Mongolia
Ministry of Health
Center for Health Development

THE PROJECT FOR STRENGTHENING POST-GRADUATE TRAINING FOR HEALTH PROFESSIONALS IN PRIMARY AND SECONDARY LEVEL HEALTH FACILITIES

Project Completion Report

JULY 2021

Japan International Cooperation Agency
(JICA)

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Project Completion Report

I. Basic Information of the Project

1. Country

Mongolia

2. Title of the Project

The Project for Strengthening Post-graduate training for Health Professionals in Primary and Secondary Level Health Facilities

3. Duration of the Project (Planned and Actual)

Planned: May 11, 2015 ~ June 10, 2020

Actual: May 11, 2015 ~ December 31, 2020; activities for nurses were introduced to the project in March 2019, which led to extending the duration of the project.

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

In the health sector in Mongolia, infant mortality rate (per 1000 births) has been reduced from 76 in 1990 to 31 and the maternal mortality ratio (per 100,000 births) has been reduced from 120 to 63 (UNICEF, 2011). Mongolia is likely to achieve its Millennium Development Goals in the health sector.

On the other hand, infant mortality rate in rural areas is twice what it is in urban areas (urban areas: 24, rural areas: 48, 2010, UNICEF Multiple Indicator Cluster Surveys summary report). Shortage of human resources for health in rural areas and low quality of service are still major issues of the health sector.

To tackle these challenges, since 2008, new medical school graduates have been required to work for 2 years in primary level health facilities in rural areas. However, because of the lack of resident training, the quality of their health care services is a major concern and government of Mongolia submitted a formal proposal titled “The Project for capacity development of regional health improvement” in July 2012. This request was subsequently accepted by government of Japan. JICA then organized the survey mission and the outline of the project was mutually agreed by signing the Minutes of Meetings on March 21, 2014.

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

Overall goal: Quality of health services in primary and secondary level facilities is improved.

Project Purpose: Post-graduate training for health professionals is strengthened.

6. Implementing Agency

Ministry of Health, Mongolia (Initial agency was Ministry of Health and Sports which was restructured to Ministry of Health in 2017. Hereinafter referred to as "MOH")

Center for Health Development: CHD

II. Results of the Project

1. Results of the Project

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

Detailed planned and actual inputs were explained in Annex 1.

(1) Amount of input by the Japanese side was planned as 297,211,000 Japanese yen, which was increased to 332,532,000 Japanese yen.

(2) Expert dispatch was initially planned as below.

(a) Long term experts

Chief Advisor, Community medicine, and Project Coordinator

(b) Short term experts

Training Management, Emergency Medicine, Post-graduate training, and others.

Experts are actually dispatch as below.

(a) Long Term Experts: 5

・Chief Advisor/Post-graduate training: 2

・Coordinator/Training Management: 3

(b) Short Term Experts: 53

・Program evaluation: 5

・Curriculum development 1

(Developing a logbook)

・Community Medicine: 1

・Postgraduate training (Training on Trainers; TOT): 17

・Postgraduate training (curriculum): 5

・Emergency Medicine: 10

・Pediatric Emergency Medicine: 3

・Pediatrics: 6
・Post-graduate training in Nursing: 4
・Public relations: 1
(b) Dispatched investigation team 3

(3) Receipt of training participants:
In accordance with necessity of effective implementation of the Project, training in Japan were initially planned to conduct once in year for five times at the cost of 15,220,000 Japanese yen. The number of participants was roughly 30 persons totally. Actual trainings were conducted for 10 times in Japan for 44 participants at the expense of 27,382,000 Japanese yen. Within those, five of trainings were financially supported by the MOH as well.
(4) Equipment Provision: 30,000,000 Japanese yen was initially planned. The cost for actual equipment provision was 14,340,000 Japanese yen. Furthermore, 8,402,000 Japanese yen was expended as carrying equipment. Major inputs were training materials such as mannequins with various types and computers.
(5) Overseas activities cost: Initially, 60,000,000 Japanese yen was planned for activities within the country. Actual expense was 60,188,000 Japanese yen. Expenditures for overseas activities cost were consumed almost as originally planned. Major inputs were made for the implementation of training courses and the binding of training manuals. The Project also hired up to four assistants to help facilitate the activities.

1-2 Input by Mongolia side (Planned and Actual)
Detailed planned and actual inputs were explained in Annex 1.
(1) Counterpart assignment:
Counterpart personnel were assigned by the MOH and CHD. Administrative personnel for the Project such as project director, project coordinator, and operational manager were also assigned by the MOH. Changes of counterpart personnel were frequent but the MOH and CHD appropriately notified the Project so that the Project was able to track all changes.
(2) Provision of the office room for the Project was planned to be prepared by CHD. This plan was appropriately fulfilled and the decent office space was provided throughout the project period. Additional office was also prepared in Orkhon Regional Diagnostic and Treatment Center to enhance project activities in the model aimag. This office was not planned initially. Several necessary office equipment such as desks and chairs were also provided.

(3) Other items borne by the counterpart government: Information as well as support in obtaining necessary data related to the Project. Necessary budgets to conduct trainings was also provided by Mongolian side. Expense were shared with JICA and Mongolia side in order to send physicians to Japan. This expense was not planned initially, but the MOH suggested providing the budget.

Detailed descriptions will be provided in Annex 1.

1-3 Activities (Planned and Actual)

Planned (PDM ver 2)

1 Capacity on management of post-graduate training at the Ministry of Health and Sports and Center for Health Development is strengthened.

1-1. Assess the current management of post-graduate training by the Ministry of Health and Sports and Center for Health Development.

1-2. Establish an assignment mechanism of trainees in residency training to clinical training hospitals.

1-3. Develop an evaluation method for trainees in residency training.

1-4. Revise the criteria for designation of clinical training hospitals.

1-5. Develop an evaluation method for clinical training hospitals concerning conditions of training setting, trainee, and trainer.

1-6. Conduct periodical on-site visits for evaluating conditions of clinical training hospitals and status of training.

1-7. Provide guidance to Center for Health Development on reporting the evaluation results to the council in Ministry of Health and Sports on an annual basis.

1-8. Provide guidance to Center for Health Development on training management for credit training courses.

1-9. Provide guidance to Center for Health Development on Training on Trainer management.

2 Quality of post-graduate training program is improved with an emphasis on trainer/clinical educator who will guide health professionals in primary and secondary level health facilities.

2-1. Assess the current post-graduate training system (implementation mechanism, regulation, etc.).

2-2. Assess the residency training program on the prioritized subjects: emergency and related subject, traumatology, and infectious diseases.
2-3. Provide necessary equipment and materials for the post-graduate training.
2-4. Develop a training package for Training on Trainers.
2-5. Conduct the model Training on Trainers workshop to train core-facilitators.
2-6. Develop training packages for the continuous training courses on the prioritized subjects: emergency medicine and its related topics, pediatrics, traumatology, and infectious diseases.
2-7. Conduct the training courses on prioritized subjects: emergency medicine and its related topics, pediatrics, traumatology and infectious diseases.
2-8. Assist the planning and implementation of the post-graduate training at the newly constructed Mongolia-Japan Teaching Hospital.
3 Post-graduate training system for health professionals in the model sites is strengthened.
3-1. Assess the current post-graduate training systems in the model aimags.
3-2. Provide necessary equipment and materials for post-graduate training to training facilities in the model aimags.
3-3. Provide guidance to the training unit of aimag health department on planning continuous training courses.
3-4. Conduct TOT workshop.
3-5. Conduct the training courses on the prioritized subjects: emergency medicine and its related topics, pediatrics, traumatology and infectious diseases.
3-6. Utilize internet network between UB and aimags effectively for conducting continuous training courses.
3-7. Provide guidance to Aimag health department on a guidance system from upper level to lower level health facilities.
3-8. Develop the model training systems to expand to other aimags.

Actual (PDM ver 4 and 5)

1 Capacity for management of post-graduate training* at MOH and CHD is strengthened.

1-1. Assess the management for post-graduate training by MOH and CHD and identify the challenges.

Initial assessment was conducted during the first nine months of the Project. Based on the assessment, following activities were determined and the 2nd version of PDM was compiled.

1-2. Establish an assignment mechanism of trainees in residency training to clinical training hospitals.

Initially, developing the system to match trainees and training programs was considered, however, the given fact that numbers of trainees and programs were limited in Mongolia, the plan was modified.

The project supported to develop the documentary video to introduce the general practitioner training program, which was broadcasted to three Mongolian TV stations in October 2020. This activity made trainees find attracting programs.

1-3. Develop an evaluation method for trainees in residency training.

Three evaluation methods, Mini-Clinical Evaluation Exercise (Mini-CEX), Direct Observation of Procedural Skills (DOPS), and 360-degree evaluation form, were developed to assess clinical skills of trainees in July 2018. All methods were externally validated in other countries, but they were modified in suitable contents in order to apply to clinical settings in Mongolian teaching hospitals.

1-4. Revise the criteria for designation of clinical training hospitals.

The proposal was to revise the criteria of clinical training hospitals. Examples of Japanese training hospitals were also provided during trips to Japan. Official order to determine the revised criteria was released in September 2017 by the Minister of Health. Based on these revised criteria, the project provided technical guidance to training hospitals in order to prepare for the training program.

1-5. Develop an evaluation method for clinical training hospitals concerning conditions of training setting, trainee, and trainer.

The project supported the working group to develop a standardized evaluation method of training programs. Short-term experts provided technical advices and practical guidance was provided during the trip to Japan. The final product was completed in November 2018, which was approved by CHD in April 2019. The product includes the standardized evaluation sheet, the manual to conduct the evaluation, and the reporting form of the assessment.

1-6. Conduct periodical on-site visits for evaluating conditions of clinical training hospitals and status of training.

On-site visits to evaluate training hospitals utilizing the developed evaluation sheet were conducted. Short-term experts provided technical guidance to conduct actual evaluation. Staffs of CHD periodically conduct assessments and more than 90% training programs were evaluated every year.

1-7. Provide guidance to CHD on reporting the evaluation results to the council in MOH on an annual basis.

The reporting form was developed as mentioned in 1-6. Staffs of CHD were also trained to conduct appropriate evaluation. Although staffs of CHD conduct the evaluation of training hospitals, periodical reports were not made. The project was considering to provide advice on this matter with supports from a short-term expert in 2020, however, this plan was halted due to pandemic of COVID-19. This would be the further issues to be dealt with in the second phase of this project.

1-8. Provide guidance to CHD on training management for credit training courses.

Guidance was provided with the manual to manage credit trainings. Staffs in charge of credit trainings were changed more than several times, they were able to handle credit trainings appropriately because they followed the manual.

1-9. Provide guidance to CHD on TOT management.

Guidance was provided with manuals to manage TOT workshop. Staffs in charge of TOT workshop were changed more than several times, they were able to handle TOT workshop appropriately because they followed the manual.

1-10. Improve training management skills of CHD regarding administration works.

The project sought for supports from the local business consultant. Based on the assessment of the work of CHD, serial teaching sessions were provided to staffs of CHD throughout the year of 2018. Following assessment and supplemental teaching sessions were provided in the early 2019. The final assessment in July 2019 showed significant improvements of their work.

2 Quality of post-graduate training program is improved.

2-1. **Assess the current post-graduate training system (implementation mechanism, regulation, etc.) and revise it if necessary.**

Assessment was conducted in 2016 and proposed ideal training system for subspecialty.

2-2. Assess and revise the residency training program on the prioritized subjects: emergency and related subject, traumatology, and infectious diseases.

Assessment was made in 2016 and provide useful information related training program for emergency medicine.

MOH released general guidance to revise curriculum for each specialty based on proposal from the project.

2-3. Provide necessary equipment and materials for the post-graduate training.

Mannequins as well as PC and projector was provided through the project activity. A list of materials was described in Annex 1.

2-4. Develop a training package for TOT.

TOT workshop was developed and revised as follow.

1) TOT (Training on Trainers) for physicians (2016)
2) TOT (Training on Trainers) for physicians revised (2019)
3) TOT (Training on Trainers) for nurses (2019)

2-5. Conduct the model TOT workshop to train core-facilitators.

69 core-facilitators were trained and certified for TOT workshop. Expense to conduct courses for TOT workshop is now fully funded by Mongolia side.

2-6. Develop training packages for the continuous training courses on the prioritized subjects: emergency medicine and its related topics, pediatrics, traumatology, and infectious diseases.

Nine credit training courses were developed in five years as listed below.

1) AALS: Advanced Assessment and Life Support Course (2016)
2) BLS: Basic Life Support; pediatric version (2016) and general version (2017)
3) MELS: Mongolian Emergency Life Support (2018)

4) Point-of-Care Ultrasound: training (2019)
5) Maternal Emergency course (2019)
6) Neonatal Cardiopulmonary Resuscitation course (2019)
7) Child development assessment (2019)
8) Infection prevention and control (2018)
9) Patient service (SETSUGU) (2018)

2-7. Conduct the training courses on prioritized subjects: emergency medicine and its related topics, pediatrics, traumatology and infectious diseases.

Credit training courses were conducted throughout a year. Budget for these courses was initially supported by the project, however, all expense is now covered by CHD. 55,000,000MNT was planned in 2016 which were doubled to 117,858,000 MNT in 2019.

2-8. Assist the planning and implementation of the post-graduate training at the newly constructed Mongolia-Japan Teaching Hospital.

The project provided several lectures as well as TOT workshops for physicians in Mongolia-Japan teaching hospital. Since the hospital was not prepared for on-site post-graduate training till 2020, direct inputs were limited.

2-9. Develop post-graduate training program on general practice.

Post-graduate training program on general practice was developed and launched in October 2018. About 20 trainees were trained in Orkhon RDTC and Chingiltei district hospital in 2018 as well as subsequent years.

3 Postgraduate training system for health professionals in the model aimags is strengthened.

3-1. Assess the current post-graduate training systems in the model sites.

Assessment was conducted during the first year of the project. Proposal to strengthen training management capacity was released based on the assessment.

3-2. Provide necessary equipment and materials for post-graduate training to training facilities in the model sites.

The project provided mannequins to provide credit training effectively. Further materials related post-graduate training such as desktop computers and a printer were provided before commencing general practitioner training.

3-3. Improve skills of the health department and training management units at designated training hospitals on planning and managing training courses.

The project irregularly provided technical guidance to develop training program in the hospital. After establishing the satellite office in Orkhon RDTC, the project was able to monitor the progress and provide necessary advice without delay.

3-4. Conduct TOT workshop.

TOT workshop was conducted in Orkhon RDTC in 2016. Two more workshops were held in 2017 and 2018. CHD and Orkhon RDTC provide all expenses related the workshop in 2018.

3-5. Conduct the training courses on the prioritized subjects: emergency medicine and its related topics, pediatrics, traumatology and infectious diseases.

Numerous training courses were conducted in Orkhon RDTC. Initially, those training course were provided by short-term experts from Japan, however, CHD prepared budgets to conduct these courses in Orkhon or other aimags in 2019 and 2020.

3-6. Utilize the internet network between Ulaanbaatar and aimags effectively for conducting continuous training courses.

Several lectures were provided from Ulaanbaatar to aimags. Topics includes infectious disease, patient services (SETSUGU), and pediatrics.

3-7. Guidance system from upper level to lower level health facilities provided by Aimag health department and training management units at designated training hospitals is strengthened.

Guidance system was introduced to Mongolia side. There was the existing system to provide trainings from the upper level to lower level health facilities in Aimags. Initial plan was to coordinate existing system and advice from the

project, however, realizing that Mongolia has sophisticated guidance system to train healthcare workers in lower level health facilities, the project suspended to intervene any further.

3-8. Develop the model training systems to expand to other aimags.

TOT workshop course was expanded to other aimag such as Uvrkhangai in October 2018.

As for general practitioner training, the project supported four RDTC to develop training program by organizing workshops learning from Orkhon RDTC in July, 2019. Dornod RDTC is going to launch general practitioner training in 2020 and Uvrkhangai RDTC is ready to start. Mongolian government as well as local health departments are financially supporting these RDCT to establish the program.

3-9. Implement the general practice training program and establish training management system organized by related health departments and training management units at designated training hospitals.

Orkhon RDTC successfully started general practitioner training program in October 2018. Chingiltei district hospital followed. These programs were able to establish the training management unit which monitor progress of training for each trainee.

2. Achievements of the Project

2-1 Outputs and indicators

(Target values and actual values achieved at completion)

1 Capacity for management of post-graduate training* at MOH and CHD is strengthened.

Achievement of this output is considered as high since the indicators are exceeded at the end of the project.

1. The grade average of capacity for the management of post-graduate training at MOH and CHD is higher than three according to five grade evaluation at the end of the project.

- Interim evaluation has been done at the Working Group on March 29, 2017. The grade average became 2.14, increased by 0.28 from the baseline. Final evaluation was made online basis. The average score from seven

counterparts was 4.6 out of 5, which made 100% achievement of the indicators.

- In spite of significant relocation of counterparts in MOH and CHD, the evaluation was held. This might affect the results of evaluation, therefore, the project tried to provide careful explanations to the newly appointed counterparts so that there would be no difference in the level of understanding.

2 Quality of post-graduate training* program is improved.

There were two indicators to assess this output, and 100% of them were achieved, therefore, the achievement of this output is considered as high.

1) A training package for TOT is newly designed.
   - TOT workshop for physician was initially developed in 2016. Contents were updated and the training package was revised in November 2019.
   - TOT workshop for nurse was also developed in December 2019.
2) Five and more training packages of continuous training courses are newly designed.
   - More than five continuous training packages were developed.
   - AALS: Advanced assessment and life support course; training to enhance capacities for initial assessment and intervention for critically traumatized patients.
   - BLS: training to provide initial basic resuscitative care to people in cardiac arrests. This was initially developed for pediatric patients, which were modified for all ages.
   - MELS: Mongolian Emergency Life support: training to provide advanced resuscitative care to patients in cardiac arrests.
   - Point-of-Care Ultrasound: training to acquire skills to utilize ultrasound at the bedside in the emergency room as diagnostic measures.
   - Maternal Emergency course: provide resuscitative care to pregnant women in critically ill condition.
   - Neonatal Cardiopulmonary Resuscitation course: provide resuscitative care to newly born babies during the first 1~5 minutes in a delivery room.
   - Child development assessment: provide general overview and specific point to assess child development. Unique educational video was translated from Japanese to Mongolia.

- Infection Prevention and Control: provide general guidance and practical approaches to prevent contagious diseases such as appropriate hand hygiene.
- Patient service (SETSUGU): training to learn how to provide patient-friendly care in appropriate manners.

3) More than one post-graduate training programs on the prioritized subjects: emergency medicine and its related topics, pediatrics, traumatology and infectious diseases are newly designed.
   - Training program for general practitioners was newly designed and implemented at model sites in October, 2018. This program is now expanding to other areas.
   - Guidelines to revise training curriculum was developed and adapted in July, 2019.

3 Post-graduate training system for health professionals in the model aimags is strengthened.

There were three indicators to assess this output. Because of COVID-19 outbreak in 2020, the achievement for the final year was hard to conclude. However, two of them were achieved in 2019 and the last indicator was fulfilled in 2020. Therefore, the achievement of this output is considered as high.

1) Five and more continuous training courses (credit or non-credit training courses) are planned and organized by the aimag health department and training management units at the designated training hospitals in a year.
   - Each year, training units planned and conducted more than five credit training for physicians and nurses in the aimag.
   - Actual activities were limited due to the outbreak of COVID-19 in 2020.
2) General practice training program is newly designed by the aimag health department and training management units at the designated training hospitals.
   - The training for general practitioners were designed and implemented in 2019. Training unit was established to monitor activities related to general practitioner training.
3) Clinical skills of doctors who take post-graduate training programs developed by the project are higher than those of doctors who do not take them.
   - Patient-resident encounters were assessed by skilled clinical instructors. Two groups of resident physicians; the beginning of general practitioner

training and the end of general practitioner training were comparatively assessed. 145 encounters for resident physicians at the beginning and 100 encounters for resident physicians at the end of training were assessed. The assessment was analyzed with statistical formula and revealed clinical skills were significantly higher for resident physicians at the end of their training ($p < 0.001$).

2-2 Project Purpose and indicators

(Target values and actual values achieved at completion)

There were two indicators to assess the project purpose, and 100% of them were achieved, therefore, the achievement of the project purpose is considered as high.

1) More than 90% of health facilities designated for residency training are monitored and evaluated by the revised method annually.

Fifteen out of 16 training hospitals have formally assessed by utilizing newly developed evaluation method in 2020. The reporting sheet was also approved by CHD.

2) More than 300 medical doctors attend TOT organized by CHD by the end of the project period.

Approximately 800 doctors attended the course and certified as clinical instructors. 69 instructors were trained and certified as facilitators for the course.

3. History of PDM Modification

1) PDM version 2; modified on December 22, 2015.
   Modification was made to focus on activities for physicians, mainly developing regulations and several basic trainings such as TOT and AALS. This modification was made based on the initial survey as the initial PDM was thought to be broad and unspecific.
2) PDM version 3; modified on January 26, 2018
   Modification was made to expand activities including general practitioner trainings. This modification was made based on the request from Mongolian government. Mongolian government wanted to provide general practice training in various parts of the country.
3) PDM version 4; modified on March, 2019

Modification was made to include nursing. Model site was changed from Bulgan to Chingiltei district hospital within this modification. This modification was also made based on the request from Mongolian government since nursing education had become an urgent issue for the country.

4) PDM version 5; modified on Oct 2019
Modification was made to extend the period of the project, because implementation of the nursing trainings and the follow-ups of medical trainings were required to be completed.

4. Others

4-1 Results of Environmental and Social Considerations (if applicable)
Not applicable.

4-2 Results of Considerations on Gender/Peace Building/Poverty Reduction (if applicable)
Not applicable.

III. Results of Joint Review

1. Results of Review based on DAC Evaluation Criteria

1) Relevance

(1) Consistency with the health-related policy

Based on the State Policy on Health in 2017, the direction of the project has been consistent with the policy. This is the only policy on health human resource development that has been implemented by the government at the time of the completion of the project.

(2) Consistency with general and specific needs

Based on information obtained during initial assessment, there was a great need to train young healthcare professionals in the primary and secondary healthcare facilities. The project was able to work for the need. This need has been emphasized by the MOH during and at the end of the project. As evidence of this, the amount of budget needed to train young medical professionals continues to increase.

(3) Appropriateness of the project plan and approach

Securing quality-assured training facilities and clinical instructors is an essential and reasonable approach to the delivery of qualified trainings.

2) Effectiveness

(1) Project Purposes will be achieved?

Since 2019, more than 90% of training facilities have been assessed and reported by standardized evaluation criteria.

Over 300 instructors have been trained and the project purposes have been met.

(2) Outputs contribute to the achievement of project purposes

The first output is to strengthen the capacity of MOH and CHD to manage post-graduate training. The second output is to improve the quality of post-graduate training program. Lastly, the third output is to strengthen the system of post-graduate medical training in model aimags.

Achievement of these outputs is necessary to meet project purposes. Mainly the first and the second output played roles to reach the goal, though.

(3) Outputs were achieved as planned.

All outputs were reached earlier than initially planned.

3) Efficiency

(1) Efficiency of the budgets

Total budget was planned as ¥297,211,000 and increased to ¥ 332,572,000 due to extending the project period. The increased amount did not affect the efficiency of the whole project.

During budgetary straits of JICA in 2017 and 2018, the project was required to limit some of activities, however, Mongolian government provided financial support to conduct trips to Japan.

Annual budget for credit trainings as well as general practitioner training continued to increase over the years.

(2) Efficiency of the project plan

Initially, the duration of the Project was 5 years; from May 2015 to May 2020. However, it was extended until December 2020 in order to implement the activities of nursing training and follow-up activities of medical trainings. These activities were added in March 2019 in response to a request from MOH.

There were no major delays in activities, but some activities were cancelled

during the outbreaks of COVID-19.

(3) Other inhibiting and facilitating factors

Regardless of the changes in government, the CP changed frequently. Each change required an explanation of project activities, but the CPs were actively involved in the progress of project activities and did not particularly cause significant delays in activities.

4) Impact

Issues related to overall goals would be discussed in **IV-1.**

The success of the project has enabled the general practitioners training to expand throughout Mongolia. It was also decided to start activities in the field of nursing.

Another important impact of the Project was the request from the Mongolian MOH regarding the training of nurses. In Mongolia, the low status of nurses and the lack of adequate education have been social problems. The Mongolian government requested the project to be involved in the training of nurses, as the project was able to successfully implement the general practitioners training. Due to the urgency and importance of this request, the Project first worked on the development of the TOT workshop for nurse leaders. There are still some activities that need to be done regarding the training of nurses, then these will be addressed in the second phase of the Project.

5) Sustainability

Sustainability was examined from the following four perspectives.

1) Policy and institutional aspects

MOH has a future plan to expand the general practitioners training across the nation. This policy is very important for the continued development of the project's outcomes.

2) Structure of the implementing agency

Ownership of the CHD has also been fostered and various credit trainings have voluntary provided. The hospital's training management units also began to manage clinical training on a voluntary basis.

3) Skills of the implementing agency

Credit training staffs in CHD use a training management sheet that was developed with support from the Project. By using this sheet, all the assigned

staffs were able to manage their training in the same way even if they were newly transferred.
4) Finance of the implementing agency
Any credit training developed with the Project's involvement is now budgeted by the MOH. As for the general practitioners training, the budget required to hire residents is now subsidized by the MOH.

Please see the attached document titled DAC evaluation criteria.

2. Key Factors Affecting Implementation and Outcomes

1) Frequent personnel changes and reorganization of MOH and CHD
Members of JCC as well as CPs changed frequently. Most of them had left their organization.
2) Budgetary deficiency for postgraduate medical training in Mongolian government
Due to budgetary deficiency, postgraduate training for general practitioners started with limited financial supports.
3) Bulgan Aimag was removed from the counterpart.
Due to dishonest activities by hospital staffs in Bulgan who were participating counterpart training for other JICA project in Japan, Bulgan Aimag Health Department and Bulgan Aimag hospital were removed from the counterpart in March 2018 and officially acknowledged at JCC in March, 2019. This decision lasts until the end of the Project.
4) Financial straits of JICA
~~F~~inancial straits overwhelmed the JICA project since the end of 2017. More than several short-term experts were unable to be dispatched and significant budgetary modifications were required, however now it is under control and further modification is no longer required.

3. Evaluation on the results of the Project Risk Management

1) As for frequent personnel changes and reorganization of MOH and CHD, Project required to put efforts on explaining about the project and keeping the activities flow. As a result, the Project developed simplified materials to explain about the Project and conducted frequent briefings to ensure the continuation of the Project.
2) As for budgetary deficiency for postgraduate medical training, the Project proposed that MOH should implement the general practitioners training program

as a pilot. In 2018, the first year of the project, the budget was indeed tight, but it gradually improved and the number of residents for general practitioners training gradually increased.

3) There was a similar project and lessons learnt for this project mentioned in the ex-ante evaluation report. This project is called The Dominican Republic's "Project for Strengthening Medical and Health Education" (1999-2004) is the similar project related to medical education, especially post-graduate training. The diagnostic imaging program developed in the project was incorporated into the national-level post-graduate training program, and it is evaluated to have been highly effective. Main lesson suggested from the Project was that the post-graduate training program should be incorporated into the health policy of the MOH in the future and be a framework for cooperation that can be rolled out nationwide by the CHD. There was another similar project called "Project for improvement of the Quality of Human Resources in the Medical Service System" in Vietnam (2010-15). This project provided support for the implementation of the system for human resource development based on the national policy and strategy for the health service sector developed by the MOH. In particular, it focused on the development of standardized curriculum and training of instructors in order to strengthen the capacity of medical professionals. Then, this project supported to develop the TOT workshop program that was adapted to the situation in Vietnam and became an official training program of the MOH.

Through these lessons learned from similar projects conducted in the past, the following two points were taken into consideration in this project and were able to lead to successful results.

1) The MOH took the lead in developing the curriculum for general practitioners training, with CHD also involved. The curriculum was developed in line with the MOH's policy of wanting to achieve training for doctors in rural areas, and this policy was clearly included in the preamble of the curriculum. As a result, we were able to get it approved by the Medical Human Resource Development Committee in the MOH, laying the groundwork for the national rollout of this training.

2) In order to clarify the status of the TOT workshop in Mongolia, the Project first established guidelines for conducting the TOT workshop to ensure its quality. The MOH issued the decree stating that only TOT workshop that meets the guidelines is recognized as the official TOT workshop, that only doctors who have taken the official TOT workshop are recognized as instructors, and that

having official instructors is a prerequisite for a hospital to be recognized as a designated training hospital. This decree was released as the order from the Minister of Health. As a result, the MOH secured a budget for the TOT workshop, which led to CHD's proactive management and administration of the TOT workshop, and made it possible to continue conducting the TOT workshop.

4. Lessons Learnt

1) While developing the curriculum for general practitioners, it was necessary to collaborate with experts from Mongolian National University of Medical Sciences who were in a position to work with the MOH. However, the MOH officials had not been able to collaborate with the experts for many years, so they asked the Project for assistance. In this case, a modified Delphi method was used to get stakeholders from different positions to sit at the same table and coordinate the discussion. This method allows individuals participating in the discussion to voice their arguments without being influenced by the opinions of others. This allowed people from each position with conflicting interests to reflect their opinions in the curriculum without being influenced by the opinions of those in other positions. Since each person was able to be proactively involved, it was possible to foster a sense of ownership of the curriculum. We believe that this is a method that can be used as a reference for building consensus among people with conflicting interests in other projects in the future.

2) Frequent turnover of CPs, i.e., frequent change of positions by civil servants, is a common and unavoidable occurrence in Mongolia. Therefore, in the project activities, we naturally paid attention to the development of human resources, and at the same time, the Project created manuals and conducted frequent briefings to ensure the continuation of the Project. In order to be able to conduct frequent briefings, the Project prepared a simplified version of the briefing materials. In the future, if the CP changes frequently in other projects, it may be a good idea to prepare materials that can be easily explained and to include the preparation of manuals for business continuity in the project activities.

3) When the Project faced with financial difficulties, we were able to extract a budget from the Mongolian side. In addition, by utilizing Mongolians who had been to Japan for JICA training in the past, we were able to proceed with the Project without major delays. In particular, human resources who have been to Japan for JICA training in the past are valuable assets in the target country. In order to be able to utilize the network of returnees, it would be a good idea to

consider activities that take advantage of staying in the target country a long term expert, such as obtaining a list of the target people, contacting them as needed, and following up on their action plans created during the training after returning home.

IV. For the Achievement of Overall Goals after the Project Completion

1. Prospects to achieve Overall Goal

Here is overall goal:
The quality of health services in primary and secondary level facilities is improved.
The objectively verifiable indicators are:
1. Percentage of inpatients referred from the health facilities in aimags to central hospitals and specialized centers (tertiary level facilities) is decreased compared with baseline data in 2014.
2. Percentage of deaths occurred within 24 hours of admission at aimag general hospitals, district general hospitals, and regional diagnostic and treatment centers are decreased respectively compared with baseline data in 2014.

These data are available from annual health indicator. These data are expected to be monitored.
It is expected that it will be possible to achieve the overall goals. One of the reasons for the achievement is that the MOH and other stakeholders have fostered a sense of ownership in terms of the training implementation system and budget securing as explained in detail later. However, given the fact that it takes time to spread general practitioners training to all aimas and that it generally takes time to see the results of human resource development, it will be necessary to monitor the project in the long run.

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

1) The MOH is considering to expand general practitioners training program to take place in four other regional diagnostic and treatment centers within a few years.
2) More hospitals will need to be designated for general practitioners training, and the CHD will continue to provide guidance in evaluating hospitals and preparing them for designation.

3) The MOH and the CHD continue to secure budget for TOT workshop because more clinical instructors need to be trained.
4) In order to expand the number of training hospitals that offer general practitioners training, the MOH has been increasing the budget for securing residents to be hired.

3. Recommendations for the Mongolian side

1) Continue to work with the JICA project as the next phase of the project will be implemented as the main objective of the next project will be to expand training for general practitioner over the country.
2) Continue to strengthen capacities of healthcare professionals in aimag hospitals which allows them to provide updated care to patients in the community.
3) Ideally, training for general practitioners should be extended to two-year training and would be compulsory training to all newly medical school graduates. Consideration should also be given to securing the budget to make this happen.
4) Work closely with Mongolia-Japan teaching hospital. Japan side would consider this hospital as the main resource for human resource development in healthcare field.

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

The foundation for the general practitioners training has finally been laid and it will be gradually extended to all aimags after 2020. In order to know the results of the project, it would be better to give it at least 4-5 years' notice and monitor it along with the progress of the next phase of the project.

(If the Project will be continuously monitored by JICA after the completion of the Project, mention the plan of post-monitoring here.)

ANNEX 1: Results of the Project

(List of Dispatched Experts, List of Counterparts, List of Trainings, etc.)

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

ANNEX 3: PDM (All versions of PDM)

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

ANNEX 5: Monitoring Sheet (copy) (*)

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

Separate Volume: Copy of Products Produced by the Project

Results of the Project

(1) Budget planned as ¥297,211,000 which was increased to ¥ 332,572,000 due to extending the project period.

(2) Dispatched Experts

(a) Long Term Experts: Chief Advisor 2

Hiroshi Ohara: June 15, 2015~June 14, 2017

Nobuaki Inoue: June 5, 2017~December 31, 2020

Project Coordinator 3

Hiroyuki Noda: May 11, 2015~July 10, 2017

Tamotsu Nozaki: July 17, 2017~July 16, 2019

Hiroshi Okuma: June 30, 2019~December 31, 2020; initial status was a short term expert which was changed to a long term expert on May 1, 2020.

(b) Short Term Experts

1. Postgraduate training: Oct 1~Oct 10, 2015 (Dr. Akira Muraoka)
   (program evaluation)　October3 – 28, 2016 (Ms. Chieko Matsubara)
   May 15 – 31, 2017 (Ms. Chieko Matsubara)
   Oct 18 – 27, 2017 (Dr. Akira Muraoka)
   November 14 – 23, 2018 (Dr. Akira Muraoka)
2. Curriculum development: June 19 – 29, 2018 (Dr. Hirotaka Onishi)
   (Developing a logbook)
3. Community medicine: February 15~March 4, 2016 (Ms. Inaoka)
4. Postgraduate training: April 18 ~June 15, 2016 (Dr. Hiroaki Takahashi)
   (TOT)　May 13~ 23, 2016 (Dr. Hiroaki Takahashi)
   May 13~ 23, 2016 (Dr. Akira Muraoka)
   June 8 ~ 15, 2016 (Dr. Hiroaki Takahashi)
   October 3 – 12, 2016 (Dr. Hiroaki Takahashi)
   October 3 – 14, 2016 (Dr. Hiroaki Nakajima)
   March 10 – 17, 2017 (Dr. Hiroaki Nakajima)
   Oct 2 – 6, 2017 (Dr. Takako Shimizu)
   Oct 2 – 13, 2017 (Dr. Hiroaki Nakajima)
   Oct 2 – 14, 2017 (Dr. Akiteru Takamura)
   May 11 – 20, 2018 (Dr. Hiroaki Nakajima)
   May 11 – 20, 2018 (Dr. Hiroaki Takahashi)
   Septr 30 – Oct 12, 2018 (Dr. Hiroaki Nakajima)
   Oct 7 – 12, 2018 (Dr. Hiroaki Takahashi)

May 26 – June, 1 2019 (Dr. Hiroaki Nakajima)
Nov 3 – 8, 2019 (Dr. Hiroaki Nakajima)
Oct 31 – Nov 9, 2019 (Dr. Akiteru Takamura)

5. Postgraduate training: Jan 29 – Feb 1, 2018 (Prof. Hiroyuki Suzuki)
(curriculum development) Jan 28 – Feb 1, 2018 (Prof. Masashi Akaike)
Jan 29 – Feb 1, 2018 (Dr. Hirotaka Onishi)
Jan 28 – Jan 31, 2018 (Dr. Akiteru Takamura)
May 09 – May 15, 2018 (Dr. Masashi Akaike)
6. Emergency Medicine: Oct 25~Oct 31, 2015 (Dr. Akio Kimura)
February 22~March 3, 2016 (Dr. Akio Kimura)
September 21~30, 2016 (Dr. Akio Kimura)
September25~October 1, 2016 (Dr. Satoshi Fujita)
May 3 – 12, 2017 (Dr. Akio Kimura)
May 3 – 12, 2017 (Dr. Satoshi Fujita)
July 27 – August 1, 2018 (Dr. Satoshi Fujita)
July 30 – August 3, 2018 (Dr. Akio Kimura)
July 29 – August 3, 2019 (Dr. Satoshi Fujita)
July 29 – August 3, 2019 (Dr. Akio Kimura)
7. Pediatric emergency medicine: January 27~February 5, 2016
November 7 – 21, 2016 (Dr. Nobuaki Inoue)
January 9– 23, 2017 (Dr. Nobuaki Inoue)
8. Pediatrics: August 22-31, 2016 (Dr. Hiroyuki Shichino)
Oct 25 – Nov 3, 2017 (Dr. Hiroyuki Shichino)
Sept 8 – 15, 2019 (Dr.Hagane Shimaoka)
Sept 22 – 28, 2019 (Dr. Hiroyuki Shichino)
Sept 22 – 28, 2019 (/Dr. Akira Yoneyama)
9. Nursing June 10 – 14, 2019 (Ms. Chiyoko Hashimoto)
Aug 12 – Sept 4, 2019 (Ms. Karin Fukatani)
Aug 28 – Sept 3, 2019 (Ms. Yumiko Shuda)
December 15 – 25, 2019 (Ms. Karin Fukatani)
10. Public Relations March 24, 26, 2020 (Mr. Masuda)
(online lecture)
11. Program evaluation October 20 21 (Dr. Baba)
12. Medical Safety November xxx (Ms Ikemoto)

(c) Dispatch of the investigation team

1. Nov 29 – Dec 8, 2017

Mr. Tatsuya Ashida (JICA, Tokyo)
Ms. Yumiko Inoue (JICA, Tokyo)
Dr. Hidechika Akashi (National Center for Global Health and Medicine)
Dr. Hirotaka Onishi (Tokyo University, International Research Ctr for Medical Education)

2. Feb 26 – Mar 8, 2019
   Mr. Tatsuya Ashida and Ms. Yumiko Inoue (JICA headquarter, Tokyo)
   Dr. Chiaki Miyoshi and Ms. Chiyoko Hashimoto (National Center for Global Health and Medicine)
3. Oct 7 – 12, 2019
   Mr. Tatsuya Ashida and Mr. Yasuaki Abe (JICA headquarter, Tokyo)
   Dr. Noriko Fujita, Ms. Chiyoko Hashimoto, and Dr. Toshiaki Baba* (National Center for Global Health and Medicine)

(d) Short term experts without financial expense from JICA

1. Postgraduate training May 13 – 18, 2018 (Dr. Nobuhiko Saito)
   May 13 – 18, 2018 (Dr. Saburou Horiuchi)
2. Emergency Medicine July 30 – August 3, 2018 (Dr. Keika Hirose)
   June 24 – 28, 2019 (Dr. Keika Hirose)
   Sept 23 – 30, 2019 (Dr. Keika Hirose)
   July 29 – August 3, 2019 (Dr. Motoko Iwahara)
   July 21~ Aug 16, 2019 (Dr. Masayoshi Terayama)
3. Pediatrics Sept 23 – Oct 19, 2018 (Dr. Kaori Ohara)
   Sept 16 – Oct 12 2019 (Dr. Mami Shimada)
   Oct 23 – Nov 9, 2019 (Dr. Mami Shimada)
4. OBGYN Dec 26, 2018 – Jan 23, 2019 (Dr. Hiroki Akaba)
5. Community Medicine September 9 – 15, 2018 (Dr. Manabu Saito)
   September 9 – 15, 2018 (Dr. Homare Murohara)
6. Nursing January 14 – 25, 2019 (Ms. Megumi Ikarashi)
   May 26 – June 14, 2019 (Ms. Karin Fukatani)
7. JICA intern Nov 1 – Dec 22, 2018 (Dr. Yu Nanamatsu)
   January 27 – March 4, 2020 (Ms. Nagisa Takeuchi)

(3) Training in Japan

Here are actual training conducted in Japan.

1. Five counterparts (3 from CHD and 2 from MOHS) have participated the program in Japan from November 30- December 9, 2015.
2. Five counterparts (1 from MOH,2 from CHD and 2 from Aimag health

department) have participated the program in Japan from October 24-November 2, 2016.

3. Seven counterparts (2 from MOH, 3 from CHD, 1 from Orkhon RDTC, and 1 Bulgan Aimag Hospital) participated the training in Japan from September 6 – 16, 2017.
4. 10 counterparts participated training in Nara from May 27 to June 9, 2018
5. November 6 – 20, 2019: 7 participants to National Center for Global Health and Medicine (NCGM)

There are five more training conducted in Japan, which expenses were partially supported by the MOH, Mongolia.

6. August 26 – September 8, 2018: 3 participants to Tokushima University Hospital (Expenses for the training was shared with the Ministry of Health in Mongolia)
7. September 9 – 23, 2018: 3 participants to Nara General Medical Center (Expenses for the training was shared with the Ministry of Health in Mongolia)
8. November 25 – December 8, 2018; 4 participants attended training at National Center for Global Health and Medicine, Tokyo. (Expenses for the training was shared with the Ministry of Health in Mongolia)
9. November 17 – 30, 2019: 5 participants to Mita Hospital, International University for Health and Welfare (Expenses for the training was shared with the Ministry of Health in Mongolia)
10. December 1 – 14, 2019: 5 participants to NCGM (Expenses for the training was shared with the Ministry of Health in Mongolia)

(4) Equipment Provision: total cost with carrying equipment was ¥22,742,000.

1. Surgical simulator with tissue packs
2. Surgical simulator for airway management
3. Ultrasound training simulator (Simulator for Focused Assessment with Sonography Trauma(FAST))
4. A set of mannequins including adult, child, and infant size to exercise resuscitation skills and bag-valve-masks for both adult and infant size were provided to Orkhon Aimag Health Office, Orkhon Regional Diagnostic and Treatment Center, Bulgan Aimag Health Office, Bulgan Aimag Hospital, Khutag-Ondor Inter-soum Hospital, Khishig-Ondor Inter-soum Hospital, and Rashaant Emergency Center.
5. Automated electric defibrillators training machines with extra pads were

provided to Orkhon RDTC and Bulgan Aimag Health Office.

6. Laptop computers and projectors with screens for conducting lectures were provided to these aimag health offices and hospitals except for Bulgan Aimag Hospital
7. Three desktop computers and a laser printer were provided to Orkhon Aimag RDTC on October 15, 2018 in order to facilitate training efficacy and enhance the quality of training for trainees.
8. Two Computers with monitors and two printers as well as a set of mannequins were provided to Chingeltei district hospital to facilitate their training in 2019.
9. Two mannequins for ultrasound training; adult and child in 2020
10. Personal Protective Equipment; related to COVID-19 outbreaks in 2020

(5) Overseas activities cost

Expenditures for overseas activities cost were consumed almost as originally planned. Major inputs were listed as below.

1. Implementation of training courses such as TOT workshops and other training courses for emergency medicine, pediatrics, and infectious diseases.
2. Binding of training manuals such as pediatrics, obstetrics, internal medicine, and emergency medicine.
3. The Project also hired up to four assistants to help facilitate the activities.
4. One of Mongolian business consultants who was trained under other JICA projects was involved for strengthening management capacities of CHD.

1-2 Input by the Mongolian side

(1) List of counterparts

There were numerous changes with counterparts due to political reasons as well as personal preferences.

Project Director: vice minister or state secretary of MOH, was changed and four personnel were assigned during the project period.

Project coordinator: Director, Department of Public Administration and Management, MOH, was changed and three personnel were assigned during the project period. At the time of submitting this report, this position is vacant.

Operational manager: Director, Center for Health Development, was changed and four personnel were assigned during the project period.

Staffs

Director, Department of Human Resource Policy and Coordination, formerly called as Human Resource Development, was the key counterpart for the project. Weekly meetings were held with the director, however, eight personnel were assigned during the project period.

(2) Decent office space was provided in CHD. Additional office space was provided in Orkhon Regional Diagnostic Treatment Center as the satellite office for the project from April 2018 to May, 2020. Orkhon RDTC provided the appropriate space and supported the Project to establish the office. The JICA project employed the staff to facilitate accomplishments of collaborative work between the JICA project and staffs in Orkhon RDTC. Necessary office equipment was provided from CHD and MOH.

(3) Other items borne by the counterpart government were listed as below.

1. Information as well as support in obtaining necessary data related to the Project.
2. Budgets provided by Mongolian side. These budgets were not initially planned, however MOH suggested to provide these.

a) Budgets for general practitioner training

2018	36 residents
2019	28 residents (number was declined since Bulgan aimag was excluded from the project model site)
2020	40 residents

b) Budgets for credit training

2016	55,000,000 MNT
2017	unavailable
2018	69,048,000 MNT
2019	117,858,000 MNT

During 2019, eight different types of credit training were provided to 300 physicians and nurses. All expense was supported by MOH/CHD.

c) Expenses for training in Japan

Due to budgetary straits within JICA in 2018, Mongolian government offer to share travel expense for training in Japan. Airfare, accommodation fee, and daily allowance were provided from Mongolian side for 30 physicians in 2018 and 2019.

3. Official letters from MOH was provided with travelling rural areas for inspection to support the Project.

1-3 Activities (Actual)

Please refer to annex1_PO

List of Products produced by the Project

1. Materials to strengthen the capacities of MOH or the government
   1) Proposal to MOH
      ① Revising Postgraduate Medical Training System; no 1, 2 (2016)
      ② Updating Systems for specialty and subspecialty training (2016)
      ③ Training Program for general practitioners (2016)
      ④ Criteria for designation as a rotational clinical training hospital (2016)
      ⑤ Developing guidelines for TOT training for physicians (2016)
      ⑥ Guidelines to revise specialty training (2019)
      ⑦ Developing guidelines for TOT training for nurses (2019)
   2) Standardized assessment tools and reporting format for evaluating teaching programs (2018)
   3) Manuals to manage credit training such as TOT training (2016)
   4) Advertisement video materials; broadcasted on three Mongolian TV (2020)
2. Training packages
   1) TOT (Training on Trainers) for physicians (2016)
   2) TOT (Training on Trainers) for physicians revised (2019)
   3) TOT (Training on Trainers) for nurses (2019)
   4) AALS: Advanced assessment and life support course (2016)
   5) BLS; pediatric version (2016) and general version (2017)
   6) MELS: Mongolian Emergency Life support (2018)
   7) Point-of-Care Ultrasound: training (2019)
   8) Maternal Emergency course (2019)
   9) Neonatal Cardiopulmonary Resuscitation course (2019)
   10) Child development assessment (2019)
   11) Infection Prevention and Control (2018)
   12) Patient service (SETSUGU) (2018)
3. Educational materials: all materials were approved by the specialty committee in MOH.
   1) Standardized competency-based curriculum for general practitioners (2018)
   2) Resident Training Logbook and standardized evaluation form (2018)
   3) Resident handbook (manual) for pediatrics (2018)
   4) Resident handbook (manual) for obstetrics and gynecology (2019)

5) Resident handbook (manual) for emergency medicine (2020)
6) Resident handbook (manual) for internal medicine (2020)
7) Resident handbook (manual) for developmental assessment (2020)
8) Resident handbook (manual) for procedures (2019)

List of PDM revising point

1. PDM version 1

2. PDM Version 2: November , 2017

Table of comparison between PDM Version 1 and PDM Version 2

PDM Version1	PDM Version 2 highlighted changes	Reasons
Implementing agency		
Ministry of Health and Sports and Center for Health Development	Ministry of Health and Sports (MOHS) and Center for Health Development (CHD)	For using the initialism thereafter.
Target group		
Staff of Division of Human Resource Development and Management of Ministry of Health and Sports, Center for Health Development, Regional Diagnostic and Treatment Centers and Aimag General Hospitals	Staff who are engaged in post-graduate training in MOHS, CHD, Aimag Health Department and related health facilities	Revised based on a current organizational structure of MOHS and contents of altered activities in PDM vesion2
Objectively Verifiable Indicator 1 for overall goal		
Percentage of referred cases is increased from X % to X%.	Percentage of inpatients referred from the health facilities in aimags to central hospitals and specialized centers (tertiary level facilities) is decreased compared with baseline data in 2014.	Revised in accordance with an existing CHD health indicator
Objectively Verifiable Indicator 2 for overall goal		
None	Percentage of deaths occurred within 24 hours of admission at aimag general hospitals, district general hospitals, and regional diagnostic and treatment centers are decreased respectively compared with baseline data in 2014.	A new indictor is added to supplement the indicator 1. It is also one of the CHD health indicators.
Means of Verification for overall goal		
Referred cases data	CHD health indicators	The data are available in annual CHD publication (CHD Health indicators).
Project purpose		
Post-graduate training for health	Post-graduate Training for Health	Revised to define the term of

professionals is strengthened.	Professionals in Primary and Secondary Level Health Facilities is strengthened.	health professionals
Objectively Verifiable Indicator for project purpose		
1. Attendance of training of primary and secondary health professionals is increased based on the needs assessment from X% to X%.	1. More than 90% of health facilities designated for residency training are monitored and evaluated by the revised method annually.	The number of attendance will be affected by factors other than the project outputs. The revised indicator is related to the monitoring and evaluation for residency training that can improve the quality of post-graduate training.
2. No. of patients who visit primary and secondary health facilities.	2. More than 300 medical doctors attend TOT organized by CHD by the end of the project period.	The number of patients will be affected by factors other than the project outputs. The revised indicator is set for verifying the attendance of TOT that will impact on improvement of post-graduate training.
Means of Verification for project purpose		
1. Training attendance data 2. 13A and 13B Form data	1. Clinical training hospital evaluation report 2. TOT record by CHD	Changed in accordance with the revised indicators
Output 1		
Capacity on management of post-graduate training at Ministry of Health and Sports and Center for Health Development is strengthened.	Capacity for management of post-graduate training* at MOHS and CHD is strengthened.	An explanatory note is added to define the term of post-graduate training.
Objectively Verifiable Indicator for output 1		
1. Doctors' deployment information is formulated. 2. Post-graduate training programme is periodically evaluated with written feedback to Ministry of Health and Sports and Center for Health Development.	1. The grade average of capacity for the management of post-graduate training at MOHS and CHD is higher than three according to five grade evaluation at the end of the project.	Revised for evaluating the management capacity more comprehensively.
Means of Verification for output 1		

1. Doctors' deployment information 2. Feedback sheet	1. Result of capacity evaluation	Changed in accordance with the revised indicator
Output 2		
Quality of post-graduate training programme for health professionals is strengthened with focusing on primary and secondary levels.	Quality of post-graduate training* program is improved with an emphasis on trainer/clinical educator who will guide health professionals in primary and secondary level health facilities.	Revised to make it more specific. An explanatory note is added to define the term of post-graduate training as with output1.
Objectively Verifiable Indicator for output 2		
1. Number of new continuous training programme 2.Number of renewed residential programmes 3. Number of staffs who received the training of trainers on the management of post-graduate training programs	1. A training package for TOT is newly designed. 2. Five and more training packages of continuous training courses are newly designed. 3. The grade average of trainee satisfaction questionnaire for newly designed continuous training courses is higher than four according to five grade evaluation.	Changed based on the revised output and the activities.
Means of Verification for output 2		
Training records/reports	1. Training package for TOT 2. Newly designed training package 3. Results of trainee satisfaction questionnaire for newly designed training courses	Changed in accordance with the revised indicators
Output 3		
Post-graduate training systems at tertiary, secondary and primary levels for health professionals is strengthened at regional and provincial levels.	Post-graduate training system for health professionals in the model aimags is strengthened.	Revised to clarify the target area for this output.
Objectively Verifiable Indicator for output 3		
1. No. of training sessions held at Regional Diagnostic and Treatment Centers is increased from XX to XX. 2. New evaluation for resident training	1. Five and more continuous training courses (credit or non-credit training courses) are planned and organized by the aimag health department in a year.	Changed based on the revised output and the activities.

programs is implemented. 3. Number of training centers established at Regional diagnostic and treatment center (target is 3)	2. TOT is organized by the aimag health department once a year after the third year of the project period. 3. The aimag health department and the aimag general hospital /RDTC provide guidance for health professionals on site at more than 80 % of the primary-level health facilities in a year after the fourth year of the project period.	
Means of Verification for output 3		
Training records/reports	1. Training record 2. TOT record 3. On-site visit record	Changed in accordance with the revised indicators
Activities for output 1		
1-1. Assess the current management of post-graduate training by Ministry of Health and Sports and Center for Health Development. 1-2. Identify the challenges of the management.	1-1. Assess the management for post-graduate training* by MOHS and CHD and identify the challenges.	Two activities (activity1-1 and 1-2) are combined into one.
1-3. Develop action plan for the challenges of the management. 1-4. Implement action plan for the challenges of the management. 1-5. Establish feed-back mechanism on the performance of the management. 1-6. Evaluate the performance of the management.	1-3. Develop an evaluation method for trainees in residency training. 1-4. Revise the criteria for designation of clinical training hospitals. 1-5. Develop an evaluation method for clinical training hospitals concerning conditions of training setting, trainee, and trainer. 1-6. Conduct periodical on-site visits for evaluating conditions of clinical training hospitals and status of training. 1-7. Provide guidance to CHD on reporting the evaluation results to the council in MOHS on an annual basis. 1-8. Provide guidance to CHD on training management for credit training courses.	For responding to the identified challenges in MOHS and CHD, activities 1-3, 1-4, 1-5, 1-6 in version1 are replaced by more specific activities 1-3, 1-4, 1-5, 1-6, 1-7, 1-8 and 1-9 in version2.

	1-9. Provide guidance to CHD on TOT management.	
Activities for output 2		
2-1.Assess the current training programme for residency and continuous training (curricula, training materials, training management, teaching methods, etc.) for medical doctor and nurses (Midwife are targeted if necessary).	2-1.Assess the current post-graduate training system* (implementation mechanism, regulation, etc.) and revise it if necessary.	In practice, it is not possible to assess all residency and continuous program for medical doctors and nurses. Instead, the training system for medical doctors, but not for nurses, is assessed, and revised if necessary.
2-2. Review the residency training programme on subjects, excluding internal medicine, pediatrics, surgery, ob-gy. 2-3. Revise the residency training programs, if necessary.	2-2. Assess and revise the residency training program on the prioritized subjects: emergency and related subject, traumatology, and infectious diseases.	In practice, it is not possible to assess all residency program (except internal medicine, pediatrics, surgery, ob-gy). Instead, three prioritized subjects are assessed and revised. The two activities 2-2 and 2-3 are combined into one.
2-4. Provide necessary equipment and materials for training of trainers.	2-3 Provide necessary equipment and materials for the post-graduate training.	Changed according to the actual needs
2-5. Conduct training of trainers on training programme on selected subjects including emergency medicine.	2-4. Develop a training package for TOT. 2-5. Conduct the model TOT workshop to train core-facilitators. 2-6. Develop training packages for the continuous training courses on the prioritized subjects: emergency medicine and its related topics, pediatrics, traumatology, and infectious diseases. 2-7. Conduct the training courses on prioritized subjects: emergency medicine and its related topics, pediatrics, traumatology and infectious diseases.	Activity 2-5 is not sufficient. Therefore, it was revised and replaced by four activities (2-4, 2-5, 2-6 and 2-7) based on the actual needs.
None	2-8. Assist the planning and implementation of the post-graduate	The new activity is added because this matter has been

	training at the newly constructed Mongolia-Japan Teaching Hospital.	mentioned in RD.
Activities for output 3		
3-1. Assess the current resident training systems at tertiary l level. 3-2 .Develop resident training plans. 3-3.Review the resident trainings. 3-4. Assess the current continuous training systems at selected Regional Diagnostic and Treatment Centers. 3-5.Provide necessary equipment and materials for training of trainers. 3-6.Conduct needs assessment of continuous training. 3-7 .Develop continuous training plans on the subjects of high priority. 3-8.Conduct the continuous trainings on the subjects of high priority. 3-9.Review the continuous trainings. 3-10.Develop the continuous training systems to expand to other provinces.	deleted	Activity 3-1,3-2,3-3,3-4,3-5, 3-6,3-7,3-8,3-9,3-10 in version 1 are deleted based on the revision of output 3.
3-11. Assess the current resident training systems at provincial level. 3-12.Develop resident training plans. 3-13.Conduct the resident trainings. 3-14.Review the resident trainings. 3-15.Develop the model resident training systems to expand other provinces.	3-1. Assess the current post-graduate training systems* in the model aimags. 3-2. Provide necessary equipment and materials for post-graduate training to training facilities in the model aimags. 3-3. Provide guidance to the training unit of aimag health department on planning continuous training courses. 3-4. Conduct TOT workshop. 3-5. Conduct the training courses on the prioritized subjects: emergency medicine and its related topics, pediatrics, traumatology and infectious diseases. 3-6. Utilize internet network between UB and aimags effectively for conducting	Based on the actual conditions and identified needs in the model sites, activities 3-11,3-12,3-13 3-14,3-15 in version 1 are revised and replaced by activities3-1,3-2,3-3,3-4, 3-5,3-6,3-7,3-8 in version 2.

	continuous training courses. 3-7. Provide guidance to Aimag health department on a guidance system from upper level to lower level health facilities. 3-8. Develop the model training systems to expand to other aimags.	
Important Assumption for project purpose		
None	Political commitment to post-graduate training for health professionals is maintained.	There was no assumption for project purpose in version 1.
Important Assumption for outputs		
None	Efforts of various donors and implementing partners are effectively coordinated. Trainers trained by the project are engaged in post-graduate training at primary and secondary level heath facilities. The importance of TOT is recognized by counterpart organizations.	There were no assumptions for outputs in version 1.
Others/ Notes		
None	Definition of TOT, Training system, Training program, Training package	Explanatory notes are added to clarify the terms that resemble each other.

3. PDM Version 3: January 26, 2018

Table of comparison between PDM Version 2 and PDM Version 3

PDM Version 3	PDM Version 4	Reasons
Target Group:		
Staff who are engaged in post-graduate training in MOHS, CHD, Aimag Health Department and related health facilities	Staff who are engaged in post-graduate training in MOH, CHD, Aimag health department , training management units at designated training hospitals, and	・Training management unit is responsible to manage resident trainings, therefore, it is better to include training unit.

	related health facilities	
Outputs		
2 Quality of post-graduate training* program is improved with an emphasis on trainer/clinical educator who will guide health professionals in primary and secondary level health facilities.	2 Quality of post-graduate training* program is improved.	・Identifying the level would identify the type of training.
Indicator for Outputs 2		
none	3. More than one post-graduate training programs on the prioritized subjects: emergency medicine and its related topics, pediatrics, traumatology and infectious diseases　are newly designed.	There was no section on general practice training, so it was added.
Means of Verification for Output 2		
	3. Newly designed training program	There was no section on general practice training, so it was added.
Indicator for Outputs 3		
1. Five and more continuous training courses (credit or non-credit training courses) are planned and organized by the aimag health department in a year. 2. TOT is organized by the aimag health department once a year after the third year of the project period. 3. The aimag health department and the aimag general hospital /RDTC provide guidance for health profesionals on site at more than 80 % of the primary-level health facilities in a year after the fourth year of the project period.	1. Five and more continuous training courses (credit or non-credit training courses) are planned and organized by the aimag health department and training management units at the designated　training hospitals in a year. 2. General practice training program is newly designed　by the aimag health department and training management units at the designated training hospitals. 3. Clinical skills of doctors who take post-graduate training programs developed by the project are higher than those of doctors who do not take them.	The department that plans ongoing training for residents is the training management unit, which is set up in the training hospital. Bulgan does not have the space to conduct it. It does not require annual implementation. There are no indicators for resident training. It would be more appropriate to evaluate the content of the training conducted rather than the guidance provided. Guidance is already provided, so it's less significant to use it

		as an indicator
Activities for output 1		
none	1-10. Improve training management skills of CHD regarding administration works.	CHD's preferred way of working needs to be made explicit
Activities for output 2		
none	2-9. Develop post-graduate training program on general practice.	No activities were documented for general practitioners training
Activities for output 3		
3-3. Provide guidance to the training unit of aimag health department on planning continuous training courses. 3-7. Provide guidance to Aimag health department on a guidance system from upper level to lower level health facilities.	3-3. Improve skills of Aimag health department and training management units at designated training hospitals on planning and managing training courses. 3-7. Guidance system from upper level to lower level health facilities provided by Aimag health department and training management units at designated training hospitals is strengthened. 3-9. Implement the general practice training program and establish training management system organized by Aimag health department and training management units at designated training hospitals.	Departments inside and outside the health department (within the hospital) that need to strengthen their training management capacity The Department of Health is not the only one that provides guidance. There is no mention of general practice training. General practice training will be initiated in a model province.

4. PDM Version 4

Table of comparison between PDM Version 3 and PDM Version 4

PDM Version 3	PDM Version 4	Reasons
Target Group:		
Staff who are engaged in post-graduate training in MOH, CHD, Aimag health	Staff who are engaged in post-graduate training in MOH, CHD, Aimag health	・Clinical trainers/educators in the post-graduate training of

department , training management units at designated training hospitals, and related health facilities	department , training management units and nursing departments at designated training hospitals, Mongolian nursing association and related health facilities	nurses are necessary. A training package of Training of Trainers (TOT) for them need to be newly designed and the model TOT workshop should be conducted. ・Capacity building for nursing departments at designated training hospitals and Mongolian nursing association is necessary to strengthen the post-graduate training for nurses.
Model Site		
Orkhon,Bulgan	Orkhon, Chingeltei district in Ulaanbaatar	・Excluding Bulgan aimag from the model sites of the Project was agreed among the people concerned due to the trouble of the trainees from the aimag in Japan. ・Post-graduate training program on general practice at Chingeltei district hospital should be strengthened in order to develop the model training systems to expand to other aimags.
Activities for output 3		
3-1. Assess the current post-graduate training systems in the model Aimag. 3-2. Provide necessary equipment and materials for post-graduate training to training facilities in the model Aimag. 3-9. Implement the general practice training program and establish training management system organized by Aimag	3-1. Assess the current post-graduate training systems in the model sites. 3-2. Provide necessary equipment and materials for post-graduate training to training facilities in the model sites. 3-9. Implement the general practice training program and establish training management system organized by	Chingeltei district in Ulaanbaatar was included in the model sites.

health department and training management units at designated training hospitals.	related health departments and training management units at designated training hospitals.	

5. PDM Version 5

Extended the period of the project. Changed closing date from May 10, 2020 to December 31, 2020.