

Vietnam

Ex-Post Evaluation of Japanese Technical Cooperation Project “Bach Mai Hospital Project for Functional Enhancement”

External Evaluator: Akiko Hirano, Global Link Management Inc.

0. Summary

This Project has been highly relevant with the Vietnam’s development plan and development needs, as well as Japan’s ODA policy both at the time of the Project planning and completion, therefore its relevance is high. This Project has realized the improvement of the Bach Mai Hospital (BMH) medical services by the enhancement of hospital management, clinical techniques and training capacity, the reduction of nosocomial infection, and the promotion of patient-centered treatment through the introduction of the Total Care activities. In addition, in terms of the medical services in the Northern Vietnam which were expected to be upgraded as the Project impact, it is observed that the medical services of provincial hospitals in the region were upgraded by synergetic effects of the Project and other related technical cooperation projects. Thus, its effectiveness and impact are largely high. On the other hand, some problems have been observed in terms of the Project design and its efficiency. No major problems have been found in the policy background and the structural, technical, and financial aspects of the executing agency, therefore, the sustainability of the Project effects is high. In light of the above, this Project is evaluated to be highly satisfactory.

1. Project Description



Project Location



Bach Mai Hospital

1.1 Background

While Vietnamese economy had been suffering from the impoverishment after 40 years of civil war, it strived to enhance social stability and economic growth by the introduction of the policy of Doi Moi (reconstruction) in 1986, which promotes the market economy. Several efforts had been also made in the health sector which brought the improvement of the health

situation compared to the neighboring countries, in such areas as life expectancy, infant mortality rate, immunization coverage, ratio of health expenditure against national budget and so on. On the other hand, many of the health care institutions faced deterioration of the facilities and buildings. Therefore strengthening of the health care network including the improvement of the base hospitals was one of the priorities of Vietnamese Government in the health sector.

BMH was established in 1911. Since then, BMH had been making significant contribution by providing medical services to the nation as a top referral hospital in the Northern Vietnam. At the same time, it also played an essential role as a major teaching hospital for the education of medical service providers for the Hanoi Medical University. However, BMH had been facing several issues such as the deteriorated facilities and equipment, lack of beds, lack of hospital staff's capacity, and lack of management skills, which hindered to serve its role effectively.

Under these circumstances, the Government of Japan implemented a Grant Aid project based on the request of the Government of Vietnam to improve the facilities of BMH in 1998. The Government of Vietnam also requested the technical cooperation to Japan in order to improve the quality of the BMH medical services.

1.2 Project Outline

Overall Goal		Medical services in the Northern Vietnam are upgraded
Project Objective		The quality of medical services is improved in Bach Mai Hospital (BMH) by focusing on Total Care ¹ activities
Outputs	1	General hospital management in BMH is improved by the end of 2004
	2	Hospital information system is improved in target departments
	3	Training system in target departments is improved
	4	Management of medical materials & equipment is improved by utilizing central system
	5	Financial and accounting management is improved
	6	Delivery system of medicine is improved in target departments
	7	Clinical activities are upgraded in target departments
	8	Nursing management and nursing care are improved
	9	Training function in collaboration with nursing school is improved
	10	Quality of examination is improved in clinical laboratories
	11	Provincial hospital supporting function of DOHA (Direction Office of Healthcare Activities) ² is improved

1 Total Care is a concept of "patient-centered treatment by the medical team" which has been notified by the MoH in 1996 in order to improve the medical service quality in Vietnam.

2 In Vietnam, the higher hospitals are obliged to conduct DOHA activities under the MoH direction, and provide training to the lower hospitals such as provincial hospitals.

Inputs	<p>Japanese Side:</p> <ol style="list-style-type: none"> 1. Experts 102 persons <ul style="list-style-type: none"> ● 10 for Long-Term, ● 92 for Short-Term 2. Trainees for Japan: 29 trainees 3. Trainees for Third-Country Training Programs: NA 4. Equipment: Approx. 310 million yen (2,835,791.24 USD) 5. Local Cost: Approx. 190 million yen (1,731,195 USD)*1 6. Others: 2 times of consultation <p>Vietnamese Side:</p> <ol style="list-style-type: none"> 1. 66 Counterparts *2 2. Land and Facilities: Project office, Utilities cost 3. Local Cost of counterpart salary and training costs
Total cost	Approx. 1,202 million yen
Period of Cooperation	January 2000 – January 2005
Implementing Agency	Ministry of Health (MoH), BMH
Cooperation Agency in Japan	International Medical Center of Japan (at the time of the Project implementation)
Related Projects	<p><u>Technical Cooperation</u></p> <p>“Bach Mai Project for Strengthening of Training Capacity for Provincial Hospitals (2006-2009)”</p> <p>“The Project for strengthening healthcare services provision in Hoa Binh Province (2004-2009)”</p> <p>“Project for Improvement of the Quality of Human Resources in Medical Services System (2010-2015)”</p> <p><u>Grant Aid</u></p> <p>“The Project for Improvement of Medical Equipment in Hanoi City (1994)”</p> <p>“The Project for Improvement of the Bach Mai Hospital (1998)”</p>

*1 and 2: Data of the Terminal Evaluation Report.

1.3 Outline of the Terminal Evaluation

1.3.1 Achievement of Overall Goal

It was reported that while further study would be required to confirm it after the terminal evaluation, it could be assumed that the technical transfer toward the medical care providers in the region was in progress through the BMH DOHA activities. Other positive impact was also reported on the occasion of SARS (Severe Acute Respiratory Syndrome) outbreak in 2003 when the BMH made a contribution with JICA and other foreign assistance to contain the SARS without further outbreak.

1.3.2 Achievement of Project Objective

According to the survey on the Total Care activities at pilot departments, there was some improvement in the attitude of medical staffs such as all the nurses reported to have increased conversation with patients. The waiting time of outpatients was reported to be decreased based on the patient satisfactory survey, and the pilot clinical departments utilized the techniques transferred for the diagnosis and treatment. It was reported in the end that the BMH medical services had been improved though the degree was varying from one department to another.

1.3.3 Recommendations

- (1) In order to utilize BMH training center to diffuse techniques to provincial level;
 - 1) To work out Plan of Operation for the Project activities in the remaining period with cooperation of C/Ps and Japanese experts
 - 2) To continue developing standardized curricula and manuals/textbooks for utilizing introduced techniques through the Project
- (2) To hold final seminar to introduce “project outcome” to other provinces and organizations

The results of implementation of the recommendations were not available due to the change of main counterpart department in the BMH after the Project completion.

2. Outline of the Evaluation Study

2.1 External Evaluator

Akiko Hirano, Global Link Management Inc.

2.2 Duration of Evaluation Study

Duration of the Study: December, 2010 – November, 2011

Duration of the Field Study: March 27, 2011 – April 13, 2011, June 26, 2011 – July 10, 2011

2.3 Constraints during the Evaluation Study

Due to the unavailability of the Project annual reports and completion report, the change of the BMH main counterpart department and the transfer or retirement of some staff after the Project, the degree of the Project achievement at the time of its completion cannot be confirmed in some areas. Therefore, the achievement degree at the time of the completion is estimated complemented by the terminal evaluation report and the findings from the ex-post evaluation.

3. Results of the Evaluation (Overall Rating: A³)

3.1 Relevance (Rating: ③⁴)

3.1.1 Relevance with the Development Plan of Vietnam

The national health strategy at the time of the Project planning was “The Strategic Direction on People Health Care and Protection 1996-2000”. The objective was to reduce morbidity, increase life expectancy and secure access to the quality and efficient medical services for every citizen, and one of the priority programs was the modernization of the medical care institutions. In addition, BMH Master Plan was approved by the MoH in 1995, which aimed to strengthen the function of the BMH based on the demands and needs of patients and the medical situation

3 A: Highly satisfactory, B: Satisfactory, C: Partially satisfactory, D: Unsatisfactory

4 ③: High, ② Fair, ① Low

in Vietnam.

The national health strategy at the time of the Project completion was “People's Health Care and Protection 2001 – 2010”. The overall objective was to secure access to primary health care services as well as access to and utilization of good quality health services for every citizen, and one of the priority programs was the development of medical technologies and information which emphasized to continue strengthening and improving the effectiveness of the high tech health centers including BMH.

3.1.2 Relevance with the Development Needs of Vietnam

According to the information from the MoH and some of the provincial hospitals at the time of the ex-post evaluation, BMH has been constantly providing the quality medical services to the people as a top referral hospital in the Northern Region. They also emphasized its vital role in improving the medical services of provincial and lower health care institutions in the region. Supporting the BMH could not only result in the improvement of the BMH alone, but also contribute to the upgrade of regional healthcare services in the North. Thus, the need of the development was regarded to be high.

3.1.3 Relevance with Japan's ODA Policy

Japan's first Country Assistance Strategy for Vietnam was formulated in 2000. The priority areas were “human resource and institutional building”, “infrastructure development including power, transportation and so on”, “agricultural and rural development”, “education, health and medical care”, and “environment”. The improvement of base hospitals was one of three pillars in the assistance strategy for the health and medical care sector. Ex Japan's Medium-Term Policy on ODA in 1999 was the assistance strategy prior to that. The “health care” was included in the “poverty reduction and social development” in the Policy and it was mentioned to continuously support core health care institutions in both tangible and intangible areas. Thus, the relevance with the Japan's assistance policy is high.

In 2008, Japan International Cooperation Agency (JICA) formulated the Cooperation Program on “Improvement of Health and Medical Services (2008 -2015)”. This program aims to achieve the improvement of the quality of healthcare services in Vietnam by specific goals of ① enhancement of capacity for policy making and implementation regarding personnel development, ② strengthening of provincial healthcare systems, and ③ improvement of facilities and equipment at central and provincial levels. This Project was part of the series of Japanese assistance for three core hospitals, namely Bach Mai Hospital in the North, Hue Central Hospital in the Central, and Cho Ray Hospital in the South, which was a basis for the

formulation of the Program.

3.1.4 Relevance of Project Design

The logic of the Project Design Matrix (PDM) and appropriateness of indicators are assessed. Overall, the Project composition seems to be logical in relation to the overall goal, project objective and outputs. However, the Project objective was very broad with a wide range of cooperation areas, and the focus on the specific objectives to be achieved came short within the limited periods and resources. Moreover, the quantitative targets of the Project objective and outputs indicators, and some of the specific techniques to be transferred were not set at the Project planning, therefore, the objective of each output was not clear.

This Project has been highly relevant with the Vietnam's development plan and development needs, as well as Japan's ODA policy, therefore its relevance is high. At the same time, the relevance of the Project design is regarded to be fair as while the overall Project composition is logical, the Project objectives are less clear and focused.

3.2 Effectiveness and Impact (Rating: ③)

3.2.1 Effectiveness

3.2.1.1 Project Outputs⁵

Project outputs are categorized into three groups, namely hospital management, clinical technique, and training capacity. In terms of hospital management, most of the assisted areas were improved except a few such as medicine delivery system. Clinical departments prioritized by the Project upgraded its techniques in diagnosis, treatment and training capacity. Training capacity toward the lower hospitals was improved while the standardization of curricula and materials was achieved only to some extent. Regarding the training capacity, the Project enhanced the DOHA activity which is a Vietnamese policy to oblige higher hospitals to train lower hospitals and it particularly contributed to the Project impact. In addition, the cooperation for the nursing care mainly contributed to the promotion of Total Care activities. Therefore, by and large, the outputs are regarded to be achieved. Detailed evaluation results are explained as follows.

(1) Output 1 : General hospital management in BMH is improved by the end of 2004

It is viewed that Output 1 is a content which should be assessed comprehensively by the

5 The indicators of the Project outputs were reset for the ex-post evaluation based on the indicators in the final PDM. However, as the targets of quantitative indicators were not set, it is judged that the expected results are achieved if the indicators show the trend of increase or improvement by the Project completion.

Output 2-6. Therefore, it is decided that the achievement of Output 1 alone is not to be assessed. Some of the key activities such as infection control under Output 1 will be assessed under other outputs and Project objective.

(2) Output 2: Hospital information system is improved in target departments

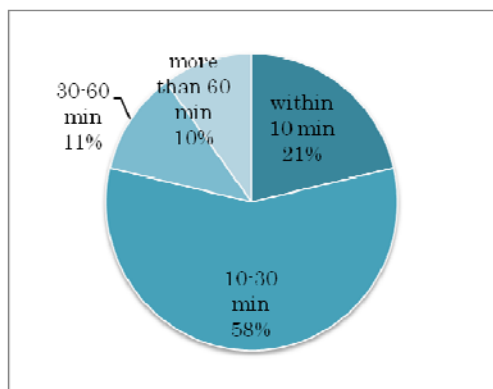
Set indicators are followings.

1	Number of department applied computer system
2	Establishment of patient database and outpatient medical record storage
3	Number of medical records stored by individual departments
4	Outpatient waiting time

By the time of the Project completion, several departments namely finance and accounting, human resource, pharmacy, emergency, medical equipment, biochemistry laboratory, etc had applied computer system in addition to the Project pilot departments. By the time of the ex-post evaluation, all of the departments have applied the computer system in the financial data management. The patient database was established for inpatient and outpatient separately by 2005. Outpatient medical record storage was established by 2005 and managed by the outpatient department (OPD). Inpatient medical record storage was managed by the general planning department. Thus, there were no medical records stored by individual departments.

In terms of outpatient waiting time, BMH officer explains that the procedure of diagnosis, treatment and payment became efficient through the introduction of computer system. The terminal evaluation report in 2004 mentioned that the waiting time was shortened from average 77 minutes in 2002 to average 49 minutes in 2004. The waiting time for the first check up of outpatients in gastroenterology and nephro-urology departments is shown in Figure 1, according to the beneficiary survey⁶ as a part of the ex-post evaluation. Around 80% answered to have received check up within 30 min. Thus, Output 2 is regarded to be achieved.

⁶ Beneficiary survey was conducted with the sample size of 40 patients each in the inpatient department of Gastroenterology and Surgery, and outpatient department of Gastroenterology and Nephro-urology in BMH. Total valid answers are 160.



Source: Beneficiary survey (N=80)

Figure 1 Outpatient waiting time for check up

OPD medical record storage

(3) Output 3: Training system in target departments is improved

Set indicators are followings.

1	Standardization of training curricula and materials for target departments
2	Development and implementation of training plan

Output 3 was newly set up after the mid-term evaluation as an area to be further strengthened. Pediatrics, emergency, gastroenterology and ICU (Intensive Care Unit) were selected as target departments. Training materials were reported to be standardized in pediatrics and emergency during the Project period, but not in the others. Terminal evaluation report mentioned that training curricula were not standardized by the Project assistance. Meanwhile, it is reported that the planning and implementation of training was conducted effectively in collaboration with DOHA department, currently training DOHA center, and individual clinical departments.

While it seems to have high achievement in the implementation of the training system with the contribution of Output 7 and 11, the major objective of Output 3 which is to standardize the training curricula and materials is achieved to only some extent.

(4) Output 4: Management of medical materials & equipment is improved by utilizing central system

Set indicators are followings.

1	Rate of operation
2	Number of medical equipment under regular maintenance
3	Number of medical equipment under central management system
4	Utilization status of major medical equipment

Results of indicator 1-3 are shown in Table 1. As all the data show the trend of

improvement by the Project completion, the Output 2 is regarded to be achieved. At the time of the ex-post evaluation, almost 100% of medical equipment, approx. 4,000 units, is under regular maintenance, and around 75% of them are under central management system.

Table 1 Operation status of medical equipment

Indicators	1999	2000	2001	2002	2003	2004	2005
Operation rate (%)	92	92	94	94.5	94.5	94	94
No. of regular maintained equipment	432	586	1,098	1,132	1,305	1,305	1,305
No of centrally managed equipment	NA	NA	142	176	206	246	246

Source: Terminal evaluation report (2004) and BMH

In terms of the utilization of major medical equipment provided by the Project, it is reported that the majority were utilized effectively during the Project period, while some of them already expired its service life time at the time of the ex-post evaluation as the average service life of medical equipment is 5 – 10 years in general. According to the interviews with the pediatrics, emergency and gastroenterology, most of the equipment is functioning well at the time of the ex-post evaluation as precious resources. It is also observed during the ex-post evaluation that major equipment at abovementioned departments is well managed and utilized.

(5) Output 5: Financial and accounting management is improved

Set indicators are followings.

1	Average annual income per bed
2	Amount of uncollected hospital fee

The results of above indicators are shown in Table 2. Both of them had been improved during the Project. Particularly the amount of uncollected hospital fee became zero in 2004 and 2005. However, it is reported that this was achieved due to the regulation change⁷ on the payment system. While the application of computer system and establishment of patient database shown in Output 2 are seen to have contributed to the improvement of overall financial and accounting system, the reduction of uncollected hospital fees which was an intended result of Output 5 was largely influenced by the external factor above. In addition, terminal evaluation report and interviews with the BMH show that the activities by the Project in this area were limited to staff training in the first year. Thus, the contribution of the Project in the Output 5 is regarded not to be high.

⁷ The current system is that inpatients are requested to put deposit more than actual fee, and outpatients are requested to pay all fees before services are provided.

Table 2 Average annual income per bed and uncollected hospital fee

Indicators	1999	2000	2001	2002	2003	2004	2005
Average income per bed (VND ⁸)	34,300	35,400	39,600	42,832	54,685	71,151	94,303
Uncollected hospital fee (1000 VND)	1,862,672	2,882,744	2,200,000	1,800,000	2,962,005	0	0

Source: Terminal evaluation report (2004) and BMH

(6) Output 6: Delivery system of medicine is improved in target departments

Set indicators are followings.

1	Amount of expired drugs
2	Number of development applied new system for drug delivery
3	Drug delivery time from pharmacist to patient

The data in 2004 and 2005 of indicator 1 and 2 were not available. It is reported that the amount of expired drugs are around 4-5 per year, and departments applied new drug delivery system are 100% for transfusion related drugs and 25% for solid drugs at the time of ex-post evaluation. No data are available for the time of drug delivery from pharmacist to patient.

Table 3 Number of expired drugs and departments applied new system

Indicators	1999	2000	2001	2002	2003	2004	2005
No. of expired drugs	NA	NA	NA	0	0	NA	NA
No. of departments with new system	NA	NA	NA	3	4	NA	NA

Source: Terminal evaluation report (2004) and BMH

By reviewing the indicators above, the achievement of this output is low or cannot be confirmed. According to the terminal evaluation report and interview in the BMH, it is regarded that the inputs of the Project in this area were very limited. Therefore, the achievement of the Output 6 and the contribution by the Project are low.

(7) Output 7: Clinical activities are upgraded in target departments⁹

Set indicators are followings.

8 VND : Vietnam currency. 1VND=0.0039 yen at the rate of April 2011

9 Target departments are categorized according to the priority level. Grade 1; gastroenterology, emergency, ICU, pediatrics, Grade 2: surgery, nephrology, pulmonology, Grade 3: infectious & tropical medicine, cardiology, neurology, endocrinology and diabetes. Total Care pilot: gastroenterology, endocrinology and diabetes. High priority is given to Grade 1 and total care pilot.

1	Mortality rate
2	Number of diagnosis and treatment procedures
3	Number of referral cases from other hospitals
4	Number of research papers

The departments with high priority by the Project, namely gastroenterology, emergency, ICU and pediatrics, are regarded to achieve the expected results. However, it is found that the set quantitative indicators alone are not enough to evaluate it in many cases due to the irrelevance to assess the quality of clinical technique¹⁰ or the lack of data. Therefore, the evaluation is complemented by the terminal evaluation report and interview with the BMH staff to identify the specific contents and techniques transferred by the Project and their utilization status.

Gastroenterology department reports that major inputs by the Project were on the utilization of the endoscopy including colonoscopy or endoscopic retrograde cholangiography (ERCP). In the emergency department, the major learning was the comprehensive trauma treatment. Various clinical handbooks developed by the Project have been updated regularly since then and utilized for the treatment. As a result, it is reported that the mortality rate had been reduced by the improvement of treatment techniques and equipment. In the pediatrics department, the Project was reported to have assisted in all aspects of diagnosis, treatment and training capacity. Clinical handbooks and training materials developed by the Project have been updated regularly and utilized effectively since then. It is reported that the mortality rate had been reduced mainly due to the improvement in the emergency and intensive care. ICU reports that though the total mortality rate was not changed much, the rate among the severe cases of multiple organ failure had been improved.

Table 4 Mortality rate (emergency, pediatrics, ICU) (unit: %)

Category	1999	2000	2001	2002	2003	2004	2005
Emergency	NA	NA	2.21	2.00	1.96	1.60	1.30
Pediatrics	0.75	1.07	0.93	0.60	0.57	0.33	0.40
ICU	9.10	8.67	12.80	7.60	7.90	9.09	8.95

Source: Mid-term evaluation report (2002) and BMH

¹⁰ It is said that many people in Vietnam prefer to die at home, so, serious patients tend to go home. Therefore, the mortality rate is regarded to be inappropriate to assess the clinical techniques. However, it is not necessarily applicable for all cases such as the emergency.



Handbooks & training materials in Pediatrics



Ultrasonography at Emergency

On the other hand, the contribution of the Project is limited or not confirmed in many of the clinical departments with lower priority, while lack of the information is observed in some departments. According to the terminal evaluation report, some of the planned activities were not implemented during the Project, which is regarded to be one of the factors for limited contribution.

(8) Output 8: Nursing management and nursing care are improved

Set indicators are followings.

1	Examination score
2	Development and utilization of nursing care manual.

There are no useful data available in the examination score. In terms of the nursing care manual, while it is reported that it has been developed and utilized properly with the Project contribution to some extent, BMH explains that the Project has mainly contributed to the promotion of the Total Care activities. The results in the Total Care activities are described in the “Achievement of Project Objectives” below.

(9) Output 9: Training function in collaboration with nursing school is improved

The data of the set indicator, which is the number of re-training courses for nurses, was not available. According to the BMH, the collaboration with nursing school was limited in the Project. Thus, the achievement is low.

(10) Output 10: Quality of examination is improved in clinical laboratories

Set indicators are followings.

1	Number of examination requested from outside
2	Total number of laboratory examination
3	Rate of re-examination
4	Result of quality control

Main support was given to the biochemistry laboratory and the data of above indicators in the biochemistry laboratory are shown in Table 5. Output 10 achieved the expected results as all indicators were improved during the Project implementation. According to the interview with the biochemistry laboratory, the Project provided the technical support mainly on the operation of the equipment and quality control of the examination. Particularly, the learning on the quality control was very useful acquiring its overall purpose and necessity, concrete approach, as well as training and teaching skills.

Table 5 Examination results in biochemistry laboratory

Indicators	1999	2000	2001	2002	2003	2004	2005
No. of examination requests from outside	840	1,440	3,240	3,700	5,200	7,236	8,948
Total no of laboratory examination	419,695	501,242	871,534	1,445,635	1,680,501	1,806,224	2,237,059
Re-examination rate (%)	5.0	4.0	1.1	0.6	0.6	0.5	0.5
Quality Control (%)	NA	NA	99.75	99.85	100	100	100

Source: Terminal evaluation report (2004) and BMH



Biochemistry laboratory



Bio urine analyzer

(11) Output 11: Provincial hospital supporting function of DOHA is improved

Set indicators are followings.

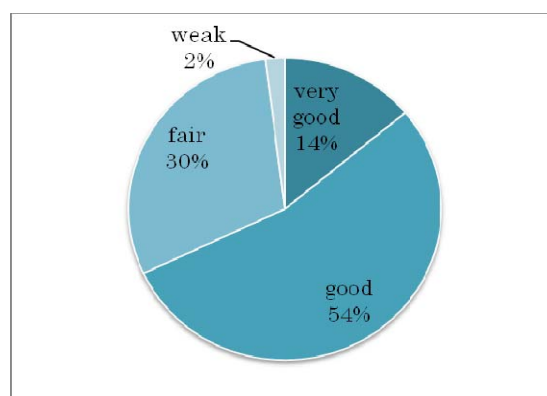
1	Number of training
2	Number of trainees
3	Satisfaction rate of training

The data in the indicator 1 and 2 are shown in Table 6. The training was conducted constantly by the Project completion. In terms of the satisfactory rate of training, the BMH survey¹¹ conducted for the trainees from 1999 to 2004 showed the high satisfactory rate with 48% of “very satisfied”, 49% of “satisfied”, and 3 % of “others”. According to the BMH survey¹² on the utilization of training contents in practice, as shown in Figure2, 68% answered they can utilize them at their work. One of the Project officers mentions that it was initially pointed out that the trained contents in the BMH could not be utilized due to the lack of facilities or equipment in the lower hospitals. However, it has been improved over the course to match the training content to the working environment of the trainees.

Table 6 Number of training and trainees

Indicators	1999	2000	2001	2002	2003	2004	2005
No of training: BMH cost	79	59	65	50	53	39	59
No. of training: Project cost	0	11	15	11	11	10	0
Total no. of training	79	70	80	61	64	49	59
No. of trainees	2,654	2,907	4,195	4,431	2,953	2,465	3,295

Source: Terminal evaluation report (2004) and BMH



Source: BMH

Figure 2 Utilization of training contents in practice

11 BMH conducted the survey with 22,136 trainees among those who were trained between 1999-2004.

12 BMH conducted the survey with 760 trainees among those who were trained between 1999-2004



Training center



Training at the training center

In addition, the training center was constructed by the Project fund in January 2005. The training center has been utilized properly since then. There are nearly 10 training rooms and around 60-100 trainings are conducted annually in the BMH. JICA related project which is “Bach Mai Project for Strengthening of Training Capacity for Provincial Hospitals (2006-2009)”¹³ is regarded to have made large contribution on this.

3.2.1.2 Achievement of Project Objectives¹⁴

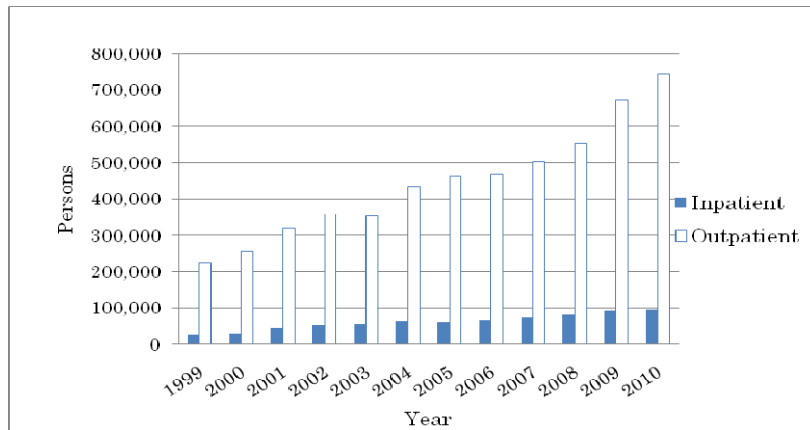
It is concluded that the Project has achieved its objectives. The details are shown below.

(1) Indicator 1: Number of patients

As shown in Figure 3, the number of patients has been increasing rapidly for both inpatients and outpatients during the Project and after that. As seen above, the hospital management and clinical techniques have been improved by the Project. Thus, the Project is regarded to have contributed to the increase of patients, though it is difficult to estimate the degree of its contribution.

¹³ “Bach Mai Project for Strengthening of Training Capacity for Provincial Hospitals (2006-2009)” was conducted in order to improve the BMH training capacity in four prioritized areas for the provincial hospitals staff.

¹⁴ As most of the indicators set for the Project Objective in the final PDM were duplicated with those for the Outputs, the indicators are reset at the time of the ex-post evaluation. It is judged, due to the lack of targets, that the expected results are achieved if the indicators show the trend of increase or improvement by the Project completion.

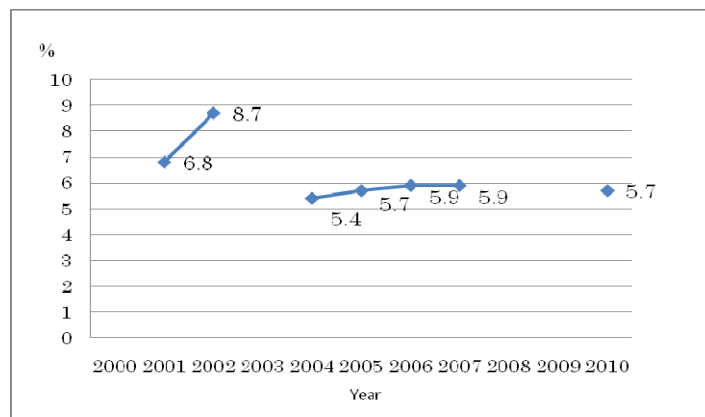


Source: BMH

Figure 3 Number of inpatients and outpatients

(2) Indicator 2: Nosocomial infection rate

Overall infection rate had been decreased by the Project completion as shown in Figure 4. However, it has not gone down since then. BMH staff in charge explains that though the BMH has been making efforts to further improve the situation, it is not easy to reduce it from this level. In terms of the individual rates for operation and ICU, both have been decreased while the data availability is limited to some of the years. The data have been shifted from 9.6% in 1999 to 4.3% in 2002 at the operation, and from 30% in 2003 to 21% in 2007 at ICU. Thus, it is regarded that the expected results are achieved.



Source: BMH

Figure 4 Nosocomial infection rate

(3) Indicator 3: Total Care activities

The Total Care was a new concept in Vietnam and the notion that the responsibility of patient care was confined to the nurses was prevailing in the BMH. Therefore, the Project initially conducted series of symposiums and dialogues to repeatedly share that the Total Care is the concept which should be dealt with by all medical care providers

cross-sectorally, as well as to discuss the purpose, the mission and the concrete activities of the Total Care. As a result, it is reported that the concept has been gradually understood within the hospital. By the Project completion, the Total Care was introduced in the departments of pulmonology, pediatrics, obstetrics, surgery, allergology, otorhinolaryngology in addition to the pilot two departments. It has been introduced in all the departments by the time of the ex-post evaluation.

It is difficult to assess the quantitative effects of the Total Care activities. However, according to the interviews with a few clinical departments, while earlier doctors and nurses tended to conduct tasks separately, they have been gradually working in a team to provide comprehensive care to the patients. In addition, it is reported that the quality and the efficiency of the medical services have been improved through the documentation of the treatment procedures or optimization of the working process with other departments such as pharmacy. It is mentioned by the some staff that the patients give them the positive feedback for their attitude.

According to the beneficiary survey at the ex-post evaluation, 99% of the outpatients answer that the doctors' attitude is good and 90% for the nurses. Patient satisfactory survey was conducted at the time of the terminal evaluation¹⁵. While the results of two surveys cannot be simply compared as their scope and target are different, the survey at the terminal evaluation showed that 85% answered good for the doctor's attitude and 80% for the nurses. In terms of the inpatients, the survey at the ex-post evaluation shows that 86% of the inpatients answer that the hospital staff's attitude is good and 92% answer that they are given enough information on the treatment and medication. The survey at the terminal evaluation showed that 74% answered good for the hospital staff's attitude and 76% answered given enough information on the diseases.

In this way, it is regarded that the Total Care activities have been enhanced and the expected outcome through its introduction has been realized in the BMH. On the other hand, the Total Care activities require much more time of the hospital staff than the conventional approach. It is reported by the BMH that there are some departments which find difficulties to provide adequate level of patient treatment as the staff is overloaded due to the increase of the patients. In addition, it is found that the hospital committee on the

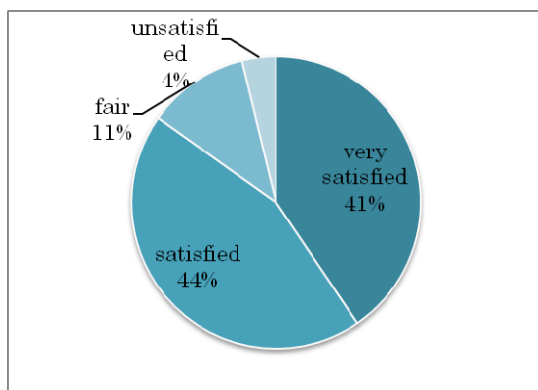
¹⁵ The patient satisfactory survey at the terminal evaluation was conducted with total 250 samples of in-patients (50 samples in each dept) at the 5 clinical departments such as gastroenterology and surgery, and 270 samples of out-patients at such clinical departments as gastroenterology, cardiology and nephro-urology.

Total Care, although established, has been limited in its activities and the guidelines and manuals have not been developed or updated promptly.

(4) Indicator 4: Patient satisfactory score

According to the terminal evaluation report, the patient satisfactory score was reduced from 74 in 2001 to 64 in 2004 during the Project implementation. It pointed out that the inadequate treatment for increased patients would be a possible reason for that. There is no data available at the time of the Project completion.

On the other hand, according to the beneficiary survey at the time of the ex-post evaluation, 85% of inpatients and 75% of outpatients were satisfied with the overall hospital services as shown in Figure 5 and 6. While it is difficult to compare the results with the score of the terminal evaluation as its definition is not clear, the score in the ex-post evaluation shows relatively high. At the same time, there are some comments such as the long waiting time for outpatients or the inadequate waiting space as reasons for dissatisfaction. Thus, while the achievement degree of this indicator at the time of the Project completion cannot be confirmed, it seems to have been improving after the Project.



Source: Beneficiary survey (N=80 each)

Figure 5 Inpatient satisfactory score

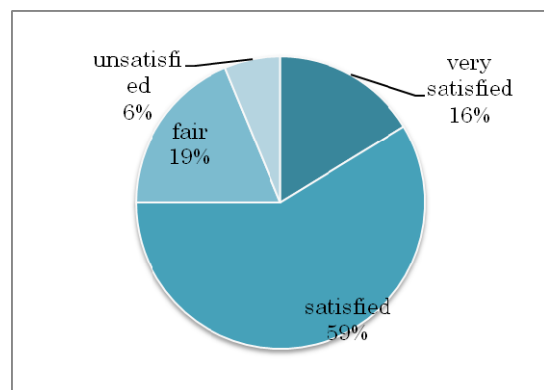


Figure 6 Outpatient satisfactory score

3.2.2 Impact

3.2.2.1 Achievement of Overall Goal¹⁶

According to the questionnaire survey with four provincial hospitals¹⁷ conducted at the time

¹⁶ Indicators for Overall Goal were newly set at the ex-post evaluation as they weren't set in the final PDM.

¹⁷ The questionnaire survey was conducted with four provincial hospitals in (1) Hoa Binh (the counterpart agency of "The Project for strengthening healthcare services provision in Hoa Binh Province"), (2) Ninh Binh (one of four prioritized provincial hospitals supported by "Bach Mai Project for Strengthening of Training Capacity for Provincial Hospitals"), (3) Lai Chau, and (4) Tuyen Quang.

of the ex-post evaluation, it is confirmed that the BMH has been contributing to the improvement of medical service quality of each provincial hospital. One of the contributing factors for the improvement is regarded to be the fact that the BMH has conducted effective technical transfer to the lower levels utilizing the upgraded clinical technique and hospital management capacity through the Project. The details are explained as follows. In addition, the trend of the Project objective indicators illustrated above shows that the medical services of the BMH have been improving after the Project completion, and the BMH is found to be given the continuous trust from the provincial hospitals as a top referral hospital in the Northern Region. Therefore, it can be said that the overall goal to upgrade the medical services in the Northern Vietnam was by and large achieved.

(1) Indicator 1: Number of clinical techniques acquired by provincial hospitals from the BMH

While the useful quantitative data was not available on the number of clinical techniques, the provincial hospitals answer that they acquired the new techniques in such areas as emergency, pediatrics, total care, infection control, and medical equipment management through DOHA activities of training and dispatch of medical staff from the BMH.

(2) Indicator 2: Number of referral cases within the Northern Region

Provincial hospitals in Hoa Binh, Ninh Binh and Lai Chau inform that the number of referral cases to the higher level has been decreasing lately as they improved their clinical techniques mainly due to the technical transfer by the BMH.

Table 7 Referral cases from provincial hospitals to BMH

	2005	2006	2007	2008	2009	2010
Hoa Binh	NA	NA	1,346	1,403	1,380	883
Ninh Binh*1	4,053	6,632	6,176	4,173	9,445	3,932
Lai Chau	22	28	81	66	18	27
Tuyen Quang	NA	NA	NA	NA	NA	NA

Source: Each provincial hospital

*1: The figures include cases to other central hospitals than BMH.

On the other hand, it is reported that the referral cases from the district hospitals to the provincial hospitals have been increasing in Hoa Binh and Ninh Binh. While it could be thought that the improvement of medical services at the provincial hospitals is a contributing factor, it appears that the introduction and revision of the health insurance system would be more influential¹⁸ in this regard. Thus, it is not possible to assess the changes in the quality of

18 For the health insurance, usually people register with the district hospital. As the number of people applying for the insurance increases, the number of patients who first go to the district

the provincial hospital with these data.

(3) Indicator 3: Training conducted by provincial hospitals to the lower levels

All provincial hospitals have been conducting training for the lower levels whose number is overall on the rise. Some of provincial hospitals inform that the BMH has contributed to the enhancement of provincial hospital training capacity through BMH training in such areas as improvement of the quality of training curricula and the knowledge and skills of the trainers. It can be said that this effect was partly attributable to the technical support by the BMH via this Project and the following technical cooperation project “Bach Mai Project for Strengthening of Training Capacity for Provincial Hospitals (2006-2009)”, though the self-efforts of each provincial hospital to promote DOHA activities are considerable contributing factors.

Table 8 Number of training by provincial hospitals to the lower levels

Province	2005	2006	2007	2008	2009	2010
Hoa Binh	NA	NA	NA	94	156	34
Ninh Binh	12	12	16	16	24	50
Lai Chau	NA	7	12	20	41	59
Tuyen Quang	NA	NA	NA	NA	NA	27

Source: Each provincial hospital

For the capacity of the Hoa Binh and Ninh Binh provincial hospitals, there seemed to have been significant contribution by the JICA technical cooperation projects, namely “The Project for strengthening healthcare services provision in Hoa Binh Province (2004-2009)”¹⁹ and abovementioned following project for the BMH respectively.

3.2.2.2 Other Impacts

(1) Impacts on the natural environment

No impacts on the natural environment were recognized.

(2) Land Acquisition and Resettlement

No land acquisition and resettlement were conducted by the Project.

hospital and are referred to the provincial hospitals increases. On the other hand, initially the insurance could be utilized only at the registered hospital. However, since 2008, people can utilize the insurance at any hospitals with additional charges, thus the number of people who directly go to the higher level increases for the better services. In this way, the health insurance system is influential to the referral situation.

¹⁹ “The Project for strengthening healthcare services provision in Hoa Binh Province (2004-2009)” was a project to strengthen the provincial medical system in Hoa Binh including the provincial health department and district and lower level hospitals through the enhancement of DOHA and referral system.

(3) Other indirect impacts

1) SARS containment

According to the terminal evaluation report, BMH made a contribution in collaboration with the JICA and other foreign assistance by accepting SARS patients to containing SARS without further outbreak of the diseases.

2) Rapid increase of patients

It is reported that as the number of patients increased due to the improved hospital services, it turned out to bring negative influence on the service quality for the patient treatment. According to the interviews and beneficiary survey at the time of the ex-post evaluation, there are some complaints such as more than two inpatients sharing one bed in congested departments, or long waiting time. BMH recognized these issues and has been implementing various countermeasures to tackle them. Details are explained in the “Sustainability” later.



Corridor at the outpatient department

This project has largely achieved its objective which is “the quality of medical services is improved in BMH by focusing on Total Care activities”, and brought the expected effects in its overall goal which is “Medical services in the Northern Vietnam are upgraded”. Therefore, its effectiveness and impact are high. However, it is difficult to assess it quantitatively due to the lack of the quantitative target.

3.3 Efficiency (Rating: ②)

3.3.1 Inputs

Table 9 Plan and Actual of the Inputs

Inputs	Plan	Actual Performance
(1) Experts	<ul style="list-style-type: none"> ● 4 areas for Long-Term ● 17 areas for Short-Term 	<ul style="list-style-type: none"> ● 10 persons for Long-Term ● 92 persons for Short-Term
(2) Trainees received	Fields of training: NA	Fields of training: 29 persons in such areas as hospital management, nursing care, infection control etc
(3) Equipment	Approx. 137 million yen (equivalent to 1,127,800 USD) for medical equipment, examination equipment, and office items.	Approx. 310 million yen (equivalent to 2,835,791.24 USD) for medical equipment, examination equipment, and office items.
Total Project Cost	NA	Approx. 1,202 million yen
Total Local Cost	NA	Approx. 36.9 million yen (equivalent to 5,176 million VND) for training cost

3.3.1.1 Elements of Inputs

It is not possible to compare the plan and actual as the planned data for most of the inputs are not available. The Japanese experts for long and short term were dispatched according to the planned areas. In terms of the trainees received, most of the trainees received in Japan have been remaining in the BMH and in the position to be able to utilize the knowledge and skills learned from the training. Regarding the equipment, most of the provided medical equipment has been reported to be utilized properly. However, the actual cost for the equipment was more than double the planned. The detail is discussed in 3.3.1.2 project cost. While the planned cost shared by the Vietnamese side is not available, the training cost was provided from the first year and the amount had been increased over the course of the Project.

On the other hand, as shown in the “Effectiveness”, there were some outputs whose achievement rate was low since some of the activities were not implemented as planned and/or the contribution of the Project was limited. Some of the experts and counterparts involved in the Project mention that as the Project scope was diverging with the various areas and some of the cooperation areas were highly specialized, it would have been difficult for the Project management to grasp and manage all the plans and progresses thoroughly. Thus, it is regarded that the efficiency of the Project is low in some areas due to the dispersed cooperation areas vis-à-vis limited resources.

3.3.1.2 Project Cost

In terms of the Project cost, while it is not possible to compare the plan and actual due to the lack of planned cost, it exceeded the average of the general technical cooperation projects. For

the equipment cost, the actual cost was more than double the planned. The additional equipment seemed to be provided to various departments and almost half of them were office equipment such as personal computers. No clear reasons are confirmed to verify this increase.

3.3.1.3 Period of Cooperation

The Project period was five years from January 2000 to January 2005, which was as planned and relevant.

Although the period of cooperation was within the plan, elements of inputs were partially inappropriate and project cost exceeded the plan, therefore efficiency of the Project is fair.

3.4 Sustainability (Rating: ③)

3.4.1 Related Policy towards the Project

“Master Plan on development of Vietnam's healthcare system up to 2010 with a vision to 2020” follows the same direction as the previous one and promotes to improve the health facilities and health care services quality at all levels from central to commune. One of the objectives is to develop the networks of medical examination and treatment, and to concentrate investment in perfecting specialized health centers. In addition, “the comprehensive master plan of BMH to 2020” has been also approved by the MoH. The master plan aims to develop BMH to become one of the first-class specialized healthcare centers in Vietnam and a practical site for Northern medical education at all levels, and to have international standard. Thus, the national health policy at the time of the ex-post evaluation appears to continuously promote the BMH to play a vital role for the enhancement of the medical care services in the Northern Region.

3.4.2 Institutional and Operational Aspects of the Implementing Agency

The BMH carries the national highest technical rating²⁰ as a “special hospital”. The BMH is composed of one director, five vice-directors, 24 clinical departments, seven para-clinical departments, 10 administrative departments, several institutions and centers, and a few committees by major issues. The scale of the BMH has been expanding since the Project planning time and the number of beds is 1900 and the staff is 2200²¹ at the time of the ex-post evaluation.

Recently, the BMH started to acquire ISO (International Organization for Standardization)

20 The hospital is classified into “special hospital”, grade 1, 2, and 3 in descending order of technical capacity and the qualification is reviewed every five years.

21 200 out of total staff are on loan from the Hanoi Medical University.

9001. 15 units selected for the pilot departments have acquired ISO 9001 in 2010 and it is planned to scale up to the entire hospital gradually. Also, there are hospital committees for major issues such as infection control or total care formed with director/vice-directors and representatives from relevant departments to tackle the issues cross-sectionally. In terms of DOHA, DOHA department and training center were merged into the training DOHA center in 2009, which has been conducting training in collaboration with relevant clinical departments since then.

3.4.3 Technical Aspects of the Implementing Agency

The BMH has been conducting training for the lower levels on such areas as hospital management and clinical techniques. The trainees seemed to be satisfied with the training contents as shown in the “Effectiveness” and “Impact” above. For their own staff capacity, the BMH has been aiming to continuously strengthen it by providing opportunities for overseas training as well as the hospital internal training. In addition, it has been making efforts to advance the technical capacity in collaboration with the National Center for Global Health and Medicine in Japan, and various other international hospitals and universities in the US, Taiwan, Korea, Singapore, Belgium and so on.

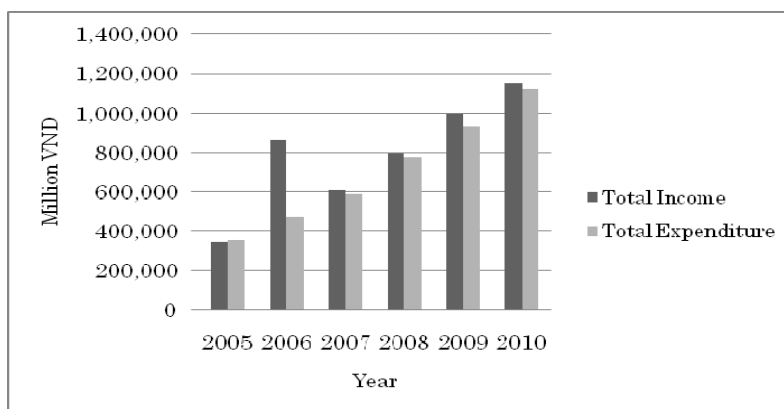
In terms of the management areas such as finance and medical record storage, all departments are reported to have applied IT system for their work efficiency. One of the issues to be tackled from now on is to unify the IT soft ware. The operation and maintenance of medical equipment is reported to be implemented appropriately without major problems by the hospital own staff in collaboration with the specialized agencies outside. At the same time, it is mentioned that the BMH plans to obtain specialized technicians for equipment management as there are some areas which require higher techniques. Thus, the sustainability of technical aspects appears to be high.

3.4.4 Financial Aspects of the Implementing Agency

The financial status of the BMH is shown in Figure 7. Total income has been on the rise and the balance of income and expenditure has been positive lately. Due to the Decree 43/2006/ND-CP²² which promotes the public hospital autonomous management, the MoH subsidies toward the BMH has been decreasing. However, the increase of medical fees and insurance income brings a rise in the total revenue. It is also reported that the necessary budget

22 Decree 43/2006/ND-CP “providing the mechanism of autonomy and self-responsibility for task performance, organizational apparatus, payroll and finance, applicable to public non-business units” was issued on April 25 2006 and includes the promotion of the self-responsibility in resource management for public hospitals.

is secured for the medical equipment maintenance. In this manner, the sustainability of financial aspects is regarded to be high.



Source: BMH

Figure 7 Trend of BMH income and expenditure

3.4.5 Continuity of Effectiveness / Impact

For the Project objective which is “the quality of medical services is improved in BMH by focusing on Total Care activities”, it is observed that the BMH has been providing quality medical services after the Project completion. Considering the hospital management structure, consecutive upgrade of the clinical techniques, and increase of the income and the number of patients, the BMH is likely to continuously provide quality services in the future. It is also probable to conduct training continuously and actively, as a leading training institution, for the lower medical facilities in the Northern Region²³. On the other hand, one of the challenges is the congestion in the hospital and overload for the hospital staff due to the increase of patients, leading to the inadequate conduct of the patient-centered treatment, which is the purpose of the total care, in some departments. To tackle this, the BMH has been making various countermeasures together with the MoH, including ① application to modern medicine in diagnosis and treatment to improve efficiency, ② strengthening medical care for outpatient to reduce the number of inpatients treatment, ③ strengthening health care services locally through DOHA activities, and ④ development and expansion of BMH treatment facilities.

No major problems have been observed in the policy background, and the structural, technical and financial aspects of the executing agency, therefore, sustainability of the project effects is high.

²³ BMH is conducting a satellite program since 2009 to provide technical support intensively for the eight selected provinces in the North with the Government financial assistance.

4. Conclusion, Lessons Learned and Recommendations

4.1 Conclusion

This Project has been highly relevant with the Vietnam's development plan and development needs, as well as Japan's ODA policy both at the time of the Project planning and completion, therefore its relevance is high. This Project has realized the improvement of the BMH medical services by the enhancement of hospital management, clinical techniques and training capacity, the reduction of nosocomial infection, and the promotion of patient-centered treatment through the introduction of the Total Care activities. In addition, in terms of the medical services in the Northern Vietnam which were expected to be upgraded as Project impact, it is observed that the medical services of provincial hospitals in the region were upgraded by synergetic effects of the Project and other related technical cooperation projects. Thus, its effectiveness and impact are largely high. On the other hand, some problems have been observed in terms of the project design and the efficiency. No major problems have been found in the policy background and, the structural, technical and financial aspects of the executing agency, therefore, the sustainability of the Project effects is high. In light of the above, this project is evaluated to be highly satisfactory.

4.2 Recommendations

4.2.1 Recommendations to the Executing Agency

(1) Promotion of Total Care

It is found that while the Total Care activities have been enhanced in the BMH, there are some rooms to be improved. It is recommended for the BMH to promote and standardize the Total Care activities through developing hospital unified guidelines and manuals without any delay and activating the conduct of the Total Care committee. At the same time, it is expected for the BMH, considering to reduce overload of the hospital staff, to further strengthen the cross-sectional cooperation with all staff and departments to improve the work standardization and efficiency and to consider utilizing the services from outside, which would ensure the provision of quality medical services in spite of increased patients.

(2) Standardization of training materials

The training conducted for the lower levels in cooperation with the training DOHA center and relevant clinical departments is essential to upgrade medical services in the region. At the same time, it is found that there are some departments where each staff prepares the training materials individually when they conduct training courses. In order to enhance the quality of training, it is desirable to unify and standardize the training materials in all departments.

4.2.2 Recommendations to JICA

(1) Enhancement of cooperation with ongoing cooperation project

JICA cooperation in the health sector has been already working closely with the BMH as an essential partner. It is expected for JICA to further enhance the relations in the ongoing and planned cooperation in the Northern Region under the JICA Program on Improvement of Health and Medical Services in order to improve the quality and efficiency of the technical transfer from the BMH to the region, through sharing the project information beforehand among stakeholders and integrating inputs to existing activities such as DOHA.

4.3 Lessons Learned

(1) Relevance of the project plan

The Project was less focused on its specific objectives and scope. The cooperation areas were very wide and there were some areas where the achievement rate was low due to the lack of the inputs. In addition, as there were no quantitative targets set for the indicators, it seemed to have been difficult to implement adequate monitoring for all outputs, leading to the inadequate quantitative evaluation on the achievement rate. Hence, when planning the cooperation, it is necessary to first clarify the project objectives in relation to the cooperation program and overall goal, then narrow down the focus to the specific project scope and set the clear target for the project objectives and outputs.

(2) Improvement of the tertiary hospital and regional medical services (Good Practice)

It is found, as seen in “Impact”, that the inclusion of the component which was to strengthen BMH training capacity for the lower levels in the Project was effective to spread the benefits of the tertiary hospital improvement to the enhancement of the regional medical system. Hence, when planning the cooperation for the tertiary referral hospital in the future, it would be worthwhile to consider, for maximizing limited resources, including the aspect of technical transfer for the lower health facilities and/or improvement of the referral system in the region.

(END)