoring and evaluation system involving students to uphold the image as model nursing college in Bangladesh. Of course, government support will be required to provide necessary financial, administrative and logistics support including training on modern nursing education to FMs to keep DNC as a modern nursing college.

DMCH was the ground for clinical practice of BSc nursing students of DNC. CBNS project gave all its efforts to develop clinical practice system for the BSc nursing students of DNC. Development of MTs, CNTs, manual and capacity building of nurses through in-service training will act as a strong base for the BSc nursing students to continue their ward-based bed-side clinical practice smoothly and effectively in the DMCH. DMCH can be developed as model for clinical practice by the BSc nursing students with the follow up support under the guidance of the hospital management.

2. Key Factors Affecting Implementation and Outcomes

The project was started late due to delay in getting approval from the MoHFW of Bangladesh government. On the other hand, COVID-19 pandemic slowed down the implementation of activities and some activities

like training and workshop in Japan cancelled. Training of clinical nurses delayed and final judgment on accreditation of DNC not yet finalized. To overcome the affect the project has been extended to more three months i.e. until March 2021. DNC has organized online classes with reduced number of classes per day (2 classes instead of 4). No clinical practice held by BSc nursing students during 2020 COVID-19 pandemic.

Project purpose of CBNS project “The quality of education for BSc in Nursing is improved” require other important factors like accreditation of nursing college, development of Nursing College Management system (NCMS) and update job description of nursing professions. JICA team has to wait for DGNM and BNMC responses to complete all these pending activities so that the project can implement other relevant linked project activities. JICA team developed the following additional plan for 6 months (October 2020- March 2021) to complete the remaining project activities.

Sl. No.	Activities to be accomplished during 6 months (Oct. 2020- Mar. 2021) period
Output 1 Administrative improvement for BSc Nursing education	
1.1	Accreditation practice of DNC (<i>Support to hold review meeting for the future accreditation at other nursing colleges, upon completion of the Final Decision Making Committee</i>)
Output 2 BSc Nursing education improvement	
2.1	Quality assurance of Faculty members at DNC- <i>Implement monitoring support (Teacher’s portfolio, DNC web)</i>
2.2	Securing subject based teaching at DNC- <i>Remote lecturing, dev. clinical practice guidebook, technical support on evaluation by students, Reorganize library and laboratory</i>
2.3	DNC Faculty members training – <i>Training materials & invitation of outside trainers/ experts</i>
2.4	Research promotion at DNC– <i>Technical support</i>
2.5	Student mentoring system at DNC- <i>Equipment for infection prevention</i>
2.6	Faculty improvement at DNC- <i>Furniture</i>
Output 3 Improvement of Clinical Practice system at DMCH	
3.1	Clinical practice system development– <i>Technical and management support</i>
3.2	Clinical Nurse training– <i>Technical and equipment support</i>
3.3	Clinical Practice Manual development– <i>Technical support</i>
3.4	Capacity improvement of Nursing department – <i>Technical support</i>

Public Works Department (PWD) of the government took long time to handover the newly constructed administrative building to the DNC management. JICA team has to wait for long time to accomplish some relevant project activities such as improvement of classrooms with modern equipment and furniture, renovate library with books and furniture, and improve lab facilities etc. until DNC has shifted to new campus.

The project planned to provide some specific On-the–job capacity building training to the nursing officers of DGNM. But DGNM has stopped the training of nursing officers after completion of six sessions and restarted the program in more systematic way by its own effort. On the other hand DGNM will require a full time IT expert to establish and maintain all digital activities and website. An open discussion between JICA team and DGNM is essential for further continuation of training and other activities initiated by the project.

3. Evaluation on the results of the Project Risk Management

Misunderstanding about the project's nature and implementation process by the current DGNM officials and inadequate communication with the JICA team during COVID-19 put the project into a challenging situation. This has scrolled down to a stagnant situation of non-cooperation in the last year of the project period. Finalizations of many important steps remain pending due to lack of communication between the parties. JICA CBNS team hoped that MoHFW will take the lead to continue dialogue with JICA team and accomplish the remaining activities.

Lack of coordination and non-cooperation between the parties at the last moment of the project period will put the next phase uncertain and most of the good practices and initiatives of the project will go in vain. Since the returning of the JICA long term experts to the Project, both JICA team and DGNM/MoHFW made their utmost effort to fill the gap of communication during the absent period and to recover the delay of the project activities. In the process of reconciliation discussions, both parties are trying to identify the root causes of the communication gaps from an objective point of view. It is supposed to be a good sign for the future cooperation program in the same nursing area.

Government is planning to reopen all education institutes shortly with some precautions against corona virus. JICA team will get scope to observe and evaluate functioning of improved DNC management, clinical practices by the BSc nursing students under new CP system at DMCH.

Lack of coordination and non-cooperation between the parties at the last moment of the project period will put the next phase uncertain and most of the good practices and initiatives of the project will go in vain. Both the parties i. e. DGNM and JICA team must realize the consequence of current stagnant situation and come forward to reach into amicable solution. MoHFW can play vital role as mediator in this regard.

4. Lessons Learnt

- In any technical cooperation projects a clearly articulated and mutually agreed "Technical Assistance Project Proposal (TAPP)" is essential to carry out the project smoothly without any misunderstanding in playing the role effectively by both the parties. In this project Record of Discussions (R/D) was the only mutually agreed document which did not clarify all aspects of technical cooperation, financial management procedure, roles, responsibilities and contribution of both the parties.
- Common understanding and close cooperation between the partners can make the project implementation easy and smooth. Some communication gaps were found between DGNM and JICA team which sometime made the progress difficult.
- Engagement of right expert since the beginning of the project implementation helps in proper implementation of the project. In this project a Nursing education expert from JICA was highly demanding to support and guide DNC management since the beginning of the project. Also language barrier sometime act as blockade in easy communication between Japanese expert and DNC, DMCH personnel. An experienced qualified local nursing expert can act as interpreter to make the communication easy and work done smoothly.

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- Composition of the national staff of the JICA team tended to be occupied by medical doctors though the team tried to recruit nursing background persons. DGNM advised the team to recruit more nurses so that the team could have effective operation of the Project activities. The team realized that highly qualified nursing officers of DGNM could be recruited for the JICA team staff with a proper “lien” agreement with DGNM.
 - The project name was capacity building of nursing services. It was a nice project that was effectively accomplished by the JICA team. Nursing personnel are known very well about the nursing issues. That’s why the Bangladesh Government suggested that in future JICA will recruit nursing personnel for the nursing project in National and international level. Another matter is that JICA has only one nursing college and medical college hospital, it was not enough for our country's context. It is also very important to provide support to other nursing colleges and hospitals. Consequently, it will be better to compare which Institution was better to full fill the objective.
 - Effective mutual complementation of the concurrent implementations of Yen Program and the CBNS Project was observed. CBNS Project fully utilized the asset (school building and its facilities) made by the Yen Loan Program for the Project activities, and CBNS Project supported the detail modification and dunning of the construction work to the contractors on-site. On the contrary, lack of close communication between the two programs on the selection and procurement of equipment by the Yen Loan Program at early stage made the distribution of them to DNC and other nursing colleges.
 - Delay in timely execution of basic activities hinders smooth implementation of other relevant activities. In this project delay in deciding holistic career path for the nurses hinders development of Job description for the nurses. Both the parties should give equal importance on timely implementation of activities that create scope for smooth implementation of other related activities. PIC can play vital role of monitoring the project progress and expedite the process even during emergency situation like COVID-19.
 - Modalities of participation and contribution of different stakeholders/ development partners in the project should be well defined in the project document. In this project a number of stakeholders i.e. UNFPA, WHO, JICA and Canadian Team participated and contributed on some common issues, but role of all stakeholders not well defined. In consequence JICA team faced difficulties to participate and contribute.
 - Any development project should have room to accommodate major shift in existing situation. In this project upgrading of Director of Nursing Services (DNS) to Directorate General of Nursing and Midwifery (DGNM) was a remarkable shift under MoHFW. With this up gradation plans, procedures and administrative capacities of the designated officials also changed. Project team should handle the changed situation more carefully to ensure better understanding and smooth working relationship with the counter parts.
 - Frequent change in lead position like Project Director create difficulties for the project team to make new comer well oriented about the project and guide the team properly. Also JICA team should comply with norms and cultural practice of the host country that influences smooth implementation of the project.

- Any project may face challenging situation during its tenure. This project faced at least two challenges i.e. terrorist attack in Dhaka that killed 6 Japanese experts and COVID-19 pandemic that made the project almost crippled for about a year. In designing new project both the parties should keep in mind some assumptions that create blockade in project implementation and develop contingency plan accordingly.
- With the improvement of modern technology all official activities are now digitalized. To make the nursing colleges fit with the changes an IT person is essential in the nursing colleges to keep all records, data and softcopy of documents properly and safely.

IV. For the Achievement of Overall Goals after Project Completion

1. Prospects to achieve Overall Goal

The overall goal as stated in the PDM is “The graduates of BSc in Nursing improve the nursing quality at their workplace” difficult to achieve by this project overcoming the risks and difficulties stated above. The project set two verifiable indicators i.e. the number of graduates of BSc who works at hospitals and the evaluation score on nursing services by nursing service users are improved. Bangladesh government has already taken initiatives to increase number of BSc nurses in the work place which is a mile stone in achieving the overall goal. Results attained against indicators shows a significant progress towards overall goal of the project.

Overall goal: The graduates of BSc in Nursing improve the nursing quality at their workplace	
Indicators	Current results
1. Number of graduates of BSc Nurses who works at public hospitals	1028 (14.23%) out of total 7226 nurses ¹⁴
2. The evaluation score on nursing services by nursing service users are improved	This indicator could not be verified as DMCH is mostly engaged in serving Corona patient and physical contacts with patient by outsiders are restricted.

Government of Bangladesh has stopped recruitment of nurses for long time until 2019. During that period many diploma and BSc nurses could not apply for government job and started working in private hospitals and clinics. According to latest report available in the website of DGNM¹⁵ 2018 total nurses working in public sector is 7226. Among those only 1028 (14.23%) have BSc in Nursing (basic). In 2019 government recruited 5054 nurses for public hospitals throughout the country. Among those almost 95% were diploma nurses and rest BSc (Basic) and Post Basic BSc nurses. In another occasion Health Minister said that government will recruit 5000 doctors and 15000 nurses (Jan/2020). According to an uncoated source; at present there are approximately 48,700 registered nurses of which 35,828 nurses are working in the Govt. Services. Rests of the nurses are working in private sectors in country and abroad like UK, USA & Middle-East.

The prospect of achieving the overall goal is high as the present government is planning to recruit more number of graduate nurses in public hospitals and other health facilities to ensure quality health services for all by increasing proportionate number of nurses with doctors. The challenge will remain for the

¹⁴ Workforce educational qualification; Human Resource Report, December 2018, DGNM;- Page-20

¹⁵ Human Resource Report of DGNM 2018 (page-20)

government is to ensure right persons in the right position who can carry out the program maintaining a logical sequence and development need of the sector.

2. Plan of Operation and Implementation Structure of the GOB side to achieve the Overall Goal

Since after upgrading of DNS to DGNM, government is gradually strengthening the structure of DGNM providing capable human resources to make DGNM functioning properly addressing the changing needs of Nursing and Midwifery sector. National Task Force (NTF) has been formed in support of vision 2020-2021 and SDG 2030 for the development of nursing education and services. NTF assigned Technical Working Group (TWG) to formulate Holistic Career Path for the Nursing services and relevant job descriptions with the support of development partners. It is expected that DGNM will proceed further in finalizing Nursing College Education Management System (NCEMS) designed by the CBNS project. On the other hand BNMC will finalize accreditation process of public nursing colleges introduced in the DNC by this project.

Accreditation exercise in DNC showed a remarkable improvement after its transition from Diploma Nursing Institute to graduate nursing college. A gradual reshuffled of FMs ensuring skills and experience in teaching has made DNC enable to run BSc nursing education program with minimum requirements. Training provided to the FMs by the project helped a lot to gain knowledge on improving teaching and technical skills and continue online classes in the hardship of COVID-19 pandemic. Improvement of physical facilities and infrastructures made DNC enable to run the courses smoothly. It is envisaged that DNC management with the support of DGNM and BNMC will continue the system developed by the project and further develop the institute addressing the missing gaps that the project could not complete due to time constraint.

DMCH was the main practical ground of BSc nursing students where the CBNS project has put optimum attention to establish a model clinical practice system for the BSc nursing students. The project provided training to the MTs, CNTs in the DMCH and developed manual and handout for clinical practice by the BSc nursing students. CNTs of DMCH gained skills to support the BSc nursing students in ward based bed-side clinical practice and render quality services to the patient with care. It is anticipated that hospital authority will continue the system with further improvement to adjust with the changing needs.

3. Recommendations for the GOB side

Based on the lessons learned and outcome of the project the following recommendations have been made.

- 1) For the next JICA funded project (phase) in health sector one senior policy level official from the MoHFW (Nursing sector) should facilitate the process and coordinate with JICA expert in designing the project. Lessons learned from this project can be capitalized in developing the new phase/ project.
- 2) A detail need assessment of DGNM and selected nursing colleges is essential before developing Plan of Action to select and prioritize project activities. *(suggested by DG of DGNM)*

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- 3) A well-articulated Technical Assistance Project Proposal (TAPP) should be designed explaining all issues related to contribution/inputs from JICA and host government; specific roles and responsibilities of both the parties; financial/ resource management, scope and limitations of the project and operation modalities of the project. TAPP should also narrate about the extent of engagement of JICA experts.
 - 4) While preparing the TAPP both the parties should consider predictable emergency situation. Thus a contingency plan is inevitable to cope with the emergency situation.
 - 5) Frequent transfer of senior level positions made the project's progress slowed down. This project suffered due to frequent change of Project Directors (DG of DGNM) and other line directors within very short period. Newly joined officials take time to understand the nature of the project and act accordingly. This is also applicable for JICA experts.
 - 6) Experience shows that full time engagement of a senior nursing officer to the project from DGNM on lien will make the coordination between the parties easy, smooth and reduce communication gap. (*suggested by DG of DGNM*)
 - 7) While engaging experts from Japan JICA should consider speaking and minimum understanding of local language by the expert. This will help people of host country to understand and communicate with the experts easily.
 - 8) Quarterly performance review by the PIC is essential to make the implementation process transparent, review achievement in relation to work-schedule and time frame.

4. Monitoring Plan from the end of the Project to Ex-post Evaluation

Considering the current status of achievement of CBNS project there are long way to go and some more steps remain to achieve the overall and super goals. As GOB and JICA shared the vision of long term cooperation on improving nursing services and education when the CBNS Project started. The project initiated first step of strengthening DGNM, BNMC and building DNC and DMCH as the model for BSc nursing education in Bangladesh. Some major tasks like Holistic career path development and Job description for nurses not yet finalized and approved by the Ministry. Accreditation for public nursing colleges still remains at the primary stage. BNMC should come forward and continue the process to establish system for public nursing colleges while DGNM is expected to take the overall leadership of improving the nursing sector. It is apprehended that DGNM will develop a strong participatory monitoring system with IT support to bring all affiliated organizations and nursing colleges under a uniform monitoring system (NCMS and PMIS).

JICA is also expected to participate on the development of the monitoring system with other development partners such as Canadian GAC, WHO and UNFPA. The base-line and end-line survey method used to gage the improvement of the indicator (student satisfaction rate) should be inherited when JICA and GOB start the next phase of the nursing project and the monitoring the change of the rate will give a kind of standard indicator of the improvement of the quality of BSc nursing education in Bangladesh.



ANNEX 1: Results of the Project

(List of Dispatched Experts, List of Counterparts, List of Trainings, Revised Plan of Operation, etc.)

1.1: List of JICA Experts

a) Long-term Experts

Sl. No.	Name	Assignment	From	To
1.	Dr. Ueda Naoko	Chief Advisor	June 2016	May 2018
2.	Dr. Yojiro Ishii	Chief Advisor (Successor of Dr. Ueda)	October 2018	Present
3.	Dr. Hiura Mizue	Expert on Nursing Education and clinical practice	November 2017	Present
4.	Ms. Rie Takahashi	Expert on Nursing Clinical Practice	March 2017	April 2019
5.	Dr. Yoko Yamamoto	Expert on Nursing Clinical Practice (Successor of Ms. Takahashi)	April 2019	April 2020
6.	Ms. Hiroko Oishi	Expert on Nursing Clinical Practice (Successor of Dr. Yamamoto)	April 2020	Present
7.	Ms. Kaori Kaise	Project Coordinator	January 2016	Present

b) Short-term Experts

Year	Name	Assignment	From	To
N/A	N/A	N/A	N/A	N/A

c) Technical Advisory Mission

Year	Name	Assignment	From	To
2016	1) Dr. Hiroko Minami, 2) President, University of Kochi, Japan 3) Dr. Noriko Katada, Professor, University of Hyogo, Japan 4) Dr. Naoko Ueda, Chief Advisor, CBNS 5) Mr. Taro Kikuchi, Director, Human Resource Development Dept., JICA HQ 6) Ms. Aki Hashizume, Associate Expert, Human Resource Development Dept., JICA HQ	Launching Event of CBNS project, Policy Dialogue at MoHFW, Courtesy Call to Prime Minister	April 10, 2016	April 14, 2016
2017	1) Dr. Hiroko Minami, Specially Assigned Professor, Graduate School of Nursing, University of Kochi 2) Dr. Noriko Katada, Professor, Kansai Medical University 3) Mr. Tatsuya ASHIDA, Senior Deputy Director, Human Development Dept., JICA HQ	Visit to Counterparts Organization in Dhaka and Jessore, Courtesy Call to Minister, Steering Committee (SC) meeting, Seminar on Future of Nursing in Bangladesh	Sept. 23, 2017	Sept. 28, 2017

	4) Dr. Mizue HIURA, Nursing Education Expert, CBNS			
2019	1) Prof. Mari Kondo, Kansai Medical University 2) Mr. Tatsuya Ashida, Director, Human Development Dept., JICA HQ 3) Mr. Yasuaki Abe, Officer, Human Development Dept., JICA HQ	Visit to Counterparts Organization in Dhaka, Seminar on Career Path, Project Implementation Committee (PIC) meeting	Sept. 9, 2019	Sept. 13, 2019
	4) Dr. Hiroko Minami, President of Kobe City College of Nursing 5) Dr. Noriko Katada, Dean, Faculty of Nursing and Graduate School of Nursing, Kansai Medical University 6) Ms. Satoko Amano, Nursing Director, Kobe Red Cross Hospital 7) Mr. Tomoya Yoshida, Deputy Director General, Human Development Dept., JICA HQ 8) Mr. Yasuaki Abe, Officer, Human Development Dept., JICA HQ 9) Ms. Ayumi Miwaki, Officer, JICA Kansai Center	Visit to Counterparts Organization in Dhaka, Seminar on "Career Path and Nursing in the Future", Meeting with Secretaries of MOHFW and DG, DGNM	Dec. 14, 2019	Dec. 19, 2019

1-2 Input by the Gob side (Planned and Actual)

Planned input	Actual input
(1) Assignment of MoHFW's counterpart personnel	1) DG and officials of DGNM- Administrative support 2) Principal and Nursing Instructors of DNC- Improvement of BSc Nursing education 3) Director, Deputy Director, Nursing Superintendent, Deputy Nursing Superintendent, Nursing Supervisor, Senior staff Nurses, Clinical Nurses of DMCH- Improvement of Clinical practice by BSc nursing students
(2) Project office space, Identification card	Project office rooms at DNC and DGNM (former building at Sher-E-Bangla Nagar), Clinical Practice Room for Clinical Nurse FMs, DMCH, and project car space at DNC premise are given to CBNS project. Entry card of former DGNM is also provided.
(3) Running expenses for implementation of the project	Electricity and water of project office at DNC and DGNM, and training rooms/spaces at DNC and DMCH are provided by counterparts respectively.

ANNEX 2: List of Products (Report, Manuals, Handbooks, etc.) Produced by the Project

Sl. No.	Title of products	Period	Purpose
	Project monitoring, documentation and reporting		
1.	Project Monitoring sheet (MS)	Half yearly since 2017	Monitor progress
2.	Project Monitoring sheet-II	Half yearly since 2017	Monitor progress
3.	Half yearly Progress Report of CBNS	Half yearly since 2017	
4.	PR video: Jantechai - The pathway of a nurse for happiness and glory	2019	Introducing nursing / a nurse for the public
5.	Video: Achievement of CBNS project	2021	
	Output-1		
6.	Pre-dispatched training for the Cox's Bazar Camp Nurses 2018	2018 (additional activity)	Training module for the Cox's Bazar Camp Nurses
7.	Career ladder/Promotional Path for Public Sector Nurses in Bangladesh	2019	Support MoHFW/DGNM in developing Career path guide for Nurses
8.	Faculty Guideline on Nursing Clinical Practice	2020	First version for further revision by practical use.
9.	Student Handbook on Nursing Clinical Practice	2020	First version for further revision by practical use.
10.	Concept Paper on Nursing College Management System (NCMS)	2021	For the future development of nursing college management information system
	Output-2		
11.	Academic calendar	2019- yearly	School management
12.	Subject teacher's list	2019- revised when necessary	School management
13.	Lab Equipment List	2019	School management
14.	Facility Map	2019-	School management
15.	Mentoring handbook	2017	Provide instructions for teachers to guide(mentor) students.
16.	Lesson plan formats (Lecture/ Lab-practice)	2018	Educational materials
17.	Evaluation format (Lecture evaluation by students/ Lecture evaluation by peer)	2018	Monitoring/evaluation for lecture
18.	FD training module 2017-2018	2017-2018	Training material for MFs
19.	FD training module 2018-2021	2018-2021	Training material for MFs
20.	Clinical practice guidebook for students in DMCH	2019-2020	Teaching material for CP
21.	1 st	B 112 Behavioral Science	
22.		B 134 Fundamentals of Nursing-I	
23.	2 nd	B 231 Fundamentals of Nursing II	

Sl. No.	Title of products		Period	Purpose
24.		B 232 Pediatric Nursing		
25.		B 233 Medical & Surgical Nursing I		
26.		B 234 Orthopedic Nursing		
27.	3 rd	B 331 Adult Medical & Surgical Nursing II		
28.		B 332 Community Health Nursing II		
29.		B 334 Gynecological Nursing		
30.		B 335 Gerontological Nursing		
31.	3 rd	B 336 Traumatology & Orthopedic Nursing		
32.		B 337 Psychiatry & Mental health Nursing		
33.		B 338 Emergency & Critical Care Nursing		
34.	4 th	B 431 Midwifery & Obstetrical Nursing I		
35.		B 432 Midwifery & Obstetrical Nursing II		
36.		B 433 Newborn Nursing		
37.		B 434 Reproductive Health		
38.		B 435 Nursing Administration & Management		
	Output-3			
39.	Clinical practice rotation plan for 2 nd , 3 rd , and 4 th year.		2020	Teaching material for Clinical Practice
40.	Faculty guideline: Supervision of Nursing students in Clinical Area		Nov. 2019	National Guidebook for CNT and FMs
41.	Hand book: Nursing Student's Guide to Clinical Practice		Nov. 2019	National Handbook for clinical practice by BSc students
42.	Clinical Nurse Training Module		Nov. 2020	Training module for clinical nurse in DMCH
43.	Nursing Students Clinical Practice Manual in Dhaka Medical College Hospital (Draft version)		Jan. 2021	Clinical practice manual for nurses personnel in DMCH

ANNEX 3: PDM (All versions of PDM)

* PDM version 1 and 2 are in separate file

Project Development Matrix (Version 3.1)

Dated Nov. 2020

Project Title: The Project for Capacity Building of Nursing Services

Implementing Agency: Directorate General of Nursing and Midwifery (DGNM), Bangladesh Nursing and Midwifery Council (BNMC), Dhaka Nursing College, Dhaka Medical College Hospital

Target Group: DGNM officers, BNMC officers, Faculty Members of Nursing Colleges, Clinical Nurse FMs (CNTs) and Nursing Department of target hospitals


Beneficiaries: Students in NCs, BSc nurses,

Period of Project: January 2016~March 2021

Project Site: Dhaka; Model Site: Dhaka and selected Nursing Colleges and their clinical training hospitals, namely DNC and DMCH

Narrative Summary	Objective Verifiable indicators	Means of Verification	Important Assumptions	Achievement	Remarks
<p>Super Goal Nursing education is standardized and quality of nursing service is improved in Bangladesh</p>					
<p>Overall Goal The graduates of BSc in Nursing improve the nursing quality at their workplace.</p>	<p>1) Number of graduates of BSc who works at hospitals 2) The evaluation score on nursing services by nursing service users are improved.</p>	<p>1) Government statistics 2) Project survey (base-line/end-line)]</p>			

<p>Project Purpose</p> <p>The quality of education for BSc in Nursing is improved.</p>	<p>The evaluation score on education by college students are improved.</p>	<p>Project Survey</p>	<p>HNPSPDP2017-2020 is implemented as planned</p>		
<p>Outputs</p> <p>1. Policy and strategies to improve BSc Nursing education are implemented</p> <p>2. Quality of management and faculty member for BSc Nursing education is improved</p> <p>3. Management of CP system is working effectively and efficiently</p>	<p>1-1) Policies and strategies for BSc Nursing education are updated</p> <p>2-1) Nursing education fulfilling the standards is being carried out at DNC</p> <p>3-1) % of trained Clinical Nurse FMs (CNTs) among all clinical nurses</p> <p>3-2) ratio of trained CNTs for students</p> <p>3-3) % of trained clinical nurses among all clinical nurses</p>	<p>Project Survey</p>	<p>Curriculum is revised appropriately.</p>		
<p>Activities</p>	<p>Inputs</p>		<p>Pre-Conditions Area that Project cannot work on</p>		
<p>1. Policy and strategies to improve BSc Nursing education are implemented</p>	<p><u>Japanese side</u></p> <p>1. Dispatch of experts - Chief Advisor</p>	<p><u>Bangladesh side</u></p> <p>1. Personnel Allocation of</p>	<p>1) The security situation in Bangladesh does not impede the Project.</p>		

<p>1-1. Update and refine the roles and responsibilities of nursing professions</p> <p>1-2. Develop and promote a Holistic Career Path Guidebook for BSc Nurses</p> <p>1-3. Update and refine the standards regulation for establishing Nursing Colleges</p> <p>1-4. Develop Monitoring, Supervision and Evaluation mechanism for accreditation of Nursing Colleges</p> <p>1-5. Strengthen management capacity of DGNM</p> <p>2.Quality of management and faculty member for BSc Nursing education is improved</p> <p>2-1. Assure the quality of assigned Faculty Members by Monitoring and Evaluation</p> <p>2-2. Secure Subject-Based teaching as per curriculum</p> <p>2-3. Ensure appropriate trainings of Faculty Members</p> <p>2-4. Promote research activities by Faculty Members according to their subject specialty</p>	<p>-Nursing Policy/Administration -Nursing Faculty Development - Nursing Clinical Training - Project Coordinator</p> <p>2. Provision of Equipment - Training/Teaching Equipment - Vehicle</p> <p>3. Training in Japan -Nursing Policy/Administration -Nursing Education -Nursing Management</p> <p>4. Activities cost</p>	<p>counterpart personnel and administrative personnel.</p> <p>2. Office space with necessary equipment and facilities;</p> <p>3. Available data and information related to the Project;</p> <p>4. Activities and running expenses</p>	<p>2) Strong political commitment/will for better nursing service continues.</p>  <p><Issues and countermeasures></p>
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<p>2-5. Motivate students through mentoring system</p> <p>3.Management of CP system is working effectively and efficiently</p> <p>3-1. Develop the framework of CP system</p> <p>3-2. Ensure adequate number of CNTs</p> <p>3-3. Ensure trained clinical nurses with CP skills</p> <p>3-4. Develop a CP manual</p> <p>3-5. Improve the capacity of nursing department for CP</p>			
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Definitions or terms

BSc	Newly graduated basic BSc nurses since 2012(exclude Post Basic and old BSc)
CN (Clinical Nurses)	The nurses who are working in clinical site (ward, outpatient, OT etc. Those who directly cares patient.) and does not mean nurses who are in charge of CP nursing students
CP	Clinical Practice
CNTs	Clinical Nurse FMs: The nurses in clinical sites and in charge of CP nursing students
CP Instructor	FM in NCs who are in charge of CP students
FM (Faculty Members)	Principal, Instructors, FMs, Lecturers, Professors, Those who directly teach students (excluding Students. Students are beneficiaries
NCs	Nursing Colleges
Subject Based Instructors	The FM assigned upon his/her specialty and who are supposed to teach this subject stably

ANNEX 4: R/D, M/M, Minutes of JCC (copy) (*)

* In separate files

ANNEX 5: Project Monitoring Sheet (copy) (*)

(Remarks: ANNEX 4 and 5 are for internal reference only.)

Separate Volume: Copy of Products Produced by the Project