

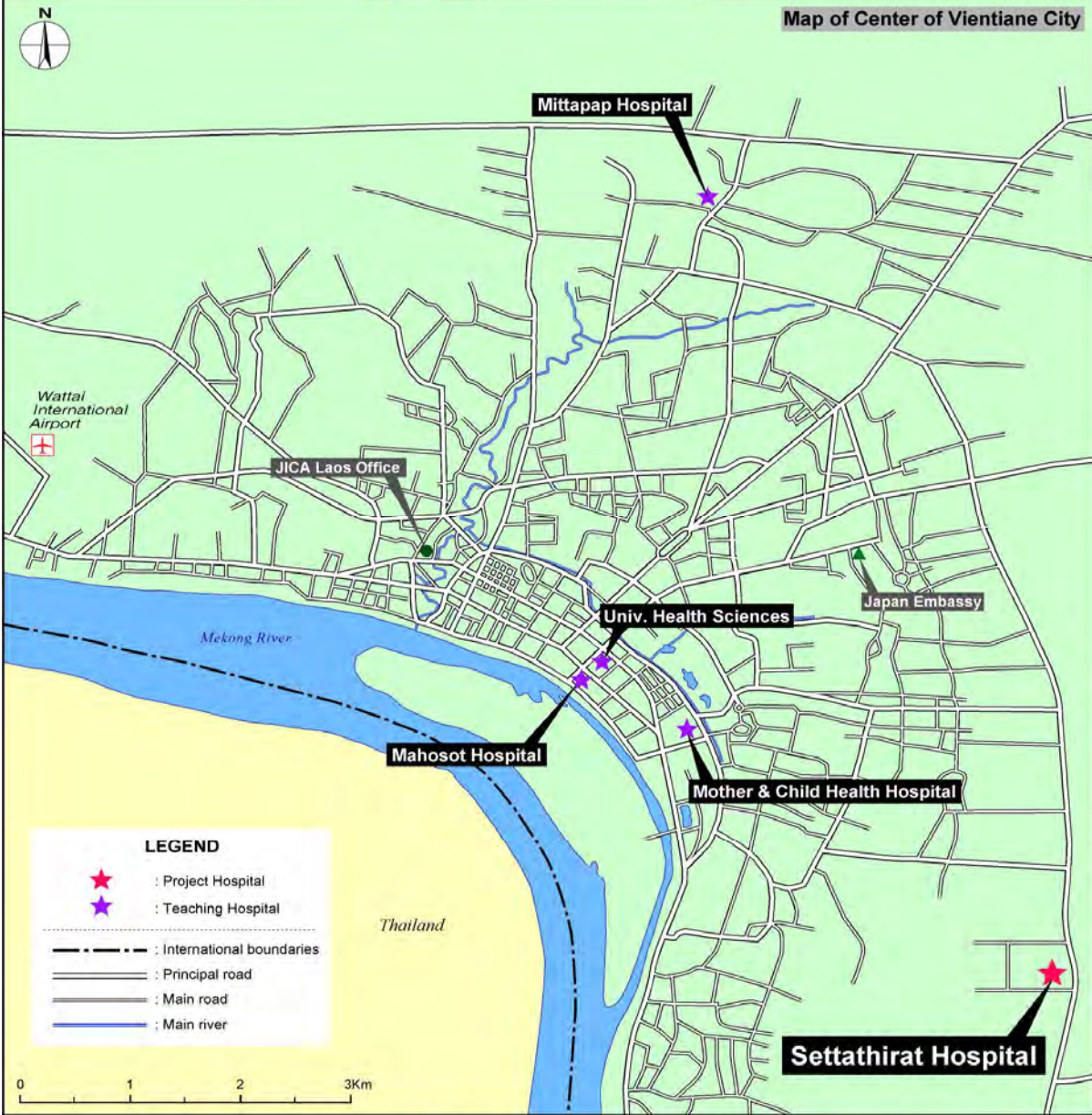
**LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF HEALTH**

**LAO PEOPLE'S DEMOCRATIC REPUBLIC
PROJECT OF MEDICAL EDUCATION AND
RESEARCH FOR SETTHATHIRATH HOSPITAL
FINAL REPORT**

November 2010

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

**GRADUATE SCHOOL OF MEDICINE, THE UNIVERSITY OF TOKYO
SYSTEM SCIENCE CONSULTANTS INC.**



MAP OF PROJECT SITE

PHOTO OF PROJECT SITES



Setthathirath Hospital Entrance



TMC meeting



CLC Opening Ceremony



CLC Medical Equipment Inspection



Setthathirath Hospital TOT



Mahosot Hospital TOT



Mittaphab Hospital TOT



Maria Teresa Hospital



Maria Teresa Hospital TOT Training



Savannakhet Provincial Hospital



Savannakhet Hospital TOT



Champasak Provincial Hospital



Champasak Hospital TOT



Luang Prabang Provincial Hospital



TOT Training at Bed Side

ABBREVIATIONS

Code	Full Title
ADB	Asian Development Bank
CIDA	Canadian International Development Agency
C/P	Counterpart
CLC	Clinical Learning Center
D6	6 th -year medical student
EBM	Evidence-based Medicine
HR-TWG	Human Resource Technical Working Group
ICU	Intensive Care Unit
JCC	Joint Coordinating Committee
JICA	Japan International Cooperation Agency
MCH	Mother and Child Hospital
(LJ)-MESH	(Lao-Japan Project for) Medical Education and Research of the Setthathirath Hospital
MTU	Medical Teaching Unit
OSCE	Objective Structured Clinical Examination
PDM	Project Design Matrix
PMEL	Project for Medical Education in Laos
R/D	Record of Discussion
R2	2 nd -year resident
SBA	Skilled Birth Attendant
TMC	Training Management Committee
TOT	Training of Trainers
UHS	University of Health Sciences
WFME	World Federation for Medical Education
WHO	World Health Organization

SUMMARY

Background of the Project

The Setthathirath Hospital in Lao People's Democratic Republic (Lao PDR) was constructed in 2000 by Grant Aid Cooperation of Government of Japan. At first, the hospital was a municipal hospital in the Vientiane Municipal. Due to its specialties such as the Department of Hemato-oncology and the Department of Endocrinology, it has been positioned as a University Hospital to the Faculty of Medicine, National University of Laos since 2004. At this point in time, it was under the jurisdiction of the Ministry of Education as with the National University of Laos. However, it was unable to clearly establish its advantages as a clinical or teaching hospital because of its location at a distance of about five kilometers from the central part of the city, and the presence of an excellent hospital in Nong Khai City in Thailand accessible located at a distance of about 20 kilometers from the Setthathirath Hospital.

In 2007, the Faculty of Medicine, National University of Laos, together with the Faculty of Dentistry, became independent as the University of Health Sciences (UHS). Accordingly, the Setthathirath Hospital came under the jurisdiction of the Ministry of Health.

Under these circumstances, the Project of Medical Education and Research for Setthathirath Hospital started from December 2007 for three years duration, mainly aimed at enhancement of clinical education at this hospital.

Project Overview

Overall Goal:	Quality of clinical training for medical doctors in the Lao PDR is improved.
Project Purpose:	Quality of undergraduate clinical training and early postgraduate clinical training for those who graduate from Faculty of Medical Sciences within two years at Setthathirath Hospital is improved.
Outputs:	<ul style="list-style-type: none">• Knowledge and know-how on clinical training of the Setthathirath Hospital as a teaching hospital is expanded.• The training management system is improved at the Setthathirath Hospital.• Capacities of trainers of clinical training for medical students/doctors are strengthened.

Outline of the Project

The Project Purpose is to improve the quality of undergraduate clinical training and post-graduation internship at the Setthathirath Hospital. Since this improvement is also for the Overall Goal of improving the quality of clinical training for doctors in Lao PDR, the clinical education model at the Setthathirath Hospital needed to be recognized by other teaching hospitals.

The specific Outputs implemented toward these goals are (1) Improvement of teaching materials, personnel, educational opportunities and educational environment, (2) Improvement of the training management system, and (3) Enhancement of abilities of preceptors in charge of clinical training at the Setthathirath Hospital. As part of the project, the Clinical Learning Center (CLC) was built because

the structure of the hospital was mainly for diagnostic and treatment functions and did not have sufficient educational facilities.

The main plans of the Project consisted of the baseline survey in the first year and the construction of the clinical education model at the Setthathirath Hospital in the second year. In the second year, a team-approach educational model called the Medical Teaching Unit (MTU) for coordination between the undergraduate and postgraduate training was constructed. The continuous improvement of this model by the Training Management Committee (TMC) began to take root.

As these situations stabilized, it gradually became apparent that improvement of the clinical education system required intervention in UHS. Therefore, it was decided to expand the activities to UHS in the mid-term review survey implemented at the beginning of the third year. Moreover, it was authorized that the project formation based on the Project Design Matrix (PDM) Version 0 would be modified to the PDM Version 1.

The most important external conditions for clinical education are that the medical care at the hospital maintains a certain level and that the ratio of students to preceptors is satisfied a certain level. However, the number of medical students rapidly increased in 2003 when the seven-year curriculum was abolished and replaced with the six-year curriculum. In accordance, clinical training taken by the medical students in their final year, which used to be provided at the four teaching hospitals in the Vientiane City, started to be provided also at the four provincial hospitals in the new semester of fiscal 2009. This change, albeit an unexpected circumstance for the Project, resulted in a decision of holding Training of Trainers (TOT) workshops at the provincial hospitals on a massive scale.

The biggest issue for TOT at provincial hospitals was the language. Unless workshops are held in Lao PDR, it is difficult to teach trainees and it is not time-efficient. Therefore, the Project of Medical Education in Laos (PMEL) was organized by inviting as members those who positively participated in TOT held at the Setthathirath Hospital and those who were regarded to take leadership at their hospitals in the future. They translated content of medical education, previously provided in English, into Lao and gradually mastered it themselves.

Cooperation of the Ministry of Health was vital to nationwide dissemination of the results of activities in the Project. Through the activities of PMEL, many of the preceptors in Lao PDR came to know about the MTU model promoted by the Project. In January 2010, the workshop on “the seventh mid-term plan from 2011 to 2015” was held by the Ministry of Health. In this workshop, the Minister of Health stated that the MTU is exceedingly important for the realization of the comprehensive concept of CHIPU (Complex of Hospitals, Institutes, Projects and University), a comprehensive program for improvement of healthcare in Lao PDR.

Three years have passed during this course of events, which were mainly focused on the improvement of “how to teach”. The improvement of “what to teach”, which requires time, was pursued with a lower priority but nonetheless has a high level of importance. Therefore, efforts were continuously made to pursue creation of teaching materials for medical students, construction of the Clinical Learning Center, establishment of a management system for the library, improvement of writing of medical records and increase of writing ratio.

Although the Project has been directly targeted at “education”, it is difficult to evaluate what kind of improvements has been brought about by the efforts in the Project. Combinations of various forms of evaluations were attempted in the project: Evaluation of teaching hospitals by UHS (evaluation of preceptors and training programs by medical students), evaluation of UHS and teaching hospitals by the Ministry of Health (internal monitoring), evaluation by project experts, and survey re-commissioned to external organizations. Through these evaluations and surveys, the Project successfully allowed UHS and teaching hospitals to understand the significance of evaluations.

Achievements of the Project Purpose

The indicators for the Project Purpose are generally achieved at the time of the Terminal Evaluation. Though the results from the survey for medical students’ and intern doctors’ satisfaction for clinical training showed the difficulty in quantitative assessment as mentioned in herein below, it is suggested that satisfaction from the trainees was generally favorable from the results of qualitative assessment such as interviews and direct observations. It is comprehensively evaluated that the Project Purpose is achieved since the foundation of the clinical training in Lao PDR is seemed to be established through the improvement of learning environment (Output 1), appropriate MTU operation under the administration of TMC (Output 2) and the improvement of clinical trainers’ pedagogy (Output 3).

However, teaching hospitals including regional/provincial hospitals rather than the Setthathirath Hospital are still in the initial phase of the actual operation of MTU-centered clinical training. It is, therefore, required to implement further training in continuous manner and further improvement in terms of the training system itself, to promote the training system mature and consolidate.

Achievements of Output 1

The Objectively Verifiable Indicators (OVIs) for Output 1 are generally achieved at the time of the Terminal Evaluation. The Project focused their effort on expanding knowledge and know-how on clinical training by constructing CLC, establishing its operation system, improving access to medical information through the provision of medical reference books and the improvement of library operation, and modifying medical record forms for better medical chart, as it turned out that the students are getting accustomed to utilize library for issues arising from their clinical training. Therefore, the Project attained certain progress in the advance of their knowledge and strengthening of problem-solving capacity. Moreover, improvement of medical chart enabled to take better progress notes and to develop better treatment plans. Consequently, it is expected that the activities under Output 1 contributed for the improvement of medical services at Setthathirath Hospital indirectly.

Achievements of Output 2

The OVIs for Output 2 are generally achieved except for several indicators at the time of the Terminal Evaluation. At first, the concept of MTU was introduced by the other cooperating partner. However, MTU was not functioning due to a poor understanding of actual operating procedures. After the commencement of the Project, the Project put clinical training into effect in the form of MTU

under the administration of TMC, which have the function of progress monitoring of clinical training and problem-solving arising from the MTU operation. Additionally, the Minister of Health as well as other important personnel at central level concerned highly valued the achievement of the Project especially for MTU as a tool for quality clinical training, and eventually, MTU is expected to be incorporated into next health related policies in the MOH and UHS action plan. Currently, appropriate operation for MTU falls behind schedule, while TMC is in the process of taking countermeasures. Internal Monitoring (formerly “External Audit”) also remains as a big issue to be solved, due to unconsolidated implementation structure for monitoring at UHS and priority of expansion and acceleration of TOT related activities to the foundation of internal monitoring system. Moreover, it will take more time to achieve a consolidated training system, since the achievement of the system will be nothing but a foundation. To achieve that goal, continuous progress for the consolidated system of clinical training should be made from the organizational and technical aspects by any means.

Achievements of Output 3

The OVI for Output 3 is generally achieved at the time of the Terminal Evaluation. As described above, fundamental management system of clinical training is basically established at the Setthathirath Hospital. Other teaching hospital, including regional/provincial hospitals where newly assigned as teaching hospitals, are currently in the process of reinforcement of capacity in terms of operational management for clinical training. As for the Medical Education Seminar, certain progress has been observed in terms of technical sustainability. Initially, Japanese experts took the initiative in organizing the Seminars and delivered lectures. The Seminar changes its style from lecturing by instructors to workshop at the operational initiative of Lao counterparts. Meanwhile, in accordance with a strong request by the MOH, the Project provided TOT workshops at regional/provincial hospitals prior to receiving students, which was planned to deal with growing number of medical students. For this reason, the Project contributed the MOH and other relevant parties to maintain the quality of clinical training system in Lao PDR.

Suggestions

At the end of three years of the Project, the following suggestions on how the clinical education in Lao PDR can be improved are proposed. Main issues are in two areas: Ministry of Health (MOH) and the University of Health Sciences (UHS);

Issues of the MOH:

Grand design on fostering medical specialists: lack of a grand design for fostering medical specialists poses a big problem for Lao PDR. Since the numbers of medical students and other health-related students and the scope of jobs in the future are not yet identified, the Department of Personnel and Organization, the Ministry of Health should take initiative to make efforts toward improvement.

Organization between MOH and related agencies for the policy making process: basically, national hospitals and UHS, except the military and police hospitals, has been placed under the jurisdiction of the Ministry of Health since 2007. However, the organization and jurisdiction of UHS has not yet been defined. It also remains unclear who should participate in the healthcare policy making and how. Therefore, coordination with the JICA Sector-wide Program is recommended.

Incentives for preceptors at hospitals: Preceptors at hospitals receive a little monetary incentive. Moreover, MOH can consider giving appropriate academic titles (such as a clinical professor) to preceptors at hospitals collaborating with UHS.

Issues regarding the UHS curriculum and management:

Conceptual framework and organization to improve medical education: Because there are wide-ranging participants and the curriculum takes a long time to learn, a conceptual framework is essential to finding what should be done to improve medical education. Quality control models such as educational certification and evaluation, curriculum development, and Deming cycle are able to be considered introducing. UHS seems to be beginning to pursue an approach of fostering medical education experts and developing a medical education center consisting mainly of them.

Difference between the chair system and TMC: UHS has a chair system aimed at managing the clinical department. The Setthathirath Hospital, which is not likely to be managed well based on the management by the chair system alone, has set up the TMC for management, taking advantage of the close relationship with UHS since the days of jurisdiction under the Ministry of Education together. This has determined the direction of holding TMC meetings at three among the four provincial hospitals where accept medical students as teaching hospital.

Direction of community-based medical education (CBME): to improve the entire healthcare system, it is extremely important to foster doctors who can work in the provincial and district hospitals, rather than at teaching hospitals in a city. At present, UHS is providing training and internship in villages to the fifth-year students and the trainees in the family medicine specialist program. The sixth-year students became to work for one year at a provincial hospital. Considerations should be given to enable continuation of these activities.

Family medicine specialist program: The family medicine specialist program, despite its name, was a program in which no qualification could be obtained. Since 2009, however, trainees who completed this program have become specialists with a higher wage level, which may cause complaints by young doctors in other specialist courses. It is appropriate to make the family medicine specialist program a three-year course in the same way as for other specialist courses.

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1. Output of the Project

1.1. Outline of the Project

1.1.1. Background of the Project

The Government of Lao People's Democratic Republic (Lao PDR) upholds fair provision of health care for all the people in "Health Strategy 2020", the strategy of health policy until 2020. Human Resource development for every level of health care is placed as one of the most important policies.

The Setthathirath Hospital is a general hospital with 175 beds, one of the core health care facilities in Lao PDR, and a teaching hospital to offer undergraduate and postgraduate clinical training for University of Health Sciences (UHS), the only faculty of medicine in Lao PDR. The Government of Japan offered the grant aid to construct a new hospital by "the Project of Construction of New Setthathirath Hospital (1998-2000)." The new hospital was completed in November 2000. In addition, technical assistance project "The Project to Improve Setthathirath Hospital" was conducted from October 1999 to September 2004 to support medical service and training function of the hospital.

In rural areas, on the other hand, insufficiency of physicians' quality and quantity is recognized. Development of quality physicians is an emerging issue to deal with the health problems in provinces. UHS has started two-year family medicine specialist program for the UHS graduates to train family medicine doctors who are able to satisfy the broad need of patients in provinces. Meanwhile, UHS was founded in May 2007 by transferring the control from Faculties of Medicine and Dentistry, National University of Laos. Some concerns remain in UHS because organizational chart is still unstable.

In parallel with these changes, the Setthathirath Hospital was upgraded from Vientiane Municipality Hospital to a university hospital of UHS in September 2004 and regarded as a teaching hospital. The Setthathirath Hospital is one of the training hospitals for family medicine specialist program stated above. However, teaching function of the hospital is not sufficient. The Government of Lao PDR requested a technical assistance project of "Project for Medical Education and Research of the Setthathirath Hospital in the Lao PDR" to Japan for functional improvement of clinical training in the Setthathirath Hospital.

Following this request, Japan International Cooperation Agency (JICA) conducted the First Preparatory Study in January 2007 and the Second Preparatory Study in February and March 2007 on "the Japanese Technical Cooperation for the Project for Medical Education and Research of the Setthathirath Hospital" to have discussion about the contents for cooperation and implementation system with Lao PDR side, and concluded the Record of Discussion (R/D) for the implementation of this project on 8 October 2007.

1.1.2. Project Master Plan

In June, 2009, Project Design Matrix (PDM) version 0 was revised as a result of the Project mid-term evaluation mission. Project purpose and outputs in PDM (version 1) are shown below.

(1) Overall Goal

Quality of clinical training for medical doctors in the Lao PDR is improved.

(2) Project Purpose

Quality of undergraduate clinical trainings and early postgraduate clinical trainings for those who graduated from Faculty of Medical Science within two years at the Setthathirath Hospital is improved.

(3) Outputs

Output 1 : Knowledge and know-how on clinical training of the Setthathirath Hospital as a teaching hospital is expanded

- This is to introduce the basis to improve clinical education in Laos. Therefore, it defines activities enrich teaching material, human resources, teaching opportunities, and environment as a clinical education field.

Output 2 : The training management system is improved at the Setthathirath Hospital.

- It defines management of clinical education.

Output 3 : Capacities of trainers of clinical training for medical students/doctors are strengthened.

- To encourage sustainability after the Project withdrawing, and expanding transferred skills to the country, it defines this output means capacity development/ building of preceptors.

(4) Activities

Activities of Output 1

- 1-1 Conduct baseline survey on clinical training for medical doctors
- 1-2 Produce textbooks to acquire standardized basic clinical competencies
- 1-3 Build Clinical Learning Center and provide practical training using simulators
- 1-4 Improve the contents and management system of medical records
- 1-5 Develop learning materials for case conference or references for medical students/residents

Activities of Output 2

- 2-1 Develop the mission of clinical training for medical education viewpoint at the Setthathirath Hospital
- 2-2 Establish a new committee (Teaching Management Committee: TMC) in charge of clinical training
- 2-3 Hold TMC meetings for clinical training
- 2-4 Accumulate the minutes of TMC meetings
- 2-5 Improve the function of Medical Teaching Unit (MTU)
- 2-6 Improve the management system of the library
- 2-7 Establish Internal Monitoring system
- 2-8 Promote project outputs through the Human Resource Technical Working Group organized by Ministry of Health

Activities of Output3

- 3-1 Develop the programs of training of trainers (TOT)
- 3-2 Prepare teaching materials for TOT
- 3-3 Conduct TOT for medical doctors working for four teaching hospitals and provincial hospitals
- 3-4 Organize Medical Education Seminar for clinical trainers
- 3-5 Set up the monitoring criteria for clinical trainers who participate in TOT
- 3-6 Monitor and evaluate clinical trainers who participated in TOT
- 3-7 Disseminate the idea of medical education through newsletters and a poster

1.1.3. Project Duration

Project duration is total 3 years (36months) which is from December 2007 to November 2010.

Project years will be 4years due to Japanese fiscal year. Each project year period is shown below.

- The 1st Project Year : December 2007 – March 2008 (4 months)
- The 2nd Project Year : April 2008 – March 2009 (12 months)
- The 3rd Project Year : April 2009 – March 2010 (12 months)
- The 4th Project Year : April 2010 - November 2010 (8 months)

1.1.4. Targeted Area of the Project

The project will target Vientiane City, the capital of Lao PDR for operation, and base on the Setthathirath Hospital located at the city. Three other teaching hospitals in Vientiane City (Mahosot hospital, Mittaphab hospital, and Mother and Child Hospital (MCH) were also target, In addition, Champasak, Savannakhet, Luang Prabang, and Vientiane (Maria Teresa) Provincial hospitals were added from the 3rd Project year. Also UHS was in charge of integrating teaching hospitals especially in Vientiane city, we have made cooperation with various activities.

1.1.5. Beneficiaries

(1) Direct beneficiaries

- Target group is about 80 people consisted with preceptors and staffs teach students on medical clinical training and residents graduated UHS in the late 2 years
- 300 students (1grade 100 students, 3 grades)/year having clinical training at the Setthathirath Hospital and 30 Resident doctors who have graduated UHS in the late 2 years

(2) Indirect beneficiaries

- Doctors of the other hospitals in Laos

1.1.6. Counterparts and the Related Organizations

According to the R/D (Record of Discussion) dated on the 8th October 2007, counterparts and collaborating organizations are shown below. Each of them will be explained details after in each section.

Table 1 Counterparts and Collaborating Organizations

Project Director	<ul style="list-style-type: none"> • Dean of the University of Health Sciences
Deputy Project Director	<ul style="list-style-type: none"> • Director of the Setthathirath Hospital
Project Manager	<ul style="list-style-type: none"> • Deputy Director of the Setthathirath Hospital (in charge of medical education)
Counterpart Personnel other than above	<ul style="list-style-type: none"> • Departments of Medical Affairs, Internal Medicine, Surgery, Obstetrics and Gynecology, Pediatrics, Laboratory, Statistics, Gastro, and other departments of Setthathirath Hospital • Department of Medicine, the University of Health Sciences
Administrative Personnel	<ul style="list-style-type: none"> • Department of General Affairs at the Setthathirath Hospital
Collaborating Organizations connected with the Project	<ul style="list-style-type: none"> • The Ministry of Health • The University of Health Sciences • Mahosot Hospital • Mittaphab Hospital • Mother and Child Hospital

(1) Setthathirath Hospital

Setthathirath Hospital in Vientiane Capital is a general hospital having 175 beds. At the same time, the Hospital is also a core medical organization of Laos. Government of Japan has supported to build new buildings of the Hospital by the Grant Aid program “Project for Construction of New Setthathirath Hospital (1998-2000)”. Also, a technical cooperation project on “Project for the Improvement of Setthathirath Hospital” has implemented for 5 years since October 1999, which aims to improve capacity of clinical training and quality of medical service in the hospital.

Making the most of its advantages in the department of hemato-oncology and the department of endocrinology, Setthathirath Hospital has been repositioned as a hospital attached to the Faculty of Medicine, National University of Laos since 2004 as a teaching hospital. Setthathirath Hospital, located at a distance of about five kilometers from the central part of the city, does not have a long history as a teaching hospital and still has some doctors who provide clinical services while receiving wage from the university. Other teaching hospitals do not have such staff assignment. The project office was set up in this hospital, which served as the base for the activities in this project.

(2) Other teaching hospitals

Hospitals providing clinical trainings are usually called teaching hospitals or central hospitals. Basically there are four teaching hospitals: The above-mentioned Setthathirath Hospital, Mahosot Hospital (450 beds), Mittaphab Hospital (150 beds), and Mother and Child Hospital (70 beds). Since January 2010, however, four provincial hospitals in Champasak, Savannakhet, Vientiane, and Luang Prabang have begun providing training to medical students. Therefore, sometimes these four provincial hospitals are included when the teaching hospitals are mentioned.

Doctors working at teaching hospital are classified into two: Preceptors who are authorized to provide supervision and other staff doctors. In addition to these doctors who receive wage from the Ministry of Health, there are contract doctors who work for lower wages through direct contracts with the hospital, and volunteer doctors who work without pay to gain clinical experience with an eye to

enrolling in a specialist course. Various duties at the clinical services are required in such a hospital, including education of medical students, are often shouldered by these contract and volunteer doctors.

(3) Provincial hospitals

A provincial hospital is placed in 17 of the 18 provinces of Laos, except Vientiane Capital. Four provincial hospitals in Champasak, Savannakhet, and Luang Prabang, and Oudomxay Provinces are large (with 250, 170, 130, and 85 beds respectively) and serve as regional hospitals that receive patients referred from surrounding provinces.

Due to a rapid increase of medical students in UHS, the above regional hospitals began to provide clinical training to sixth-year students (D6) of the faculty of medicine, starting from the new semester in 2009 academic year. However, the Oudomxay provincial hospital, with poor accessibility and small scale, did not come to receive D6 students in clinical training. Instead, the Vientiane provincial hospital (Maria Theresa Hospital) with 90 beds has become one of the hospitals that receive clinical training students.

(4) University of Health Sciences (UHS)

UHS was established by renaming and reforming the former Faculties of Medicine, Dentistry, and Pharmacy of the National University of Laos as of May 22, 2007. Whereas these faculties of the National University of Laos were under the jurisdiction of the Ministry of Education, UHS is under the jurisdiction of the Ministry of Health, which is now controlling the entire educational process from before to after the graduation.

In 2007, UHS was still a Department of Medicine of National University of Laos, and implementing curriculum at the times. In September 2009, 2 of 4 Deputy Dean was changed. Dr. Phoutone Sittideth and Dr. Thondy Luangxay were resigned and Dr. Somchit Boupha (former Dean of Nursing technical school) and Dr. Bouavan Sengsathit (Former Director of MCH) were joined. At that time, Department of Medicine was renamed to Faculty of Medicine, with having a new director Dr. Bounkong Syhavong double as the director and Deputy Director of Mahosot Hospital. At the same time, Department of Dentistry and Department of Pharmacology was also renamed to Faculties. In addition, 3year technical schools which were for students to be nurses and laboratory technicians were integrated and renewed as 4year Faculty of Nursing and Faculty of Medical Technology.

In June, 2010, deputy directors of each faculty were assigned. Dr. Vongphet Luangxay and Dr. Niranh Phoumindr were remained as Deputy Director of Faculty of Medicine. One of the Project's most important counterparts, Dr. Ketsomsouk Bouhphavanh joined them as one of deputy directors. This contributed significantly to the sustainability of the Project.

The Chair system is a well-known system that plays a significant role in clinical education of universities. In many countries including Japan, a faculty of medicine has classes of clinical departments (such as internal medicine) in itself, with an attached university hospital providing both medical care and clinical education. In Laos, however, a faculty of medicine does not have clinical departments in itself but senior members of teaching hospitals form a committee organization called

the Chair system for each department. In the pediatrics department, for example, the director of the Setthathirath Hospital serves as the Chair and the pediatricians from teaching hospitals meet face-to-face every month to discuss what should be improved about medical care and education. In the internal medicine department, too, the Chair system is also in operation, with the deputy director of the Mahosot Hospital and the dean of the faculty of medicine of the UHS serving as the Chairs. Unfortunately, however, meetings are not held in the surgery and obstetrics/gynecology departments because the Chairs, who are the director of the Department of Curative of the Ministry of Health and the director of the Mahosot Hospital, are too busy.

There is a possibility that TMC may serve as the warp thread in each hospital and the Chair system as the weft thread across hospitals, enabling discussion in each department. At the three teaching hospitals in the city other than the Setthathirath Hospital, the formation of TMC seems to be discussed but no specific reorganization has been made yet.

(5) Ministry of Health

The Ministry of Health, having jurisdiction over UHS and other hospitals, consists of the Cabinet Office, Dept. of Hygiene & Disease Prevention, Dept. of Health Care (former Department of Curative, Dept. of Planning & Finance, Dept. of Food & Drug, Dept. of Personnel & Organization, and Dept. of Inspection. The teaching hospitals and provincial hospitals are under the jurisdiction of the Dept. of Health Care, and UHS under the jurisdiction of the Dept. of Organization and Personnel.

(6) Joint Coordinating Committee (JCC)

According to the R/D, the Project established Joint Coordination committee. This was established to have smoother technical transfer in the Project. Dean of UHS is the chairperson of JCC, and its function is three points written below.

- Drawing up an annual plan of the project
- Confirming progresses of whole picture of progress and technical assistance
- Discussion on implementation of the project

JCC members were set as a table below.

Table 2 Member List of Joint Coordination Committee (JCC)

Chairperson	<ul style="list-style-type: none"> • Dean of the University of Health Sciences
Lao Member	<ul style="list-style-type: none"> • Ministry of Health <ul style="list-style-type: none"> ➢ Cabinet ➢ Department of Curative ➢ Department of Organization and Personnel ➢ Department of Planning and Budgeting • University of Health Sciences

Lao Member	<ul style="list-style-type: none"> • Setthathirath Hospital <ul style="list-style-type: none"> ➢ Director ➢ Deputy Directors ➢ Chief of General Affairs, Medical Affairs, Internal Medicine, Surgery, Obstetrics and Gynecology, Pediatrics, Laboratory, Statistics, Gastro, etc. • Mahosot Hospital • Mittaphab Hospital • Mother and Child Hospital
Japanese Member	<ul style="list-style-type: none"> • Japanese experts assigned to the Project • Resident representative of JICA
Observer	<ul style="list-style-type: none"> • Representative of the Embassy of Japan • Other personnel invited by the Chairperson

Table 3 Date of JCC, Agenda and Participants

Date	Agenda	Participants
No. 1 25 Feb. 2008	<ul style="list-style-type: none"> (1) Out line of Baseline Survey and Results (2) Relation between other donor (3) Relationship between UHS and 3 hospitals (4) Committee for bedside training (5) Internal monitoring (6) Training in Japan (7) Plan for 2nd Year Activities 	Total 31 persons
No. 2 13 Jun. 2008	<ul style="list-style-type: none"> (1) 1st Year Activities and Result (Explanation of Progress Report: Dec. 2007 to May. 2008) (2) Project Plan for 2nd Year Activities 	Total: 34 persons (Breakdown) Setthathirath Hospital: 15 University of Health Sciences: 8 Ministry of Health: 0 Other teaching hospitals: 1 JICA office / experts: 5 Other donors: 1 JICA Expert Team: 4
No. 3 March 10, 2009	<ul style="list-style-type: none"> (1) Report on activities and accomplishments in the second year of the project (2) Action plan for the third year of the project 	Total: 34 persons (Breakdown) Setthathirath Hospital: 14 University of Health Sciences: 6 Ministry of Health: 2 Other teaching hospitals: 0 JICA office / experts: 5 Other donors: 1 JICA Expert Team: 6
No. 4 25 Jun. 2009	<ul style="list-style-type: none"> (1) Result of Intermediate Review (2) Signing of Minutes 	Total: 65 persons (Breakdown) Setthathirath Hospital: 21 University of Health Sciences: 9 Ministry of Health: 9

Date	Agenda	Participants
		Other teaching hospitals: 6 JICA office / experts: 8 Other donors: 1 JICA Expert Team: 6 Other: 2
No. 5 9 Mar. 2010	(1) Result of 3 rd Year Activities (2) MTU Progress of Provincial Hospital (3) 4 th Year Plan	
No. 6 8 Jul. 2010	(1) Review of Activities from Dec. 2009 (2) Question and Answer (3) Explanation of Final Evaluation (4) Question and Answer (5) Signing of Minutes	Total 51persons
No. 7 28 Oct. 2010	(1) Review of 2009~2010 activities (2) Question and Answer (3) Suggestion of post Project Activities (4) Question and Answer	

(7) Project for Medical Education in Laos (PMEL)

To provide Training of Trainers (TOT) at provincial hospitals in the third year, it was decided to make teaching materials in Lao and nurture personnel who can teach in Lao because the use of English and interpreters is extremely inefficient. In the third TOT workshop held for three days from June 29, 2009, we talked about the PMEL concept to the deputy director of the faculty of medicine of UHS, who readily agreed. Thus, the deputy director of the faculty of medicine of UHS and this project staff gathered ten members shown in the table, who began to serve as the main members in actions. The first PMEL meeting was held on July 10, 2009 and subsequent meetings were held as appropriate before each TOT workshop.

Table 4 PMEL Member List

Name	Position
Dr. Vongphet Luangxay (Chair)	Faculty of Medicine, UHS
Dr. Ketsomsouk Bouphavanh	Academic Affair Department, UHS
Dr. Thavone Chanthasone	Faculty of Medicine, UHS
Dr. Oua Phimmasan	Faculty of Graduate Sciences, UHS
Dr. Bounmy Somsamouth	Setthathirath Hospital
Dr. Keomanichan Oupathana	Setthathirath Hospital
Dr. Sinpasong Sinvongsa	Mittaphab Hospital
Dr. Khaysy Latsavong	Mahosot Hospital
Dr. Duangkham Vongphachan	Mahosot Hospital
Dr. Syvansay Vongsak	Mother and Child Hospital

As of December 29, 2009, the Medical Education Committee including all the PMEL members was approved by UHS.

Table 5 Medical Education Committee List

Medical Education Committee			
1. Steering Committee		2. Academic Committee	
Dr. Som Ock Kingsada	Chairman	*Dr. Ketsomsouk Boupphavanh	UHS
Dr. Sing Menorath	Vice chairman	*Dr. Vongphet Luangxay	FOM
Dr. Bounkong Sihavong	member	Dr. Chanthavisao Phanthanalaqy	FOD
Dr. Manivanh Souphanthong	member	Dr. Phouvang Suignavong	FOP
Dr. Syli Kenphachan	member	Dr. Phetsamone Alounlangsy	FOMS
Dr. Sengphouvanh Gnonphady	member	Mrs. Souksavanh Phanpaseuth	FON
Dr. Chanheim Songnavong	member	Dr. ViPhavanh Vilabout	FOD
Dr. Vimone Soukkhaseum	member	*Dr. Thavone Chanthasone	FOM
Dr. Vanphanome Sychaleun	member	*Dr. Oua Phimmasan	FOG
		*Dr. Bounmy Somsamout	Settha
		*Dr. Keomanichan Oupathana	Settha
		*Dr. Sinpasong Sinvongsa	Mittaphab
		*Dr. Khaysy Latsavong	Mahosot
		*Dr. Duangkham Vongphachan	Mahosot
		*Dr. Syvansay Vongsak	MCH

*PMEL members, FOM: Faculty of Medicine, FOD: Faculty of Dentistry, FOP: Faculty of Pharmacy, FOMS: Faculty of Medical Science, FON: Faculty of Nursing, FOG: Faculty of Graduate Studies, MCH: Mother and Child Hospital

(8) Human Resource Technical Working Group (HR-TWG) , Ministry of Health

On March 6, 2009, the second year of the project, the first HR-TWG meeting was held at the Ministry of Health. Through encouragement by the Health Sector Operation Regulating Ability Enhancement Project, etc., this meeting was held to ensure proper implementation of health policies in accordance with the Health Strategy 2020 and the Sixth National Socio Economic Development Plan (2006-2010) (NSEDV VI). The participants were the parties concerned at the Ministry of Health (particularly the Department of Human Resources Development) and other related ministries as well as various donors such as WHO, UNICEF, UNFPA, ADB, WB, DFID, and JICA.

1) The Second Year

The first meeting discussed the national policies for fostering health personnel, HR-TWG Action Plan in 2009, and plans for fostering skilled birth attendants (SBA). The project team pointed out that there was no control on an increase in the number of medical students to be admitted and that there is only an insufficient infrastructure for effectively utilizing the family medicine specialists. The team also suggested that a taskforce on medical education be formed in the Ministry of Health in fiscal year 2009 to have thorough discussion on the above issues. Thereafter, the Project members are attending this meeting regularly.

2) The Third Year

When meeting on the seventh five-year plan was conducted in January 2010, the Project team participated in the first joint meeting held between the Laos side and the development partners at Thalat (Nam Ngum Dam site). In particular, the Project team attended the Human Resource for Health section meeting and proposed making a human resources development plan with a long-term perspective, not putting too much emphasis on a specific field.

(9) Collaboration with other donors

1) University of Calgary

Their project is operated over ten years on an aggregation of miscellaneous budgets such as expenses of the university, Canadian International Development Agency (CIDA), and Agence d'exécution de la coopération au développement luxembourgeoise. It has been achieving various outputs such as a change in the curriculum from seven years to six years, introducing clinical presentation¹, and two-year training for family medicine specialist program. The leader is Professor Dr. Clarence Guenter of respiratory tract medicine, and the members include not only those from the University of Calgary but also some from MacMaster University. The members are not fixed but changed quite frequently. The core members have an experience of promoting medical education based on regional health care infrastructure in Zamboanga, Philippines since 20 years ago. The Project had established firm cooperation opportunities to exchange opinions with them regarding many issues. The project progress, plan, through the MTU dissemination activities started in the second year of the project. The specific harmonization items are described below.

① The Second Year

In June 2008, in the beginning of the second project year, the Project decided to use the "Medical Teaching Unit (MTU)," a hospital ward training model originally advocated by the University of Calgary and gained approval from the University of Calgary. In September 2008, a medical education workshop was co-hosted, marking the start of harmonization of activities.

In January 2009 when the Project conducted South provinces investigation tour to observe provincial hospitals that were planned the reception of medical students. The Calgary University team accompanied up to Savannakhet. At the same time, discussion on the implementation of project activities in the future was taken place.

Upon the revision of the UHS Basic Clinical Ability Study Guide and the Clinical Presentation Algorithm Handbook, originally developed by UHS in collaboration with the University of Calgary, the experts of both projects participated in writing and it was agreed that they are printed by the Project.

¹ This refers to the typical physical signs or symptoms that are associated with a particular disease process. The proper interpretation of the clinical presentation often leads to a specific diagnosis.

② The Third Year

In the third year, the above two teaching materials were printed and distributed to all the 4th- to 6th-year medical students of UHS. These teaching materials are going to be used in classes and hospital ward training.

Moreover, the Calgary University members participated as guests in TOT at provincial hospitals, and a lifetime learning program workshop provided by the University of Calgary for those who completed the family medicine specialist program was held at CLC making the most of the supplied teaching materials.

③ The Fourth Year

The University of Calgary participated in the Fourth Medical Education Symposium as a presenter, who pointed out effectiveness and problems of actually implementing MTU in regional health care.

2) Khon Kaen Hospital

In Thailand, the “Collaborative Project to Increase Production of Rural Doctors (CPIRD)” has been in operation since 1994. It is to promote development of doctors to contribute to community health care at a local general hospital run by the Ministry of Health such as the Khon Kaen Hospital while keeping its distance from the hospital attached to the faculty of medicine under the jurisdiction of the Ministry of Education. The Khon Kaen Hospital also has a Medical Education Center where they are developing teaching materials and studying medical education. The Project established a cooperative relationship with the hospital, considering giving stimulation to Laotian medical educationist through seminars and teaching materials in order to learn the status quo of medical education at a university in Thailand, which is close to Laos in terms of culture and language.

① The Second Year

The director of the Medical Education Center of the Khon Kaen Hospital gave permission for the Project to print and distribute for educational purposes their original teaching materials on “Heartful Care” and “Medical Ethics.” The hospital also contributed as a liaison with the original author of two Thai books entitled “Medical Education Key words 100” and “Medical Education Theories,” making it possible for the Project to translate these books into Lao and print them.

② The Third Year

In the Third Medical Education Seminar, Dr. Satang Supapon came over to Laos as a presenter especially on “Professionalism.” Dr. Satang at the Medical Education Center of the said hospital delivered a lecture on professionalism. Although the above-mentioned teaching materials were distributed at TOT, they came to be recognized more widely after the lecture because, particularly, the senior members such as directors of universities and teaching hospitals show a great deal of interest in this topic. Particularly, the interest manifested itself as a tangible action of incorporating a session on professionalism in the TOT curriculum and discussing it every time.

③ The Fourth Year

The director of the Center, Dr. Sirijit Wasanawat and Dr. Satang Supapon was invited to the Third Medical Education Symposium, delivered a lecture on the relationship between a medical university and an teaching hospital in Khon Kaen, Thailand.

4) University of Freiburg in Germany

At the Luang Prabang Provincial Hospital and the Setthathirath Hospital, the University of Freiburg team directly teaches and trains residents in the Department of Obstetrics/Gynecology. In collaboration with the Laotian members, it has been making steady efforts on guidance on the local health activities and medical care methods related to obstetrics/gynecology. Previously, it was only information exchange with the team members when they come to Vientiane. After CLC was constructed in the second project year, however, the University of Freiburg team began to make active use of CLC. On February 8 to 12, 2010, an obstetrics/gynecology seminar was held using supplied equipment as a collaborated effort.

5) Health Frontiers (NGO in the U.S.)

Health Frontier, an NGO consisting mainly of members from the Case Western Reserve University in the U.S., is providing education in clinical environment (particularly bedside). At the Setthathirath Hospital, the team provides bedside education in the Departments of Internal Medicine and Pediatrics and also supplies financial incentives and procures books.

① The Third Year

Since the start of the MTU dissemination activities, the Project had more active information sharing with them especially the real situation and advice on MTU. The team also participated to JCC and medical education symposiums and is informed about this project.

② The Fourth Year

The Third Medical Education Symposium took up the theme of improving the relationship between teaching hospitals and universities. Health Frontiers joined as presenters to give a presentation on the status quo of clinical training at teaching hospitals in Vientiane and UHS. The presentation that has been made explained objectively what needs be improved about the collaborative relationship between teaching hospitals and the University of Health Sciences in clinical training from an outsider's viewpoints, which gave impetus to active discussion.

6) University of Tokyo in Japan

In fiscal year 2009, the International Research Center for Medical Education involved in this project established the University of Tokyo Medical Education Joint Research Center at UHS, which operated for one year. The International Research Center for Medical Education has also established a fund for launching Laos Medical Journal to promote medical research in the entire country of Laos. At the

start of this project, two researchers were dispatched to Laos for two weeks to evaluate the family medicine specialist program that was implemented by the University of Calgary.

1.2. Action Policies by Each Year

This section describes the activity policies by fiscal year in this project. After the mid-term review in the third year (fiscal 2009), however, PDM has been revised and the activities related to output have also been revised. Therefore, the following sections describe the activity policies before and after these changes.

1.2.1. The First Year (Fiscal 2007)

The major activities were the establishment of the operation framework, creation and explanation of the inception report, implementation of the baseline survey (including sub-contracted survey), summary of the baseline survey results and review of policies, and preparation for training in Japan scheduled to be provided in April 2008.

The inception report was used to explain the plan to the interested parties. In the explanation process, it was important to gain understanding about the fact that this is a project for improving clinical education and the operation flow of developing a training management system at the Setthathirath Hospital and transfer it to other hospitals. The baseline survey was conducted both as a sub-contracted survey and a direct survey by the project members. Table below shows the items of the direct survey and the description of the sub-contracted survey.

Table 6 Outline of the Baseline Survey

Heading	Baseline survey Item	Direct survey				Sub-contracted survey
		Interview	Inspection	Group Discussion	Data collection	
Survey on medical care system	National planning, financial affairs referral system, etc.	○			○	
Survey on general health conditions	Basic health indicators, disease structure				○	
Survey on general conditions of hospitals	Setthathirath hospital/the three teaching hospitals	○	○		○	
Survey of patients at the exit	Setthathirath Hospital/the three teaching hospitals	○	○			○
Survey of related organizations	National Institute of Public Health, the University of Medical Sciences	○	○			
Survey of donors involved	The University of Calgary, ADB, France, etc.	○	○	○		
Survey on medical education	Laws and regulations, education of medical students, in-service training, continuing education	○	○	○	○	
Survey of clinical training	Training for medical students, training for medical doctors, the current state of the four hospitals	○	○		○	
Survey of trainers of clinical training	Knowledge, techniques, attitude, system, etc.	○	○			○
Survey of medical students	Knowledge, techniques, attitude, system, etc.	○	○	○	○	○
Survey of medical doctors	Knowledge, techniques, attitude, system, etc.	○	○		○	○

1.2.2. The Second Year (Fiscal 2008)

In the second year, activities were carried out with a major policy of appropriately defining the outline of all the project activities with reflecting the results of the baseline survey conducted in the first year.

First, the baseline survey results revealed an unexpectedly high deficiency in the basic management ability of the Setthathirath Hospital and the basic scholastic abilities of medical students and interns. It showed a need for starting to work on these infrastructures, the prerequisites for the project activities. In the second year, therefore, the outline of the project was reviewed. Figure 1 shows a conceptual diagram of the status quo at the time of writing of the first-year proposal related to the progress of the project.

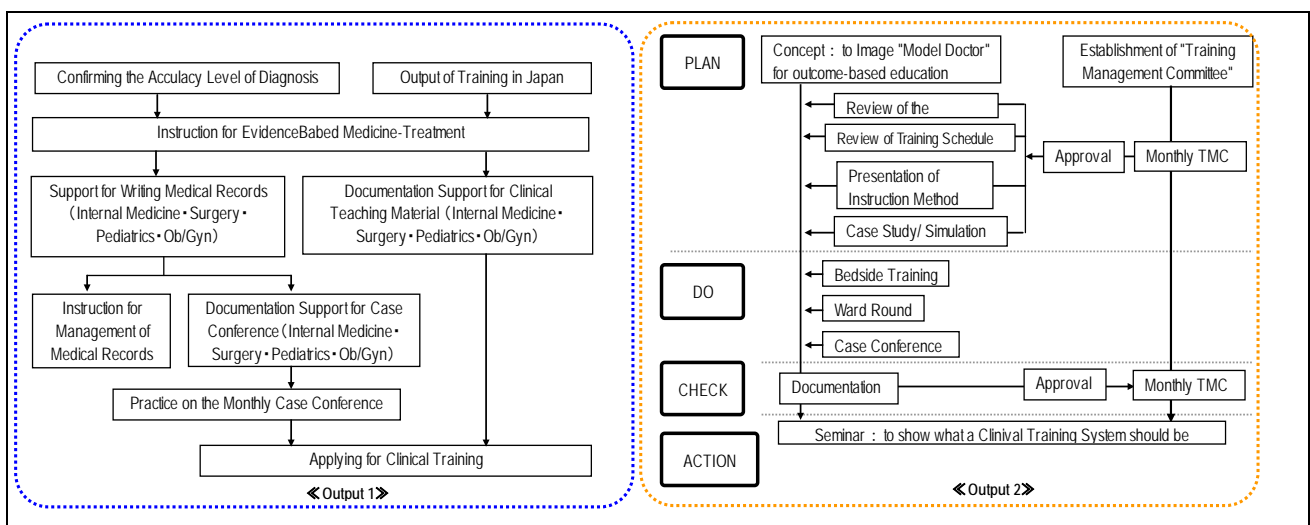


Figure 1 Conceptual Diagram of First-Year Proposal

In Output 1, the problems in implementing Evidence Based Medicine (EBM) were the shortage of computers, insufficiency of Internet access, and mixture of Lao, English, and French in medical care. For the hospital management, there is also the issue of insufficient writing and management of medical records. In Output 2, the biggest concerns were that preceptors themselves had low basic clinical competency (such as interview, physical examination, diagnostics, and decision-making for treatment) and did not have sufficient knowledge to teach and that they were too busy to teach. Since the preceptors had insufficient basic clinical competencies, it was exceedingly difficult for the medical students and interns being taught by them to exceed the levels of the preceptors. It was considered still insufficient even if the teaching ability of preceptors were complemented with Training of Trainers (TOT), teaching materials for preceptors, educational management system enhancement by the Training Management Committee (TMC), and enhancement of hospitals as places for clinical training by the Medical Teaching Unit (MTU).

Therefore, it was decided to schematize and reorganize the activities in the second and later years into a conceptual diagram shown in Figure 2. First, it is necessary to create teaching materials on the

basic clinical competencies and open the libraries having books in Lao and Thai. In the second and later years, these activities were named “Library setup and operation improvement,” which became an important goal both in Outputs 1 and 2. These activities were intended not only to enhance the abilities of preceptors but also to enhance the training of students and intern doctors, gradually improving future education (with a view to the future 10 to 20 years later).

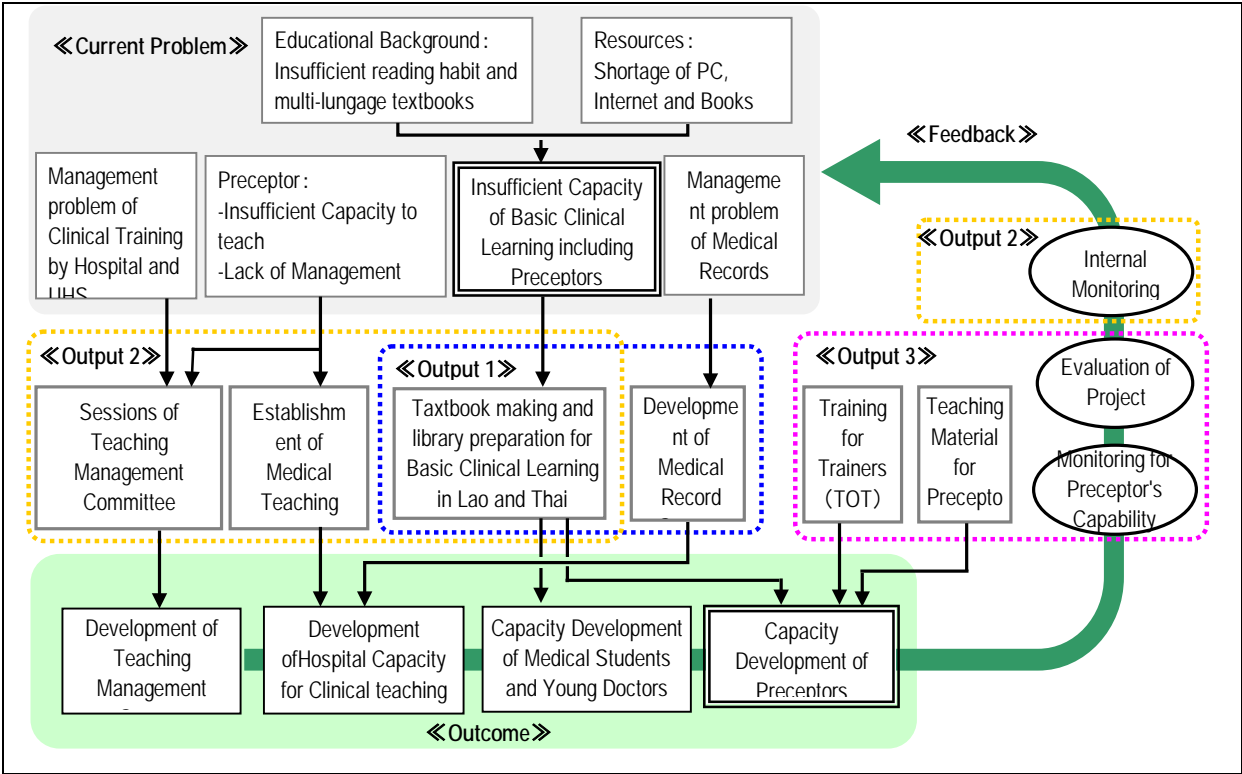


Figure 2 Conceptual Diagrams of Activities to Be Implemented in the Second Year and Later

The improvement of basic clinical competency is a big educational goal on which UHS is essentially required to work. To achieve this goal, it is necessary to raise the standard of basic clinical competency of all the teachers. Therefore, considerations were given to use MTU or TMC to enhance the training management system of the Setthathirath Hospital and to allow teachers to enhance teaching abilities in order to improve the degree of satisfaction by medical students.

The improvement of basic clinical competency is not easy to accomplish. To gain efficient and spontaneous expansibility in a limited length of time of the project activities, the Project classified the educational goals regarding clinical aspects such as the improvement of basic clinical competencies as “what to teach” and the educational approach to be spread through training management and TOT as “how to teach.” Based on the understanding that both “what to teach” and “how to teach” are an inseparable pair, that projects on “how to teach” will be implemented first to aim at immediate effects, and that the improvement of “what to teach” will take time, the major policies were defined to continue these efforts. Thereafter, these were the major premises of activity policies in the third and fourth project year.

1.2.3. The Third Year (Fiscal 2009)

The goal in the third project year, based on the activity policies changed in the second year, was implementation of technical transfer about educational methods “how to teach” as more specific activities.

The biggest goal was the establishment of use and management methods of the Clinical Learning Center (CLC) and the full use of CLC and education-related equipment in training activities. This would allow preceptors to perform various educational techniques to transfer their techniques to medical students. It was also hoped that the use methods would be one of the core topics at the Training Management Committee (TMC). The prerequisite for this was that TMC would remain as active as in the second year. The activity policies in the third year, therefore, included the promotion of sustainability of TMC, and attention was paid also to the operation management and how to decide agenda.

The implementation of internal monitoring was scheduled early in the third year. Internal monitoring is expected to spread the concept of quality control of education and training and gain understanding of the counterpart that evaluation activities are effective for improvement. However, there is also a result that internal monitoring may have been premature.

As for the learning materials for medical students created in the second year, a goal was set for promoting the use of them, and activity policies were set accordingly. In the beginning of the year, with utilizing medical education seminars, how to use the materials was tried to be known wider. As for the teaching materials translated from Thai to Lao, the implementation of a seminar of the original author in Thailand was considered to give impulse to the efforts in the neighboring country with similar culture and language.

A policy was established to continue to work on the improvement of medical records and case presentations in the form of enhancement of the Medical Teaching Unit (MTU). A policy of pursuing the quality improvement of medical care was established to make the most of the supplied books through activities of improving the operation system of libraries in hospitals.

Training of Trainers (TOT) was planned to be provided three times at the Setthathirath Hospital for the sake of four teaching hospitals in Vientiane Capital. It was also planned to provide TOT at the four provincial hospitals. Although the TOT monitoring method was mostly established in the second year, it was decided to examine it including monitoring items because it was already decided to be implemented also in the fourth year while incorporating the viewpoints of external evaluation.

In the third year, the project mid-term review was conducted and the PDM was corrected. As for the public relations of the project, it was decided to carry out specific activities, partly because the outputs were beginning to become tangible.

Since the surrounding environment was drastically changed in the third year, the following points were re-considered and elaborated in the project activities.

(1) Position recognition of the Project in the international trend in development of human resource for health

International trend of strengthening human resource for health is patiently pursued in various countries. However, these activities were not focused as an important issue in international health for a long time. In 2006, World Health Organization (WHO) announced that a country with less than 2.3 doctors, nurses, and midwives per population of 1,000 had a health personnel crisis and pointed out that 56 countries in the world have such a crisis. Laos is one of the 56 countries. The latest data shows that the number of health personnel is about 1.3 per population of 1,000.

The Toyako G8 summit held in Japan in 2008 discuss the health personnel crisis as a big issue and raised against it three specific activities, one of which is “Enhancing an international network by higher education facilities to ensure access to health and medical education in a field with limited resources.” This project, currently implemented in Laos, has a strong correlation with this activity. The issues of health personnel in developing countries are often discussed in relation with MDG 4, 5, and 6. In Laos, in particular, discussion often focuses on development of SBAs to enhance maternal and child health in relation in relation to MDG5. This course of action is not incorrect. However, there is little proof that, without improvement of quality of doctors who supervise SBAs, MDG5 can be achieved only by increasing the number or improving the quality of midwives and other personnel. Moreover, there is no proof, at least on a national basis, that increasing the number of deliveries at facilities decreases the maternal mortality rate. Therefore, both the quantity and quality of health personnel should be improved. In recent years, Laos is attempting to increase the number of doctors, nurses, and midwives. As for doctors, the number of medical students has been rapidly increased. This is a proof of positive efforts toward resolution of health personnel crisis. This trend will certainly secure the quantity of required personnel. However, there is only an insufficient education system for current medical students and intern doctors just after graduation, for which improvement of quality is a pressing issue. Regarding to maternal and child health is secured only if quality is secured and a pregnant woman coming to a facility can feel safe in having a child birth. To realize this status, securing of quantity and quality of midwives must be realized in parallel effort with securing of quality of doctors. Moreover, the trend of emphasis on maternal and child health does not last forever. The enhancement of overall quality of doctors is an important activity that can enhance the entire health care service of one country, regardless of trends and fashions.

(2) Plan of providing UHS clinical training at provincial hospitals

The numbers of students at the UHS faculty of medicine, in the academic year from fall 2009 to summer 2010, are about 180 in D6 (6th-year medical students; same abbreviation hereafter), about 240 in D5, about 280 in D4, and about 380 in D3. Since the number of graduates in summer 2009 was 107, they could be given clinical education only at four teaching hospitals. However, it was anticipated that similar training would be impossible in fall semester 2009. Since the start of training at provincial hospitals was considered to be unavoidable in fall semester 2009, the Project obtained

information about provincial hospitals that can serve as the training hospitals in advance, and it was decided to hold TOT workshops at these provincial hospitals ahead of clinical trainings.

The following figure shows the correlations between the activities in the project and the content of learning at each grade. This figure explains what kind of support the Project thought to provide to the provincial hospitals that offer hospital training for the first time.

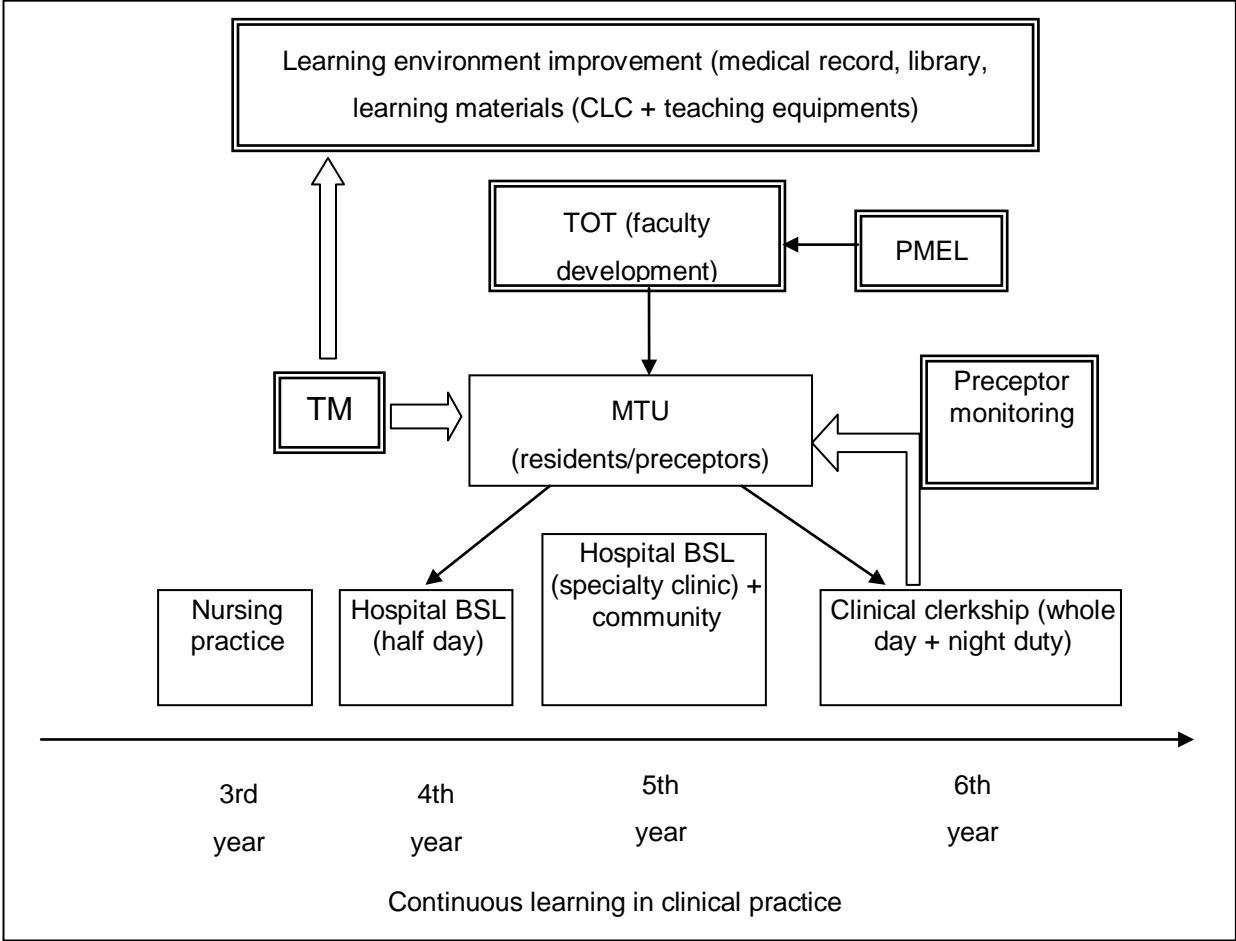


Figure 3 Correlation between Activities and Education

1.2.4. The Fourth Year (Fiscal 2010)

The activities in the fourth year are the quality control of clinical training, improvement of learning environment for clinical training at the Setthathirath Hospital, final evaluation, project public relation activities, and monitoring of the teaching system.

Quality control of clinical training should be conducted at each teaching hospital through management control systems such as MTU and TMC. Since some positive results have been achieved at the Setthathirath Hospital, improvements were pursued through TOT so that similar improvements could be made at other teaching hospitals in Vientiane Capital and the four provincial teaching hospitals.

Improvement of learning environment for clinical training at the Setthathirath Hospital includes activities related to management of CLC, management of the library, and ensuring of writing of

medical records. In the regard of CLC, it was in need of determining the managing department in the hospital and aims at establishing relationships with the departments that mainly use it. For the library, activities related a renting system and improvement of librarian staffing and opening hours have been planned. Writing of medical records was already incorporated into the educational system of each department, but the result would be fed back through persistent evaluation. These activities were examined by TMC for continuous improvement.

Terminal evaluation was made in June and July 2010. It was done based on the policies of first defining the indexes according to PDM, checking and correcting the directions of a few remaining activities in the project, defining the exit strategies through consultation with the parties concerned, and contributing to the establishment of a sustainable system.

The project public relations activities include conducting medical education seminars and medical education symposiums, issuing of newsletters, and creation and distribution of a clinical training report in English and Lao. The medical education symposium, which used be called the medical education seminar, will be held mainly for discussion inside the country to examine how clinical education in Laos should be. It was decided to create a clinical training report to explain such things as project concepts and achievements with a view to provide useful information for future improvements of clinical education.

Monitoring of the teaching system is roughly classified into two: Sub-contracted and direct operations. The sub-contracted survey was carried out by an external survey organization to compare quantitative indexes with those of the first year. The direct survey will be focused, particularly, on identifying how the clinical training started in January 2010 at provincial hospitals benefits the community and how the long-term perspectives should be.

1.3. Activity Achievement of Output 1

1.3.1. Activity1-1: Implementing Baseline Survey on Clinical Training

As the result of baseline survey it discovered low levels of health care and medical sciences (For details, see the baseline survey report in each year already submitted). The JICA expert team, in view of the status quo identified by the baseline survey, confirmed that the indexes of PDM Ver. 0 included some inappropriate ones to measure levels of achievement and that they need to be revised. The decision for revision was made in the beginning of the second year and the PDM was revised in the third year.

1.3.2. Activity1-2: Introducing Textbooks and Reference Books to Help Acquire Standardized Basic Clinical Abilities

(1) The First Year

Based on the baseline survey results, activities of Output 1 in PDM Ver. 0 were conducted in the first year to pursue “establishment of evidence-based medicine” and focus on mastering of “medical interview techniques” and “basic physical examination/treatment method.”

In PDM Ver. 1, this item has been incorporated into Output 1 under a major classification of “acquiring standardized basic clinical competencies.”

(2) The Second Year:

Providing training to preceptors to pursue establishment of evidence-based medicine (EBM)

The activities in the second year based on the above policy are as follows:

- 1) Promoting EBM through seminars and promoting the improvement of teaching abilities of preceptors for this purpose

The First Medical Education Seminar aimed at establishing the concepts of MTU and TMC and helping participants clearly understand concepts about basic clinical diagnoses abilities. The seminar showed how to implement EBM by overcoming problems which a developing country faces such as little experience in small group learning, little time to participate workshops, and lack of role models in implementing EBM.

The clinical education seminar was conducted mainly to provide information useful for the UHS when it establishes a curriculum, help preceptors improve their skills, and ensure that medical students acquire basic clinical competencies.

- 2) Introducing textbooks and reference books to create an environment for promoting EBM

In the workshop of the First Medical Education Seminar, it was found that computer-based EBM had its limits. Therefore, the Project concluded that EBM needed to be promoted mainly using books and guidelines. At the time, few students used the books available at the hospital library because most of them were written in French or English. Therefore, 582 books in Thai and English were contributed to the library.

1.3.3. Activity1-3: Constructing CLC and Conducting Training Activities Using Simulators

(1) The Second Year

- 1) Construction of the facility

The first-year baseline survey found that there is not sufficient learning space. Apart from the large conference room, only two rooms were available to hold meetings. The departments competed with each other to use meeting rooms. Therefore, a decision was made to construct of facility in a way to enable rooms to be used for diverse purposes.

As for the construction process, it was decided to establish the philosophy/concept of clinical training at the Setthathirath Hospital in June 2008 and then set about the design conception of the Learning Center. Therefore, the conception diagram for the facility according to the uses was examined several times with the counterpart at the Training Management Committee (TMC); the construction site survey (The examination of topographical survey and geological reconnaissance was conducted using the results of the Basic Design Study for establishment of Setthathirath Hospital),

scale and structure were decided in August; local consultant (architect) selection and contractor tendering were conducted in September, and construction was started in October. The construction was completed in March as on the scheduled.

The discussion on the operation of the Learning Center such as the manager, management method, and opening hours was carried over to the third year when the operation was actually started.



Figure 4 Clinical Learning Center

2) Equipment Supply

The equipment plan was designed to procure minimal equipment required to achieve the objectives of the project and clinical training. Therefore, priority was placed on procuring equipment required for the “Clinical Learning Center (CLC)” under construction and equipment required for hospital training. Therefore, the details of the equipment plan were established after October 2008 when the construction expense of the CLC and the scope of equipment that could be included in the construction expense were identified. The specifications of planned equipment were determined at the end of December; and the tendering for the equipment was delayed until March, but a part of the equipment was delivered in March as scheduled. However, the timing of delivery of medical equipment was put off on purpose until the beginning of the third year because it is better to conduct quantity check, operation test, and training in the presence of experts at the time of installation in order to inspect of equipment troubles and defects, and thus manage the training from a experts' point of view.

The kind, purpose and number of the equipment to be supplied were determined to improve the current medical education and allow medical students to acquire the technologies listed below.

- Acquisition of basic clinical examination abilities (auscultation for heartbeats and respiratory sounds, blood pressure measurement, rectal examination, and fundus and ear observation)
- Resuscitation education such as Basic Life Support (BLS)
- Basic bedside treatment (securing of blood vessels and tracheal intubation)

The utilization of equipment at the CLC was incorporated into the activities in the third year and later because, after equipment supply, technology transfer to the counterpart was determined to be conducted in the activities of the project, together with the CLC management method.

Table 7 Equipment list procured (2nd Year)

Category	Major equipment
① Necessary facility and furniture equipment	Air Conditioner, Table, Chair, Audio-Visual equipment, etc.
② Medical education training equipment	Model, Consultation instrument, Training furniture, etc.
③ Necessary bedside training equipment at hospital	ECG, Respirater, Ultra sound, etc.
④ Necessary training equipment at teaching hospital	Sorting computer for medical information, Student locker, etc.

(2) The Third Year

The mid-term review added the activities from the second year as the activities of Output 1 and marked the start of implementation of specific activities of technology transfer.

1) Equipment installation and management status

As described in the previous section, the construction was completed in March, 2009 and an opening ceremony was conducted at the same time as JCC held in the mid-term review survey in June. However, procured equipment was only partially delivered in May 2009. Therefore, the operation of CLC was started in July with a view to promote its use as a conference facility while limiting its functions as a Skills Laboratory for conducting clinical examination simulations using training equipment only to OSCE and emergency resuscitation training such as Basic Life Support (BLS).

The equipment procurement was completed in a period from November 2009 to January 2010. However, a fire that broke out at CLC on October 26 led to a loss of part of the room and equipment, making it impossible to hand over the facility to C/P in a complete form by the end of this fiscal year because re-procurement of the lost equipment would last until the end of March 2010. Therefore, the project team operated CLC while managing the facility and equipment basically. Then, it was determined that the spontaneous management of the facility would be started in the fourth year, with the equipment frequently used by several departments (four basic departments of Internal Medicine, Surgery, Pediatrics, and Obstetrics/Gynecology) to be managed by the Training Management Committee (TMC) again with its responsibility and the rooms to be managed under the responsibility of the general affairs department of the hospital.



Figure 5 Opening Ceremony of Clinical Learning Center (25 June, 2010)

2) Facility and equipment utilization status

The table below shows activities of CLC from July 2009 to March 2010 in the third year.

Since fiscal 2008 clinical training for the faculty of medicine was provided until August 2009, the schedule of utilizing CLC until August was occupied to a certain degree. However, the SEA GAME (Southeast Asian Games) held in Vientiane in December 2009 caused a complete stop of the curriculum of the 6th-year medical students from September to December, causing the utilization ratio of CLC to significantly drop. Furthermore, the CLC utilization ratio by the Department of Obstetrics/Gynecology was low because the University of Freiburg provided support to resident training in the Department of Obstetrics/Gynecology at the Setthathirath Hospital and the Luang Prabang Provincial Hospital. This is considered to be because, in the Department of Obstetrics/Gynecology, abundant medical care equipment is provided in the outpatient clinic where most of training is provided. However, after we consulted and reached an agreement with the Germany University of Freiburg team that the department should use CLC for conference more actively after January 2010, the Department of Obstetrics/Gynecology is using CLC increasingly more frequently. In July 2009, the experts devised a curriculum draft for the Basic Life Support and presented it as a sample to C/P. On October 20 and 21, the chief of the emergency outpatient department and other persons held a Basic Life Support Procedure Workshop. Since the objective of this workshop was to familiarize trainees with simulator-based training, the above curriculum was not put to use.

On August 20 and 21, the Department of Surgery gave an Objective Structured Clinical Examination (OSCE) using a simulator of CLC.

Other donors also applied for the use of CLC after the facility became available for use. The “Other” column in the table below shows the frequency of CLC use by external organizations. The University of Calgary of Canada made a request to use CLC when they implement a clinical training project at the Setthathirath Hospital. Activities using the input equipment have already been conducted in conferences and training sessions.

Table 8 CLC activities (3rd Year)

	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Total
Internal Medicine	10		4			1	8		23
Surgery	9						4	3	16
Pediatrics	9	2	2				10		23
OB/GY						1	1	3	5
UHS			3				9		10
Nursing				1					1
other					1	1	8		10
	28	2	9	1	1	3	38	6	90

(3) The Fourth Year

In the fourth year, technology transfer on management and operation was conducted, rather than the activities in the departments of CLC. In TMC at the end of the third year, the equipment to be

managed by the departments with responsibility was determined. The project distributed among them the equipment, which was checked in the presence of the director of each department and the project team, and an orientation was given on how to use it. The major rules that have been established are shown in the table below.

Table 9 Rule for Clinical Learning Center (CLC)

Ground rule for CLC use	Basic rule for using of CLC facilities (procedure for electric IN/OUT)
Regulation for room rental	Room key shall be kept by chief nurse. Chief nurse manage key for student use. The student shall write purpose on the room rental list.
Regulation for rental Audio Visual Equipment	The student who want to use the room shall describe purpose, doctor, address in the format. The format shall be made by the Project and academic affairs will be followed this system.
Regulation for Equipment rental	The equipment cabinet key will be managed chief nurse. Chief nurse manage key for student. Student will use equipment under chief nurse and describe on equipment list with checking by chief nurse. Returning of equipment, The chief nurse will check the equipment and store equipment in the cabinet original position
Check system for equipment usage	Academic affair will manage equipment control and chief nurse will manage the equipment. Chief nurse will check the equipment after using and on every 2 nd and 4 th Monday with signing of nurse on equipment list. Academic affair will check all the equipment on 2 nd and 4 th Friday. Last Friday in the month, Academic affair and chief nurse will check all equipment together and making the report and submit hospital director, academic affair director and subject director.

Among these items, particularly equipment check has been defined in CLC Management Rules, which were adopted as hospital rules. In August and September, an expert accompanied the team as an observer and supervised the check procedure.

The source of frequency of use, Table 9 (Aug 2009 to Feb 2010) was taken from the key renting log book, due to the Project managed keys of CLC. While the 4th Project year (After Mar 2010), the source was taken from Audio visual facility rental log books which was taken by the Project. This source is not all the correct data because the hospital could not accumulate the exact data although key management was already delegated to the hospital side. In addition, data from September 2010 will be omitted because the management of audio visual facility was delegated to the department of General Affair of the Hospital. Below is the frequency of CLC usage in the 4th Project Year.

Table 10 Monthly CLC Activities (the Forth Year)

Dept.	March	April	May	June	July	August	Total
Internal Medicine	4	5	7	4	3	3	26
Pediatrics	7	7	11	13	16	6	60
Surgery	6	0	4	6	7	2	25
Ob/Gyn	18	6	5	5	1	4	39
Monthly Total	35	18	27	28	27	15	150

By the records of CLC usage, the frequency has been increased after distribution of rooms to each department in February 2010. Many of departments conduct case presentation conference once a week at CLC. Also it has been observed that students doing assignments at CLC not only at the library. It shows the purpose of CLC establishment, having more space of learning was accomplished.



Figure 6 Student's Case Presentation in Paediatrics

Although the Project has supported to make textbook of Basic Life Support with using simulator in CLC, it was difficult after the fire accident in October 2010. It was due to taking time of processing rehabilitate the building such as recording burnt equipments, selecting re-procuring equipments and re-procurements. The final procurement finished in March 2010. Yet it was observed that each department conducted simulation training by them though the Project could not implement the clear support for them.

1.3.4. Activity1-4: Improving Content and Management of Medical Records

For improvement of medical records with a view to providing follow-up to and accumulating cases, activities in the second year were conducted, mainly consisting of improvement of medical record formats, introduction of examination result pasteboards, improvement of the medical record

management method, storage of X-ray films, and writing of medical records by medical students. The following sections describe details of activities in each year.

(1) Improvement of medical record formats

1) The Second Year

The medical record form initially used at the Setthathirath Hospital at the beginning of the second year was the one that had been introduced in the “Project for the Improvement of Setthathirath Hospital” (1999-2004), containing some items that were no longer used. Particularly, there were opinions for improvement of the “admission note” column. There were opinions that “it is difficult to use because, when there is much information to write, it does not have enough space for writing them.” Therefore, the hospital personnel proposed that the new form should indicate only items to write (such as the chief complaint, history of present illness, past history, family history, other personal history, system review, and summary) and has no frame so that spacing for each item can be freely changed. The items to write have been selected from the Case Presentation Guidebook created in the Project, which indicated they used the guidebook, and records written in this format were likely to smoothly promote accumulation of cases. In the second year, therefore, the revision of the medical record format was discussed at TMC and the first revision was made.

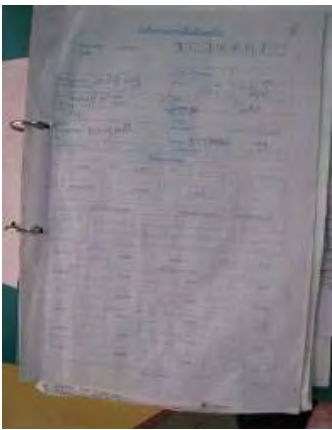


		
<p>First page: only describe the name of patient. Date of hospitalization, infection and blood type do not describe.</p>	<p>Hospitalization record first page : Hospitalization data, consultation, treatment do not describe</p>	<p>Hospitalization record second page: Physical Examination, family record do not write</p>

Figure 7 Existing Medical Record(September, 2008, before improvement)

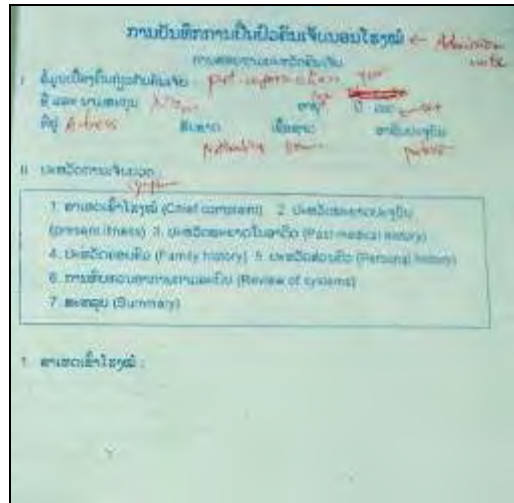


Figure 8 Description on Medical Record (February 2009, after improvement)

Remark: The area of admission-note is written only necessary essential subjects and leaves blank space for free writing.

2) The Third Year

The latest medical record format was finalized in July 2009. This format is characterized by the following, in addition to the revision made in the second year.

- The physical examinations at the time of admission used to be so detailed that many blank columns were found in the forms. Therefore, it had been revised so that only summary information (results of the examinations of vital signs, skin, head and neck, chest, abdomen, limbs and nervous system, a problem list, the most plausible diagnosis at the time of admission and diagnoses to be differentiated, examinations and nursing care instruction and final diagnosis) was included.
- In the previous format, prescription orders were described separately after progress notes. With this format, it was unclear at what stage and on what basis a certain order had been issued. Therefore, a new format resembling the Form No. 2 which used to be used widely in Japan as an outpatient medical record format was introduced.

(2) Introduction of forms to affix examination results

1) The Second Year

The baseline survey implemented between January and March 2008 and the observation by the JICA experts revealed that results of clinical examinations had not been entered in the designated columns in the medical records and they had been filed with the records randomly in terms of types and chronological order of examinations. To rectify the situation, TMC decided to introduce colored forms to affix result slips by examination in order to make it easy to monitor progress of patients.



Figure 9 Inspection Format on Medical Record (September 2008, before improvement)
 Inspection record which is banded at last page (Inspection order, receipt, inspection result)

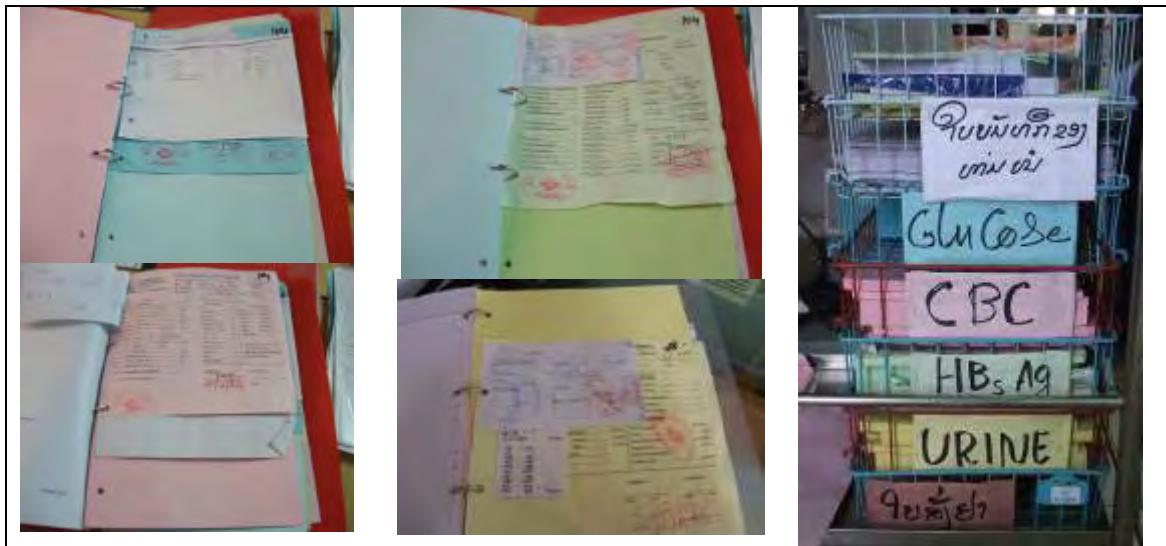


Figure 10 Introduction of pasted paper for inspection (February, 2009, after improvement)

As shown in the photographs above, the four colors used as the colors of the forms, blue, red, green and yellow, are the same as those of the examination result forms (examination slips), blue for biochemical examinations, red for blood cell counts, green for immuno-serological examinations and yellow for urine analysis, respectively. Therefore, these colors make it easy to sort out examination slips. The quality of paper used for the forms to affix examination slips was much harder and more durable than that used for the other medical record forms. Affixing the examination slips on such harder and more durable paper had an advantage of reducing loss of the slips. However, there was confusion and many mistakes were observed at the time of the introduction. Therefore, TMC decided to educate the hospital staff on the use of the forms using the hospital staff meetings and other occasions.

2) The Third Year

Since the revision of the medical record forms in the third year, the forms to affix examination slips have been glued to the back of a medical record form when it is created. As a consequence, all examination slips have been affixed to medical records in the wards.

(3) Improvement in the management of medical records

Accumulation of case records requires management of each patient with his/her own patient ID number and continuous accumulation of his/her records in a single medical record file. Such management and accumulation require continuous operation of a medical record management system, which is to be established by organizing the medical record repository so that past medical records of a patient can be located with the patient's ID number and preparation of a patient register so that it is possible to locate the record of previous consultation of a patient even if (s)he lost her/his patient card. Such medical record management system was once developed in the preceding project, "the Project for the Improvement of Setthathirath Hospital (1999-2004)." However, the operation of the system was found to be discontinued in 2008 because the space in the repository had been exhausted and the computer for managing the registry was too old for the use.

Under such circumstances, several discussions were held with the staff of the Department of Medical Affairs who was in charge of the management of medical records and, with indirect assistance from the JICA expert team, a plan to upgrade the medical record repository was formulated and the work to organize the repository was commenced. In addition, a new computer was procured and management of the registry with the computer was resumed in the second year.

(4) Storage of X-ray films

1) The Second and Third Years

Because of the shortage of storage space, Setthathirath Hospital asks patients to keep developed X-ray films at home. However, as it was impossible to use the films as reference at treatment and case studies in this system, discussion was held at a TMC meeting in the second year to recommend storage of x-ray films in the hospital.

As there was a plan to build a new ward block within the hospital, several candidate storage places were considered. However, the storage place has not been secured. As a method to store and use films required for the purpose of accumulation of cases, creation of digitized data from the films with digital cameras was proposed.

2) The Fourth Year

The report made by the hospital in the fourth year refers to the strong sense of ownership of patients for the X-ray films as one of the reasons for not being able to retrieve the films from the patients. The report also mentions many cases in which patients declare that they would not pay radiography fees when they are asked to return the films. Under such circumstances, the hospital had adopted a

method which had been proposed as an alternative until the third year of accumulating case data by taking photographs of X-ray films required or considered useful as teaching materials for case studies with digital cameras. The adoption of this new method has been confirmed by the Project experts.

(5) Entry in medical records by medical students

1) The Second Year

By the second year, it had become a general practice that D6 medical students made entries in medical records and the entry in medical records were increasingly being recognized as a duty to be performed by medical students in MTUs. However, different departments had responded differently to this issue. Therefore, the experts reminded the hospital of the three critical issues; 1) Making medical reports separately from the official medical records does not give students a sense of participating in actual patient care and lack of such a sense could lead them to irresponsible practice; 2) The use of correction fluid is legally problematic; and 3) Preceptors are responsible for the contents of students' entries. In response, the following three proposals were made at a TMC meeting on the entry in medical records by students in MTUs: 1) Medical students should be urged to make entries in medical records from the educational point of view; 2) The use of correction fluid should be banned; and 3) Preceptors should take responsibility for the entries made by students by countersigning the records. The proposals were approved at the meeting.



Figure 11 Draw up Medical Record by student and Training

2) The Third and Fourth Years

Following the agreement in the second year, monitoring of whether the three agreements had been followed or not was continued in the third and the subsequent years. In the survey of the medical records, 50 records randomly selected each from the inpatient medical records during the period between January and December, 2008, and those after the summer of 2009 (after the intervention) were compared.

The strictest measures are required for the ban on the use of correction fluid and countersigning the records signed by students by doctors or residents from the legal point of view. Complete compliance to the ban on the use of correction fluid had almost been achieved when the use of correction fluid which was

observed on 18 % of the records in 2008 was reduced to 2 % in 2009. Improvement had also been observed as the proportion of the records countersigned by preceptors among those signed by medical students had increased from 12 % in 2008 to 52 % in 2009.

However, the trend in both of the two issues reversed in fiscal 2010. It is very likely that the orientation to D6 students at the beginning of the practice in fiscal 2010 was not conducted appropriately because of the confusion at the time as the orientation was implemented simultaneously with the practice of D4 students. This observation was reported to TMC so that due attention should be paid to the orientation in the first term (which usually begins in October) of the school year 2010 in order not to repeat the mistake. What the project has focused on is continuous record-keeping of medical histories and findings of examinations by students because what is most important in keeping medical records is to make it a habit to enter medical histories and examination findings at the time of admission and during hospitalization without fail. This basic rule was hardly followed when MTUs were introduced in 2008. Since the survey in Fiscal 2010 estimated that 80 % or more of medical histories and examination findings were entered in records, it is considered that the entry in accordance with the basic rule has been established. It was also found that almost all the entries had been made by students.

Table 11 Medical record ratio 2008 to 2010

Description		2008 (%)	2009 (%)	2010 (%)	
Admission notes	Medical history (chief complaints)	2	70	100	
	Physical examination	Vital sign	2	28	82
		General appearance	--	--	56
		Skin	2	35	94
		Head	2	35	94
		Neck	2	35	92
		Chest	2	35	94
		Abdomen	2	35	94
		Extremities	2	35	94
		Nervous system	2	35	10
Signature		2	64	62	
Progress notes (written days/hospitalized days)	1/4>	20	0	0	
	1/4~3/4	30	0	0	
	3/4<	50	100	100	
Physician's counter signature after student's signature		12	52	10	
Usage of white fluid for correction		18	2	20	

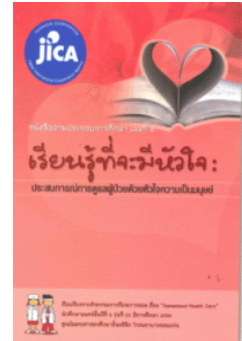
1.3.5. Activity1-5: Develop learning materials for case conference and reference for medical students/ residents

Interviews with the teaching staff and students revealed that a method which was considered routine in Japan of studying by reading standardized textbooks had not been established in Laos because of the critical shortage of appropriate learning materials written in Lao. Therefore, as a plan for the activities in the second year, it was decided to prepare reference books and materials in Lao and to provide them to medical students and intern/ residents so that these materials could contribute to the development of activities in medical education in future. A learning material prepared for case conference and reference for students and residents, in particular, is described.

(1) The Second Year

In collaboration with the Medical Education Center of the Khon Kaen Hospital, the Project decided to introduce “Heartful care” . “Heartful care” is a collection of essays written by medical students in relation to education of professionalism (including medical ethics and communication between patients and doctors) actively pursued in Thailand at present.

The book, containing many photographs showing how doctors are meeting children and aged people at hospitals, clinics, and communities, was considered to have good influence on Laotian medical students if they read it. After a lecture on professionalism including medical ethics was delivered in the medical education symposium, the book has begun to have good influence such as incorporation of the item in TOT in the second half of the third year.



「Heartful care」

This learning material was presented as guidelines for case conference which is considered as a pillar of the clinical education in this project. During the development of this material, a draft standardized format was prepared and discussion on it was held during the first Training of Trainers (TOT) in November 2008. The Departments of Internal Medicine, Surgery, Pediatrics and Obstetrics/Gynecology made their respective revision in accordance with their respective characteristics. One thousand copies of the finalized Lao version of the guidelines were printed and handed over to the Faculty of Medicine in February 2009. A training course on the use of the guidebook was implemented for the teaching staff during the second TOT workshop in March.



「Case presentation guide book」

A total of approx. 380 copies of the Case Presentation Guidebook prepared in the second year were distributed to students, residents and preceptors. While some have found the guidebook a useful reference for medical record entry, a problem that some students do not have the guidebook, partly because of the increase in the number of students, has been identified. In the third year, an additional 500 copies were printed and distributed to UHS and provincial hospitals.

The copies of this guidebook have been distributed at TOT at the provincial hospitals, which was commenced in the third year, and the basic TOT courses held at the teaching hospitals. The purpose of this distribution was to support the training and teaching provided by preceptors and medical staff involved in the training at the provincial hospitals, which are to admit medical students, by presenting the established standards identical to those used at the national level.

Table 12 Learning materials for students and interns (Produced in the second year)

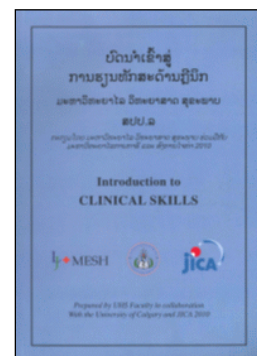
No	Name	Target	No. of copies	Overview
1	Heartful care	Students	1,000	Side reading materials for communication and medical ethics. Already completed.
2	Case presentation guide book	Students, residents, preceptors	1,000	Pocket size guide book for case presentation after seeing patients. They refer to it before presentation. Preceptors can assess students by assessment guide in the end of the guidebook. Already completed.

(2) The Third Years

There are three new teaching materials created in the third year: “UHS Basic Clinical Examination Study Guide” (formerly called “UHS Basic Clinical Competencies Study Guide” in the second-year report), “Diagnosis Algorithm Handbook” (formerly “Clinical Presentation Algorithm Handbook”), and “Set of Five DVDs on Basic Clinical Examination Methods.”

The newly created teaching materials which were meant to be used at the clinical training (Bedside teaching / case presentations) were ” UHS basic clinical skills study guide” , ” Clinical presentation algorithm handbook” , “Basic physical examination skills (DVD 5 volumes).”

With distributing and sharing “UHS basic clinical skills study guide” which is used at UHS, to preceptors through the Project, the project aims to let the preceptors understand the position of clinical training and its essence. This material has been used for long time by students and they used to it. With utilizing this material, it can be said the Project has effectively activated the existing resource and cooperated with Calgary University.



「UHS basic clinical skills study guide」

Table 13 Overview list of learning materials developed in the 3rd year

No.	Materials	Target	No of copies	Overview
1	UHS basic clinical examination study guide	D4-D6 students, preceptors	1,500	Study guide for basic clinical examination developed by Calgary University. UHS translated the English version into Lao to use clinical teaching. When the 2nd version was edited, an expert in the Project also contributed to it. Copies were printed by the Project.
2	Algorithm handbook for diagnostic process (Black Book)	D4-D6 students, preceptors	1,500	Black Book lists diagnostic algorithms for 103 health problems for clinical presentation curriculum developed in Calgary University. C/P translated the original booklet into Lao and edited it. The Project printed the copies in the size to put into the pocket on a white coat.
3	DVDs for basic physical examination	students, residents and preceptors	50	Movie materials for physical examination skills developed in Japan. Their scripts were translated into Lao. C/P compared Lao version with English version, developed narration and caption, and asked a film maker company to produce the movie files. It was burned to DVDs in copy-free format.

(3) The Fourth year

This material, “Clinical presentation algorithm handbook” was finished its printing in the end of the 3rd project year. Distribution was done in the year, yet, the workshop for how to use was not implemented. The 4th year activity on this material was focused on it. This was implemented in TOT. Preceptors of teaching hospitals reporting they are already start using it when they are at teaching. At the end of the Project, UHS requested its reprinting, and the Project showed the cost estimation for it.



「Clinical presentation algorithm handbook」

Although making textbook and DVD was finished in March 2010, the new academic year had started at that moment. Therefore, those materials were not able to be used in the curriculum. Yet the Setthathirath Hospital department effectively utilized those materials during the clinical trainings, such as showing DVDs to students. The Project has observed that each department recommended both students and residents/interns to watch those DVDs and conducting study meetings. Especially Surgery department responded it was very useful. In addition, those DVDs were installed to the library and students watching them were also observed.



「Basic physical examination skills (DVD 5 volumes)」

Decision on including those materials into the new academic year 2010 was not been taken. This was due to UHS condition was not enough to consider about it. Because UHS building was renovated, usual work at each department and faculty was stagnated. Therefore, reformation of curriculum in 2010 was minimized. Therefore, the Project included “how to use” topic into TOT advanced course conducted in each provincial hospital and Setthathirath hospital.

To sum up, the materials meet its purpose which was to improve both students and preceptors of Setthathirath Hospital knowledge and skills by effectively activated in the clinical teaching/ training. Materials made in 2nd project year also included concept implied its necessity by UHS and MOH. They are also inevitable knowledge for preceptors when students having trainings. By utilizing them appropriately, those materials will be considered its significant contribution to improve preceptors of Setthathirath Hospital to grow educationist.

1.4. Activity Achievement of Output 2

1.4.1. Activity2-1: Develop the mission of clinical training from the viewpoint of medical education at Seththirath Hospital

(1) The Second Year

1) Building of training vision and concept

Output 1 was redesigned to acquire basic clinical competencies, and proceed to the next based on opinions and ideas of Lao counterpart members. Moreover, in order to formulate the vision and concept of clinical training in accordance with this idea, a “Training Managing Committee” was composed of several members selected from Setthathirath Hospital and UHS. The committee identifies current various issues related to the clinical training and improves them as well as discusses on an implementation strategy of the new framework

2) Teaching theory/skills

It was initially designed that this project would put the most focus on this aspect of teaching theory and skills. The team proposed an idea of focusing on teaching skills (i.e. How to teach) because the teaching content (i.e. What to teach) is too profound to improve the training. However, it is a fact that when teachers themselves have not sufficiently acquired knowledge of “what to teach,” skills in “how to teach” cannot be completely developed. Therefore, necessity of new proposal was to introduce “what to teach” as a part of BCC as mentioned above. These tables below shows the contents introduced after the 2nd Project Year.

Table 14 Teaching theory and attitude to teaching based on it

Adult teaching and adult learning theory	<p>In many cases of medical education, the teaching environment becomes more constructive and promising when it is presumed that learners are already grown-ups. In order for adults (residents and students) to learn new things, it is important to clearly define the objective and target so that they are encouraged to study in order to achieve them. However, motivating them by vaguely showing the usefulness can not improve the effect of adult learning.</p> <p>【Specific activities】</p> <ul style="list-style-type: none"> • Leanings related to cases are more focused than systematic lecturing. • Preceptors learn teaching skills which considers incentives/motivation. • Training environment is improved.
Hidden curriculum	<p>Students and residents by themselves tend to learn what preceptors do not intend to teach. This is called “hidden curriculum.” In order to avoid negative hidden curriculum, preceptors are trained to always behave themselves as a “role model.”</p> <p>【Specific activities】</p> <ul style="list-style-type: none"> • Discuss on what is contained in negative hidden curriculum to be aware of • Analyze a close role model and group discussion • Preceptors reflect their behavior as “role models” and try to match their words with action. (Self-evaluation is necessary to examine whether words speak about the ideal while action shows the reality.)
Learners’ evaluation	<p>Evaluation of learning result: “Formative evaluation” has high educational effect as it feedbacks good points and bad points, and leads to motivation. On the other hand, “summative evaluation” is suitable for admission decisions.</p>

	<p>Teaching target and its achievement: Learners themselves perform self-evaluation and portfolio evaluation in order to integrate learning and evaluation.</p>																							
	<p>【Specific activities】</p> <ul style="list-style-type: none"> Utilization of teaching method and evaluation method using “taxonomy” that was developed to analytically understand learners’ (students/residents) current condition and the state of growth for academic evaluation. <table border="1" data-bbox="459 461 1385 1043"> <thead> <tr> <th rowspan="2">Type of individual target</th> <th colspan="2">Cognitive domain</th> <th>Affective domain</th> <th colspan="2">Psychomotor domain</th> </tr> <tr> <th>Knowledge</th> <th>Problem-solving</th> <th>Behavior</th> <th>Skill</th> <th>Action</th> </tr> </thead> <tbody> <tr> <td>Teaching method</td> <td>Reading, lecture</td> <td>Problem solving exercise, learning project</td> <td>Discussion, role model</td> <td>Demonstration observation, Artificial model, Role-play, Review by recording</td> <td>Trainers’ feedback, Field experience</td> </tr> <tr> <td>Evaluation method</td> <td>Multiple-choice question</td> <td>Oral exam</td> <td>Questionnaire</td> <td>Direct observation , Objective structured clinical examination (OSCE)</td> <td>Checking medical records, Evaluation by others</td> </tr> </tbody> </table> <ul style="list-style-type: none"> Residents and students who have not acquired BCC and attitude to patients are required to re-learn through feedback. 	Type of individual target	Cognitive domain		Affective domain	Psychomotor domain		Knowledge	Problem-solving	Behavior	Skill	Action	Teaching method	Reading, lecture	Problem solving exercise, learning project	Discussion, role model	Demonstration observation, Artificial model, Role-play, Review by recording	Trainers’ feedback, Field experience	Evaluation method	Multiple-choice question	Oral exam	Questionnaire	Direct observation , Objective structured clinical examination (OSCE)	Checking medical records, Evaluation by others
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Evaluation method	Multiple-choice question	Oral exam	Questionnaire	Direct observation , Objective structured clinical examination (OSCE)	Checking medical records, Evaluation by others																			
<p>Incentive</p>	<p>Preceptors motivate students and residents, and keep a very close watch at their learning. As only extrinsic motivation (penalty and reward) does not have a long-term effect, intrinsic motivation (intellectual curiosity and self-efficacy) needs to be strengthened.</p> <p>【Specific activities】</p> <ul style="list-style-type: none"> Preceptors objectively evaluate their own classes. Distinguish “extrinsic motivation” from “intrinsic motivation” Provide other motivating opportunities that fulfill intellectual curiosity and feeling of accomplishment by participating study sessions and skills training regardless of grades and universities, communicate with other relevant people, and clarify future target and learning objectives. 																							
<p>Experiential learning</p>	<p>The repeated cycle of “Plan” “Experience” “Reflection” and “Theory” enables learners to correlate theories with experiences. In this cycle, how to deepen learning will be modeled.</p> <p>【Specific activities】</p> <ul style="list-style-type: none"> Example of the first outpatient training <table border="1" data-bbox="459 1653 1372 1886"> <tbody> <tr> <td>Plan</td> <td>For chief complaint (stomachache), differential diagnosis is organized before interview.</td> </tr> <tr> <td>Experience</td> <td>Interview under preceptor’s observation</td> </tr> <tr> <td>Reflection</td> <td>Case presentation. Narrowing targets at digestive apparatus, female genitals, and kidneys, and checking the characteristics of pain and stages.</td> </tr> <tr> <td>Theory</td> <td>Explain different complaint by organs, characteristics, and stages</td> </tr> </tbody> </table>	Plan	For chief complaint (stomachache), differential diagnosis is organized before interview.	Experience	Interview under preceptor’s observation	Reflection	Case presentation. Narrowing targets at digestive apparatus, female genitals, and kidneys, and checking the characteristics of pain and stages.	Theory	Explain different complaint by organs, characteristics, and stages															
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Table 15 Teaching skills

Teaching using case presentation	Diagnostic reasoning and training of clinical decision making in examination and treatment enables to search for the better interview skills and physical examination skills.
Questions and feedback	Feedback to learners is very important in order to motivate learners and promote self-directed learning. Feedback skills should be trained steadily by role-playing.
Teaching of clinical examination (interview and examination)	Direct observation and feedback have high teaching effect. Preceptors need to practice standardized method themselves and become role models. The first step will start from describing work order which experienced clinical doctors do on a daily basis.

3) Hospital management

During the baseline survey, many students and residents expressed that their learning opportunity from patients are limited because nurses need to spend more time on administrative work such as documentation rather than patients' care. Considering this current situation, the Project proposed to add another expert who will be in charge of "hospital management" in order to discuss on hospital management, especially in the aspect of personnel management, and to lead to the hospital reform. However, as the total reform of Setthathirath Hospital was not the purpose of this project, and one senior volunteer and two JOCV nurses were posted for nursing management. Therefore, the Project confirmed the partial reform of the hospital management which was in need of the aspects of clinical trainings, with considering the role of each actor.

① Organization management: Confirmation of health professionals' assignment and training

Nurses, normally working in the closest position to the patients, are engaged in diagnoses in wards and outpatients department. Therefore it is important for them to aware that they are also a part of medical education in the sense of environment settlement, instruction and evaluation. Yet, the result of the baseline survey found that nurses' task was not directed to patients' care, which negatively affects on medical education. Regarding this point, the Project confirmed it was required to build a system where the hospital collaborates as a whole for the better training of doctors.

② Confirmation and training of instruction system

Hospital work is "a process of decision-making and problem-solving." Once the responsibility for diagnosis is defined, a flow of "instruction (test) → implementation (medication/treatment) → recording (process/result) → storing" is established. As all the patients' information are fundamental for residents and students to perform effective case conferences, diagnosis efficiency and cost-effectiveness can be also improved, which eventually leads to the improvement of such hospital function as prevention of medical accidents.

4) Documentation and sharing of the mission and concepts

The mission/concepts of the clinical training at Setthathirath Hospital were established at TMC, mentioned below, in June 2008. TMC also decided that MTUs should play a central role in the clinical training and practice at Setthathirath Hospital. MTUs had been introduced to four teaching hospitals by the University of Calgary previously. However, it has not been fully established. On the basis of this experience, the relevant personnel had come to share the vision that learner-centered clinical education should be developed through implementation of patient-centered practice.

Table 16 Bedside Training Principle and Concept

<p><u>Vision Statement</u> Medical Teaching Unit at Setthathirath: Learner-centered Education for Patient-centered Practice</p> <p><u>Mission for Clinical Education</u> To train clinical learners case presentation and following discussion among a team of physicians and students is the most effective and efficient method. If the contents of a case presentation are not reliable, however, strengths of such case presentation and discussion will be decreased. For that reason, basic clinical competences, such as communication skills, history taking and physical examination skills, are key issues to start clinical learning. Medical teaching unit (MTU) is the team for both taking care of patients and teaching younger physicians and medical students. Small group learning in MTU forms a small community to stimulate and motivate each other. In case presentations, the order and amount of information of history and physical should be standardized for smooth understanding of the audience. If MTU works well for both patients and learners, senior physicians can delegate the work to junior physicians or medical students. Again, to make MTU useful and helpful, basic clinical competencies are the key.</p>

1.4.2. Activity2-2: Establish a new committee (Training Management Committee: TMC) in charge of the clinical training

(1) The Second Year

The Training Management Committee (TMC) was established with the participants of the Training in Japan and clinical preceptors at Setthathirath Hospital as its members on June 19th, 2008. TMC's activities are for planning, consultancy and evaluation for the improvement of the clinical training at Setthathirath Hospital and matters discussed and agreed upon at TMC meetings are to be implemented upon approval from the director of the hospital.

A decision was made on the membership of the committee at the first TMC meeting. Since then, each clinical department has almost always been represented by a representative, though not always by the same person, in the meetings. TMC has been engaged in activities expected from the original purpose of its establishment as a wide variety of issues on the clinical training at Setthathirath Hospital have been discussed at TMC meetings.

The expert team members often led preparation for TMC meetings and discussions at the meetings. Since the third year, the responsibility of managing TMC has been transferred gradually to the Lao side as a measure to promote independence in the management of the committee, in consideration of sustainability of the project. In the 25th TMC meeting, a system in which the Lao side was to prepare agenda and minutes and experts were to provide assistance, if it was needed, was proposed for the following fiscal years. This proposal was put into practice after it was decided that the Foreign Relations Office should take charge of managing TMC meetings.

A discussion on the membership was held in the 26th TMC meeting and it was decided that TMC was to be operated by the members listed in Table 22 in the third and the subsequent years.

Table 17 2009 TMC Member

Position	Organization	Name
Chairman of TMC	Vice Director	Dr. Khampe PHONGSAVATH
Secretary of TMC	Chief of Medical Affairs	Dr. Phay DOANGSY
Members	Deputy Chief, Internal Medicine I	Dr. Bounmy SOMSAMOUTH *
	Deputy Chief, Outpatient Department	Dr. Sisomphone TANDAVONG *
	Internal Medicine II	Dr. Oukham APHAYGNALATH
	Deputy Chief, Pediatrics	Dr. Phouphet VISOUNALATH
	Deputy Chief, Surgery	Dr. Thavone CHANTHASONE
	Chief, OB/GYN/MCH	Dr. Bounthieng APHAY
	ICU/anesthesiology	Dr. Somphet CHANDAMANY
	Deputy Chief, ER	Dr. Phimseng PHITHANOUSONE
	Deputy Chief, Medical Affairs Section	Dr. Kounlathida SAYMONGKHONE
	Representative for the Library	Dr. Chanthone SAYSANAVONG
	Foreign relation office	Dr. Kongsinh AGGHARATH
	Foreign relation office	Ms. Mimala PATHOUMXAD
	Academic Affair, UHS	Dr. Ketsomsouk BOUPHAVANH *
	Department of Postgrad, UHS	Dr. Oua PHIMMASARN *
Japanese Experts of the JICA Project		

*Participants of training in Japan in April 2008

(2) The Third Year

The above-mentioned issues agreed upon in the second year were revised and an agreement was reached on the basic issues shown in the table below for holding TMC meetings in the third year. Because preceptors had busy schedules, it was made possible to replace a member with another person if the member was not available or had been transferred. Meanwhile, as hospital staff has become well aware of the TMC.

Table 18 Basic Agreement on TMC

Friquently	Once in week	
Time	2 PM to 4 PM	
Attendance	Dr. Khampe PHONGSAVATH (Chair)	Director
	Dr. Phay DUANGSY	Medical Affair
	Dr. Bounmy SOMSAMOUTH	Internal Medicine I
	Dr. Chanthone SAYSANAVONG	Library Committee
	Dr. Phouphet VISOUNNARATH	Pediatric
	Dr. Sisomphone THANDAVONG	OPD
	Dr. Somphet CHANDAMANY	ICU
	Dr. Bounthieng ABAY	OB / GYN
	Dr. Khammek SINGHAVONG	Surgery
	Dr. Phimseng PHITTHANOUSON	ER
	Dr. Kongsinh AKKHARATH	Foreign Relation
	JICA Expert / MESH	JICA/MESH
	Dr. Bounsai THOVISOUK	JICA/MESH

1.4.3. Activity2-3: Hold TMC meetings

(1) The Second Year

Since the first TMC meeting held in June 2008, a total of 26 TMC meetings were held in the second year. It was revealed at the beginning of the activities for the third year that Seththirath Hospital by itself had organized the 27th TMC meeting on March 27th.

Table 19 TMC Schedule in 2nd Year

No.	Date	Attendance*	No.	Date	Attendance*
1	19 June, 2008	13	14	9 October, 2008	14
2	27 June, 2008	11	15	24 October, 2008	11
3	4 July, 2008	11	16	7 November, 2008	11
4	11 July, 2008	14	17	14 November, 2008	14
5	17 July, 2008	12	18	21 November, 2008	11
6	25 July, 2008	6	19	5 December, 2008	10
7	1 August, 2008	7	20	12 December, 2008	15
8	18 August, 2008	12	21	30 December, 2008	11
9	22 August, 2008	9	22	16 January, 2009	16
10	29 August, 2008	13	23	4 February, 2009	15
11	8 September, 2008	11	24	18 February, 2009	17
12	19 September, 2008	11	25	6 March, 2009	16
13	29 September, 2008	11	26	13 March, 2009	18

* Attendance included Counterpart and Expert

(2) The Third Year

A TMC meeting had been held on every Friday until July of the third year. Then, the day of TMC meetings was switched to Wednesdays at the request of the TMC members because there was not student practice on Wednesdays. The dates and the numbers of participants of the meetings were as follows:

Table 20 TMC Schedule in 3rd Year

No.	Date	Attendance*	No.	Date	Attendance*
28	3 April, 2009	9	43	7 October, 2009	7
29	12 June, 2009	17	44	14 October, 2009	4
30	19 June, 2009	16	45	21 October, 2009	11
31	10 July, 2009	13	46	28 October, 2009	9
32	17 July, 2009	11	47	11 November, 2009	6
33	24 July, 2009	8	48	18 November, 2009	10
34	31 July, 2009	10	49	1 December, 2009	8
35	7 August, 2009	9	50	23 December, 2009	12
36	19 August, 2009	4	51	30 December, 2009	10
37	26 August, 2009	14	52	6 January, 2010	10
38	2 September, 2009	10	53	18 January, 2010	14
39	9 September, 2008	10	54	29 January, 2010	10
40	16 September, 2008	12	55	24 February, 2010	6
41	23 September, 2009	12	56	3 March, 2010	14
42	30 September, 2009	13	57	12 March, 2010	12

* Attendance included Counterpart and Expert

(3) The Fourth Year

In the fourth year, TMC meetings were held as described in the table below:

Table 21 TMC Schedule in 4th Year

No.	Date	Attendance*	No.	Date	Attendance*
58	31 March, 2010	10	65	21 July, 2010	15
59	21 April, 2010	8	66	28 July, 2010	12
60	5 May, 2010	6	67	11 August, 2010	7
61	19 May, 2010	13	68	8 September, 2010	10
62	2 June, 2010	18	69	22 September, 2010	8
63	23 June, 2010	16	70	25 October, 2010	15
64	7 July, 2010	17			

* Attendance included Counterpart and Expert

It is worth noting that the 58th to 60th meetings were held while the Japanese members were not available.

1.4.4. Activity2-4: Accumulate the minutes of TMC meetings

(1) The Second Year

Documentation of processes, experiences, results and lessons learned from the clinical training:

In the second year, activities for “accumulating the minutes of TMC meetings” were regarded as “documentation of the processes, experiences, results and lessons learned from the clinical training.” TMC was established simultaneously with MTUs. Then, discussions were held on schedules and teaching staff in charge of the practice at each clinical department and frameworks of the practice were developed. Documentation of such more practical activities has been implemented in addition to the activity of accumulating the minutes of TMC meetings.

All such processes, experiences, results and lessons learned from the activities related to the clinical training have always been discussed at TMC meetings and the outcomes of the discussions have been recorded in the minutes of each meeting. The table below shows the major documents related to the processes of the clinical training which were prepared individually in the second year.

Table 22 Major Note at Bedside Training

Schedule	Source	Contents
June, 2008	No.1 TMC Minutes	Purpose of TMC establishment and Members
June 2008	No.2 TMC Minutes	Bedside Training Principle and Concept in Setthathirath Hospital
November, 2008	No. TOT Workshop Report	Case presentation and Medical record Guide Line
Ditto	Ditto	Suggestion for D6 hospital Training by Each Subject, Trainer and UHS meeting
February, 2009		Case Presentation Guide Book (Final)

The table below shows the documents on the experiences, results and lessons learned from the clinical training.

Table 23 Experience, Result and Lesson on Bedside Training

Schedule	Source	Contents
November, 2008	No. 1 TOT Work Shop Report	Actual situation of each subject MTU and planning for D6 bedside training
December, 2008		Trainer Evaluation report by D6 student's questionnaire
March, 2009	No. 2 TOT Work Shop Report	Actual situation of MTU after starting of D6 bedside training and improvement plan
March, 2009	Progress Monitoring Report	Evaluation report on bedside training at Setthathirath hospital and UHS which was done by out sourcing evaluation team for student, doctor and bedside trainer.

(2) The Third Year

The most significant output in the third year related to the subject of this section is that the C/P side had begun preparing the minutes of TMC meetings. Until the 29th meeting held on June 12th, 2009, the minutes had been prepared in English by experts and project staff and distributed to each clinical department after being translated into Lao. At that time, the project team was considering adoption of a policy of transferring the duty of preparation of the minutes to the Lao side in order to raise the sense of ownership of TMC of the C/P side and to improve sustainability of the project. The C/P held a TMC meeting by them in April 2009 while experts were not available. This event had led to an agreement on preparation of the minutes by the Lao side from the beginning of the third year.

In the beginning, the project team inspected the minutes translated from Lao into English and made corrections. However, this practice was later replaced with reading the minutes twice, in the beginning to review the previous meeting and the end to review the current meeting, at TMC meetings in order to advance technology transfer on management of the meeting.

Meanwhile, each department was obliged to make report on MTUs in the beginning of each TMC meeting and the reports were included in the agenda of the meeting. These measures are taken in order to strengthen horizontal links among the clinical departments.

(3) The Fourth Year

As in the third year, activities in the fourth year were carried out with the intention to enable Setthathirath Hospital to continue to hold TMC meetings independently after the completion of the project.

Consideration was given to the proceeding of the meeting so that each clinical department presented improvement made on the basis of the discussion in the previous meeting, new problems and measures taken to the best of their capacity against the problems when presenting the MTU operation report. The experts and the chief of the Foreign Relations Office who played a significant role in the management of TMC had a consultation and decided to establish certain standards for the way to present the reports. It is recommended that the minutes of a TMC meeting should be distributed to each department preferably on Friday of the week of the meeting or, at latest, on Monday of the following week and shared among the department staff at the regular meeting in the morning. It has been observed that this procedure has been put into practice almost fully. The actual discussions are

led by the Foreign Relations Office of the hospital and the experts participate in the meetings almost as observers. Ninety-five (95) percent of the discussions are in Lao.

The main agenda in the fourth year are activities of MTUs at each department, problems arising from the activities and management of CLC. Now that the allocation of equipment to CLC has been completed and transfer of the management of CLC to the hospital has commenced, a decision has to be made on how to use and maintain CLC. What has been often mentioned as an example of the issues in the activities of MTUs by many departments is what measures should be taken against absence without leave of medical students from the practice. In fact, solution to this problem requires discussion with UHS. However, because a person in charge of MTUs at UHS rarely attends TMC meetings, discussion with UHS on this issue has not been realized and the discussion at the hospital has been focused on how to handle the problem at hand..

In the past, TMC meetings used to be a place to share problems faced by individual departments. This development of the discussion mentioned above indicates that the hospital is in the process of changing its stance toward training from independent management of the training by individual departments to considering the management and operation of the training as an issue of the hospital as a whole. This change in the perception suggests that Setthathirath Hospital has potential to improve its capacity to operate clinical training.

The same issue was raised and discussed in the session on the theme, “Relationship between the Teaching hospitals and the Medical Universities” in the third Medical Education Symposium. The members of TMC of the Setthathirath Hospital were actively involved in the discussion on this issue at the symposium. It is hoped such discussion involving the TMC members to provide an opportunity to strengthen cooperation between the staff involved in operation of the training and people in charge of the training at UHS.

1.4.5. Activity2-5: Improve the function of Medical Teaching Unit (MTU)

(1) The Second Year

Practical activities to improve the function of MTUs, which had already been introduced by the University of Calgary, were started in the second year. The University of Calgary named a model “MTU activities” in order to show that this model is “different from the conventional clinical education”. This model is to make examinations and treatment of patients by a team of medical students, residents and preceptors into an educational and learning opportunity and introduced them to the hospital. Therefore, MTU activities include examinations/treatment, rounds, presentation of cases at case conferences and entry in medical records. Keeping records of these activities as a routine activity program and clear statement of preceptors in charge have become new obligations.

1) Establishment of MTUs and definition of students’ duties

In the beginning, each department was asked to establish the number of MTUs. In accordance with the response from each department, two, three, two, two and three MTUs were established in the Departments of Internal Medicine, Surgery, Pediatrics and Obstetrics/gynecology and ICU,

respectively. TMC designed a program in which groups of 10 D6 UHS students assigned to the Departments of Internal Medicine, Surgery, Pediatrics and Obstetrics/Gynecology in rotation participated in the practice at the Emergency and ICU from the department they were assigned to. The program was approved by the director. After the implementation of this program commenced, D6 students assigned to different departments have been found working simultaneously in the Emergency and ICU. A decision was made at TMC that D6 students were to assist doctors on duty at the Emergency.

2) Visualization of the activities with the use of MTU whiteboards

Then, a whiteboard was provided to each department to show its activity program. The Department of Internal Medicine used it to show weekly schedule of the preceptors and the names of the residents in charge of MTUs. The Department of Surgery used it to show membership of the teams. The Department of Pediatrics has started using it to display hourly schedule. (The schedule included lectures on cases.) At about the same time, each department began increasing the opportunities for preceptors and medicals students to hold small case conferences. Not only the conference rooms but also the medical offices and the library have been used as venues of the conferences and competition in reserving a room for the conference has been often observed. These observations prove the increase in the MTU activities.

The interview survey of D6 students conducted by the experts in February 2009 shows that the students considered the MTU activities themselves as fruitful learning activities. Meanwhile, some students mentioned insufficient instruction because of the techniques used by preceptors or time limitation. There have been cases in which properties of students on duty were stolen. These facts suggest emergence of new problems.

The lockers procured in the third year were provided as a measure against the thefts. The problem of the shortage of rooms for conferences is being solved with the completion of the construction of CLC. Meanwhile, if the insufficient instruction is a technical problem, TOT was to contribute to the solution of the problem. However, if it is a problem of time on the part of preceptors, it will be difficult to solve it in this project alone because solving this problem requires an increase in the number of preceptors and a reduction in time of absence of preceptors in various training.

(2) The Third Year

1) The concept of MTU

In the third year, implementation of activities to further improve MTUs which had been established in Setthathirath Hospital and which had commenced their activities was continued. In addition, implementation of TOT at the provincial hospitals was commenced and the activities to facilitate establishment of MTUs in the provincial hospitals were also implemented.

The students who had taken the practice as D6 students from November 2008 to August 2009 and the students who had started the practice in January 2010 were urged to form MTUs. At the same

time, points to be improved in the previous operation of MTUs were identified. The main functions of MTUs so far had been controlled mainly by four factors; 1) team composition, 2) activities by the team (rounds and conferences), 3) job description of each member and 4) schedules of duties and training programs. However, there emerged a concern. Even if TMC held meetings with the intention to improve MTUs at Setthathirath Hospital, the meetings may not provide opportunities to review the MTU activities effectively because the hospital staff may not be able to shake off the perception that “We have adopted MTUs pretty well.”

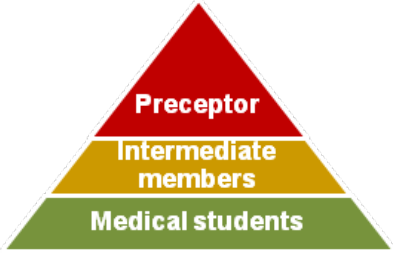
The first Medical Education Symposium held on January 6th. 2010, provided the first opportunity for the four teaching hospitals to present their MTU activities at the same venue. The other teaching hospitals had reportedly introduced MTUs before Setthathirath Hospital did so. However, interpretation of the concept of MTU differed among them on various points; *e.g.* presence/absence of 1) differentiation of the job description between medical students and residents, 2) pre-decided schedules for duties and training, 3) students’ involvement in examinations and treatment at the emergency and outpatient departments and 4) medical students on duty for emergency medical care 24 hours a day.

When TOT was implemented at the four provincial hospitals, a question was raised on how to compose MTU teams in the first place. In accordance with the concept of MTU adopted for this project, a MTU team is composed of four groups of members, *i.e.* groups of residents at each clinical department (several years after graduation) and residents in family medicine (one to two years after graduation) between the groups of medical students and preceptors. Although it is not absolutely necessary for an actual MTU team to have these four groups, it is quite likely that the MTU model would not work without a group in the middle. Since there were no residents at the clinical departments in the provincial hospitals, the question raised at TOT was interpreted as a suggestion that young doctors had to assume the role which was supposed to be that of residents. As the project team had not come up with clear answer to this question, discussion on it was held in TOT in the fourth year.

2) General criteria for the evaluation of MTUs

In the previous section, existence of the four underlying concepts for the evaluation of MTUs’ functions was indicated. However, the discussion in the Medical Education Symposium and the review of TOT at the four provincial hospitals led to the recognition of additional three key issues; 1) 24-hours-a-day examinations and treatment by medical students at the emergency outpatient department, 2) management of learning activities when MTU members are not engaged in the program and 3) evaluation at the end of each rotation. The seven points identified above are summarized in the table below.

Table 24 Factors to Improve MTU System

Factor	Features of the factor	Viewpoints for improvement
<p>1. Team formation</p>	<ul style="list-style-type: none"> Usually formulate a team of 5-10 members. The team consists of 1-2 preceptor(s), 1-3 intermediate member(s), and several medical students. Each team is incharge of 10-30 patients when involved in ward practice. 	<ul style="list-style-type: none"> How many students are allocated to each MTU in what way? Who are teachers? How many students does each teacher supervise? Is there any intermediate member between students and teachers? What kind of background does the intermediate member has? <ul style="list-style-type: none"> Residents in each department Family medicine residents (previously called as interns) Young staff (sometimes less salary than normal staff) Volunteer doctors (normally doctors just graduated from UHS. Heavy workload but no salary)
<p>2. Teaching activities by the team</p>	<ul style="list-style-type: none"> Work round: The intermediate members lead the ward round with medical students. After pre-round, students go to the ward to check all the patients and present patient cases. Direction of the treatment or management is decided in work round. Attending round: The preceptor (attending doctor) does the ward round for selected cases for teaching purpose. Sometimes combined with a conference. The length of case presentation can be short or long, depending on the contents to teach. 	<ul style="list-style-type: none"> Attending round is sometimes included in work round. Even in such a case does the preceptor maintain the authority of intermediate member? Are teaching skills of the intermediate level doctor(s) acceptable? Do medical students take certain level of responsibility for patient care? Do the teachers use different lengths of case presentations depending on the situation (especially pay attention not to use long case presentation when time is limited)? Are case presentations done the way case presentation guidebook says?
<p>3. Job description</p>	<ul style="list-style-type: none"> Job description for students, intermediate members, and preceptors is specified. These job descriptions can be varied depending on each hospital, each department, each context, or achievement level of each physician. 	<ul style="list-style-type: none"> Is the actual job done along with job description? Do intermediate level doctors have appropriate authority? Does the preceptor supervise teaching by intermediate level of doctors and learning by medical students. Does the preceptor understand his/her responsibility for patient care and try not to impose too much responsibility on intermediate level doctors. Are these job descriptions planned to be revised regularly.
<p>4. Program scheduling for the job and undergraduate</p>	<ul style="list-style-type: none"> Each member in MTU model should have detailed schedules of what time they start pre-round and work round. Medical students and intermediate level 	<ul style="list-style-type: none"> How to manage starting and finishing times and how much hours of working. How to manage scheduling and attendance of preceptors/medical

Factor	Features of the factor	Viewpoints for improvement
practical training.	<p>doctors have to adhere to schedule of start and finish times. Preceptors have to supervise the scheduling.</p> <ul style="list-style-type: none"> • Preceptors have to pay attention to any negative influence from too much work resulting in damaging health situation or decision making ability. • Program schedules for medical students and residents must be made known not only to the hospitals but also to UHS. 	<p>students.</p> <ul style="list-style-type: none"> • How does UHS manages if proper teaching sessions are done in programs of all the hospitals?
5. 24-hour on duty in emergency department	<ul style="list-style-type: none"> • 24-hour on duty system by medical students helps human resources especially in the timing only duty doctors are working. Such system enables medical students to cultivate responsibility and ownership for the future purpose. 	<ul style="list-style-type: none"> • Do medical students seamlessly do some kind of work for 24 hours? • Does the hospital provide beds and security at night for 24-hour work by medical students?
6. Management of learning in extra hours	<ul style="list-style-type: none"> • Preceptors should motivate and check up medical students to learn by themselves. • Teaching hospitals should ensure appropriate environment for clinical education such as library or internet connection. • Provincial hospitals should support and take care of students life, such as dormitory and students' economical situations. 	<ul style="list-style-type: none"> • How about the management for start and finish time or how many hours students are working? • How about the situation of provision of library or internet facility in a teaching hospital? • Is the dormitory in a provincial hospital in appropriate environment? • Can students maintain certain level of life while in the provinces?
7. Assessment in the end of rotation	<ul style="list-style-type: none"> • Teaching hospitals have to assess knowledge, skills and attitudes of each student during each rotation and submit the data to UHS. • Teaching hospitals have to conduct evaluation of how students feel the teaching at the end of each rotation and submit the data to UHS. 	<ul style="list-style-type: none"> • Is the student appropriately assessed? • Is the teaching program appropriately evaluated from students?

The experts and others conducted evaluation surveys at the three provincial hospitals, Champasak, Savannakhet and Luang Prabang Provincial Hospitals, using the criteria mentioned above in February and March 2010.

(3) The Fourth Year

1) Improvement of MTU function

Because of the concern recognized in the third year, MTU function at Setthathirath Hospital was improved mainly through discussions within TMC. Discussions on MTUs were held mainly during the presentation of reports by the clinical departments at TMC meetings. Every possible effort was made for creation of a common awareness about the concern mentioned above during these discussions. In the other teaching hospitals, the concern mentioned above was shared within each

hospital in the discussion at TOT implemented in the fourth year. It was also possible to have time to discuss about the concern in TOT.

Job Description has naturally become a focus of discussion as the number of students continues to increase. It is without doubt that each hospital will have to continue to address the issue of how to accommodate increasing D4 students in MTUs.

2) Management of MTU scheduling

Although it took a little bit time in some departments, resulted from observation round of Japanese Experts in the third and fourth project year, in the beginning of the fourth year, records below were taken.

Schedule renewal of preceptors (While students were there)	IM 1/week, Surgery 1/week, Pediatric 1/week, OB-GYN 1/week – 2~3/month Others OPD 2/months ER 1/month
MTU structure and time tables	Update according to students rotation

There are 3 purposes of MTU white board. They are 1) to clarify structure of MTU to both students and teachers, 2) to clarify Timetable during their clinical training such as round, and case presentation, 3) to smooth out communication between students and preceptors by showing preceptors' schedules during the week. This activity met its purpose because the schedules were updated as it was shown above. Therefore, it can tell that schedule management has done well.

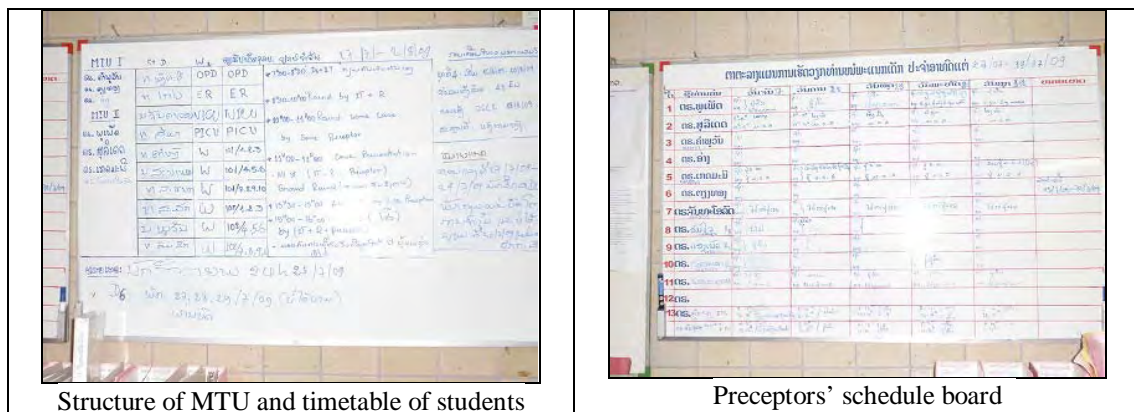


Figure 12 MTU schedule of Paediatrics

Although only a basic instruction in the beginning about what to write was done by the Japanese experts, the concept of this MTU whiteboard and purpose above was understood, and it was observed from how they wrote, though how to write were different in each department. These whiteboard showed that MTU concept was rooted to each department and they have adjusted to their own situation.



Figure 13 Descriptions of Each Department

Yet there is still a problem and this is accuracy which is regardless to their frequency of updating. This problem solution largely relies onto willingness of preceptor individuals. Indeed, there were complaint from students because of not adjusting the board after changing of their schedule, this whiteboard did not show their preceptors' proper schedule. Especially it was shown in Surgery department in the beginning of the 4th project year. This happened because indeed the particular preceptor willing to introduce the system had been dispatched to France and left Setthathirath Hospital. After that, this system – updating whiteboard became superficial. To solve this problem, the Project instructed to the preceptors taken place after the preceptor. Also stimulation of neighbor department enhanced improvement of Surgery preceptors. Internal Medicine MTU was very active and a preceptor had behavior change.

1.4.6. Activity2-6: Improve the management system of the Library

(1) The Second Year

The activities “to promote Evidence-Based Medicine (EBM)” in PDM ver.0 resulted in 1) provision of books which were more practical and with smaller language barrier than those already in the library to the hospital library and 2) commencement of assistance for the improvement of the management system of the library associated with the provision of books, in the end. The original design was developed with the preconditions that demand for access to reference books and information was potentially high and that the medical personnel read books regularly. However, the observation made in the second year revealed the condition that the demand for the access was low and the medical personnel did not read manuals, textbooks or medical journals regularly. These findings of the observation were further supported by the fact that preceptors and residents had rarely been seen reading something while providing medical services and by the extremely low level of the use of the library.

It was revealed as a cause of this situation that the library was not useful in finding answers to practical problems because many books in the library in Setthathirath Hospital are written in English or French (not all students or teaching staff can read them) and many of them are highly specialized. Therefore, it was decided to purchase standard medical textbooks and manuals written in Thai, which is similar to Lao as it was mentioned in the section 1.3.2. When selecting books to be purchased, discussion was held with representatives of the Departments of Internal Medicine, Surgery, Pediatrics and Obstetrics/Gynecology in TMC and mostly books on basic physical examination skills and

clinical interview techniques for each clinical department were selected so that the books would contribute to acquisition of standardized basic clinical competence, a component of Output 1.

In order to develop an environment which would enable full usage of the provided books, the counterpart established the Library Committee and the project side provided assistance in reorganizing and cleaning bookshelves and changing the layout in the library including moving the copier. The committee made a decision on the library hours and posted them on the entrance. As a result, a group of staff who has failed to find a venue for conference elsewhere have been found using the library for their study. As this example suggests, it seems that the awareness of the hospital staff about the library space has been raised and the use of library has increased.

Absolute necessity of developing an environment enabling commencement of a book lending system, which did not exist then, was recognized for the library to perform its expected function and to have more users and the work to establish this lending system has been implemented step-by-step since the third year.



Figure 14 Library of Setthathirath Hospital (February, 2009 – after improvement)

Left: International classification label fixed on book and arranged

Right: After changing the layout, the using ratio increased by good atmosphere

(2) The Third Year

From the third year on, the activities to improve the management system of the library were recognized as official activities as they were mentioned in the PDM. The provision of books to the library implemented in the second years was continued in the third year. Operation of a system of lending library books commenced in the third year.

In order to improve the access to the provided library books by doctors and students, review on the systems of lending and managing library books was implemented in the third year. In practice, rules on use of the library were developed and the library hours were set from 08:30 to 16:00 with an hour of lunch break. The rules were drafted by the Library Committee and became effective in July 2009 upon approval of the director of the hospital. The library has since been operated in accordance with the rules.

A person who intends to borrow books is allowed to do so after registering the borrowing in the lending book kept at the counter. The lending book is used for identification and management of books which were lent. A borrower has to write down titles of books, date of borrowing, his/her name, place of work, contact number (mobile telephone number), signature at the borrowing and signature at the return in the lending book. The contact number written in the lending book prevents delay in returning and loss of books. If a borrower fails to return books on time, the librarian makes a call at the contact number of the borrower. In reality, such a call rarely happens. The rule on the penalty for loss of and damage to books has been provided and, in accordance with the rule, a borrower who lost or damaged a book has to pay three times the purchase price of the book.

In the process of drafting these rules, opinions of not only the members of the Library Committee but also several medical students who were potential borrowers of library books were incorporated. The rules are meant not only for prevention of loss of books but also to maintain a stock of books best suited for the requirement of medical students.

The project side provided a computer for the librarian in the end of the third year from the stock of the equipment to be provided. A gradual increase in the use of computer for the library management, *e.g.* management of book lending and books on the shelves and keeping user statistics was observed immediately before the completion of the project.

(3) The Fourth Year

In addition to the computer provided in the third year, a desk-top computer was provided for the use by students by the project and installed in the library in accordance with the agreement reached in a discussion within TMC. The installation of the computer has enabled access to a wider range of medical information. Before the installation of the computer, there was a concern that it might be used for purposes other than medical education. However, since preceptors and TMC considered the significance of access to more information by students outweighed the concern, the computer was installed. The desk-computer was actually installed in the library in January 2010. Since then, the number of library users has increased significantly. Since the beginning of their practice, students have accounted for 80 % of the library users. The increase in the number of library users is accompanied by rapid increase in the number of book borrowers and books lent. From the observation mentioned above, it can be concluded that many users come to the library not only for the purpose of using computer for reasons not related to their study and that the existence of the computer has drawn more attention to the library.

The table below shows the breakdown of the numbers of library users and books lent after the launch of the book lending system.

Table 25 User of Library, Rentals from April 2009 to September 2010

Month	Number of User		Rental User		Rental Book	
	Total	Student	Total	Student	Total	Student
April	91	55	No Rental System Establish		No Rental System Establish	
May	173	64				
June	203	42	22	20	26	24
July	176	75	24	14	29	17
August	239	97	46	43	49	45
September	158	24	23	21	44	41
October	88	2	23	20	18	15
November	230	2	23	5	30	13
December	74	4	7	4	12	9
January	235	64	76	76	146	146
February	418	368	75	75	155	155
March	377	328	80	72	157	148
April	291	259	58	54	118	109
May	190	175	46	43	94	91
June	413	382	78	76	139	135
July	428	410	112	112	139	139
August	232	214	54	54	90	85
September	134	109	18	17	22	21
Average	231	149	48	45	80	75

(4) Human resource for library

1) The Third Year

The problem of non-availability of the librarian at the time of high demand for library use (*e.g.* during the lunch break) was noted in the third year. The library has only one official staff and all the library work depends on this staff. Therefore, it is difficult for the librarian to leave the library during the library hours even if she/he has another business to attend. A part-time staff was employed at the library as reinforcement for a short period in the second year. However, since the part-time staff worked only two days a week, little improvement was noted. This issue was raised several times in TMC meetings. Even a proposal of assigning a staff from the Secretary Department to the library to assist the librarian was presented. Nonetheless, the changes described in the following paragraph are emerging.

2) The Fourth Year

The current system at the completion of the project is the same as that up to the third year. However, changes have been observed in the attitudes of the librarian and the part-time worker since the time when the library rules were developed, the number of book lending was increased to a certain level and the use of the library by students started increasing. At present, either the librarian or the part-time worker is always available at the counter except for the designated break. The computer provided in this project is used for recording book lending. Independence and motivation emerged in the way they work. These changes in the attitude are considered partly because the establishment of the lending system and clearly defined rules have made the terms of work of the librarian clear.

1.4.7. Activity2-7: Establish Internal Monitoring System

(1) The Second and Third Years

Members of the Internal Monitoring Committee were appointed in March 2009. The Academic Affairs Department of UHS finished compiling the results of the internal monitoring on April 19th. The Internal Monitoring Committee held a meeting on June 9th and held a discussion on the results of the internal monitoring and how to implement the internal monitoring with the participation of Mr. Somchat Xaysida of the Department of Organization and Personnel and Mr. Phisith Phoutsavath of the Department of Curative, the Ministry of Health (MOH).

Table 26 Internal Monitoring Member List

<ul style="list-style-type: none"> • Dr. Phouthone Sitthideth (Chairman, UHS Deputy Director, After Graduation Education) • Dr. Alounnadeth Sithiphanh (UHS Deputy Director, Student affair) • Dr. Manivanh Souphanthong (UHS Director, Faculty of Medicine) • Dr. Vongphet Louangxay (UHS Deputy Director, Faculty of Medicine) • Dr. Bouthavong Phengsisomboun (UHS, Director, Accademic Affair) • Dr. Ketsomsouk Bouphavanh (UHS, Deputy Director, Educational Affair) • Dr. Khampe Phongsavath (Setthathirat Hospital, Deputy Director) • Dr. Bounmy Somsamouth (Setthathirat Hospital, Deputy Cheaf, Internal Medicine) • Dr. Hirotaka Onishi (MESH Project Leader)

What was considered as significant problems in the results of the internal monitoring conducted by the Academic Affairs Department of UHS were described in the table below. These problems can be summarized into 1) insufficient autonomy of UHS, 2) insufficient leadership and governance of MOH and UHS and 3) low level of specialization (in the pedagogical sense) in the educational activities at UHS.

Table 27 Significant Problems in the Results of the Internal Monitoring

<ul style="list-style-type: none"> • Lack of bedside element on medical ethic education • Lack of bedside technical teaching • Lack of optional Curriculum • Irregular meeting of curriculum committee • Relation between educational out come and evaluation method • Lack of admission policy • Enroll student, especially control of special student number • Lack of concerning education by representative of student • Lack of recruitment of teacher's policy 	<ul style="list-style-type: none"> • Lack of appropriate lecture room and library • Lack of monitoring system for number of bed and student • Lack of computer number • Lack of research activities • Lack of educational professionalism • Lack of program evaluation mechanism • Lack of feedback system between Lecture and student • Lack of transparency system for approval of educational affair • Lack of business mind on clerk
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It seemed difficult to request actions against such many problems identified in the internal monitoring to MOH and affiliated institutions under the current conditions in which UHS had not established its internal structure. Dr. Phouthone Sitthideth who had been serving as the chairperson of the Internal Monitoring Committee was dismissed from the post of the vice president. Although

the internal monitoring provided many important insights, it is considered difficult to continue to implement it in the similar way for the reasons mentioned above.

Medical Education Symposium was held on March 10th, 2010. In the morning, the plan on human resource development in the health sector for the period between 2006 and 2010 promoted by MOH was reviewed. The discussion was focused on the discrepancy between the result of the need survey on medical human resources conducted at sites of medical practice that UHS had to produce 150 doctors per year and the actual program implemented at UHS. Although MOH recognized the number of students actually admitted to UHS exceeded this figure, it issued a statement implying some force beyond its control was in action on the issue. Therefore, it was understood that it was difficult for the project side to make request on this issue.

(2) The Fourth Year

The internal monitoring was originally an activity designed in accordance with the intention to implement external audit of the Lao side. However, since it had been revealed that the root cause of the problem in the management of the clinical education in the hospital was found in UHS and the root cause of the problem in the management of the clinical education in UHS was found in MOH, a new discussion was held with the C/P side on the issue of “who and for what purpose to implement internal monitoring.” In the end, it was concluded that it was too early to establish a system of internal monitoring during the implementation period of this project because the current structure in the health sector, in which the organizational structure of UHS had not been fully developed (for example, deputy dean of UHS was appointed in June 2010 at last), was considered not conducive to implement internal monitoring.

1.4.8. Activity2-8: Promote project outputs through the Human Resource Technical Working Group (HR-TWG) organized by Ministry of Health

(1) The Third and Fourth Years

The project team members actively participated in the regular meetings of HR-TWG implemented during the periods of the field activities. The table below lists the meetings attended by the members.

Table 28 Outline of HR-TWG Conference 3rd Year

Date		Agenda
6 March, 2009	1 st HR-TWG Conference	Explanation of draft paper on human resource national health sector and discussion. AWP of TWG, SBA development plan, priority activities, development partner’s assistance
10 April, 2009	2 nd HR-TWG Conference	Organization and management of TWG
21 July, 2009	3 rd HR-TWG Conference	Revise of yearly human development plan
15 September, 2009	4 th HR-TWG Conference	Revise of human development plan, Report of regional human development conference in Manila (24 to 25 August), Progress report of SBA activities
22 September, 2009	5 th HR-TWG Conference	Development of midwife
19 to 20 January, 2010	Work Shop	Refer to under mentioned note

During the period between the last meeting described in the table above and the end of the fourth year, HR-TWG meeting was not held as one HR-TWG meeting scheduled in the fourth year was cancelled.

At present, “The Seventh Five-Year Plan for the Health Sector (2011 – 2015)” is being drafted in Laos. This plan for the next five years is to be developed jointly by MOH and development partners on the basis of the activities of the Sector Working Group (SWG) implemented to date. The draft plan was presented to SWG and several comments were made on the draft. In order to develop the plan through exchange of opinions within MOH and with external institutions, a two-day workshop was held on January 19th and 20th, 2010, at the Thalath Training Center in the Province of Vientiane.

(Retreat Coordination Workshop between MOH and DPs for refining the 7th Five-Year Health Development Plan 2011-2015 with utilization of Sector Common Work plan and Monitoring Framework)

At the HR-TWG meeting in the workshop, the Minister of Health, Dr. Pommeck Dalalay, emphasized the importance of the partnership between medical service providers (hospitals), medical education institutions (research institutions, universities and medical colleges) and donor agencies in strengthening the project coordination mechanism promoted by MOH. The minister called this partnership “CHIPU (Complex of Hospital, Institute, Project and University)” and stated that the bottom-up approach from the district-level would be adopted in the Seventh Five-Year Plan and that he expected extension in future of the MTU concept of this project as it not only embodied CHIPU and but also was applicable to extension of medical education to district hospitals.

1.5. Activity Achievement of Output 3

In the beginning of the second year, the project team was considering sharing and verification of the clinical training model established at Setthathirath Hospital with the four training hospitals, universities and MOH and standardization of the model, because the project had a plan to extend this education model to the four provincial hospitals which was expected to admit students in fiscal 2009. In order to realize such extension, verification is required as to whether the four training hospitals, universities and MOH accept this model and put it into practice or not. Therefore, activities focused on development of a model common to the four teaching hospitals in Vientiane City and improvement of quality of the model to the level which enables standardization of the model were implemented at first. These activities formed the core of the main activity for Output 3, TOT.

1.5.1. Activity3-1: Develop the programs and curriculum of training of trainers (TOT)

(1) The Second Year

1) Develop the curriculum and the training programs

In the second year, a TOT’s curriculum was developed for the four training hospitals in Vientiane City in accordance with the policy described above. TOT was a short-term training course intended

for improving the teaching capacity of preceptors. As is the case with the training course for preceptors for introductory clinical training introduced in Japan by the Ministry of Health, Labor and Welfare, three-day courses were planned in TOT, as a principle. As the results of baseline survey revealed that many preceptors were using outdated teaching skills, the activities in the second year was commenced with discussion on TOT for the acquisition of “basic teaching theories” and “educational skills”.

At the 14th TMC meeting held in October 2008, a draft content of TOT was presented for consultation and it was agreed that TOT should include such subjects as teaching theories and skills and design of MTUs which is introduced organization. On the basis of this content, a plan for 2 days implementing TOT workshops was developed. In the workshops, 1) an introductory lecture by the experts, 2) group discussion and 3) plenary discussion were to be implemented in this order, in principle. A practice session to acquire practical teaching skills through role-playing was included in the workshops in order to facilitate learning by the participants. The workshops were intended mainly for preceptors in Setthathirath Hospital, those in the other teaching hospitals were also invited to attend the workshops in order to raise the standards of the program.

2) The First TOT Workshop

Acquisition of theories and skills in clinical education was the assumed purpose of the TOT workshop on November 4th to 6th, 2008. However, the commencement of the practice in the hospital of D6 students under the new curriculum which was scheduled in the beginning of the new school year, September, had been delayed for more than one month because of the poor coordination between the university and the training hospitals and it was unclear when the practice would commence. Because of this uncertainty, this project had to provide assistance to the solution of this problem. Therefore, the theme of the workshop was changed to the introduction of the D6 practice at the last moment.

Setthathirath Hospital and the other three training hospitals jointly designed the D6 hospital practice in compliance with the new curriculum. A study was carried out on the timetables of the practice at the four major clinical departments, duties of D6 students, rotation schedules and evaluation methods. The results of the study were incorporated in the new Study Guidebook for D6 Students of the university. On the final day, preceptors of the clinical departments and the hospitals held a discussion and jointly presented a recommendation for the outline of the D6 hospital practice. All these activities had led to the commencement of the delayed D6 practice.

Table 29 The First Training of Trainers Workshop

Title	1 st Instructor training work shop
Training purpose	Development of educational capability for bed side trainer by new D6 curriculum
Date	4 to 6 November, 2008
Place	Conference room, Setthathirath Hospital

Attendance	First and second day: 4 teaching hospital (internal medicine, surgery, pediatric, OB/GY) 3 rd day: Director of each subject, hospital director and deputy director, related doctor as like instructor Total attendance: 52 persons
Training contents	1. Study of new D6 bed side training at teaching hospital 2. Design of each subject MTU focus on D6 student 3. Development of evaluation tool for bed side capability measuring
Lecturer	Dr. Vongphet (deputy director, Faculty of medicine, UHS), Dr. Hiroshi Nishigori, Dr. Takuya Adachi
Result	<ul style="list-style-type: none"> • Study of training program for 4 major subject, D6 works, rotation chart, evaluation of student (continuously evaluation, evaluation for end rotation, evaluation of end school year), the result of study feed backed to D6 study guide which prepared by UHS • Created guidelines considering the stationery of the basic clinical skills especially case presentations and medical book mentioned about proposal projects tailored to the characteristics of each Department • Council of the Department on the final day, each hospital leaders overview of D6 hospital lab made recommendations.

3) The Second Training for Trainers Workshop

The second TOT workshop was implemented with the original purpose, acquisition of theories and skills in the medical education, incorporated.

The teaching staff of Setthathirath Hospital and UHS who had participated in Training in Japan contributed to the implementation of the workshop for three days as facilitators. The participants are expected to put the acquired skills and concepts into practice at their hospital on work. Specific measures were taken so that the contents of the second workshop could be used as a model for TOT to be implemented at other teaching hospitals and the provincial hospitals in the following next years.

Table 30 The Second Training of Trainers Workshop

Title	2 nd Instructor training work shop
Training purpose	Up grade educational capability for bed side trainer
Date	3 to 5 March, 2009
Place	Setthathirath Hospital conference room
Attendance	Setthathirath Hospital and 3 teaching hospital and UHS bed side trainer Total 53 persons
Training contents	1. Educational theory of bed side training 2. Basic educational technique 3. Component of basic bed side capability 4. Approach of out come basic education 5. Leader ship and management of bed side education 6. Professionalism and medical ethnic
Lecturer	Dr. Hirotaka Onishi, Dr. Takuya Adachi Facilitator: Dr. Ketsomsouk (UHS), Dr. Bounmy (Setthathirath hospital)
Result	<ul style="list-style-type: none"> • The practice Guidebook available techniques about the teaching of medical students in case presentation • D6 student improved MTU plan which developed 1st TOT • earned how to design a learner assessment appropriate for each, and then set the multiple outcome of clinical education, knowledge, skills and attitudes • Practice of work shop planning at each facilities

The project discussed on how TOT should be implemented after the completion of the second TOT. In the discussion, the following problems were identified with regard to continuous improvement of the teaching competence of preceptors.

- Topic 1: The participants have been providing clinical education. What is/are the incentive(s) for them to take the trouble of participating in TOT?
- Approach:
- Lead intention to learn new methodologies
 - Issuance of the Certificate of completion
- Topic 2: Is there an incentive which compels the participants to change the conventional way of clinical education?
- Approach:
- Status to retain the position of preceptor, status to be earned with the continuous improvement
 - Good reaction from medical students and residents, prospects for the future
- Topic 3: How should the outputs of TOT be assessed?
- Approach:
- External evaluation, evaluation of preceptors by students
 - Introduce positive and negative episodes at the places of work
- Topic 4: Coordination with and corporate with the similar TOT provided by other donors
- Approach:
- No significant difference is expected.
 - Improvement by coordinated implementation of internal monitoring, external evaluation and evaluation of preceptors by students

Despite the problems mentioned above, project decided as a policy for the third year to continue to implement TOT with the same contents and to hold workshops with the precondition that those who had attended the previous workshop should not be allowed to attend another workshop, because of the presumed importance of raising the overall standards of the clinical education.

(2) The Third Year

1) Extension of TOT program to 4 provincial hospitals

A total of 11 TOT workshops, three at Setthathirath Hospital and two each at the four provincial hospitals, Champasak, Savannakhet, Maria Teresa and Luang Prabang Provincial Hospitals, were implemented in the third year. Since the project had been informed that training of medical students began from the first term of the school year 2009 (The school year usually begins in September) at the four provincial hospitals, the project had made up a plan with the intention to teach teaching skills to the preceptors at the provincial hospitals.

The contents of the workshop were in Setthathirath hospital similar to those in the two previous workshops with emphasis on very basic education theories and skills. At this point, the project still led the operation of the workshop and mostly English was used in the workshop.

Table 31 Outline of 3rd Trainer's work shop

Title	3 rd Trainer's work shop
Training purpose	Development and upgrade of educational capability of bed side trainer
Date	29 June to 1 July, 2009
Place	Setthathirath Hospital Conference room
Attendance	Setthathirath Hospital and 3 teaching hospital and UHS bed side trainer Total 45 persons
Training contents	<ol style="list-style-type: none"> 1. Educational theory for bed side education 2. Approach of Basic out come education 3. Study of basic education technique and theory of MTU 4. Observation of CLC and Simulator 5. Professionalism and medical ethnic 6. Bed side education with case presentation
Lecturer	Dr. Takahiro Onishi, Dr. Teruaki Kitamura (MESH Project), Dr. Ketsomsouk (UHS)
Result	<ul style="list-style-type: none"> • Participant focused lecture and discussion • Result of evaluation after TOT, recognition point decrease and activities increased (recognition:: 3.46 to 3.39, activities: 3.68 to 3.71) • Confirmed PMEL system from 10 doctors included Dr. Vongphet.

2) Establishment of PMEL

The project planned to educate counterpart as translator and facilitator for technical translation step by step. However, problems were identified in the second year: They were 1) the counterpart side had no expert on medical education and 2) the Lao language has no technical terms or concepts. Therefore, preparation of teaching materials in Lao and development of human resources capable of teaching in TOT workshops in Lao were considered necessary for the implementation of TOT workshops in the third year.

The Third TOT Workshop mentioned above turned out be a significant turning point in terms of meeting the need mentioned above. The project informed Deputy Dean of the Department of Medicine of a plan of the Project for Medical Education in Laos (PMEL), which he approved readily. Then, deputy dean and the project team selected members of PMEL and a system in which the selected ten PMEL members played leading roles in the implementation of TOT training was established.

Later, PMEL implemented TOT workshops independently and actively. PMEL revised the curriculum through numerous discussions for the TOT workshops to be implemented later at the four provincial hospitals as it was considered important to make the workshops have more practical programs and to let the participant understand the concept of MTU.

The table below describes the outlines of the Fourth TOT Workshop (held at Champasak Provincial Hospital).

Table 32 Outline of 4th Trainer’s work shop

Title	4 th Trainer’s work shop
Training purpose	Development and upgrade of educational capability for provincial hospital
Date	6 to 7 October, 2009
Place	Packse Hotel
Attendance	Chanpasak provincial hospital trainer (22 persons)
Training contents	Education theory for bed side education Study of basic educational technique and MTU theory Professionalism and medical ethnic Bed side education by Case presentation
Lecturer	PMEL member
Result	Activities of group discussion and presentation were high. Lecturing time by PMEL member over some times. Group discussion technique was low. After finishing the morning and afternoon session, PMEL member lead the attendance to upgrade teaching technique

Similar workshops were later implemented at Savannakhet Provincial Hospital, Maria Teresa Hospital (Vientiane Province) and Luang Prabang Provincial Hospital in the third year, using the training curriculum used in the Fourth TOT Workshop as a reference.

(3) The Fourth Year

1) Curriculum development of advanced course

In addition to the basic course developed in the third year mentioned above, the advanced course for the four provincial hospitals, at which implementation of TOT workshops was to be continued, was developed in the fourth year.

While continuation of TOT workshops at the provincial hospitals had already been confirmed in the third year, the other three teaching hospitals in Vientiane City unexpectedly requested implementation of TOT workshops at the respective hospitals for the staff who had not attended the TOT workshops. The curriculum for the TOT workshops for the provincial hospital was developed under the precondition that participants had attended the TOT workshop implemented with the curriculum mentioned in the preceding section in the third year. The experts inspected all the hospitals in the end of the third year and confirmed establishment of MTUs. The curriculum was developed for the purpose of “improving further” the established MTUs. As the framework for further improvement of MTUs was discussed in the Second Medical Education Symposium held in March 2010, the outcomes of the discussion were incorporated in the curriculum. A lecture on the use “Basic Diagnosis Algorithm (commonly known as Black Book),” one of the teaching materials whose preparation had completed in third year, which could be used at the place of practice was included in the curriculum as a means to make the curriculum more practical. A program of recreating a scene of training by participants acting as a preceptor and students and programs at the places of practice, such as

demonstration of teaching by PMEL members and feedbacks to the teaching methods of preceptors at the hospitals were developed.

The table below shows the outlines of the 15th TOT Workshop held at Maria Teresa Hospital (Vientiane Province).

Table 33 Out line of 15th Trainer’s work shop (Maria Teresa Hospital)

Title	15 th Trainer’s work shop
Training purpose	Development and upgrade educational capability in provincial hospital trainer
Date	15 to 16 June, 2010
Place	Leokham Hotel
Attendance	Maria Teresa Hospital (Vientiane provincial hospital)
Training contents	For upgrade of basic consultation capacity (usage of consultation algorithm) Upgrade of basic physical consultation method training Purpose of Bed side education and practice Visiting MTU activity at provincial hospital Upgrade of MTU at provincial hospital TMC establishment and role
Lecturer	PMEL member
Result	Participants appraise good value to observe student training at bedside in provincial hospital. Practical Training will be good training included practical contents. After established MTU, discussion comes frequently and case of trial and error also increased

2) Expansion of TOT in each teaching hospital

According to the request from other teaching hospitals in Vientiane city, the Project changed its activities to conduct TOT to staffs not having TOT conducted at Setthathirath Hospital. These TOTs were conducted at Mahosot Hospital and Mittaphab hospital (MCH joined to Mittaphab Hospital TOT).

1.5.2. Activity3-2: Prepare teaching materials for TOT

(1) The Second Year

TOT teaching materials are used by preceptors as references to the theories and skills of medical education and for acquisition of additional knowledge of the theories and skills. They are classified into two major types 1) those used in the three-day TOT curriculum and 2) other reference learning materials. Regarding 1): the absence of expert in medical education on the counterpart side and lack of technical terms and concepts in Lao language encountered by the second year, it was decided that the teaching materials should be prepared with a certain degree of initiatives taken by the experts in the project team. Therefore, all the teaching materials used in the TOT workshops held in the second year were prepared by the experts in English.

Three books, “Medical Ethics,” “Medical Education Theories” and “100 Keywords in Medical Education,” were translated into Lao as 2) reference learning materials in cooperation with Medical

Education Center, Khon Kaen Hospital, Thailand, and other institutions. Five hundred copies of the respective books were printed as supplementary readers. Trainees who were in Japan training also involved in the translation. The translation of these books into Lao is expected to further the understanding of what taught in the TOT workshops and technical terms in medical education.

Table 34 Overview list of materials for preceptors

No	Material	Target	Receivers	No. of Copies	Overview
1	Medical ethics	Preceptors	Those who came to TOT	500	There are various issues of medical ethics in the real settings of clinical practice every day due to decisions related with life. It is indispensable for preceptors to understand medical ethics principles.
2	Medical education principles	Preceptors	Those who came to TOT	500	It is indispensable to understand newly established principles of medical education because clinical medicine is based on real settings and preceptors cannot use any educational principles of class room teaching. There are several educational concepts produced in medical education field.
3	Medical education keywords 100	Preceptors	Those who came to TOT	500	It is difficult for preceptors in real settings to have discussions with experts to adopt advanced models of medical education in the Western countries unless preceptors understand keywords.

(2) The Third Year

As mentioned above, PMEL was established after the third TOT Workshop with 10 counterparts. After its establishment, PMEL established preparation of the teaching materials, those used in TOT, mentioned in the preceding section, by themselves as the ultimate goal and launched its first activity, translation into Lao of the teaching materials for the TOT workshops to be held at the provincial hospitals. Since holding its first meeting on July 10th, 2009, PMEL has held meetings at appropriate time before and after the TOT workshops.

Table 35 3rd Year PMEL Meeting

No.	Date of meeting	Total member
1 st	10 July, 2009	12
2 nd	17 July, 2009	9
3 rd	7 August, 2009	8
4 th	24 October, 2009	7
5 th	6 November, 2009	6
6 th	13 November, 2009	6
7 th	27 November, 2009	7

After the Third TOT Workshop, all the slides in English used in the workshops implemented by then were translated into Lao mainly by the members of PMEL. The members of PMEL organized workshops on the translation during PMEL meetings to discuss standardization of terms and expression. The workshops also contributed to better understanding of the contents of the slides by the members. After the completion of the translation, all the workshops from the fourth TOT

Workshop held at Champasak Provincial Hospital to the 27th TOT Workshop in the fourth year were conducted in Lao with lectures with slides in Lao provided by the PMEL members as lecturers. The experts participated in these workshops by providing comments on important issues and supplementary issues in English. After each workshop, PMEL held a meeting to review the workshop and the experts participated in the review in order to guarantee the quality of the TOT workshop implemented by Laotians.

Copies of the teaching materials for TOT, Medical Ethics (with a green cover), Medical Education Theory (with a yellow cover) and 100 Keywords in Medical Education (with a navy blue cover) were provided to the participants of all TOT workshops as references. Detailed explanation of these books was not provided in the programs of TOT in general in order not to burden participants with too many subjects. The PMEL members were found reading these three TOT teaching materials mentioned above before implementing TOT workshops. This is an unexpected impact of the provision of the teaching materials and suggests that the PMEL members use those materials to learn how to give lectures and to confirm the training contents.

(3) The Fourth Year

The project had already terminated provision of teaching materials in the third year as the materials developed in the second year had been translated into Lao and the Lao materials were used in TOT as the basic teaching materials. However, the development of the curriculum for the advanced course created demand for new training subjects. On some of the new subjects, and the improvement of the function of MTUs in particular, the experts had to provide slides. Thus, as in the third year, the work of translating the slides into Lao was created. During the creation, the PMEL members made slides on some of the other subjects by themselves and gave lectures on the subject in TOT workshops. This observation confirmed a certain progress in the sustainability of PMEL as an implementer of TOT.

1.5.3. Activity3-3: Conduct TOT for Medical Doctors Working for Four Teaching hospitals and Provincial Hospitals

(1) The Second Year

In the second year, because of the need to establish a model of clinical education at the four teaching hospitals as preparation for the implementation of TOT for the provincial hospitals in the third year, TOT Workshops were implemented not only for Setthathirath Hospital but also for the other three teaching hospitals invited. The table below shows the outlines of the workshops.

Table 36 TOT out line 2nd Year

No.	Date	Place
1 st	4 to 6 November, 2008	Setthathirath Hospital
2 nd	3 to 5 March, 2009	Setthathirath Hospital

(2) The Third Year

While the TOT workshops for the teaching hospitals were held at Setthathirath Hospital, those for the provincial hospitals were held at hotels in the respective areas. The capacity of the PMEL members in managing the workshops has been developed to the level that they can prepare audio-visual equipment, arrange tables and chairs, register participants and facilitate group discussions by themselves.

Table 37 TOT out line 3rd Year

No.	Date	Place
3 rd	29 June to 1 July	Setthathirath hospital
4 th	4 to 5 October	Champassak provincial hospital
5 th	6 to 7 October	Champassak provincial hospital
6 th	13 to 14 October	Savannakhet provincial hospital
7 th	15 to 16 October	Savannakhet provincial hospital
8 th	20 to 21 November	Setthathirath hospital
9 th	24 to 25 November	Vientiane provincial hospital
10 th	1 to 2 February	Luang Prabang Provincial hospital
11 th	3 to 4 February	Luang Prabang Provincial hospital
12 th	11 to 12 February	Setthathirath hospital
13 th	16 to 17 February	Vientiane provincial hospital

PMEL member seemed to be not good at role-playing among the teaching skills. It seemed that they had not understood how to organize a role-playing session in a way conducive to the purpose of the training very well. In order to address this problem, PMEL started preparing detailed scenarios and conducting rehearsals while they were preparing for the tenth TOT workshop.

(3) The Fourth Year

TOT workshops in the fourth year were implemented as follow-ups to the clinical practice implemented at eight teaching hospitals in Vientiane City and provinces since January 2010. The TOT workshops implemented at Mahosot and Mittaphab Hospitals had the same contents as those implemented at the other hospital in the third year. Therefore, the TOT workshops implemented at these two hospitals are described as “Basic” in the table below. The advanced course mentioned above was implemented at Setthathirath Hospital and the four provincial hospitals where the TOT workshops had been implemented before.

Table 38 TOT out line 4th Year

No.	Date	Place	Course
14 th	9 to 11 June, 2010	Mahosot hospital	Basic
15 th	15 to 16 June, 2010	Maria Teresa hospital (Vientiane province)	Advanced
16 th	17 to 18 June, 2010	Maria Teresa hospital (Vientiane province)	Advanced
17 th	22 to 24 June, 2010	Mahosot hospital	Basic
18 th	29 to 30 June, 2010	Luang Prabang Provincial hospital	Advanced
19 th	1 to 2 July, 2010	Luang Prabang Provincial hospital	Advanced
20 th	13 July, 2010	Setthathirath hospital	Advanced

No.	Date	Place	Course
21 st	14 July, 2010	Setthathirath hospital	Advanced
22 nd	2 to 3 August, 2010	Mittaphab hospital	Basic
23 rd	4 to 5 August, 2010	Mittaphab hospital	Basic
24 th	21 to 21 September, 2010	Champasak provincial hospital	Advanced
25 th	22 to 23 September, 2010	Champasak provincial hospital	Advanced
26 th	27 to 28 September, 2010	Savannakhet provincial hospital	Advanced
27 th	29 to 30 September, 2010	Savannakhet provincial hospital	Advanced

The basic programs implemented at Mittaphab Hospital on August 2nd and 3rd and August 4th and 5th were implemented without an expert in medical education. The TOT workshops implemented on July 13th and 14th at Setthathirath Hospital were implemented not only without an expert in medical education but also with the hospital's own budget. These facts deserve special mention. The contents of the training implemented at Setthathirath Hospital were reorganized in accordance with the situation at the hospital and all the necessary contents were condensed in a one-day program.

The number of TOT started from second year reached 24th times at end of fourth year. The number of target was reached 15th times.

At the beginning, in the second year, to set up and confirm the basic curriculum, conduct TOT to improve capacity of teaching with gathering well – willing teachers from Setthathirath Hospital and other 3 teaching hospitals. Based on the curriculum, the Project expanded TOT to the provincial hospital preceptors in the third years to improve preceptors' capacity to medical students. The curriculum is considered as a basic course curriculum now. The fourth year developed advanced course more practical than the basic course. This course was developed due to the requests from provincial hospitals to continue TOT to them. Throughout the TOT from the third year, basically to have good observation to the participants, each hospital was divided to 2 groups to make them smaller so that there would have more understanding to the contents.

To ensure participants understood the TOT or satisfied evaluation questionnaire was conducted to the participants. Until the first 1-3 times in TOT this evaluation was conducted before and after, after the 4 first TOT it was only after the trainings. This means that the evaluation of the TOT, but quantitative evaluation of the leader participants in meaningful questions, and the result is "1.5.6. Activity 3-6: according to the above criteria to monitor clinical training teaching physician ", follows.

1.5.4. Activity3-4: Holding a Medical Education Seminar for Preceptors in Charge of Clinical Training

The original design of the project included a plan to hold a seminar to inform the teaching hospitals, UHS and MOH of the experience and lessons learned from the clinical training implemented at Setthathirath Hospital as reference information for the other three teaching hospitals. However, the project team had gradually come to realization that it is inappropriate because in Laos, seminars in general were still considered strongly as venues for the superior to deliver knowledge to the inferior and, thus, concluded the format of the staff of Setthathirath Hospital playing significant roles in delivering knowledge to the staff of the other three teaching hospitals, which were technically equal as

institutions as Setthathirath Hospital, or to UHS, which was in the position to supervise the clinical training implemented at the Setthathirath Hospital. Instead, the seminars were to adopt the format of being organized and managed by UHS or development partners, such as JICA and the University of Calgary, with participation of staff of Setthathirath Hospital in the operation of seminars within the allowable extent.

(1) The Second Year

1) The First Seminar (Medical Education Workshop)

Two seminars on clinical training were held in the second year with the cooperation with the other three teaching hospitals and UHS. The first seminar was held in September 2008. On the first day, the four teaching staff of Setthathirath Hospital and UHS who had participated in Training in Japan presented their knowledge of medical education and, on the second day, the professor in clinical medicine at the University of Calgary, who was an invited guest, and experts of this project gave lectures. In the week before the week in which this seminar was implemented, project experts participated in the workshop on physical examination skills implemented with assistance from the University of Calgary. This mutual cooperation between the project team and the University of Calgary is considered as an output of the donor coordination. The table below shows the outlines of the seminar.

Table 39 Overview of the 1st Medical Education Seminar

Title	The 1 st Medical Education Seminar
Purpose	Improving teaching ability of Preceptors at UHS teaching hospitals
Date	11 th , 12 th September, 2008
Place	Conference room of Setthathirath Hospital
Participants	Preceptors of Setthathirath Hospitals and three (3) teaching hospitals, and UHS 43 persons
Contents	<ol style="list-style-type: none"> 1. Structure plan of MTU in each department 2. Understanding of Basic Clinical Competencies 3. How to utilize case conference 4. How to achieve basic instruction skills
Lecturer	Dr. Bounmy, Dr. Sisomphone (Setthathirath Hospital) , Dr. Ketsomsouk, Dr. Oua (UHS) , Dr. Lanice Jones (Calgary University) ,Dr. Masamine Jimba, Dr. Takuya Adachi (MESH project)
Outcomes	<ul style="list-style-type: none"> • Action Plan on MTU establishment based on the result: it is not established in many departments. • Participants experienced how to evaluate students with using checklists especially about history taking and physical examination. • Knowledge on quality of preceptors, EBM and communication between different cultures were deepen.

2) The Second Seminar (Seminar on Clinical Education)

Seminar on Clinical Education was implemented in the amphitheater of UHS on 16 October, 2008. As requested by UHS, two subjects, 1) practical activities for MTU and 2) evaluation of clinical education, were discussed in the seminar.

Table 40 Overview of the 2nd Medical Education Seminar

Title	The 2 nd Medical Education Seminar
Purpose	To let participants know about deeper knowledge on clinical education
Date	16 th October, 2008 10:00~12:00
Place	UHS amphitheater
Participants	Preceptors of Setthathirath Hospitals and three (3) teaching hospitals: 42persons (details) UHS 5, Setthathirath Hospital : 6, Mittaphab Hospital 13, Mahosot Hospital 11, MCH 3, Others (Calgary University etc) : 4
Contents	1) How to improve MTU 2) Evaluation on Clinical Education
Lecturer	Dr. Hiroataka ONISHI
Outcomes	Participants tells that they could deepen their knowledge in these topics

(2) The Third Year

Table 41 Overview Medical Education Seminar in the 3rd Project Year

Title	Date	Place	Theme
The 3 rd Medical Education Seminar	21 st Oct, 2009	UHS amphitheater	Medical Ethics and Education on Professionalism
The 1 st Medical Education Symposium	6 th Jan, 2010	UHS amphitheater	About Medical education in Lao P. D. R.
The 2 nd Medical Education Symposium	10 th March, 2010	UHS amphitheater	Reports on Medical Education in Reality and MTU

Assuming that learning from the neighboring Thailand with which Laos has cultural and linguistic links has very significant influence on the project, possibility of receiving direct assistance from Thailand was considered. In the third year, lecturers of the seminar were invited not only from the development partners involved in medical education in Laos, but also from Thailand.

On 21 October, 2009, Dr. Satang Suppamong, lecturer at the Medical Education Center, Khon Kaen Hospital, took charge of the third Medical Education Seminar and gave a lecture on education on professionalism. Since then, the program on education on professionalism has been included in the seminars.



Figure 15 Dr. Satang lecture at 3rd Medical Education Seminar

On 6 January, 2010, the First Medical Education Symposium was implemented. While the first to third Medical Training Seminars were implemented with the format of Laotian participants listening to lectures on the latest medical education as audience, most of the lectures were given by Laotian doctors involved in medical education and, after the lectures, discussions were held between the lecturers and the audience in the symposium. Therefore, this occasion was given the title of the “First” Medical Education Symposium. However, the First Medical Education Symposium was counted as the Fourth Medical Education Seminar with relation to the relevant indicator in the PDM. The project lectured on the point that TMC and PMEL at Setthathirath Hospital would be a very strong force for the future development of medical education through the activities of MTUs. There is no significant difference among the MTUs in the four teaching hospitals at present. Most impressive topics in the symposium was that the Minister of Health, Dr. Pommeck Dalaloy, was present all through the conference which lasted more than three hours and started talking about the importance of MTUs during the conference.

The Second Medical Education Symposium was held on 10 March. The subject of the discussion in the morning session was an alternative to internal monitoring and, in the afternoon session, a discussion for further development of MTU was held. In the beginning, residents of the four teaching hospitals, including Setthathirath Hospital, presented the current situations in the respective hospitals. The expert gave a lecture on the theoretical background of MTU to further deepen the discussion. In closing remarks, the Minister of Health strongly advocated, “MTUs have made all happy, including medical students, residents and preceptors. MTUs will be a very useful tool for the promotion of the idea of CHIPU which MOH intends to carry out. Use of MTUs is urgently required as a process to achieve the indicators of mother-and-child healthcare, which are the most important among the Millennium Development Goals.”

(3) The Fourth Year

The table below shows the seminar activities implemented in the fourth year.

Table 42 Overview Medical Education Seminar in the 4th Project Year

Title	Date	Place	Theme
The 4 th Medical Education Seminar	21 st June, 2010	Setthathirath Hospital	What is TMC/ PMEL
The 3 rd Medical Education Symposium	15 th Sept, 2010	UHS amphitheater	Relationship between teaching hospitals and medical university
The 4 th Medical Education Symposium	27 th Oct, 2010	Lane Xang Hotel	Community based Medical Human Resource Development

1) The Fourth Medical Education Seminar

The seminar was implemented at the conference room of Setthathirath Hospital with the theme of improvement of medical education by MESH Project from 13:00 to 16:00 on 21 June, 2010. An expert gave a lecture on the concepts of TMC and PMEL, which was followed by a

question-and-answer session with the audience from the teaching hospitals in the city, including Setthathirath Hospital, and UHS.

In the discussion on TMC, an issue of what types of incentives and communication being provided by UHS to the teaching hospitals for undertaking clinical education of students of UHS was raised. As such huge problems as the budget and the roles provided to UHS and the teaching hospitals by MOH were involved in this issue, it was decided to organize another opportunity to discuss it. On other discussion for PMEL activities, PMEL member considered that providing TOT with same member in the future.

2) The Third Medical Education Symposium

The Third Medical Education Symposium was held in the amphitheater of UHS from 09:00 to 16:30 on 15 September, 2010. The theme of the symposium was the communication between UHS and the teaching hospitals. The clinical practice in the new term of school year 2009 commenced in January 2010 and completed at the end of August basically without any significant problem. However, some pointed out problems such as the syllabus not being provided to students and preceptors and the confusion derived from the fact that D4 students had been assigned to the major four departments every morning since January 2010. Thus, UHS was tasked to prepare appropriate measures against these problems before the next clinical practice.

An expert gave a talk about the advantages and disadvantages of the Chair system and TMC in the management of UHS clinical education by comparing of these two systems. UHS does not have classrooms for the clinical departments, such as internal medicine or surgery. Thus, physicians from various teaching hospitals hold inter-hospital meetings to have discussions on examination/treatment and education. This is a system called Chair system.

While many participants acknowledged that the Chair system was not functioning satisfactorily, participants also accepted the difficulty in abolishing the system for political consideration and expressed the view that the management of clinical education may be improved through the operation of a new system, TMC.

3) The Fourth Medical Education Symposium

The symposium was held on 27 October, 2010, with the attendance of the Minister of Health at Lang Xane Hotel. The theme of the symposium was community-based education. It was an innovative occasion as representatives from a wide variety of organizations, including those involved in policy making in the central government, provincial hospitals which just started admitting students for training and development partners implementing projects for community-based human resource development in the health sector in Laos.

MOH made a presentation on the background of CHIPU, which had been promoted as a policy concept since 2009, improvement to be made as targets of CHIPU and how MOH intended to establish inter-institutional cooperation among the institutions involved in human resource development in the health sector and presented a draft policy document. This presentation had large impact on the

participants and many expressed the view that MOH had presented a straight-forward policy for the human resource development for community health care in future.

From the development partners, the lecturers from WHO and the University of Calgary presented the results of the analysis of the problems in the current system of community-based human resource development in the health sector from their experiences as the basis for future improvement. The lecturer from the University of Calgary, in particular, pointed out the limited human resources involved in community health care and suggested the importance of selecting those who were capable of carrying out appropriate human resource development.

As the representatives of the provincial hospitals which were at the front of the community-based human resource development, the director and another representative from each of the four provincial hospitals participated in the Symposium and presented a report on the current status. They also spoke about introduction of MTUs and the training system established in accordance with the current condition of each provincial hospital while having many problems such as shortage of doctors at the intermediate level and shortage of space in the student dormitories, etc.

This symposium proved the potential of MTU promoted in this project in the community-based human resource development in the health sector, suggested the need to overcome problems in the ways appropriate for the conditions at the sites as pointed out in the presentation from the provincial hospitals and managed to inform secretaries at the policy-making level and policy implementers of the potential and the need. As there have been few opportunities for those involved in the community-based human resource development in the health sector to meet together to discuss, it is hoped this symposium to serve as the starting point for the creation of such opportunities on regular basis in future.

1.5.5. Activity3-5: Establishing Standards for the Monitoring of Clinical Training Doctors

The evaluation of this category was to be done on the initiative of UHS. We hereinafter describe the evaluation standards basing on the materials created by the experts with UHS.

It is necessary, in order to control and improve the quality of medical education, to continue the activities such as curriculum development, implementation of TOT and the evaluation and reformation of curriculum in addition to the implementation of curriculums. Those four activities require the assignment of experts who have a certain knowledge and experience in medical education. The members of PMEL have acquired knowledge and experience to take such responsibility through TOT. Within the PDCA cycle described below, TOT comes under “Do” while the evaluation of trainer comes under “Check”.

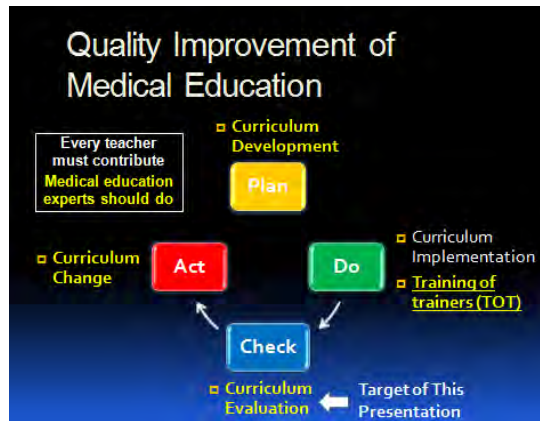


Figure 16 Quality Improvement of Medical Education

Furthermore, for those four works, in needs of deploy experts with having knowledge and experience of medical education more than certain levels. PMEL members have been assigned in order to play these responsibilities and they are getting those required conditons through the TOT gaining knowledge and experience.

(1) Who should evaluate and what kind of data should be collected?

It is a difficult matter to have a valid result because it contains problems of by whom and how to conduct evaluation. To set the standard of the monitoring, the following processes were taken in this project.

The recent program evaluation theory prefers to combine qualitative and quantitative data accordingly. Quantitative data is convenient for statistical analysis. Yet it deletes many details which cannot be explained by those quantitative data. This makes analysis be difficult to explain why if the data changes to unexpected situation.

On the other hand, qualitative data is inferior to the objectivity and reliability. However it has more information than quantitative data to know the situation of educational situation deeper. This gives implication on what improvements to be made in the next step. For example, in case of getting information from interns, as they are limited target group of people, it is difficult to lead a concrete result from quantitative analysis. Therefore it results more reliance onto qualitative data. And synthesizing these quantitative and qualitative data is the basic policy on the data analysis.

Next is who is to evaluate. Usually in the service industry, customer satisfaction evaluation is highly important. Yet, in case of instruction to medical students, it is difficult for those students to assess their preceptors as customer because they do not have enough knowledge and experiences as well as patients. At the same time, it is highly necessary to build an autonomous evaluation system by UHS although UHS may not have a valid evaluation due to think of getting a good assessment.

In regards of project experts, their commitment to the Project may disturb their valid evaluation in the aspect of preceptors' improvement and growth although they are the best knowledge and experience holders in medical education.

The Project planned the baseline survey and conducted by the consigned third party. From this experience, the Project considered that it would be better to continue survey by the consigned third party.

Consigned to the parties during the baseline survey and planning phase 1 projects, the studies were made. And, thought to be easy to understand guidance medical improvement and growth will continue to conduct surveys like this education project in consigned to third parties. An education project like this project, in need of measure the improvement and growth, this objective and continuous survey would provide the result easy to understand.

Therefore, to set an appropriate criterion as much as possible, ①Quantitative evaluation from medical student and interns by UHS, ②Qualitative, quantitative evaluation by project experts, ③The overall evaluation (qualitative and quantitative) by third-party by the subcontracted were combined.

(2) Quantitative evaluation from medical student and trainee doctor by UHS

Evaluation on preceptors from medical student from clinical training will shape across 4 places training hospitals in the curriculum of the 2008 fiscal year. Therefore it was in need of having comparative perspective. Quantitative data was considered and must include, yet data utilized in baseline survey was unsuitable for the current state of Laos. Thus, it was re-developed in the 2nd project year. Questions are the following ten items and evaluated by the following 5 levels, (5) very good, (4) considerably good, (3)good, (2) So-so, (1) not good. These items showed the high reliability coefficients 0.91 and proved its suitability to the current situation in Laos, in the 2nd project year.

Table 43 Items for preceptor evaluation questionnaire

1. My clinical teachers work hard not only for patient care but also teaching.
2. My clinical teachers' communication is clear for me.
3. My clinical teachers prepare for work spaces, study guides, and schedules
4. I regard my clinical teachers as role models
5. My clinical teachers give feedback on my performance repeatedly.
6. My clinical teachers stimulated my problem-solving capabilities by asking probing questions.
7. My clinical teachers guided self-learning for patient problems and their management.
8. My clinical teachers encouraged me to ask questions.
9. My clinical teachers assigned appropriate number of patients to me for learning.

Within the current UHS curriculum, D6 is being trained in 10-week rotation at each field (those who started training in January 2010 are in 8-week rotation due to the limitation of time). The evaluation of trainer by student is to be done at the end of each rotation.

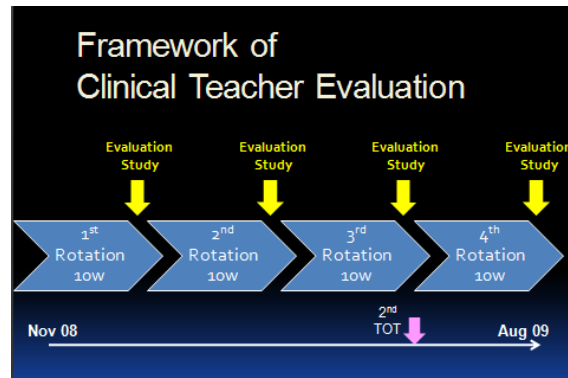


Figure 17 Timing of Clinical Teaching Evaluation

(3) Qualitative, quantitative evaluation by project specialist

This evaluation was conducted after TOT. This was to measure whether TOT made enough improvement or not. The 1st TOT is not being kneaded enough in the respect to both contents and teaching. Thus, assessment on that point was limited significantly. 2nd and 3rd TOT, the evaluation attempted to measure the difference of awareness in the before and after the TOT and yet it was not clear enough (Other factors can understand, the more knowledge, teaching physicians who what is still insufficient) Because the limit of evaluation done before after was seen, it assumed to conduct evaluation for the outline of TOT after the trainings from the 4th TOT. For the preparation of first provincial TOT, evaluation after the 4th TOT could not be conducted, however. Yet, since 5th TOT, evaluations in such aims were conducted after each TOT.

Table 44 Evaluation of first TOT

Q1.	Were the topics helpful enough to improve your knowledge and skills?
Q2.	Do you think that 2 days were enough to fully cover the content of this workshop?
Q3.	Was the seminar of “What MTU is and how it functions” useful to you?
Q4.	Was the presentation of “What MTU is and how it functions” easy to understand?
Q5.	Was the small group discussion about MTU helpful to share the experiences?
Q6.	Was the facilitator good at promoting active discussion in your group?
Q7.	Was the seminar of “Basic clinical competence” useful to you?
Q8.	Was the presentation of “Basic clinical competence” easy to understand?
Q9.	Was the seminar of “Feedback and Microskills” useful to you?
Q10.	Was the presentation of “Feedback and Microskills” easy to understand?
Q11.	Was the seminar of “Qualities of a good bedside teacher” useful to you?
Q12.	Was the presentation of “Qualities of a good bedside teacher” easy to understand?
Q13.	Did you get hands-on learning from the practice of role-play?
Q14.	Was the lecture of “What makes an effective clinical teacher” useful to you?
Q15.	Was the lecture of “What makes an effective clinical teacher” easy to understand?
Q16.	Was the workshop of “Evidence-based medicine” useful to you?
Q17.	Was the workshop of “Evidence-based medicine” easy to understand?
Q18.	Was the seminar of “Cultural communications” useful to you?
Q19.	Was the seminar of “Cultural communications” easy to understand?

Please check *one choice* (Strongly agree, Agree, Disagree, Strongly disagree) that applies the most in each question.

Table 45 Evaluation of second and third TOT

Q01-1	I can explain what the difference between teaching and learning is.
Q01-2	I am always careful about how students/interns/residents are learning
Q02-1	I can explain how to motivate learners
Q02-2	I am always using the skills to motivate learners
Q03-1	I can explain adult learning theory
Q03-2	I am always using the idea of adult learning theory for my teaching.
Q04-1	I can explain reflective practice
Q04-2	I am always using the idea of reflective practice for my teaching.
Q05-1	I can explain what the prerequisites for case presentation are.
Q05-2	I am always teaching how to collect reliable patient data by history and physical.
Q06-1	I can explain how case presentation should be used for assessment of clinical reasoning .
Q06-2	I am always assessing students' clinical reasoning to decide how I should give a feedback.
Q07-1	I can explain what good feedback skills are.
Q07-2	I am always giving learners good feedbacks .
Q08-1	I can explain what MTU (medical teaching unit) is.
Q08-2	I am always asking residents to manage team of interns and students.
Q09-1	I can explain the best balance among different learning outcomes .
Q09-2	I am always keeping the best educational/clinical practice as a professional .
Q10-1	I can explain three aspects of clinical skill education.
Q10-2	I am always teaching differently for three aspects of clinical skill education.
Q11-1	I can explain what hidden curriculum is.
Q11-2	I always consider how I become a role model for my learners.
Q12-1	I can explain the difference between a leader and a manager .
Q12-2	I always consider how a leader should work for an organization or a team.
Q13-1	I can explain how I should assess learners to motivate.
Q13-2	I am always using formative assessment to motivate learners.
Q14-1	I can explain what SWOT analysis is.
Q14-2	I can use SWOT analysis to identify the issues to improve the current situation.
Q15-1	I can explain what the new clinical education system is.
Q15-2	I have already implemented the new clinical education system

Please check *one choice* (Strongly agree, Agree, Disagree, Strongly disagree) that applies the most in each question.

Table 46 Evaluation of TOT after fifth TOT

Educational contents	<p>I understood the contents below:</p> <p>Q1. Learning theories in everyday teaching practice</p> <p>Q2. What are the factors of the best clinical teachers? (Group discussion)</p> <p>Q3. Basic Clinical Competencies and MTU (Lecture)</p> <p>Q4. What is MTU? Its functions and types of different rounds (Lecture and Group discussion)</p> <p>Q5. How to learn Integration curriculum (Lecture)</p> <p>Q6. Objectives Structured Clinical Examination (OSCE) (Lecture and Group discussion)</p> <p>Q7. Clinical education using case presentation: aims, contents and reliability of information (Lecture and Group discussion)</p> <p>Q8. Education Methods: feedback and one-minute role-play (Lecture, and Role- play)</p> <p>Q9. Education for professionalism</p>
Training skills	<p>I felt trainers in TOT as follows:</p> <p>Q10. Trainers have sufficient knowledge.</p> <p>Q11. Trainers communicate well</p> <p>Q12. Trainers are open, honest and fair to all</p>

Please check *one choice* (Strongly agree, Agree, Disagree, Strongly disagree) that applies the most in each question.

Qualitative evaluation was conducted after PMEL was organized. This evaluation aimed to measure improvements gained by TOT. The assessment was done by interview with participant related stakeholders. To achieve its objective assessment, experts conducting evaluation was different from experts accompanied TOT as much as possible. Basically targeted interviewees were medical students, preceptors, and Director and Deputy Director. However, the 4th year evaluation reluctantly accepted the evaluation when students were not on trainings because of some reasons. Those reasons were 1) the new academic term did not start on October it usually should, and 2) Schedule limitation of Japanese experts due to the end of the project was coming.

Table 47 Monitoring overview by JICA experts in the 3rd-4th year

Schedule	Names of hospitals	JICA Experts
23 rd – 24 th February, 2010	Champasak Provincial Hospital	Akiteru TAKAMURA
25 th – 26 th February, 2010	Savannakhet Provincial Hospital	Akiteru TAKAMURA
4 th – 6 th March, 2010	Luang Prabang Provincial Hospital	Hirota ONISHI
20 th September, 2010	Maria Teresa Hospital (Vientiane Province)	Hirota ONISHI
23 rd September, 2010	Luang Prabang Provincial Hospital	Hirota ONISHI
17 th –19 th October, 2010	Champasak Provincial Hospital	Hirota ONISHI, Kiyoshi KITAMURA
19 th –20 th October, 2010	Savannakhet Provincial Hospital	Hirota ONISHI, Kiyoshi KITAMURA
18 th October, 2010	Mahosot Hospital	Keiko YANO
19 th October, 2010	Mittaphab Hospital	Keiko YANO
19 th October, 2010	Mother and Child Hospital	Keiko YANO

Roles of quantitative and qualitative evaluation were as follows. Quantitative evaluation assess direct result of TOT which are considered as Outputs in program evaluation theories, while qualitative evaluation assess by preceptors change after TOT and outcomes of teaching program. Thus, if one evaluation proven good improvement though the other was not, it could not be considered the total improvement and less meaning.

(4) Overall evaluation by consigned third-party institution

In educational projects which does not have an absolute measure for evaluation, it is quite a difficult challenge to carry out the evaluation with objectivity in a certain level because all the stakeholders of the evaluation which are medical students, preceptors, UHS administrators, Ministry of Health, and Project experts are the internal actors on the whole. Therefore, at least to increase the objectivity of the evaluation, evaluation survey by consigned institute was conducted. The outline of this subcontracted investigation is shown in the following figure

Table 48 Outline of subcontracted survey (2007-2010)

Year	Items	# of hospitals	Data
2007	1. Learning environment for undergraduate students	4	quantity
	2. Learning environment for residents	4	quantity
	3. Best preceptor for students (only one)	4	quantity
	4. Best preceptor for residents (only one)	4	quantity
	5. Patient dissatisfaction	3	quantity

	6. Training program for each hospital by students	1	quality
	7. Training program for each hospital by residents	1	quality
2008	1. Best preceptor for students (from 1st to 9th)	4	quantity
	2. Preceptor group evaluation by students	4	quantity
	3. Training program evaluation by students	4	quantity
	4. Training program for each hospital by students	1	quality
	5. Training program for each hospital by residents	1	quality
	6. Training program for each hospital by preceptors	1	quality
2009	1. Training program for each hospital by students	8	quality
	2. Training program for each hospital by residents	1	quality
	3. Training program for each hospital by preceptors	1	quality
2010	1. Best preceptor for students (from 1st to 10th)	8	quantity
	2. Preceptor group evaluation by students	8	quantity
	3. Training program evaluation by students	8	quantity
	4. Patient dissatisfaction	3	quantity

Remarks: A part of of the baseline survey 2007 is executed.

Selection of hospital number of target, target audience, data type (or qualitative or quantitative) was done by reasons below. Firstly the budget related reasons. More targeted hospitals required more cost. Thus, selection of hospitals according to the circumstances was required. Next was schedule and purpose related reasons. The survey conducted in 2007 took quantitative data more than qualitative data due to be considered as the base of comparison in the near future because this survey was conducted a part of the baseline survey. However needs of taking quantitative data again in 2008 due to have more appropriate data than 2007, because many of those data were not appropriate to the situation at that time in Laos. To have more appropriate comparison in the future, the Project needed to collect quantitative data again. As achieving improving point easily, qualitative data was continuously taken from 2007 to 2009. Qualitative data was obtained along the following semi-structured questions. These items were continuously used. (Refer to Appendix for six kinds of the questionnaire used.)

Table 49 Question item in evaluation to training in each hospital a half structurized

Target	Question	Contents
D6	1. Busy and training	How do (did) you usually use your time in the Hospital? Do (did) you feel bored or busy?
	2. Improvement idea of training hospital	Do you have any suggestion to improve the Hospital from the viewpoint of a teaching hospital?
	3. Quality of diagnosis	How do (did) you consider patient care in the Hospital? If one of your family members has an illness or an injury, do you think that he should be hospitalized in the Hospital? Why do you think so?
	4. Quality of training	How do (did) you consider the teaching provided by preceptors/teaching clinicians? If you compare teaching in the Hospital with other teaching hospitals, what are the strengths/weaknesses of the Hospital?
Residents including family medicine	1. Busy and training	How do (did) you usually use your time in the Hospital? Do (did) you feel bored or busy?
	2. Improvement idea of training hospital	Do you have any suggestion to improve the Hospital from the viewpoint of a teaching hospital?

Target	Question	Contents
	3. Quality of diagnosis	How do (did) you consider patient care in the Hospital? If one of your family members has an illness or an injury, do you think that he should be hospitalized in the Hospital? Why do you think so?
	4. Quality of training	How do (did) you consider the teaching provided by preceptors/teaching clinicians? If you compare teaching in the Hospital with other teaching hospitals, what are the strengths/weaknesses of the Hospital?
	6. Training by training doctor	Have you had chance to teach D6 students as interns/residents? What did you think of having additional job of teaching?
Preceptor	1. Improvement idea of training hospital	Do you have any suggestion to improve the Hospital from the viewpoint of a teaching hospital?
	2. Source of clinical decision	For the decision making in clinical diagnosis, which do you normally refer to: latest medical journals, the summarized document of journals, internet, and information from other doctors? What kind of problems can you identify in each item?
	3. Student's independence	Do you think D6 students will have ability enough to work as physicians right after graduation? If not, what kind of improvement is necessary to train work-ready graduates?
	4. Changes after the installation of MTU	What do you think of MTU system? Have you found any change from last year? What was your action to the change?

1.5.6. Activity3-6: Monitoring Clinical Training Doctors in Accordance with the Standards Above

Monitoring/ Evaluation on preceptors in charge of clinical training are generally divided into three parts. In UHS by medical student and medical evaluation, project expert assessment, and was again comprehensive evaluation by the consigned third party.

(1) Evaluation from medical student and trainee doctor by UHS

1) The Second Year

Deputy Director of Academic Affair Department of UHS, mainly took care of this monitoring and conducted survey twice in the second week of December and the first week of February at 4 hospitals almost simultaneously. The survey result showed the different performance grade among training doctors of 4 hospitals; Mahosot < Setthathirath < Mittaphab and Mother and Child Hospital (MCH). Among departments of Setthathirath Hospital, the Department of Internal Medicine received the better reputation than those of other 3 hospitals.

2) The Third Year

No monitoring was done in the third year firstly because the data collecting route from the students who were sent to each provincial hospital has not been secured since January 2010 and secondly because UHS could not assign the appropriate number of staff for the implementation of the monitoring due to the influences of reorganization of the Faculty of Medicine (deputy dean was finally assigned in June 2010) and/or the repair work of school building. The accumulated results of

evaluation on training doctors by D6 who were trained from November 2008 to August 2009 are shown as follows. The words “first, second, third, and fourth” indicate the specific groups of the trainees.

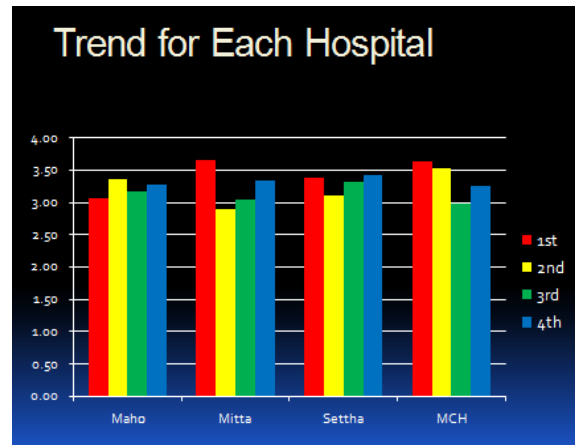


Figure 18 Preceptor Evaluation by D6 medical Students in 2008-2009

Though the differences among the hospitals and/or the rotations are not particularly definite, there is a certain tendency of improvement at every hospital between the third and the fourth training. The second TOT was carried out in such period and indicates the possible effect of the training. It seems that the result of evaluation declined significantly between the first and the second training at the hospitals other than Mahosot Hospital. It might be because the students had lost their expectation for clinical training at the time of the second evaluation.

This attempt, UHS had medical students evaluate preceptors could not continue in the 2009 fiscal year clinical training. There were several reasons. One was the SEA GAME. Because of SEA GAME, clinical trainings usually starting in the autumn delayed until January, 2010. The other was the weak collaboration system between provincial hospitals and UHS. There is no coordinated system collecting and sending data in the provincial hospital to UHS (To establish such a system, there should be collaborative relationship between UHS and the Provincial hospitals. However departments in charge of each institute are divided. One is Department of Personnel and latter is under the Department of Curative, now Department of Healthcare.). It is a cause that system construction did not advance enough though clinical training was expanded to the provincial hospital.

(1) Evaluation by project expert

Firstly quantitative evaluation is described. Followings are the educational contents in each TOT implementation times and locations and 12 items in evaluating teaching techniques.

Table 50 Result of evaluation in 5th to 13th TOT

Number of TOT		5	6	7	8	9	10	11	12	13
Place		CPS	SVN	SVN	Settha	MT	LPB	LPB	Settha	MT
Topics	Q1. Education Theories for Medical Education	4.40	4.50	4.22	4.27	4.68	4.50	4.60	4.54	4.45
	Q2. Essence for a good physician	4.35	4.56	4.44	4.19	4.58	4.59	4.57	4.72	4.55
	Q3. Basic clinical competencies and MTU	4.40	4.63	4.67	4.30	4.58	4.50	4.63	4.58	4.29
	Q4. What is MTU	4.30	4.56	4.47	4.19	4.53	4.50	4.57	4.41	4.50
	Q5. Integrated Curriculum	4.37	4.19	4.41	4.00	4.53	4.50	4.62	4.65	4.45
	Q6. OSCE	4.25	4.31	4.53	4.10	4.53	4.45	4.38	4.44	4.60
	Q7. Education using case presentation	4.20	4.47	4.35	4.32	4.68	4.55	4.62	4.57	4.55
	Q8. Feedback skills and 5 micro skills	4.10	4.63	4.29	4.10	4.63	4.36	4.70	4.71	4.36
	Q9. Professionalism	—	—	—	4.16	4.56	4.59	4.65	4.48	4.33
Teaching skills	Q10. Teachers have enough knowledge	4.72	4.81	4.74	4.06	4.85	4.82	4.85	4.55	4.82
	Q11. Teachers have good communication	4.61	4.88	4.53	4.07	4.75	4.82	4.85	4.62	4.64
	Q12. Teachers were open and fair to all	4.50	4.88	4.32	4.06	4.80	4.68	4.90	4.66	4.73

Remarks : Q1~9: item below was able to be understood well, Q10~12: leaders' guidance techniques, 5: It thinks very so, 4: It think so, 3: There is both either, 2: do not think, 1: no considerable, Q9: It was added since the 8th from which the content concerning professionalism was begun.

Maho: Mahosot Hospital 、 MT: Vientiane Provincial Hospital (Maria Teresa Hospital) 、 LPB: Luang Prabang Provincial Hospital Settha: Setthathirath Hospital、 Mitta: Mittaphab Hospital

Table 51 Result of evaluation in 14th to 23rd TOT

Number of TOT		14	15	16	17	18	19	20	21	22	23
Place		Maho	MT	MT	Maho	LPB	LPB	Settha	Settha	Mitta	Mitta
Topics	Q1. Education Theories for Medical Education	4.48	4.38	4.25	4.28	4.50	4.87	4.19	4.61	4.48	4.39
	Q2. Essence for a good physician	4.48	4.62	4.25	4.63	4.43	4.60	4.69	4.67	4.48	4.68
	Q3. Basic clinical competencies and MTU	4.48	4.69	4.67	4.44	4.64	4.80	--	--	4.44	4.54
	Q4. What is MTU	4.52	4.46	4.50	4.38	4.36	4.73	--	--	4.52	4.43
	Q5. Integrated Curriculum	4.32	4.54	4.58	4.31	4.36	4.67	4.31	4.61	4.32	4.54
	Q6. OSCE	4.32	4.42	4.33	4.44	4.21	4.60	4.44	4.56	4.28	4.64
	Q7. Education using case presentation	4.32	4.83	4.58	4.31	4.57	4.80	--	--	4.32	4.39
	Q8. Feedback skills and 5 micro skills	4.26	4.33	4.67	4.31	4.57	4.57	--	--	4.26	4.61
	Q9. Professionalism	4.30	4.45	4.45	4.50	4.50	4.60	--	--	4.32	4.54
Teaching skills	Q10. Teachers have enough knowledge	4.63	4.85	4.83	4.41	4.86	4.79	4.27	4.59	4.63	4.75
	Q11. Teachers have good communication	4.67	4.92	4.67	4.41	4.79	4.79	4.88	4.65	4.67	4.71
	Q12. Teachers were open and fair to all	4.75	5.00	4.75	4.50	4.79	4.93	4.81	4.53	4.75	4.86

Maho: Mahosot Hospital 、 MT: Vientiane Provincial Hospital (Maria Teresa Hospital) 、 LPB: Luang Prabang Provincial Hospital Settha: Setthathirath Hospital、 Mitta: Mittaphab Hospital

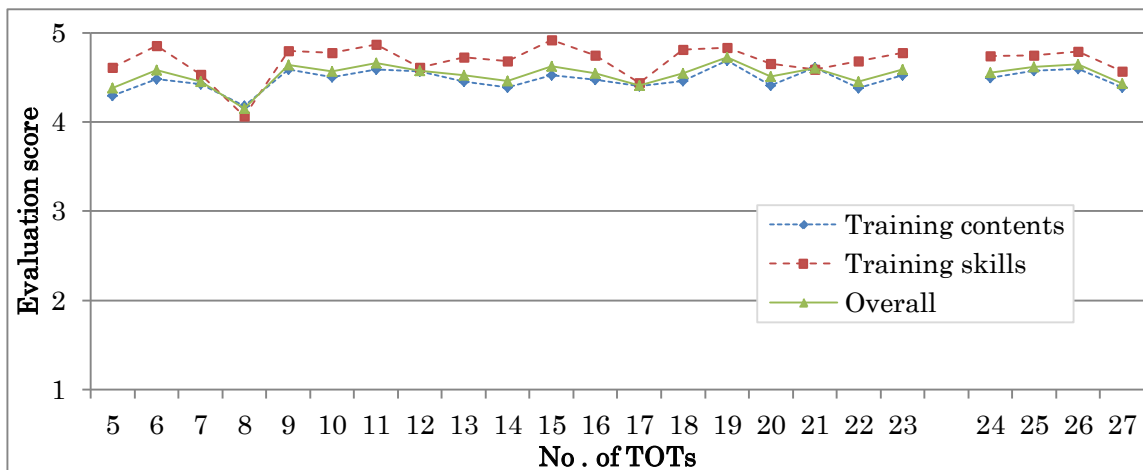
Changing of contents after the 24th TOT were reflected to the questionnaires, but intact items using part about teaching techniques.

Table 52 Result of evaluation on 24th to 27th TOT

Number		24	25	26	27
Place		CPS	CPS	SVK	SVK
Topics	Q1. How to use Black Book	4.71	4.63	4.64	4.71
	Q2. Make your own diagnose map	4.81	4.69	4.57	4.29
	Q3. Blue print of Examination	4.24	4.31	4.43	4.25
	Q4. Case presentation and 5micro skills	4.06	4.50	4.29	4.00
	Q5. How to improve MTU	4.44	4.44	4.79	4.47
	Q6. Discussion on MTU	4.47	4.75	4.57	4.53
	Q7. Professionalism	4.35	4.56	4.50	4.18
	Q8. How to implement OSCE	4.65	4.67	4.79	4.47
	Q9.TMC	4.71	4.63	4.79	4.59
Teaching skills	Q10. Teachers have enough knowledge	4.59	4.69	4.79	4.53
	Q11. Teachers have good communication	4.76	4.75	4.79	4.53
	Q12. Teachers were open and fair to all	4.88	4.81	4.79	4.65

CPS: Champasak Provincial Hospital, SVK: Savannakhet Provincial Hospitals

The most of topics were over point 4 and shows participants have satisfied and understood to the TOT. 4-5 and the high appraisal were gained in all items at each time. The graph below shows average scores of each category and on the whole. This graph was made to compare the scores on educational content and teaching technique after the 5th TOT. The 8th and the 12th both were conducted at Seththirath hospital and 17th were at Mahosot hospital. Both hospitals had more participants than the other locations and young preceptors who did not get used to teaching students participated to the seminar. These were the reasons of relatively lower scores of teaching techniques. The teaching technique is evaluated to other times generally higher than an educational content. This can prove that PMEL members showed “Good teaching “by themselves.



Next is about qualitative survey. Constant tendency achieved in the surveys were supportive attitude towards TOT by preceptors. Many preceptors did not feel they were disturbed and willing to improve their educational environment to medical students, although they were not sure how much they could utilize the taught contents.

This was shown in some interviews. Luang Prabang provincial hospital was considered the most

problematic hospitals in the respect of education quality in clinical trainings. At that hospital, the Project could have interviews to two preceptors who had confrontation with medical students. As mentioned later, clinical trainings in provincial hospitals started in January 2010. Soon after the beginning, medical students could not consider Medical Assistants as teaching staffs and confronted each other. However gradually students noticed those experienced Medical Assistants had many things that students could learn. Since then, they naturally made teaching – learning relationships between them.

(2) Monitoring of the progress by Sub-contracted Organization

1) The Second Year

In the second year, quantitative and qualitative evaluations were carried out in February 2009 and the report was submitted. The project has sub-contracted the monitoring of the progress to Institut de la Francophone pour la Médecine Tropicale since the second year.

Table 53 Qualitative survey for subcontracted monitoring for the 2nd year

Target	<ul style="list-style-type: none"> • 174 D6 students in UHS • Several residents (family medicine or other specialties) in Setthathirath Hospital
Survey period	<ul style="list-style-type: none"> • The end of January 2009: Completion of the questionnaire • The beginning of February 2009: Quantitative survey • The end of February 2009: Qualitative survey • The beginning of March 2009: Report for the raw data and simple analyses • 15 March 2009: Submission of the survey report
Deliverables	<p>Following reports are submitted in English</p> <ul style="list-style-type: none"> • Hard copy of the questionnaires for raw data • Files made by Microsoft Excel and burned on a CD-ROM • Hard copy of the data itself • Microsoft Word file for the report burned on a CD-ROM • Hard copy of the report
Survey items	<p>Quantitative:</p> <p>A) All 174 students in the 6th year of UHS</p> <p>B) Global rating survey for individual preceptors</p> <p>C) Questionnaire for all the preceptors in each rotation site (where students are practicing)</p> <p>D) Questionnaire for practical training program itself</p> <p>Qualitative:</p> <ul style="list-style-type: none"> • Subjects <ul style="list-style-type: none"> • Several D6 students • Several residents in family medicine or other programs • Preceptors • Methods: Focus group (in Lao language) • Question items: in a following questions

Table 54 The second year subcontracted progress monitoring survey: qualitative question items and answers

For D6	Question items	Answers
Q1: Is the training busy?	Q1: How do (did) you usually use your time in the Hospital? Do (did) you feel bored or busy?	They are generally satisfied with the teaching though they feel tasks are too many. Several negative comments are as follows, (1) It is difficult to continuously work for 36 hours during on-duty. (2) Inability of prescription produces inconvenience. (3) It is not easy to deal with different contents between study for the test and practical study.
Q2: Suggestion to improve the hospital	Q2: Do you have any suggestion to improve the Hospital?	There are several suggestions for improvement. (1) Quantity for the practical training should be increased. For example, students should take practical training from D3 from short to longer period. (2) Students expected more teaching not only from residents but also preceptors.
Q3: Quality of care	Q3: How do (did) you consider patient care in the Hospital? If your family member is sick do you take the member to this hospital? Why?	Five out of six students answered they can recommend the hospitalization to Setthathirath Hospital because nurses are trustworthy. However, one concern is some physicians' unprofessional behaviors (discriminative words to ethnic minority patients or no-show at patients' death.
Q4 : Quality of teaching	Q4. How do (did) you consider the teaching?	Some said preceptors and residents should take care of them more time. Some had impression that teacher/student ratio is low.

For residents	Question items	Answers
Q1: Is the training busy?	Q1: How do (did) you usually use your time in the Hospital? Do (did) you feel bored or busy?	The situation was obviously improved but further improvement was expected. They especially expected that amount of tasks during night duty would be decreased. The schedule in paediatrics is clear. That in ob/gyne was unclear but on-the-job training is good.
Q2: Suggestion to improve the hospital	Q2: Do you have any suggestion to improve the Hospital?	They expected improvement in task allocation, e.g. ward and OPD, how to formulate MTU, teaching skills, the number of preceptors, clarity of objectives, and how to contact with preceptors in emergency cases.
Q3: Quality of care	Q3: How do (did) you consider patient care in the Hospital? If your family member is sick do you take the member to this hospital? Why?	It is heard that the explanation for the therapeutic decision to some ethnic minority had some problems.
Q4: Quality of teaching	Q4. How do (did) you consider the teaching? Compared with other teaching hospitals what are strengths/weaknesses of Setthathirath Hospital?	In obstetrics they feel the number of preceptors was not enough.
Q5: How do you feel about teaching?	Q5: As residents do you have any opportunity to teach D6? How did you feel about teaching tasks mixed with other tasks?	Since all resident recognized that teaching is a good opportunity, they are willing to teach students.

Table 55 Second year, subcontracted progress monitoring survey, Qualitative investigation question item and answer

B) Questionnaire concerning all advising doctors of training hospital		Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Mahosot	IM	2.09	1.45	1.27	2.45	1.91	1.36	1.91	1.64	1.73	1.82
	SU	2.08	1.77	1.62	2.46	1.69	1.85	1.92	1.77	1.92	2.00
	OB	2.31	2.25	2.00	2.81	2.13	2.25	2.50	2.19	2.88	2.56
	PE	1.95	1.82	1.77	2.50	1.82	1.36	2.05	2.23	2.23	1.86
Mittaparb	IM	1.93	1.79	1.57	2.00	1.64	1.64	1.79	1.71	1.71	2.00
	SU	1.80	1.60	1.90	2.60	1.80	2.00	2.30	2.20	2.70	2.00
	OB	2.33	1.67	1.67	2.17	1.67	1.83	2.17	2.17	1.83	1.50
	PE	2.60	2.00	2.00	2.60	2.00	1.60	2.00	1.60	1.80	1.80
Setthathirath	IM	1.75	2.00	2.50	2.50	1.75	2.25	2.00	2.25	2.00	2.00
	SU	2.80	2.00	1.40	2.60	1.40	2.00	1.80	2.60	2.00	2.20
	OB	2.14	1.86	1.71	2.36	1.79	1.71	2.07	1.93	1.71	2.00
	PE	1.80	1.80	2.60	2.80	2.60	2.20	2.60	2.60	2.80	2.60
MCH	IM	2.00	1.67	2.00	2.67	1.33	1.00	2.00	1.00	1.33	2.00
	OB	2.56	2.11	2.11	2.44	2.11	2.00	2.22	2.11	2.00	2.22
	PE	2.50	1.75	1.50	2.50	2.25	2.25	2.25	1.75	1.50	1.50

Bold numbers is the item Setthathirath hospital achieved the top ranked. Except OB/GYN, it has various strong point to be evaluated.

Table 56 Second year, subcontracted progress monitoring survey, Qualitative investigation question item and answer

C) Evaluation question concerning management of hospital practice program		Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Mahosot	IM	1.54	1.55	1.09	1.46	1.27	1.27	2.00	1.46	1.91	1.36
	SU	1.69	1.39	1.39	1.54	1.39	1.54	1.69	1.54	1.69	1.92
	OB	1.53	1.53	1.35	2.00	1.47	1.53	2.24	1.94	2.24	2.12
	PE	1.41	1.36	1.23	1.73	1.32	1.46	1.96	1.68	2.27	1.77
Mittaparb	IM	1.00	1.00	1.23	1.64	1.43	1.29	1.64	1.36	2.07	1.71
	SU	1.89	1.67	1.67	1.56	1.33	1.44	2.00	1.56	1.67	1.89
	OB	1.17	1.17	0.83	1.17	0.83	1.50	1.67	1.33	2.00	1.50
	PE	1.20	1.20	1.20	1.80	1.00	1.40	2.00	2.00	2.00	1.60
Setthathirath	IM	1.50	1.25	1.50	2.25	1.75	1.75	2.00	1.75	2.25	2.00
	SU	1.60	1.40	1.20	2.60	1.60	1.00	2.60	1.40	2.60	2.00
	OB	2.21	1.71	1.64	1.86	1.64	1.57	1.62	1.64	2.14	1.71
	PE	1.43	2.29	2.14	1.71	1.14	1.00	2.43	1.71	2.71	1.86
MCH	IM	1.67	1.67	1.33	1.67	1.67	2.00	1.33	1.33	2.00	1.33
	OB	1.30	1.60	1.60	1.80	1.80	1.40	1.90	1.60	2.10	1.90
	PE	1.25	1.75	1.50	1.25	1.75	1.25	2.25	1.75	2.00	2.00

Bold numbers is the item Setthathirath hospital achieved top ranked. It shows all departments have various strong points to be evaluated. Overall, compared to other hospitals Setthathirath hospital education is very highly evaluated. Preceptors committed enough to their students and their commitment was seemingly comfortable for students. Also course management was well-organized according to the survey. Therefore, generally the result showed that activities in the 2nd project year

achieved students' satisfaction.

2) Third year

In the end of 3rd project year, qualitative survey was conducted. Quantitative survey was extended until the beginning of 4th project year because it was in the middle of clinical trainings when the qualitative survey was taken place.

Because provincial hospitals started to accept trainees since 2010, this progress monitoring survey included them additionally to the teaching hospitals in Vientiane capital. The 3rd project year was qualitative survey as mentioned. The basic method was not changed radically. Below is the methodology.

- Targeting 4 teaching hospitals and 4 provincial hospital for medical students. Information on interns and preceptors is Setthathirath hospital only.
- All are the focus groups. One researcher of IFMT entered and the moderator and the other two people as a secretary entered at the same tim. Two researchers' memos besides the opening passage data were confirmed, and the triangulation analysis was attempted.
- Contents of interview was firstly written in Lao and translated into French. Qualitative analysis was conducted later.. Especially, the comment on a necessary point to improve was carefully analyzed.
- Two researchers did an independent analysis, and it was collated later.

Table 57 Third Year, subcontracted progress monitoring survey, Qualitative investigation question item and answer

D6	Answer
<p>Q1 : Busy and practice</p>	<ul style="list-style-type: none"> • Medical student training in Vientiane <p>Good things :</p> <ul style="list-style-type: none"> - Because it is possible to learn, the practice is positively accepted though the amount of the work is overall large. <p>Problem :</p> <ul style="list-style-type: none"> -Students are not allowed to commit to help child delivery. Therefore unless there are too many deliveries, students have no chance to commit to it. - The clinical examination is difficult to understand, and preceptors explain mostly insufficient. - Frequently preceptors were not present, and difficult to take care of students. - Preceptors think students are insufficient in both knowledge and skills. - Some doctors in higher positions are unkind to the student and look down on, too. - Not really systemized job description for the D4, D5, and D6 students. Jobs are frequently mixed up. - Sometimes one preceptor takes care of D4 and D6. - Frequently roles between nurses and students. Sometimes nurses' works were included to D6 students trainings. (especially, mahosot hospital). - Students feel unsatisfaction because they cannot make prescription. - The period of the clinical training is too short. - The difference of each department is too large. Although there are good preceptors, there are also many not so good. <ul style="list-style-type: none"> • Content heard only in a part of city hospital <p>Good things :</p> <ul style="list-style-type: none"> - The settlement of Mitaparb and Mahosot hospital's practice is good. <p>Problem :</p> <ul style="list-style-type: none"> - The number of cases is comparatively little in the Sethathirath hospital. (one student) 。 - Work in Motaparb hospital are just the routine passes. (one student) <ul style="list-style-type: none"> • Content heard in provincial hospital <p>Good things :</p> <ul style="list-style-type: none"> - It is easy to have more practical practice because the ratio of student/patient is lower than that of the Vientiane city. - There is a person who often teaches in preceptors. (person not so either) <p>Problem :</p> <ul style="list-style-type: none"> - More preceptors should take part in the education. - Equipment, apparatus, material, the Internet, and the book are insufficient. - It is not easy to contact to preceptors at the duty, also limited access to the medicine or machine parts.

<p>Q2 : Improvement idea of training hospital</p>	<ul style="list-style-type: none"> - Student's management - It is necessary to improve the management at the entire practice period. - It is difficult how to make the relationship to preceptors from the student. There are preceptors who tries to be having the student read the book only, too. • It is necessary to have more training on the clinical examination, the electrocardiogram, the clinical inference, and English and French. • Ratio of student/training doctor - Allocate a specific preceptor to each student group is needed. • An increasing case experiences - The method of the diagnosis and the prescription and the methods of the case presentation are too different depending on the departments, the hospitals, and preceptors. - Educational purpose of UHS is not told the hospital well in Mittaphab hospital. - Relationship between nurse and MA needs improvement. Which nursing care to be helped by students should be clarified. - More feedback from preceptors to student's clinical work is necessary. - The students in the provincial hospital want to compare to preceptors in other hospitals. - It is necessary to be educated according to an educational plan of the university, and to learn gradually. - An economically and culturally handicapped student should have more offer a scholarship. - More the quality of teaching in the provincial hospital is needed. Want to spare time to teach students a little more. - Want to increase the number of classrooms. - Want to practice on schedule. - Want to make it turn round a variety of provincial hospitals. • Problem before 2009 other year - Necessary to extend the clinical practice period more as the start etc. from D3 and D4 grader. - Want to use the example of the clinical cases more (Setthathirath and mitaperb hospital pediatrics department doing well). - Want preceptors to lecture concerning the medicine management and the prescription. - Want to receive instruction not only by the interns but also guidance by preceptors more.
<p>Q 3 : Quality of diagnosis</p>	<ul style="list-style-type: none"> • Hospital in Vientiane Good things : <ul style="list-style-type: none"> - Because sanitation problem, OB/GYN cannot be recommended, but it can be recommended to the family to be hospitalized to the other departments. - Equipment and doctor are high-quality. Problem : <ul style="list-style-type: none"> - There are some doctors having problem to their attitude and speech to the poor patients from rural area. Also some doctors are very fastidious about patients. - The quality of the diagnosis goes up if Setthathirath hospital staff is done the gratuity. - It is necessary to improve the quality of the diagnosis in ER (especially Setthathirat hospital). • Provincial hospital Good things : <ul style="list-style-type: none"> - May hospitalize the family. The quality for the patient care is also good. - (Maria Teresa Hospital) The infrastructure, cleanness, and the rule are steady. Problem : <ul style="list-style-type: none"> - Equipments are insufficient. The medical knowledge is also insufficient. - The nurse and the doctor are often impolite attitudes for the patient. - Misunderstanding might be caused because the language difference. - The serious case is introduced to Thailand. • Luang Prabang Hospital problem <ul style="list-style-type: none"> - Not recommended to the family. - Equipment is old and pharmaceutical expense is high. Doctor's level is low. - Problem such as being not able to use the medicine that cannot be contacted preceptors during the duty.
<p>Q 4 : Quality of training</p>	<ul style="list-style-type: none"> • Basically called No. Answer. However, some students can work as skilled because he or she practices independently by using various chances. • Might the practice period in post-graduation be extended or the postgraduate training be made to require or the method lead to the improvement.

Interns	Answer
Q 1 : Busy and training	<ul style="list-style-type: none"> • Good things <ul style="list-style-type: none"> - Accepts as the work though it is busy. The responsible experience is obtained. - Being possible to join the decision process is good. It can consult the preceptors when prescribing. - Being able to teach when the patient comes is a good chance. • Problems <ul style="list-style-type: none"> - Not received respect from the student. On the other hand, student's ability is low. There are interns who feel that it is unpleasant to take care of students due to their irrespectful attitudes. - Person who feels that the ability is insufficient in the family medicine interns. - A lot of numbers of students per one intern. - Might program the family medicine training for three years including the training of one year in the provincial hospital.
Q 2 : Improvement idea of training hospital	<ul style="list-style-type: none"> • Increase preceptors to supervise them. • Want to include the time spent in study and the education into the schedule. • Want to do the under graduate education and the specialist program in the seamless • Family medicine interns should attend to lecture with the specialist interns training. • Want to take a course in once during the week with the preceptors. • There are no Good classrooms and no computer, no internet nor library. • Need to have more feedback. • When going to the academic society, consideration to the less assistance is needed. • Want lecture in English. • Want to be able to do study with a simulator.
Q 3 : Quality of diagnosis	<ul style="list-style-type: none"> • Overall good. You may hospitalize the family in a provincial hospital depending on the disease. • Opinion that there was a problem in the explanation concerning treatment to minority tribes.
Q 4 : Quality of training	<ul style="list-style-type: none"> • Good things <ul style="list-style-type: none"> - Preceptors have knowledge and the experience, and are treating the international average. - Setthathirath hospital has good guidance facilities. - The foreign trainer often supports and it exists more. - Mahosot hospital has a lot of preceptors and the foreign doctors. • Problems <ul style="list-style-type: none"> - There are preceptors with a low skill, too. It is necessary to update knowledge and the skill. - Doctor not along an international guideline either. - Difficult for a poor patient and the patient that there is no acquaintance in the hospital to receive the diagnosis and treatment in the hospital.
Q 5 : Training by training doctor	<ul style="list-style-type: none"> • Basically, no one thinks that they can work soon in a present clinical training after graduation. • There were opinions that it is possible to work as a doctor at last to some degree by the supplement of 2 to 3 year's training after graduation is general. • All members taking teaching is a good chance and positive.

Preceptors	Answer
Q 1 : Quality of diagnosis	<ul style="list-style-type: none"> • Overall good. Because they understand the hospital characteristic, it is possible to hospitalize the family in the provincial hospital depending on the disease. • Doing diagnosis and treatment are decided by information obtained in the Internet, hospital magazine at Mahosot hospital, and the library, etc. However, references update is slow, and it is a problem that the Internet is also not speedy. • Information on a peculiar infectious disease to Laos in Mahosot hospital, and it is useful for the selection of the antimicrobial agent. • Want to have lecture whether to obtain reliable information because information on the Internet is low in reliability at time.
Q 2 : Source of clinical decision	<ul style="list-style-type: none"> • One preceptor takes five students would be just good. • When preceptors go to the conference, necessary to put out someone support the training. • Necessary to maintain the Internet and the library.
Q 3 : Student's independence	<ul style="list-style-type: none"> • Basically, no one thinks that it can work soon in a present clinical training after graduation. • Opinion that it is possible to work as a doctor at last to some degree by the supplement of 2 to 3 year's training after graduation is general.

3) Forth Year

To compare four provincial hospitals and the previous data, it investigated quantitatively. A basic method is as follows.

Target	4 teaching hospitals in Vientiane capital and 4 provincial hospital
Question	Questionnaire
Implementation	<ul style="list-style-type: none"> The evaluation questionnaire to the medical student and the interns distributed. It was self-filled in after the researcher of IFMT proceeded to each hospital, and informed consent in oral was obtained, and collected. Data went up to the stage of descriptive statistics after it input it on the IFMT side and the report was submitted. Raw data also submitted. Raw data was analyzed in the repeated statistics on the project side if necessary.
Implementation	<ul style="list-style-type: none"> The evaluation questionnaire to the medical student and the interns distributed. It was self-filled in after the researcher of IFMT proceeded to each hospital, and informed consent in oral was obtained, and collected. Data went up to the stage of descriptive statistics after it input it on the IFMT side and the report was submitted. Raw data also submitted. Raw data was analyzed in the repeated statistics on the project side if necessary.

① Evaluation on best preceptors by medical student (1~10)

- Basic academic vital events

Target grade	D 6, 196 persons、 Answer was obtained from 193 persons on May 26-27, 2010.
Target sex	Male 93persons (48%) , Female 100persons
Object treatment	Student public 63Persons (33%) , Scholarship 33persons, Special 95persons, Assisted doctor 1person
Training place	Mahosot H. 27persons, Mitaperb H. 37persons, Setthathirath H.29persons, MCH 25persons、 Ruang Prabang H. 20persons, Savanaket PH. 19persons, Changpasck PH. 16persons, Maria Teresa H. 20persons

- Methodology

- Choose up to nine preceptors they have been taught. Students were asked to list up whom they think of having good teaching skills.

- To the doctor, evaluate in 5steps: 5: very good, 4: Over standard, 3: Standard, 2: Under standard, 1: Bad.

- Comparison of each hospital

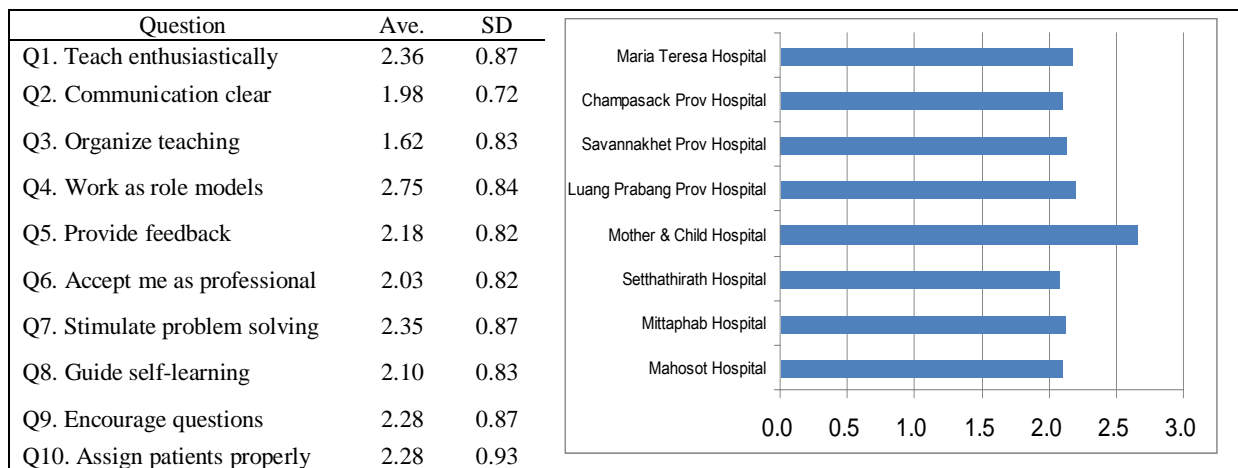
- There are no significant differences between hospitals in the evaluation on preceptors from 1st to 5th ranked preceptors.

Hospital	1st	2nd	3rd	4th	5th
Mahosot	4.00	3.67	3.70	3.61	4.00
Mittaperb	3.82	3.59	3.78	3.33	3.50
Setthathirath	3.67	3.93	3.74	3.27	3.43
MCH	4.72	4.25	4.11	3.88	4.33
Luang Prabang PH	4.17	3.89	3.41	3.59	3.12
Savanacket PH	3.53	3.63	3.68	3.53	3.42
CHangpasack PH	4.31	3.88	3.50	3.82	3.50
Maria Teresa PH	3.75	3.55	3.55	3.50	3.55

- Students evaluated rank 5th preceptors were: Mahosot hospital 78%, Mittaphab 43%, Setthathirath 24%, MCH 24%, Luang Prabang, 85%, Savvnakhet 63%, Champasak 63%, and Maria Teresa 100%.

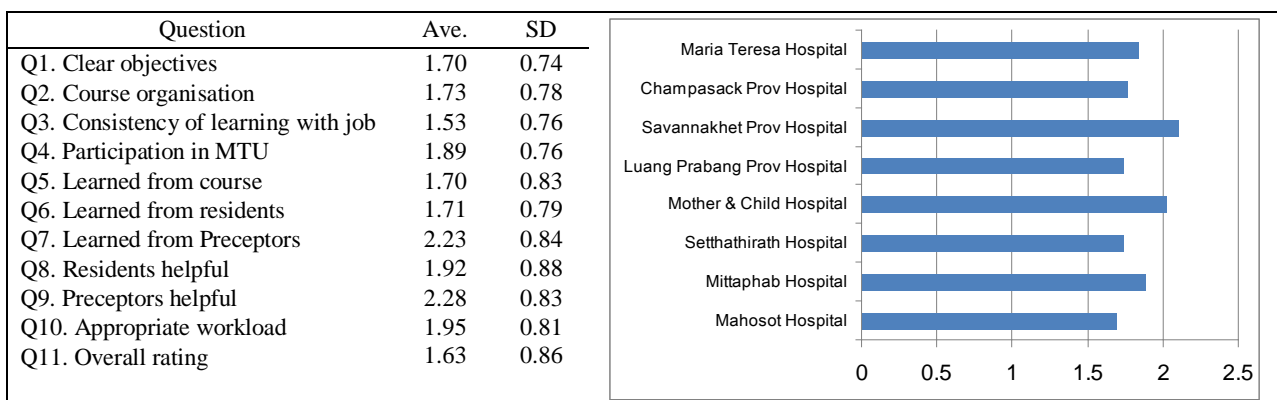
② Evaluation to group of preceptors by medical student

- Basic vital events academic data is the same as 1.
- Evaluated preceptors on the whole as a group in a hospital.
- 10 items with five levels Likert scale, 4: Grate, 3: Very Good, 2:Good, 1: Normal, 0: Bad
- Reliability is high in α coefficient 0.83.
- Main result (average and SD): There is a significant difference in ANOVA with $p=0.001$. In Post-hoc test (Bonferroni), a significant difference was seen between the mother and child hospital and other hospitals.



③ Evaluation to training program by medical student

- Basic vital events academic data is the same as 1
- Program in the training site was evaluated
- 10 items with five levels Likert scale, 4: Grate, 3: Very Good, 2:Good, 1: Normal, 0: Bad
- Reliability is high in α coefficient 0.83
- Main result: It is $p=0.08$ and none a significant difference in ANOVA.



④ Dissatisfaction degree of patient investigation

The patient's dis-satisfied investigation was conducted by three teaching hospitals with Setthathirath, Mahosot and Mitaperb located in the Vientiane city on 25 May 2010 and 1 June.

Target	60 people in more random respectively than each hospital (Mahosot is 61persons) ,Total: 181persons 96persons (53.0%) Male, 85persons (47.0%) Female Age: 20th 52persons (28.9%) , 30th (31~40year) 48persons (26.7%) , Over 41year 80persons (44.4%) Hospitalization and the outpatient were another, and the in-patient occupied 170 people
Question	The questionnaire is made as a patient satisfaction rating investigation by United States internal medicine association (American Board of Internal Medicine), and consists of ten items. 「Agree(5)、Think so(4)、 Uncertainty (3)、 Not think(2)、 Not (1)」
Implement	The investigator who took training conducted survey at the 3 hospital. Target patients were from surgery and internal medicine. It was explained to their answer will never influence the treatment of the hospital and privacy security from the investigator.

- Mean value of the result of ten items is as follows (value large is more dissatisfied)

Items	Dissatisfied	< Ave. >
Q1 Talk was a coarse, insincere, unkind feeling	3.23	■ Setthathirat : 2.73
Q2 Atmosphere of feeling with □amilarity be not able	3.04	■ Mahosot : 2.62
Q3 Attitude is does self-conceitedness, and is not equal	3.01	■ Mitaperb : 3.79
Q4 Not able the listen to enough as the story was interrupted	2.96	
Q5 Indifferent, and it was disregarded by the talk	2.96	
Q6 As for the examination, an explanation beforehand and after the fact was insufficient	2.91	
Q7 As for the selection of treatment and the inspection, the discussion was insufficient	3.01	
Q8 Not explain enough though it did not urge, and it questioned on the question	3.07	
Q9 Explanation remained about the symptom and uneasiness remained in the insufficiency	3.12	
Q10 Explanation has not been understood easily as the technical term is used	3.14	

(3) Comparison before quantitative data

① Dissatisfaction degree of patient investigation

Tendency of dissatisfaction increased remarkably in all the hospitals from the baseline investigation (February, 2008) to before the terminal evaluation of the Project (May, 2010).

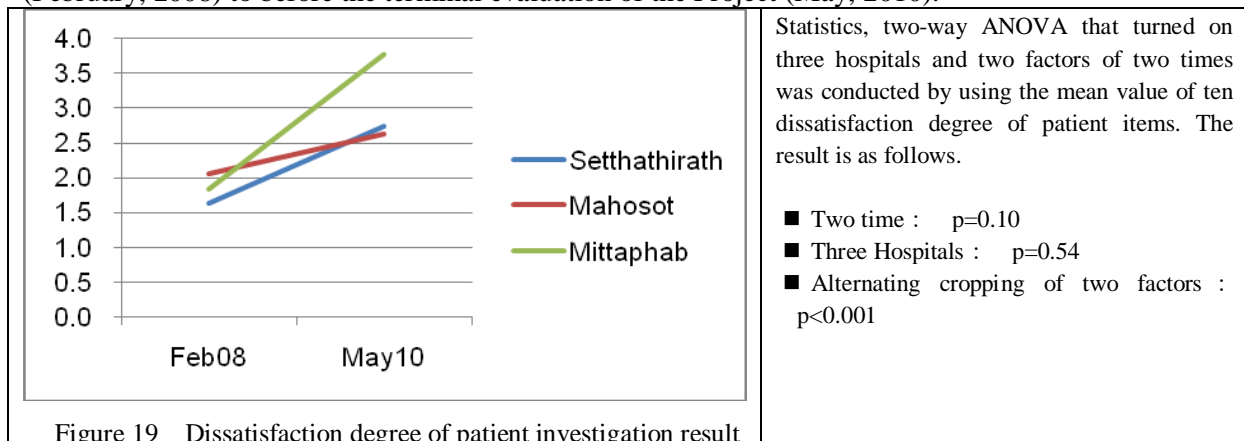


Figure 19 Dissatisfaction degree of patient investigation result

Possible reason can be the following as a cause for the alternating cropping.

- Consideration to the quality of patient's medical treatment rises overall, and it is shown as a dissatisfaction potentially
- Possibility that the building of the hospital and the factor such as new of equipment also influence
- Possibility of the influence of other factors is too larger than the result of training appears in the improvement of the dissatisfaction degree of the patient

② Evaluation to group of preceptors by medical student

Compared before the second annual subcontracted investigation (February, 2009) and before the terminal evaluation of the Project (May, 2010). From whole data of May 2010, only data from students in Vientiane capital was taken to have appropriate comparison, because in 2009, students took trainings only in Vientiane capital.

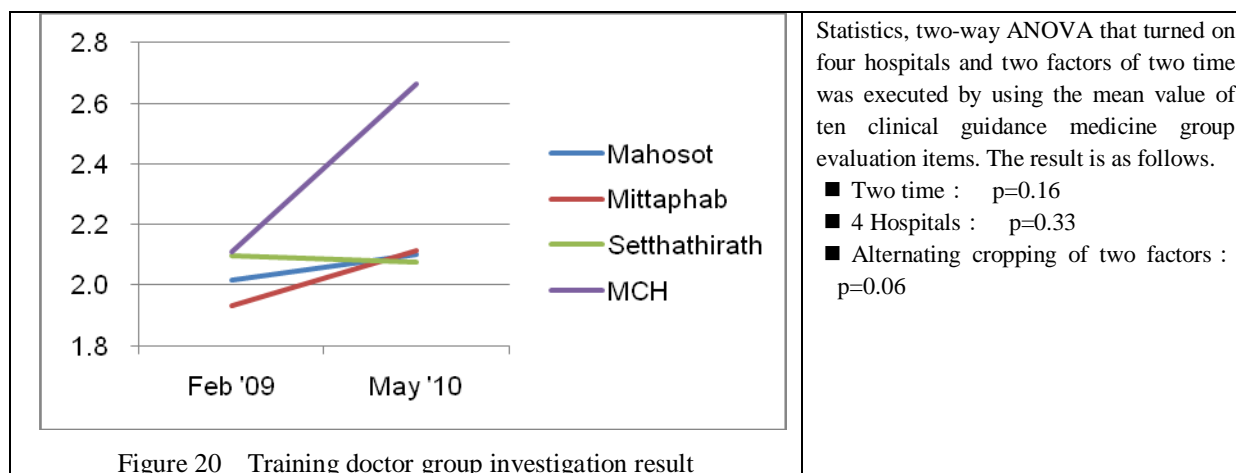
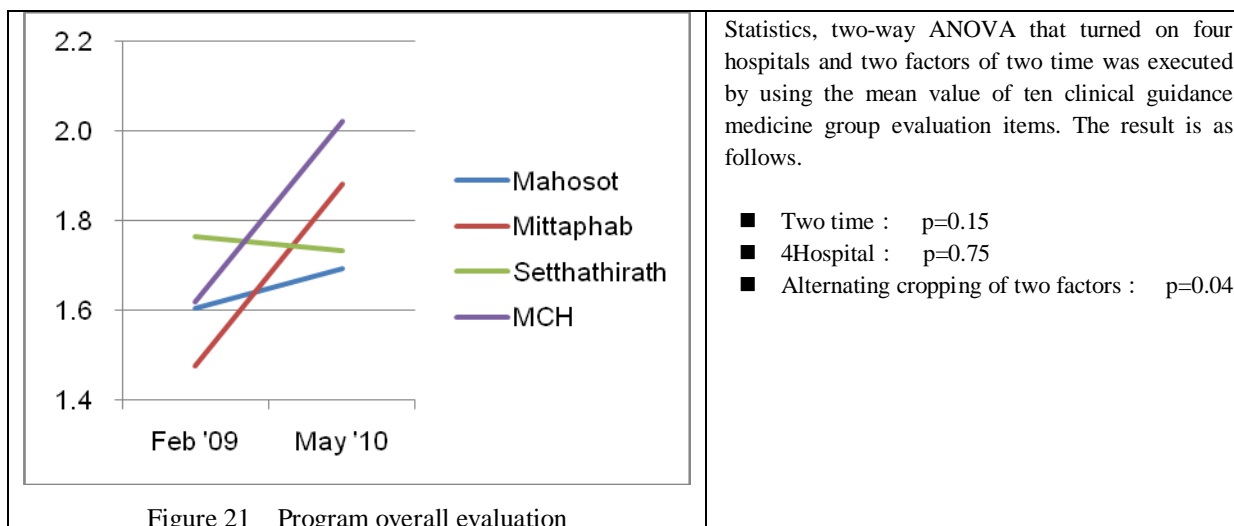


Figure 20 Training doctor group investigation result

Significant difference is not shown in statistics. Notably MCH achieved high scores in many indicators. This is possibly due to education passionate Director and Deputy Director in MCH. By their leadership, many educational improvements were implemented.

③ Evaluation to training program by medical student

Compared it before the second annual subcontracted investigation (February, 2009) and before the terminal evaluation of the Project. (May, 2010). Other background 2 is the same.



Significant difference was seen in statistics only for the alternating cropping. Potential reason is TOT. The 1st TOT was implemented at Setthathirath hospital in November, 2008. In February 2009, TOT was admitted highly effective. At the same time, this enthusiasm was already expanded to the other hospitals. This can be said the expansion of enthusiasm made Setthathirath hospital be overtaken to the other hospitals.

1.5.7. Activity3-7: Attempts of Educational Expansion by Newsletters and Posters

(1) Newsletters

7 newsletters issues of newsletters were published and distributed by the fourth year. Their outlines are as follows;

Table 58 Overview Project News Letter

No.	Issue	Contents
Vol.1	January, 2009	About MESH Project To improve MTU functions Learning Bedside Teaching
Vol. 2	June, 2009	JCC meeting CLC Opening Ceremony Library improvement TOT for Medical Education
Vol. 3	January, 2010	Southern Provincial TOT Basic Life Support Seminar at CLC Grand Round
Vol. 4	March, 2010	OB/GYN program of Freiburg University TOT at Luang Prabang and Maria Teresa Improving functions of MTU
Vol. 5	July, 2010	JCC sharing Joint Evaluation Report PMEL Activities for the 4 th Project Year Mahosot Hospital TOT Maria Teresa Hospital TOT Luang Prabang Provincial TOT

No.	Issue	Contents
Vol. 6	September, 2010	TOT at Southern Provincial Hospitals Champasak Provincial Hospital TOT Savannakhet Provincial Hospital TOT Participants after TOT
Vol. 7	October, 2010	Project Concluding Overview What MTU Brings to Setthathirath Hospital (Dr. Khampe) JCC meeting 3 rd Medical Education Symposium 4 th Medical Education Symposium

List of the major destinations of newsletter is as follows;

Table 59 Organizations Newsletter distributed

MOH
Mahosot Hospital (Teaching Hospital)
Mittaphab Hospital (Teaching Hospital)
Mother Child Hospital (Teaching Hospital)
103 Hospital
UHS
Doctors and preceptors attended to the TOTs

1) The Second Year

The project gave priority to publicity activities than education in the second year in the whole aspects. The counterparts, with the indirect support of expert team, created the first issue of the project newsletter in January 2009 in order to disseminate the purpose of the project.

100 copies in both Lao and English were distributed to Setthathirath Hospital, University of Health Sciences, teaching hospitals in the Vientiane City, Ministry of Health and donor organizations, etc. and experts utilized them as the introductory tool of the project when experts surveyed at local health centers and/or hospitals for the inspection of their capability to accept student training.

2) The Third and Fourth Years

In addition to the function as “publicity tool” in the second year, the articles of the newsletters in the third and fourth year were written so that related organizations and parties would understand about medical education and MTU more practically, and would utilize them in their own activities. Preceptor wrote about activities with the experts by themselves and introduced mainly MTU activities of Setthathirath Hospital, the principal implementing agency.

(2) Posters

There are two purposes in issuing posters; 1) to visualize the concept of MTU so that the parties concerned would deeply understand it and 2) to make patients known that the cooperation of them

who have a medical examination at teaching hospitals is essential for the practice of medical students at MTU.

The designing of poster was started in July 2009 and 500 copies were completed in October. The posters are currently being distributed and posted at Setthathirath Hospital, facilities of related organizations mentioned in the above table and the provincial hospitals related to the project. The project provided posters to each provincial hospital when they carry out TOT and the posters were distributed to TOT participants.



Figure 22 Project Poster

1.6. List of the Outcome Materials

The report and Outcomes of technical cooperation submitted in accordance with the contract article “6. Contracted outcome”

Table 60 A List of Report and Outcomes of Technical Cooperation

Year	Report Title	Submission	Numbers
The 1 st Year	Inception Report (IC/R)	Within a month after contract confirmed November, 2007	English 20 books (15books to Lao side) Japanese 5 books CD-ROM of Reports (English and Japanese)
	Baseline Survey Report	March, 2008	English 20 books (15 books to Lao side) Japanese 5 books CD-ROM of Reports (English and Japanese)
	Year Final Report (1 st Project Year)	March, 2008	Japanese 3 books CD-ROM of the Report
The 2 nd Year	Project Progress Report No.1	May, 2008	English 20 books (15 books to Lao side) Japanese 5 books CD-ROM of Reports (English and Japanese)
	Project Progress Report No.2	November, 2008	English 20 books (15 books to Lao side) Japanese 5 books CD-ROM of Reports (English and Japanese)
	Year Final Report (2nd Project Year)	March, 2009	Japanese 3 books CD-ROM of the Report

Year	Report Title	Submission	Numbers
The 3 rd Year	Project Progress Report No.3	May, 2009	English 20 books (15 books to Lao side) Japanese 5 books CD-ROM of Reports (English and Japanese)
	Project Progress Report No.4	November, 2009	English 20 books (15 books to Lao side) Japanese 5 books CD-ROM of Reports (English and Japanese)
	Year Final Report (3 rd Project Year)	March, 2010	Japanese 3 books CD-ROM of the Report
The 4 th Year	Project Progress Report No.6	May, 2010	English 20 books (15 books to Lao side) Japanese 5 books CD-ROM of Reports (English and Japanese)
	Clinical Education Report	September, 2010	English 95 books (90books to Lao side) CD-ROM of Reports (English)
	Project Final Report	November, 2010	English 20 books (15 books to Lao side) Japanese 5 books CD-ROM of Reports (English and Japanese)
	Year Final Report (4 th Project Year)	November, 2010	Japanese 3 books CD-ROM of the Report

Other printed teaching materials are shown in below.

Table 61 A List of Teaching Material

Category	Material Title
Materials for Medical Students	Name of Teaching Material
	Case Presentation Guidebook
	Humanity Care
	Basic Clinical Skills Guidebook
	Basic Diagnostic Algorithm
	Basic Physical Examination DVD (5 DVD sets)
Materials for Preceptors	Medical Ethics
	Theories of Medical Ethics
	Medical Education Key words 100

2. Work Schedule

	Year in order		First Year					Second Year										Third Year										Fourth Year																									
	Month in order	Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37														
		2007	2008																																		2009												2010				
Year		Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov															
First Year	[Domestic work]																																																				
	Study on basic policy																																																				
	[Local works]																																																				
	Presentation of and consultation on Inception Report																																																				
	Implementation of baseline surveys (direct)																																																				
	Implementation of baseline surveys (re-commissioned)																																																				
	Analysis of the data obtained in the baseline surveys and formulation and finalization of the detailed design																																																				
	Establishment of target figures of indicators and evaluation criteria to be used in the mid-term and terminal evaluations																																																				
	Development of a training plan in Japan																																																				
	Development of a plan for equipment supply for the project																																																				
	Verification of the necessity of training facilities and preparation of design																																																				
Second Year	[Training of C/P in Japan]																																																				
	[Local works]																																																				
	Implementation of the training for trainers of clinical training on EBM in clinical pathology, diagnosis and symptomatology taking systematic presentation of clinical cases into consideration																																																				
	Improvement of treatment records with follow-up and accumulation of cases in scope																																																				
	Guidance in accumulation of clinical cases for EBM																																																				
	Guidance on clinical case study meetings for medical students/medical doctors; support for development of training materials for presentation/reference of clinical cases for medical students/medical doctors																																																				
	Establishment of the philosophy/concept of the clinical training at the Sethathirath Hospital																																																				
	Support to the establishment of a new committee, the "Training Managing Committee," responsible for the clinical training and support to, advice to and guidance at monthly conferences for the clinical training																																																				
	Guidance in preparation of document, documentation of the process of, experience in, outcome from and lessons learned from the clinical training at the Sethathirath Hospital																																																				
	Implementation of clinical training seminar with cooperation among the four teaching hospitals, the Ministry of Health and the University of Health Sciences																																																				
	Support to the implementation of the external inspection																																																				
	Development of a program and a curriculum for TOT; preparation of training materials for TOT																																																				
	Implementation of TOT for the staff of the Sethathirath Hospital who are engaged in the fields such as teaching techniques, problem-solving-oriented clinical training methods, presentation of clinical cases, training management by team approach, training structure and self-learning																																																				
	Establishment of monitoring criteria for trainers of clinical training																																																				
	Monitoring/training of trainers of clinical training																																																				
	Internal mid-term evaluation of the project																																																				
Third Year	[Local works]																																																				
	Mid-term evaluation																																																				
	Guidance on systematic accumulation of clinical cases for EBM, guidance on clinical case study meetings for medical students/medical doctors, and support for development of learning materials for presentation/reference of clinical cases for medical students/medical doctors																																																				
	Routine advice on monthly meetings about clinical training and day-to-day guidance on documentation of the clinical training process, experiences, results and lessons learned at the Sethathirath Hospital																																																				
	Support for coordination of documentation of the clinical training process, experiences, results and lessons learned at the Sethathirath Hospital																																																				
	Organizing a clinical training seminar in collaboration with the four educational hospitals, the Ministry of Health and the University of Health Sciences																																																				
	Support for external inspection implementation																																																				
	Development of a program and a curriculum for TOT and preparation of training materials for TOT																																																				
	Implementation of TOT for trainers of clinical training (from three other teaching hospitals in Vientiane City and the prefectural hospitals) who are engaged in the fields such as teaching techniques, problem-solving-oriented clinical training methods, presentation of clinical cases, training management by team approach, training structure and self-learning																																																				
	Monitoring/training of trainers of clinical training																																																				
	Internal terminal evaluation of the project																																																				
Fourth Year	[Domestic work]																																																				
	Reporting the final report of the project at a domestic meeting and submission of the report																																																				
	[Local works]																																																				
	Terminal evaluation																																																				
	Guidance on systematic accumulation of clinical cases for EBM, guidance on clinical case study meetings for medical students/medical doctors, and support for development of learning materials for presentation/reference of clinical cases for medical students/medical doctors																																																				
	Routine advice on monthly meetings about clinical training and day-to-day guidance on documentation of the clinical training process, experiences, results and lessons learned at Sethathirath Hospital																																																				
	Support for coordination of documentation of the clinical training process, experiences, results and lessons learned at the Sethathirath Hospital																																																				
	Organizing a clinical training seminar in collaboration with the four teaching hospitals, the Ministry of Health, and the University of Health Sciences																																																				
	Development of a program and a curriculum for TOT and preparation of training materials for TOT																																																				
	Implementation of TOT for trainers of clinical training (from three other teaching hospitals in Vientiane City and the prefectural hospitals) who are engaged in the fields such as teaching techniques, problem-solving-oriented clinical training methods, presentation of clinical cases, training management by team approach, training structure and self-learning																																																				
	Monitoring/training of trainers of clinical training																																																				

3. Input

3.1. Dispatching JICA expert team

Dispatched JICA Expert members in each year are below.

The First Year

No.	Name	Position Title
1	Hiroataka Onishi	Chief Advisor/Medical education/Teaching skills (1)
2	Chuji Kuroiwa	Medical education/Teaching Skills (2)
3	Shuji Noguchi	Training management & evaluation (1)
4	Sakiko Yamaguchi	Training management & evaluation (2)
5	Masamine Jimba	EBM/ Epidemiology
6	Kiyoshi Kitamura	Clinical pathology
7	Masaru Shimizu	Medical record management
8	Hiroshi Nishigori	Internal medicine/Emergency
9	Keiko Muramatsu	Medical Laboratory

The Second Year

No.	Name	Position Title
1	Hiroataka Onishi	Chief Advisor/Medical education/Teaching skills (1)
2	Takuya Adachi	Medical education (2)
3	Takeo Mori	Hospital Management/Teaching skills (2)
4	Keiko Muramatsu	Medical Laboratory/Training management & evaluation (1)
5	Sakiko Yamaguchi	Training management & evaluation (2)
6	Masamine Jimba	EBM/ Epidemiology
7	Kiyoshi Kitamura	Clinical pathology
8	Makoto Tobe	Medical record management
9	Hiroshi Nishigori	Internal medicine/Emergency

The Third Year


No.	Name	Position Title
1	Hiroataka Onish	Chief Advisor/Medical education/Teaching techniques (1)
2	Teruaki Takamura	Medical Education (2)
3	Takeo Mori	Hospital Management/ Teaching techniques (2)
4	Keiich Yamamoto	Facility Management
5	Keiko Muramatsu	Training management & evaluation (1)/Clinical Laboratory
6	Satoko Okamoto	Training management & evaluation (2)
7	Masamine Jimba	EBM/ Epidemiology
8	Kiyoshi Kitamura	Clinical Pathology
9	Toshiharu Hata	Medical Record
10	Keiko Yano	Internal Medicine/ Emergency

The Forth Year

No.	Name	Position Title
1	Hiroataka Onishi	Chief Advisor/Medical education/Teaching techniques (1)
2	Akiteru Takamura	Medical education (2)
3	Takeo Mori	Teaching techniques (2)/Hospital Management
4	Keiko Muramatsu	Training management & evaluation (1)/ Medical Laboratory
5	Satoko Okamoto	Training management & evaluation (2)
6	Masamine Jimba	EBM/ Epidemiology
7	Kiyoshi Kitamura	Clinical pathology/Medical education (3)
8	Toshiharu Hata	Medical record management

The First Year

Assignment	Name	Year	2008									2009			2nd Year		
		No.	1	2	3	4	5	6	7	8	9	10	11	12	Lao	JPN	
		Month	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar			
Chief Advisor/Medical education/Teaching techniques (1)	Hiroataka Onishi				6/3-7/8 36				9/25-10/20 26	10/17-11/15	11/18-12/18	1/15-2/10 27	3/2-3/16 15	4.50			
Medical education (2)	Takuya Adachi						9/1-9/30 30	10/17-11/15 30				2/15-3/16 30	3.00				
Teaching techniques (2)/ Hospital Management	Takeo Mori				7/5-7/24 20	8/9-8/21 13			11/2-11/18 17					1.67			
Supervision of Construction	Keiichi Yamamoto							10/20-10/29 10				2/22-3/3 12	0.73				
Training management & evaluation (1)/ Medical Laboratory	Keiko Muramatsu			5/27-6/20 25	7/5-8/3 30		9/1-9/30 30					2/15-3/16 30	3.83				
Training management & evaluation (2)	Sakiko Yamaguchi					8/2-9/5 35		10/17-11/10 25	12/7-12/26 20	1/4-1/28 25			3.50				
EBM/ Epidemiology	Masamine Jimba			5/27-6/10 15			9/11-9/20 10	11/17-11/26 10			2/19-2/28 10		1.50				
Clinical pathology	Kiyoshi Kitamura			6/11-25 15				10/4-18 15		12/24-1/7 15			1.50				
Medical record management	Makoto Tobe						9/8-10/3 26				2/11-3/16 34		2.00				
Internal medicine/Emergency	Hiroshi Nishigori			6/30-7/17 18	8/11-8/20 10			11/3-11/16 14			2/9-2/26 18		2.00				
Training in Japan			4/7-5/2													23.50	
Report	Submission		▲ PPR1							▲ PPR2							
	Work in Japan												▲ YFR2				

Note : Work in LaoPDR  : Work in Japan  PPR: Project Progress Report YFR: Year Final Report

The Second Year

Name	Name	Year No. Month	2009									2010			Total Days	MM	
			1	2	3	4	5	6	7	8	9	10	11	12		Lao	JPN
			Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar			
Chief Advisor/Medical education/Teaching	Hiroataka Onishi				6/3-7/8 36				9/25-10/20 26		11/18-12/18 31		1/15-2/10 27	3/2-3/16 15	4.50	0.15	
Medical education (2)	Akiteru Takamura							9/1-9/30 30	10/17-11/15 30				2/15-3/16 30	3.00	0.10		
Teaching techniques (2)/Hospital Management	Takeo Mori				7/5-7/24 20	8/9-8/21 13				11/2-11/18 17					1.67	0.06	
Construction Supervising	Keiichi Yamamoto								10/20-10/29 10				2/8-2/27 20		1.00	0.03	
Training management & evaluation (1)/ Training management & evaluation (2)	Keiko Muramatsu			5/27-6/20 25	7/5-8/3 30			9/1-9/30 30					2/15-3/16 30		3.83	0.13	
	Satoko Okamoto					8/2-9/5 35			10/17-11/8 23		12/7-12/27 21	1/4-1/29 26			3.50	0.12	
EBM/ Epidemiology	Masamine Jimba			5/27-6/10 15				9/11-9/20 10		11/17-11/26 10			3/7-3/16 10		1.50	0.05	
Clinical pathology/Medical education (3)	Kiyoshi Kitamura			6/11-25 15					10/4-18 15			12/24-1/7 15			1.50	0.05	
Medical record management	Toshitaru Hata							9/8-10/3 26					2/8-3/13 34		2.00	0.07	
Internal medicine/Emergency	Keiko Yano				6/30-7/17 18	8/11-8/20 10				11/3-11/16 14			2/9-2/26 18		2.00	0.07	
Main Events			4/7-5/2												25	0.78	
Report				▲ PPR1						▲ PPR2							
			△ Meeting in JPN														

Note ■ : Work in Lao PDR □ : Work in Japan MTR: Mid-Term Monitoring Review PPR: Project Progress Report YFR: Year Final Report

The Third Year

Name	Name	Year	2009												2010			MM	
		No.	1	2	3	4	5	6	7	8	9	10	11	12	Total	3rd Year			
		Month	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Days	Lao	JPN		
Chief Advisor/Medical education/Teaching	Hiroataka Onishi				6/3-7/2 30				9/29-10/30 32			12/24-1/7 15	1/26-2/19/3/1-3/16 25	16	118	3.93			
Medical education (2)	Akiteru Takamura				6/19-7/18 30				11/4-11/28 25			2/18-3/14 25		80	2.67				
Teaching techniques (2)/Hospital Management	Takeo Mori					8/20-31 12						2/20-3/3 12		24	0.80				
Construction Supervising	Keiichi Yamamoto											2/17-2/28 12		12	0.40				
Training management & evaluation (1)/	Keiko Muramatsu		5/13-6/29 48					10/25-11/11 18			1/6-2/6 32	2/24-3/15 20		118	3.93				
Training management & evaluation (2)	Satoko Okamoto				7/8-8/12 36		9/14-10/20 37				1/6-2/3 29			102	3.40				
EBM/ Epidemiology	Masamine Jimba			6/1-6/10 10			9/28-10/7 10					3/4-3/13 10		30	1.00				
Clinical pathology/Medical education (3)	Kiyoshi Kitamura			6/18-7/2 15				11/12-11/26 15						30	1.00				
Medical record management	Toshitaru Hata			6/3-6/27 25				11/14-12/28 45		1/13-1/31 19				89	2.97				
Internal medicine/Emergency	Keiko Yano										1/30-3/15 45			45	1.50				
Main Events				△ Internal MTR △ Monitoring JCC				▲ Seminar ▲ Provincial TOT	▲ Provincial TOT	▲ Seminar ▲ Provincial TOT	▲ Seminar ▲ Provincial TOT	▲ Seminar ▲ Provincial TOT	△ JCC	648	21.20				
Report			▲ PPR1 △ Meeting in JPN					▲ PPR2				▲ YFR2							

Note ■ : Work in Lao PDR □ : Work in Japan MTR: Mid-Term Monitoring Review PPR: Project Progress Report YFR: Year Final Report

The Forth Year

Assignment	Name	Institute	Year	2010										M/M		
				No.	1	2	3	4	5	6	7	8	Days	Laos	Japan	
				Month	April	May	June	July	August	September	October	November				
Work in Laos	Chief Advisor/Medical education/Teaching	Hiroataka ONISHI	Univ.Of Tokyo	3			6/1-23 23	6/29-7/9 11			9/13-27 15	10/1-30 30	3	82	2.73	
	Medical education (2)	Akiteru TAKAMURA	Univ.Of Tokyo	4							9/14-10/7 24			24	0.80	
	Training management & evaluation (1)	Keiko MURAMATSU	SSC	3		5/11-28 18	6/22-7/10 19							37	1.23	
	Training management & evaluation (2)	Satoko OKAMOTO	SSC	5		5/24-6/13 21	6/26-8/10 46		8/24-9/17 25	10/2-31 30	3		125	4.17		
	EBM/ Epidemiology	Masamine JIMBA	Univ.Of Tokyo	2			6/28-7/9 12				10/5-16 12	3		27	0.90	
	Clinical pathology/Medical education (3)	Kiyoshi KITAMURA	Univ.Of Tokyo	3			6/19-7/2 14				10/13-26 14	3		31	1.03	
	Medical record management	Toshiharu HATA	SSC	3			6/1-7/7 37				9/25-10/31 37	3		77	2.57	
	Internal medicine/Emergency	Keiko YANO	Univ.Of Tokyo	5							10/2-31 30			30	1.00	
Submission																
Reporting							▲ PPR5									
Work in Japan (M/M)																0.50
Activities					← 4th Year Activities in Laos →											
																0.50

Legend: : DR : Japan

3.2. Training in Japan

FY 2008 Training Course “Medical Education” was provided as counterpart training in Japan as scheduled in the second year of the project. One noteworthy point was that a three-week Training Course was provided to Afghanistan around the same time. The outline is described below (For more details, see the FY2008 First Laos-Afghanistan “Medical Education” Joint Training Report).

Schedule: 9 April, 2009 to 1 May, 2009 (4 weeks)

Place: The University of Tokyo, International Research Center for Medical Education

Trainee: Dr. Sisomphone Tandavoung (Deputy Director, Surgery, Setthathirath Hospital)

Dr. Bounmy Somsamouth (Deputy Director, Internal Medicine, Setthathirath Hospital)

Dr. Ketsomsouk Boupavanh (Deputy Director, Academic Affairs, UHS)

Dr. Oua Phimmasarn (Coordinator, Post Graduate Education, UHS)

Trainer: Kiyoshi Kitamura (Professor, International Research Center for Medical Education, the University of Tokyo)

Hiroataka Onishi (Lecturer, International Research Center for Medical Education, the University of Tokyo)

Hiroshi Nishigori (Associate Professor, International Research Center for Medical Education, the University of Tokyo)

Masamine Jimba (Professor, Graduate School of Medicine and Faculty of Medicine, the University of Tokyo)

Other outside Lectures

Training Purpose : **Overall:** To train Medical Education person by theory, methodology and practice

Individual:

- Learning theory and technique of ,medical education
- Learning educational of basic clinically capability
- Observing the technique of bedside education
- Observation practice for bedside training in hospital and clinic

Table 62 Curriculum of the Training in Japan

Week/ Theme		Mon	Tue	Wed	Thu	Fri
1 st week • Education Theory • Basic of consultation • Orientation	Date	4/7	4/8	4/9	4/10	4/11
	10: ⁰⁰ -12: ³⁰	Arriving in Japan	JICA Tokyo, Briefing	Opening Ceremony (11:00 ~)	Adult Education Theory, Review and bedside education	Basic concept of consultation
	13: ³⁰ -16: ⁰⁰		JICA Tokyo, Briefing	Orientation, Medical education demand in Laos	Visiting Ukima Clinic	What is Teaching Material
2 nd week • Case based education • Medical communication • Consultation technique	Date	4/14	4/15	4/16	4/17	4/18
	10: ⁰⁰ -12: ³⁰	Going to rounds, Instruction of Conference	Technique of question and Feed back	Case presentation and education, SP participant education	Methodology of out coming education	Consultation education
	13: ³⁰ -16: ⁰⁰	Indonesia University	St. Luke's International Hospital	Guide book for instruction	Consultation education	Chiba University

Week/ Theme		Mon	Tue	Wed	Thu	Fri
3 rd week • EBM • Medical Education Management • Site visiting	Date	4/21	4/22	4/23	4/24	4/25
	10: ⁰⁰ -12: ³⁰	Leadership and management	Evidence based Medicine	Local Medical Education	Transfer to Hokkaido	Teine Keijinkai Hospital
	13: ³⁰ -16: ⁰⁰	Action Plan Presentation, Guide book for instruction	Medical communication training	Guide book for instruction	Sapporo Medical University Local Medicine	Teine Keijinkai Hospital Transfer to Tokyo
4 th week • Local medicine education • Action plan presentation	Date	4/28	4/29	4/30	5/1	5/2
	10: ⁰⁰ -12: ³⁰	AP Confirmation for contents of presentation	Holiday Preparation for presentation	Preparation for presentation	Visiting in hospital 10:00 -	JICA evaluation
	13: ³⁰ -16: ⁰⁰	Plan of TOT (FD)	Rehearse of presentation	15:00 - Presentation at TIC and relay between Japan, Laos and Afghanistan	National Memorial Showa museum	

Outcome:

Every trainee was able to achieve the training goals. In the action plan presentation, a group of four trainees expressed about “Improvement of Clinical Education Method at Sethathirath Hospital.” The trainees were able to extract problems in their country and make a feasible plan.

After returning to the country, in particular, the two trainees from the Sethathirath Hospital are regarded as essential persons in the implementation of MTU. The two trainees from UHS are playing a central role in determining the content in the medical education seminar and the medical education symposiums held for the third and fourth year, and are making the most of the concepts of medical education in the field. One thing to note is that three of these four persons belong to PMEL and acted as leading members in TOT provided at hospitals in Vientiane and provincial hospitals.

3.3. Equipment List

(1/2)

No.	Name	Purpose	Main Specification	Quantity	Procurement Country	Manufacture	Model
Training Center							
Training Simulator							
1	CPR model (Adult)	Training of artificial respiration and cardiac compression	full body, face mask, mannequin cleaner	4	Thailand	Nihon 3B Scientific	M22 11218-000
2	Airway Management Trainer	Training of airway management, tracheal cannula and bronchoscopy examination	head to thorax adult model	2	Thailand	Sakamoto Model	KR6 11242-020
3	Midwifery Practice Model	Training of conduct of labor and palpation	abdominal to external genitalia part model, fetal model	2	Thailand	KOKEN Co., Ltd.	M54 11362-000
4	Vital Sign Infant Model	Training of detection of cardiac sound and sphygmopalpation	Newborn full body (approx. 50cm), control panel of cardiac sound and pulse	2	Thailand	Kyoto Kagaku	M58 11365-000
5	Male Catheterization Simulator	Learning of male urethral catheterization	amputation model for male lower half of the body	2	Thailand	Sakamoto	M78 11214-000
6	Female Catheterization Simulator	Learning of female urethral catheterization	amputation model for female lower half of the body	2	Thailand	Sakamoto	M52 11271-000
7	Simulator Intravenous Arm	Practice of blood sampling and intravenous injection	arm model, exchangable pad, blood circulation pump	4	Thailand	Kyoto Kagaku	M50 11267-000
8	Eye Examination Simulator	Practice of hemorrhage in the eye ground	adult head full-size model, exercise films for funduscopy	2	Thailand	Kyoto Kagaku	M82
9	Ear Examination simulator	Practice of otoscopy	adult head full-size model, exercise films for tympanum	2	Thailand	Kyoto Kagaku	M88
10	Suture Practice Simulator	Practice of trauma suture	skin model for suture	20	Thailand	Kyoto Kagaku	M83
Clinical Training Instrument							
11	Minor Surgical Instrument Set	Equipment for the practice of minor surgery (suture and disinfecting)	Forceps, suture holder, scissors, handle scalpel, etc., in total 8 items, stainless	4	Laos	Taiyu	-
12	Instrumental Tray	Equipment for instrument preparation and sanitation control	material: stainless, catheter tray, size: approx. W320xD80H50mm	8	Laos	Taiyu	TY-2407E
13	Instrument Set for Treatment of Ob/ Gyn	Practice for Ob/Gyn treatment such as detection of pregnancy, delivery and examination	vaginal retractor speculum, plastic surgery scalpel, tissue forcep, forceps (no hook), retractor, suture needle container, forcep case for autoclave, pelvimeter, etc. 23 items, stainless	2	Laos	Muranaka	-
14	Stethoscope, adult	Auscultation of adult cardiac sound and cardiac murmur	material: stainless, for adult, dual type (bell or diaphragm type) chestpiece: aluminum or stainless	60	Laos	Kyoto Kagaku	12267-110
15	Spymomanometer, newborn/ infant	Auscultation of infant cardiac sound and cardiac murmur	material: stainless, for infant, dual type (bell or diaphragm type) chestpiece: aluminum or stainless	20	Thailand	Muranaka	MM-608GR
16	Electric Stethoscope System	Lecturer can allow students or colleagues to hear the patient's body sounds at the time the exam is performed	Master Elite Plus, Distributor & 5 Headsets	2	Thailand	Welch Allen	579-400, 5079-414, 5079-416
17	Universal Diagnostic Set	Practice of ENT consultation and treatment, and general medical examination	pharyngoscope, funduscope, pen light, head mirror, aural speculum, nasal speculum, tone depressor, etc. total item 9, stainless	8	Thailand	Nitien	PNP-01 etc
18	Spymomanometer, Table Top Type	Practice for sphygmomanometry	table top type, mercury type, bulb with valve, adult and child cuff with latex bag	40	Laos	Muranaka	MM-101
19	Clinical Thermometer	Practice for body temperature to diagnose	digital type, with case	40	Laos	Taiyu	CT-785V
20	Timer/ Stop watch	Practice for pulsation and respiration suture	digital type, lap timer, 60 minutes measurement	20	Laos	Muranaka	HS44-001
21	Hammer, Taylor Type	Practice of neuroreflex	Taylor type, material: handle- stainless or equivalent, head-rubber	20	Laos	Taiyu	TY-501
22	Intubation Set, adult	Training of maintenance of a patent airway for adult	pharyngoscope blade (adult), cuff syringe, intubation tube, bite block, hemostasis forceps, etc.	2	Thailand	BlueCross	ET-A-DX
23	Intubation Set, infant	Training of maintenance of a patent airway for infant	pharyngoscope blade (infant), cuff syringe, intubation tube, bite block, hemostasis forceps, etc.	2	Thailand	BlueCross	ET-I-etc
Medical Furniture							
24	IV Pole	Practice of intravenous drip infusion	height: 90-200 cm, material: stainless, with wheels attached, hook: 3-4	8	Laos	Muranaka	MA-24
25	Negatoscope (Stand Type)	Training of reading X-ray film and diagnosis	stand type with wheels attached film capacity: 4 films (1 film size: 14"x17") 2 teps Fluorescent lamp: 15W	8	Thailand	Moriyama	KSA-313
26	Instrument Pushcart/Trolley	Organizing equipment for clinical training	material: stainless steel or equivalent, size: W450xD300xH800mm shelf: 2 shelves with guard rail, drawers: 2 or more, on casters	8	Thailand	Muranaka	EMW-30
27	Folding Meeting Table	Table for practice of blood collection and suture	size: approx. W1800xD800xH715mm, frame: steel pipe, on casters, folding legs	8	Laos	Okamura	8184YE-M
28	Round Chair with Caster	Chairs for clinical training such as consultaion and palpation	round chair without armrest and backrest, 360 degree round, height adjuster, on casters	100	Laos	Muranaka	JC-EC4482V
29	Examining Table	Practice of clinical training such as consultaion and palpation	size: approx. L180xW60xH50cm material: metal and urethane foam mattress (if possible, legs are foldable)	8	Laos	Kyotokagaku	KOC-9100 12745-00

No.	Name	Purpose	Main Specification	Quantity	Procurement Country	Manufacture	Model
30	Cabinet	Storage for equipment and simulators	size: approx.H180xW120xD40cm, shelf: 2 shelves or more, material: steel, with lock key	4	Laos	Muranaka	PR-211
31	White Board (Wall Hung Type)	For lecture and conference	size: appr. W1700xH850mm, magnet correspondence, with marker pen (black, red, blue) each 10pcs, board eraser 5pcs	8	Laos	Uchida Yoko	3 x 6 Type SW
32	Air Conditioner	Temperature control for clinical training room with equipment	separate type, for room dimension:25m2, capacity: approx.3.0kW, power supply: single phase	8	Laos	Mitsubishi	-
33	Audio Visual Set	Learning through DVD and visual teaching material	LCD projector:16000 LMS, PC - notebook type, HD:160GB, OS:WindowXP or more, display:approx. 15inchs, memory size:2GB or more screen size:approx.2x1m with a tripod speaker:power amplifier, connection cable, speaker with wall bracket	4	Laos	Uchida Yoko, etc	-
Hospital							
Equipment related to Medical Education							
34	Locker for Medical Students	Storage for medical student private properties	size: approx.H180xW120xD40cm, shelf: 3shelves, in total 12 lockers or more, material: stainless steel or wood	15	Laos	Uchida	1-302-4134
35	PC for EBM Data Research	Correcting information for medical treatment, practice and documents	desktop type, HD:160GB, OS:WindowXP, display:approx. 15inchs, memory size:2GB or more	10	Laos	Fujitsu	-
36	Shelf for Medical Record/ X-ray Film	Organizing and storage for medical records and X-ray films	size:approx.H180xW120xD40cm, shelf: 4 more or more, material: steel	20	Laos	Okamura	6365AM
Clinical Equipment							
37	Electric Cardio Graphy (ECG)	Practice for cardiovascular diseases and basic examination	Standards 12 leads, channel number:6ch, sensitivity:5, 10, 20mm/mV, display:LCD monitor, with carry cart, with rechargeable battery	3	Laos	Nihon Kohden	ECG-9022K
38	Fetal Doppler	Practice for detection of pregnancy and basic examination	united type of main unit and probe, frequency:2.5-3.0MHz, . . . sinic output: under 10mW/cm2, with gel 5 pcs, battery charger	5	Laos	Toitu	FD-390
39	Ventilator, Adult	Training for treatment of adult patients in severe condition under specialist	composition: main unit, air compressor, mobile type, for adult, patient's breathing circuit, reusable, ventilation mode:VCV, PCV, SIMV+PSV, tidal volume:50~2,000mL or wider, safety device:equipped	1	Laos	Acoma	ART-21EX
40	Ventilator, Newborn-Infant	Training for treatment of pediatric patients in severe condition under specialist	composition: main unit, air compressor, mobile type, for infant, patient's breathing circuit, reusable, ventilation mode:CMV, IMV, PEEP/CPAP, tidal volume:50~2,000mL or wider, safety device:equipped, with heat humidifier or equivalent	1	Laos	Acoma	ICV-60, AC-35
41	Ultrasound Apparatus (B/W)	Training for diagnosis and examination of ultrasoundgraphy under specialist	scanning method: electronic convex, electronic linear, display mode:B, B/B, B/M, M or equivalent, display size: max. 24cm or bigger, application: abdominal, Ob/Gyn, pediatrics, urology, breast, vascular, cardiology, with printer	3	Laos	Hitachi	EUB-500

3.4. Project Expenses and Sub-Contracted Survey

3.4.1. Project Expenses

The following table shows the total amount of site operation expenses for the project including general operation expense and local consultant contractual expense.

Table 63 Total Amount of Site Operation Expenses for the Project

Year	Operation Cost in Laos
1st Year(Fiscal Year 2007)	2,478,096 Yen
2nd Year(Fiscal Year 2008)	9,191,000 Yen
3rd Year(Fiscal Year 2009)	6,857,000 Yen
4th Year(Fiscal Year 2010)	5,067,000 Yen

3.4.2. Input by Recipient Country

The input by the recipient country as defined in R/D is as follows:

- Project office
- Utilities for the Project activities, such as lighting and water expenses
- Other necessary expenses for maintenance and purchases for the Project activities

4. Various Attempts and Learnt on the Project Management

It is no exaggeration to say that clinical education improvement in Laos is so far by the three-year project finally started in the starting line. Until 2007, graduate education was Ministry of Education, communication was totally later in the circumstances of Ministry of Health, but has no policy level challenges has been still accumulated. A basic agreement to challenge some recommendations about C/P side and also share in July, 2010 6th JCC, and October, 2010 7th JCC, so be found here.

4.1 Suggestion

4.1.1 Tasks at the Policy Level of the Ministry of Health

(1) Grand design of human resources development of medical specialist

The lack of grand design of human resources development of medical specialist is the serious problem in Laos. It has been widely talked that the reasons of rapid increase of the number of medical students in recent years are that WHO (World Health Organization) has established the numerical indicators of the number of medical specialists (medical doctor, nurse and skilled birth attendant with diploma or higher qualification) and that there might be a possibility of some financial merits for universities or the Ministry of Health when they increase special students. However, the ambiguity of the grand design should be the major cause. Even though the Ministry of Health is forced to depend on overseas donors for 60 to 70% of its budget, it should be essential to have certain policies on what category of medical workers should take care of what level of works and on the number of medical workers of each category.

Some other issues are to be mentioned in addition to the issue of sudden increase of medical student. One of them is how to utilize assistant doctors in the near future. Assistant doctors who took care of the same tasks of doctors within 3-year program in remote rural areas were mainly developed in rural area formerly. Such a development of assistant doctors was suspended for the time being and their number decreased and then the recommencement of the development has been examined in a recent few years. The reason of such instability might be the lack of thorough consideration on the important issue of the balance of quantity and quality of medical staff. The situation is the same in case of nurse and skilled birth attendant. It should be examined considering the local factors that which of traditional birth attendant and young and skilled birth attendant would be more acceptable and/or would save more lives of mothers and newborn babies in rural areas.

(2) Organization chart and the policy making process of the Ministry of Health and related organizations

Basically the whole national hospitals including UHS and teaching hospitals came under the control of the Ministry of Health after 2007 (excluding hospitals, etc. of armed forces and/or police). However it is mentioned that the controlling system of UHS has not been clarified yet. For example, when a teacher of UHS wishes to check the educational situation of provincial hospitals, he or she must obtain permissions from more than one department such as secretariat of the Ministry of Health and/or the

Department of Health Care (previous Department of Curative). Such a situation of the procedures limits the activities of UHS and also raises the possibility to bound UHS by unnecessary administrative works since it would face strong political influence in spite of its nature as an independently managed institution of higher education.

During the 6th JCC in July 2010 on the occasion of the final evaluation, it was recommended that the Ministry of Health should secure educational budget for UHS and/or teaching hospitals. However, it is inevitable as the premise to clarify the organizational line such as which of Department of Human Resources Development and Department of Health Care UHS belongs to.

Furthermore, the Ministry of Health should invite all the necessary members of UHS, teaching hospitals in the city and teaching hospitals in the provinces and make them involved in the discussions on policy making. The Ministry of Health, with the assistance of JICA project, is now manage to deal with Sector-Wide Approaches and one of the three Technical Working Groups (TWG) is related to human resources of health sector in which the issue on “the grand design of human resources development of medical specialist”, etc. mentioned in the above (1) might be able to be discussed. However, it seems that so far the discussions at Human Resource-TWG were occupied by the development of skilled birth attendants and therefore the discussions in other fields are expected from now on.

(3) Incentives for preceptors

The hearing survey conducted at Champasak Provincial Hospital on 18 October, 2010 revealed that LAK 2,500 (approx. Japanese Yen 25) per hour was paid as a financial incentive for preceptor. Since it is difficult to distinguish training and medical examination, training doctors receive such incentive for about 1 to 2 hours per day. As a result, the amount of such incentives was approximately LAK 100,000 (around Japanese Yen 1,000) per month. Such amount might not rise the motivation of training doctors much and most of them might be more interested in academic titles, etc. rather than a financial incentive.

In the advanced countries, when a university entrusted education of students to doctors of hospitals and/or clinics, the Faculty of Medicine of such university commonly presents a title such as clinical professor to the doctor who had been continuously involved in the training of medical students. Such system has become nationally common even in Japan around in the year 2000. In most of the cases, such title seems to be accompanied with the qualification to use library and/or free use of car parking lot in the university instead of direct financial incentives. It should be taken into consideration as a reformation that basically does not require any substantial budget though the work load of the ministry is to increase.

4.1.2 Issues Related to Curriculum and/or Administration of UHS

(1) Conceptual framework and organizational structure for the improvement of medical education

Medical education requires number of wide range of parties and long-term curriculum over years and therefore the conceptual framework is essential on what should be prepared for the improvement

of education. For example, the global standard of undergraduate education of World Federation of Medical Education presents conceptual framework that can be utilized for the certified evaluation and accreditation of education and could be utilized in the developing country like Laos. Other than that, sustainable improvement system of curriculum development and/or the quality control model like Deming Cycle could be usable.

Within the current organizational structure, Academic Affair Department is administrating cross faculty education and each dean is taking care of management of each faculty. No agency that takes care of strategic planning and implementation of education exist. There is a welcome rumor that Medical Education Center (MEC) would be established within UHS with the assistance of WHO in the near future.

It might be ideal to establish the ground so that the leaders who completed master program in medical education and have a high expertise could administrate UHS when such a new movement mentioned above has been realized at UHS. It is recommendable to foster several specialists in medical education as a national policy.

(2) Differences between Chair System and TMC

Faculty of Medicine of universities in many countries have clinical departments such as internal medicine and surgery and it is the system in which they enhance each other within the structure of three in one of medical examination, education and research. UHS however does not have such an independent clinical department and established Chair system instead among mainly doctors who work at teaching hospitals in the city. For example, Dr. Khampe Phonesavath, the director of Setthathirath Hospital, takes the role of Chair in the field of pediatrics and is giving full play of nationwide leadership in medical examination and education of the field. Distinguished members take care of each field in the same way; Dr. Bounkong Syhavong, deputy director of Mahosot Hospital and the dean of the Faculty of Medicine of UHS, in integral medicine, Dr. Somphone Phounsavath, Chief of the Department of Health Care of the Ministry of Health, in surgery, and Dr. Chanpheng Thammavong, director of Mahosot Hospital, in obstetrics and gynecology.

It is said, however, that Chair is too busy in surgery and obstetrics and gynecology to have an adequate discussion. Under such a situation, the organizational structure could not be well established even if UHS attempts to administrate clinical training by them.

Considering that it would not be well managed only with the management control by Chair system and making the best use of its tight relationship with UHS from even when it was under the control of the Ministry of Education, Setthathirath Hospital newly established TMC and started managing. TMC is the system to control management vertically within each hospital while Chair system has the nature to bind teaching hospitals horizontally. Though there was a concern that conflict might occur between TMC of Setthathirath Hospital and Chair system, no such a conflict has taken place actually. Rather TMC improved trainings by integrating each department with emergency unit, ICU and outpatient with coordination and has been appreciated with such a significant merit.

Though it would be difficult, from the viewpoint of politics, to dispose Chair system, Educational management structure of each teaching hospital is expected to be improved by experiencing management structure by TMC. Among those 4 provincial hospitals that had started receiving student training, Maria Theresa Hospital experimentally held TMC twice by the end of training in the fiscal year 2009. Also the management of Champasak and Savannakhet provincial hospitals notified the decision to establish TMC and its members by the internal letter dated on October 4th, 2010. Such movement is attracting attentions of teaching hospitals in the city and it seems that they would also hold TMC sooner or later. The movement is one of the evidences that the parties concerned are making account of the output of the project, and it is expected that such a movement is to be continued and developed.

(3) Direction of Community-based medical education (CBME)

It would be the items of Millennium Development Goals (MDG) related to health that have the great influence on the policies in health sector. It is very important, in order to make some progress in the issues of such items, to develop doctors who would be able to work at the level of provincial and/or district hospital rather than teaching hospitals in the city. The program in which students improve their skills in rural area has been welcomed worldwide since 1990's for the development of doctors who are able to work in rural area, and therefore CBME should be taken into serious consideration in Laos.

As of the autumn of 2010, 3 programs – 1) the program in which 5th-year students would work at provincial hospital, district hospital, health center and villages for 3 weeks, 2) the program in which almost half of the 6th-year students would work at provincial hospitals and 3) the program in which 2nd-year students of specialist program of community medicine would work at provincial hospital, district hospital and health center – are under the operation. Although University of Calgary is involved in the program 1) and 3), program is making a certain achievement.

(4) The Program for Community Medicine Specialist

The program for community medicine specialist has been started in 2005 with the financial assistance of World Bank and the practical assistance of University of Calgary. The 2-year program is broken down to the training at teaching hospitals in the city in the first year and the training at provincial hospital, district hospital and health center in the second year, and it is the policy that the trainees are to work at district hospital after completion of the program. In spite of the very high quality of the contents, the program was not accompanied with the system to provide incentive as the medical specialist even after 2 years program and even though it was called as “medical specialist program”, and then applicant for this program was drastically decreased.

The issue was settled and the number of applicant stopped decreasing in the autumn of 2009 when they decided to provide the degree as “Medical Specialist” to the person who completed community medicine specialist program. However, other medical specialist programs are all 3-year courses and

the applicants for other program have to clear strict criteria one of which require years of practical experience, and therefore the community medicine specialist program has become the easiest course to obtain the qualification of medical specialist.

Although the University of Calgary seems to have the reforming plan on this point to transform the community medicine specialist program to 3-year course, it has not yet clarified its direction. It is simply because the 2-year program is taking care of a part of payment of living expenses and the modification to 3-year program would derail the plan financially. However, it would be required to be modified due to the possibility of negative influence on other specialist programs.

4.1.3 Approach on the Budgeting for Continuous TOT

According to the experience of TOT financial management on the Project, counterparts of MOH and/or UHS are able to formulate further TOT seminars using their budget. Following table can be referred to know what kind of items counterparts have to consider for TOT in the provincial and central levels.

A Case of Provincial Hospital TOT Cost Estimate

Participants 20 person 2 Group Total 40 persons PMEL member 8 ppl (Can be flexible)

	Unit Cost	Amount						Total		Remarks
Participants										
Per Diem	40,000	20	pax	4	days	1	hospital	3,200,000	LAK	
PMEL										
Per Diem	8	8	pax	6	days	1	hospital	384	USD	
Accommodation	15	6	pax	5	nights	1	hospital	450	USD	Can be flexible
Transportation	1,710,000	8	pax	1	return	1	hospital	13,680,000	LAK	Airplane(Can be flexible)
Other costs										
Conference Room	70	1	room	4	days	1	hospital	280	USD	
Cofee Break	30,000	28	pax	4	days	2	times	6,720,000	LAK	
Lunch	50,000	28	pax	4	days	1	times	5,600,000	LAK	Can be flexible (not inevitable)
Car Rental	50	1	car	6	days	1	hospital	300	USD	In-site city (not inevitable)
Certificate Paper	96,000	1	pack	1	set	1	hospital	96,000	LAK	
Pens	82,500	1	pack	1	set	1	hospital	82,500	LAK	
Paper Holder	129,000	1	pack	1	set	1	hospital	129,000	LAK	
Total										
								29,507,500	LAK	
								1,414	USD	

5. Transition of Project Design Matrix (PDM)

The project, after the baseline survey, was implemented while the update of both PDM Ver. 0 and activities were examined. Consequently, the mid-term review conducted in the third year resulted in the creation of PDM Ver. 1, which was approved by JCC.

5.1. Mid-Term Review Survey

From June 10 to 26, 2009, the mid-term review team was dispatched to analyze the goal attainment level, output, etc. of this project at the mid-term point of one and a half years since the start of the project as well as to check the issues and future direction in the remaining period of the project.

First, the activities in the former half of the project were reviewed and the discussion between the mid-term review team and the project specialists reached a unanimous agreement that the future policies should be further involvement of UHS and the Ministry of Health in the project and further improvement of the clinical education level of the entire country. C/P welcomed this conclusion because the involvement of UHS and the Ministry of Health makes it easier to expand the project from the Setthathirath Hospital to other hospitals than by direct operation.

Second, in accordance with the trend of doubling the number of medical students at UHS in two or three years, UHS and the Ministry of Health made a plan to provide clinical training at four provincial hospitals. In response, the project made a plan to provide TOT at the four provincial hospitals that would receive medical students for training and formed the Project for Medical Education in Laos (PMEL) to make preparations to allow doctors working at the four provincial hospitals to serve as preceptors.

Due to these two courses of events, partial change of PDM was requested both by the project and C/P at the time of mid-term review. Consequently, the Joint Coordinating Committee (JCC) had a plenary meeting and reached an agreement about partial revision of PDM at the time of mid-term review. This includes amendment of indexes of upper goals and means for obtaining the indexes, amendment of means for obtaining the indexes for project goals, amendment of output indexes, amendment of activities, and amendment of some of external conditions.

5.1.1. Revision of PDM

(1) Definition of beneficiaries

Through the activities in the second year, a question arose whether the output of the project activities would be more easily achieved if beneficiaries are defined more clearly according to the degree of input. Moreover, regional hospitals (provincial hospitals that receive patients referred from surrounding provinces) were newly appointed as hospitals that would provide training to medical students who are rapidly increasing in number. These hospitals have never received students for training, there is an urgent need to educate preceptors. Therefore, it was deemed necessary to give consideration to extending the project to such regional hospitals on a timely basis.

Table 64 Definition of Project Beneficiaries from 1st Progress Report's recommendation

Direct Beneficiaries	<ul style="list-style-type: none"> ① Preceptor who train bedside training and graduated doctor within 2 years in Setthathirath Hospital ② Training doctor except preceptor in Setthathirath Hospital ③ Medical student who learn bedside training in Setthathirath ④ Doctor who graduated within 2 years and bedside trained in Setthathirath Hospital
Indirect Benefit	Doctor of other hospital in Lao

Table 65 Project Beneficiaries (Draft)

Direct Beneficiaries	<p>Narrow sense:</p> <ul style="list-style-type: none"> ① Training doctor in Setthathirath Hospital (①+② above) <p>Wide sense:</p> <ul style="list-style-type: none"> ② D6 and Trainee in Setthathirath (③+④ above) ③ Vientiane city's 3 medical teaching hospital trainer ④ UHS faculty of medicine staff ⑤ Provincial Hospital that receive medical student
Indirect Benefit	Doctor of other hospital in Lao

(2) Problems regarding output indexes

Outputs do not need to be changed because the project activities have the same directions. However, the wording of outputs needs to be redefined because the hospital is failing to meet the prerequisite as the project progresses (Since the Setthathirath Hospital is to become a core hospital (attached to the university) that can turn out doctors who can contribute to the regional health care, the ability to foster doctors sufficiently familiar with basic medical sciences should be enhanced, rather than advanced medical technology). The definitions of outputs are described in Section 3.1, "Activity Policies" in Chapter 3, "Project Implementation Method."

Thus, part of the output indexes need to be changed accordingly. The following lists the output indexes that need to be changed.

1-1: What is the definition of Evidence-based Medicine (EBM) in this project?

1-2: Is the Setthathirath Hospital supposed to conduct pathological diagnosis? What is the division of roles with the pathological department of the university?

1-3: Among the four university hospitals, there is a rule, albeit a loose one, on which hospital should be visited by a patient in a certain field. What is the relationship between an increase in the number of referred patients and the quality of clinical training?

1-4: What is the meaning of the accumulation of clinical cases? Is it conducted for the purpose of hospital management or education?

(3) Problems regarding activities

In accordance with the changes needed in how to regard outputs, the need to change some of the activities was recognized, in relation to the status quo of the Setthathirath Hospital. The following lists problems in the activities that are not in line with the activities in this project.

1-2: Regarding EBM, how much specialist knowledge and skills in each field is required?

1-3: For the improvement of medical records, is it not better to take the improvement of education into consideration?

1-4: What is the meaning of case accumulation for the sake of EBM?

2-6: It is not clear what external audit is conducted for and whether it is useful for improvement even if it is read as internal monitoring.

(4) Results of Revision

The revisions to be made to solve these problems were reflected on the revised edition in the mid-term review and agreed upon by the Japan and Laos sides. The table shown below lists the major revisions. There is no change either in the overall logic or the project goals and outputs.

There were particularly many changes in the indexes and activities regarding Output 1. Since there were ambiguities in many of the intentions of the indexes and activities regarding Output 1, the project team interpreted Output 1 as “development of an infrastructure required improving clinical training” and carried out the actual activities accordingly, in consideration of the overall plan including Outputs 2 and 3. The current revision amended activities and indexes based on this interpretation and activities conducted so far. Specifically, activities such as the creation of teaching materials for infrastructure development, building of CLC, and training at the center have been incorporated. The indexes were amended to reflect the results of these activities and the degree of infrastructure development for clinical training.

Regarding the EBM-related activities specified in PDM Ver. 0, as described earlier, it was reconfirmed that the necessary activity environment such as documents and computers was not available in Laos. The mid-term review team decided to work on this issue in Activity 1-2 and others in PDM Ver. 1.0, with an eye to “enhancing the basic clinical abilities that form the basis of future EBM introduction” in accordance with the status quo of Laos. However, the explicit use of the word EBM was avoided in the revised PDM because it may cause confusions. This is because the Lao language still lacks words representing the concepts of basic medical terms and those in French, English, and Thai are used instead. In such a status, we determined that the use of the word EBM, which can be interpreted in many ways, in PDM would only invite confusion. The implementation of activities related to infrastructure development to enhance clinical abilities will be sufficient to achieve the initially assumed outputs without any explicit reference to EBM. This decision about EBM was approved by the Laos side and therefore incorporated into the final PDM revision. Note that the preliminary survey concluded that “it is difficult to set goals because EBM is a process or concept for providing evidence-based medical care” and that “the practice of EBM should not be

advocated in the activities.” Therefore, the current PDM revision and the reason for it regarding EBM is in line with the result of the preliminary survey.

Numeric targets were included wherever possible. In this project with an emphasis on clinical education, i.e., qualitative activities, however, it is difficult to set numerical targets for all the items, and a policy was approved to conduct qualitative evaluation through reports and hearing from the parties concerned.

Table 66 Revision of PDM

PDM element	Revision in PDM1
Overall Goal	Objectively Verifiable Indicators and Means of Verification are modified so that achievement of Overall Goal can be evaluated more clearly and necessary data can be collected.
Project Purpose	Means of Verification are modified so that necessary data can be collected.
Output	Objectively Verifiable Indicators are revised so that Indicators better reflect output of actual activities. Objectively Verifiable Indicators for Output 1 are completely revised as those in PDM0 were not very clear and they were not directly related to actual activities affiliated to Output 1. Indicators for Output 2 and 3 are modified as well. Means of Verification for Output 1 to 3 are also revised according to the revision of Indicators.
Activities	Activities affiliated to all three Outputs are modified, based on agreed interpretation of each Output and actual activities already taking place.
Important Assumptions	Important assumptions from Project Purpose to Overall Goal and from Overall Goal to Super Goal are revised, taking actual environment into consideration. Important Assumption to sustain Super Goal is eliminated as it is difficult to define Important Assumption at this moment.

5.1.2. Result of the Mid-Term Review

- Result of the review according to the Five Evaluation Criteria is shown below table.

Table 67 Result of the Mid-Term Review

Criteria	Summary of the Review
Relevance	Relevance is high in terms of policy and needs in the Lao PDR, Japanese policy of Official Development Assistance (ODA) to the Lao PDR, and project design. To produce medical doctors who are insufficient in quality and quantity, clinical training in hospitals plays an important role which UHS cannot subsidize this education through lecture. Also management system of UHS is ineffective yet. Therefore establishment of the institutional management system is an urgent issue, and the Project is able to support to the situation.
Effectiveness	Effectiveness is generally high at this moment. Three Outputs are being achieved in general. Foundations on medical education are being built up. For example, Clinical Learning Centre was constructed, simulators for clinical skill training were introduced, and teaching materials were developed and translated. The training system is gradually being established at the Setthathirath Hospital. Project Purpose is expected to be achieved if the Project continues to make smooth and steady progress. According to the survey on the satisfaction level of trainees at the Setthathirath Hospital, the quality of medical education at the Hospital is higher than that of other teaching hospitals in some evaluation items.
Efficiency	Efficiency is high. Inputs are being implemented almost as planned and utilized to achieve Outputs. Four counterpart members were dispatched to Training in Japan. They acquired knowledge and skills necessary to improve clinical practice and successfully formulated a feasible action plan. The Japanese side constructed Clinical Learning Center, provided

Criteria	Summary of the Review
	equipment necessary for medical training, and developed textbooks and teaching materials. The Japanese side provided medical books to enhance the library at the Setthathirath Hospital.
Impact	<p>It is still difficult to judge the prospect of achievement of Overall Goal at the time of the Mid-Term Review.</p> <p>To expand the benefit of the Project at the Setthathirath Hospital on a nation-wide scale, it is necessary to enhance the involvement of other hospitals and the University of Health Sciences as well as the support by MOH. With this viewpoint, the Project tries to strengthen the involvement of related organizations.</p> <p>Some unexpected positive impacts are observed. The motivation of preceptors at the Setthathirath Hospital has been improved. At the TOT workshops, participants exchange information among four teaching hospitals. As a part of activities, the Project introduced a new clinical record system on a trial basis, where undergraduate students write clinical records and preceptors make correction. With this system, the time of preceptors to fill in clinical records is reduced, and their time to be allocated to consultation of patients increases. No negative impact has been reported so far.</p>
Sustainability	<p>Sustainability is expected The institutional capacity of the Setthathirath Hospital is quite high. MTU is strengthened and TMC is already functioning. When no experts were dispatched, TMC was held only among Lao counterparts, which is a positive sign in terms of sustainability. The operation and maintenance system of the Clinical Learning Center and library is under discussion.</p> <p>Financial sustainability is not very high but expected to some extent. It is expected that the budget for medical education is continuously allocated, though it may not be abundant. The medical education methods introduced by the Project to establish basic clinical capacity do not need expensive equipment and can be implemented relatively easily at provincial and district hospitals as well.</p> <p>Contributing factors to enhance sustainability is to establish a monitoring system to evaluate trainers of clinical training and to establish a system to share information and experiences among hospitals. Developing materials in Lao will facilitate continuous activities among Lao counterparts by themselves. If sufficient budget is not allocated to organize training and to maintain the Clinical Learning Center and library, that may be an inhibiting factor.</p>

5.2. Final Evaluation

Final evaluation team was started evaluation study from last part of June. Followings are result of evaluation.

5.2.1 Results of the Final Evaluation

- (1) Relevance: The relevance of the Project is highly maintained at the time of the Terminal Evaluation for the following reasons.

In addition to “Health Strategy 2020” aforementioned, “The 7th Five-Year Health Development Plan 2011-2015”, which is placed as an incoming action plan, is being conferred with Sector Wide Groups (SWG) amongst the MOH and development partners to finalize. Issues with regard to human resource development are technically dealt with at the subordinating “Human Resource for Health-Technical Working Group (HRH-TWG)”. The HRH-TWG also recognized MTU, of which the Project assisted to establish the practical operation, as an important and effective element for the capacity development of health personnel, especially for medical doctors. Therefore, it is considered that the purpose of the Project, aiming to improve the quality of clinical training for medical students as well as early graduates by MTU system under TMC administration, closely meets Laotian health policies, especially for capacity development for medical doctors at the time of the Terminal Evaluation.

Moreover, reinforcement of management system, improvement of educational environment and capacity strengthening of clinical trainers, which were expected outputs of the Project, were highly reasonable for the improvement of clinical training, and for up-coming increase of medical students as well. Simultaneously, it is considered that the Project Purpose is highly consistent not only with needs from medical students and doctors but also with practical necessity of human resource development plan in Lao PDR.

With regard to the basic policy of Japan's assistance for Lao PDR, the Project aiming for future quality reinforcement of medical doctors through the improvement of quality of clinical training is placed at "Program for strengthening of human resource development in health" under "developing human resources and institution building related to the field of healthcare".

(2) Effectiveness: The effectiveness of the Project is considered to be high on average at the time of the Terminal Evaluation for the following reasons.

Three Outputs, set out in PDM, constitute necessary and sufficient conditions mutually for the achievement of the Project Purpose. Additionally, there found no logical error in the relation between the Project Purpose and Outputs, and objectively verifiable indicators for Outputs as well as the Project Purpose are favorably fulfilled at the time of the Terminal Evaluation Survey. Thus, it is highly expected that the comprehensive achievement of the project purpose by the end of the project purpose. Especially for the practical MTU foundation that was established by the Project, authorities of human resource development emphasized the importance of MTU in future quality clinical training in Lao PDR. Thus, it is implied that the Project implemented their activities effectively.

Meanwhile, even the Setthathirath Hospital established the organizational foundation for quality clinical training, yet to be consolidated. Thus, it is of necessity to advance the quality of clinical training in terms of organizational system. On the other hand, the Project was not directly engaged in improvement of clinical capabilities of medical doctors as well as students.

(3) Efficiency: The efficiency of the Project is generally high though several external factors vitiated the progress of the project activities.

CLC is efficiently used not only by hospital staff and medical students but also by other organizations such as UHS, cooperating partners, etc. Moreover, teaching materials and text books are utilized by other teaching hospitals as well as UHS, which was also confirmed through the direct observation by the Terminal Evaluation Team. It is notable that medical doctors and students effectively use medical reference books written in Thai language provided by the Project. Medical students are getting accustomed to utilize library for issues arising from their clinical training under the guidance of preceptors and clinical trainers. Thus, inputs from the Project were efficiently turned into the achievement of Outputs of the Project.

Effective collaboration with the University of Calgary and other cooperating partners contributed to the efficient implementation of the project activities. It is particularly worth noting that the Project and the University of Calgary developed a learning material in collaboration, by modifying existing

material that was developed by the University of Calgary on the basis of their experiences. Therefore, it is considered the learning material should meet the actual conditions of clinical practices in Lao PDR. In addition, other learning materials are also developed on the basis of existing materials, which contributed the efficiency of the Project.

“SEA Games” and fire accident of CLC were influenced on the efficient progress of the Project. But fortunately, there was little impact on the eventual achievement of the Project Purpose.

(4) Impact: The following positive and/or negative impacts are confirmed and/or expected by the implementation of the Project.

The Government of Lao PDR focuses on the enhancement of the capability of health professionals for the improvement of the medical conditions of the country. Activities in the Setthathirath Hospital that is promoting enhancement of the quality of clinical training are regarded as a base for the doctor training with guaranteed quality by the future. In this Project, activities are conducted with the emphasis on sustainability in the participant for the purpose of future prevalence of benefits through the activities. In particular, PMEL was formed by UHS and the representatives of four education hospitals and is conducting the activities enthusiastically including the implementation of TOT. Through TOT, the training management method in the Setthathirath Hospital is shared among other education hospitals and regional/provincial hospitals that were newly appointed for providing internship. In this way, the impact such as the institutionalization of TMC is confirmed. That is, the foundation of clinical training that has been established by the Setthathirath Hospital has evolved during the project period with the emphasis on the sustainability within Lao PDR, which means that the basis for achievement of the overall goal has been established.

On the other hand, the number of medical students who will receive training is expected to increase for the next five years so that obviously, the current important assumptions will not be satisfied. Currently, the scope of facilities made available to the training has expanded to the regional hospitals. The clinical training in Laos may fail and this may become a critical assumption. The measure for coping with increasing participants for clinical training is requested as well as the realization of a restriction on the number of students accepted by the Faculty of Medicine based on the demand. The issue of health professionals is discussed in HR-TWG of the SWG conference and at the same time, a practical handling method such as formation of a specialized task force in this matter is expected within the subcommittee meeting.

(5) Sustainability: Self-sustainability as well as a self-deployment of the benefits provided by the Project can be expected in some degree if continuous small-sized assistances are obtained by any means.

The Laotian Government highly evaluated the improvement of the quality of the clinical training implemented by this project. Highly comprehensive sustainability can be expected in the political and institutional viewpoints also as MTU are expected to be incorporated in the strategic plan for human resource development.

In the technical aspect also, although the Setthathirath Hospital can independently provide clinical training with the guarantee of a certain quality, it is still at the primary stage regarding the training. Other education hospitals and training hospitals of the provincial level are at the initial stage of introduction and the necessity for sustainable technical assistances even on a small scale is signaled.

To achieve the quality of clinical training across the whole of Laos, it is necessary to improve the learning environment and to train instructors. The necessity for some sort of financial assistance is suggested for proper implementation of clinical training for the increasing number medical students.

APPENDIX

1. Project Design Matrix (PDM) Version 0

Annex I: PDM₀

Project Name : Project for Medical Education and Research of the Setthathirath Hospital in the Lao P.D.R.

Target Group : Trainers of clinical training for medical students/doctors

Target Area : Setthathirath Hospital

Project Period : 2007 – 2010 (3 years)

Date : October 8, 2007

Version : No. 0

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
<p>Super Goal Skills, knowledge, and attitudes of medical doctors in the whole country are improved.</p>	<ol style="list-style-type: none"> 1. The utilization rate of district hospitals increases. 2. The number of medical doctors at district hospitals increases. 	<ol style="list-style-type: none"> 1. Annual Report from Ministry of Health 2. Annual Report from Ministry of Health 	<p>Medical doctors are appropriately deployed at district hospitals and health centers in line with the policy of the MOH.</p>
<p>Overall Goal Quality of clinical training for medical doctors in the Lao P.D.R. is improved.</p>	<ol style="list-style-type: none"> 1. Achievement of undergraduate / Family Medicine Specialist Programs increases. 	<ol style="list-style-type: none"> 1. Academic report of completion by the University of Health Science 	<p>Overseas study programs (Long-term training programs) for obtaining a master or doctoral degree are carried out.</p>
<p>Project Purpose Quality of undergraduate clinical training and early postgraduate clinical training for those who graduated from the Department of Medicine, the University of Health Sciences within two years at the Setthathirath Hospital is improved.</p>	<ol style="list-style-type: none"> 1. Satisfaction rate of trainees who completed clinical training at the Setthathirath Hospital increases. 2. Evaluation (Reputation) of clinical training at the Setthathirath Hospital from the professional organization is enhanced. 	<ol style="list-style-type: none"> 1. Trainee Assessment by Department of Personnel and Doctors' Committee at the Setthathirath Hospital 2. External audit from other teaching hospitals, Curative Department of MOH 	<p>The MOH improves clinical training based on the outcomes of this project.</p>
<p>Outputs</p> <ol style="list-style-type: none"> 1. Knowledge and know-how on clinical training of Setthathirath Hospital as a teaching hospital is expanded. 2. The training management system is improved at the Setthathirath Hospital. 3. Capacities of trainers of clinical training for medical students/doctors are strengthened. 	<ol style="list-style-type: none"> 1-1. The number of doctors who receive training for evidence-based medicine increases. 1-2. The number of pathological diagnosis increases. 1-3. The number of transferred patients from other hospitals increases. 1-4. The number of compiled clinical cases increases. 2-1. The number of monthly meetings for clinical training is increased. 2-2. The number of seminars/meetings held among relevant organizations is increased. 3-1. The levels of skills, knowledge and attitude of trainers of clinical training at the Setthathirath Hospital are enhanced. 3-2. The number of trainers of clinical training for medical students/doctors who receive TOT at the Setthathirath Hospital increases. 	<ol style="list-style-type: none"> 1-1. Medical Records in Medical Affairs 1-2. Medical Records in Medical Affairs 1-3. Medical Records in Medical Affairs 1-4. Medical Records in Medical Affairs 2-1. Project Report 2-2. Project Report 3-1. Observation/Assessment by Doctors' Committee in charge, i.e. DTC (Drug Treatment Committee) 3-2. Project Report / Training Report 	<p>The MOH continues to secure the budget for the clinical training at the educational hospitals.</p>

<p>Activities</p> <p>1-1 Conduct baseline survey on clinical training for medical students/doctors.</p> <p>1-2 Conduct training for evidence-based medicine in the fields of clinical pathology, pathognomy, symptomatology, etc. for trainers of clinical training in consideration of systematic clinical case presentations.</p> <p>1-3 Improve medical records from a viewpoint of follow-up/compiling of clinical cases.</p> <p>1-4 Compile clinical cases systematically for evidence-based medicine.</p> <p>1-5 Implement case conferences of clinical cases for trainees.</p> <p>1-6 Prepare learning materials for case presentations/references for trainees.</p>	<p>Inputs</p> <p>Japanese side (tentative)</p> <p>1. Experts Chief Advisor, Medical Education, Pedagogy, Evidence Based Medicine, Epidemiology, Internal Medicine, Medical Record Management, Emergency Medicine, Clinical Laboratory, Clinical Pathology, Training Management and Evaluation (Note: The number of experts will be smaller than the number of above-mentioned fields, because some experts will be in charge of several fields. At the moment, such envisaged examples are as follows; - Chief Advisor/Evidence Based Medicine/Epidemiology - Medical Education/Pedagogy)</p>	<p>Lao side</p> <p>1. Personnel Project Director Project Manager Counterpart personnel</p> <p>2. Provision of the project office and facilities necessary for the implementation of the project</p> <p>3. Others Administrative and operational costs Running costs for electricity, water, etc.</p>	<p>1. Trainers of clinical training continue working as teaching doctors.</p> <p>2. The number of patients is not reduced drastically at the Setthathirath Hospital.</p>
<p>2-1 Develop concepts/philosophy of clinical training from a viewpoint of medical education at the Setthathirath Hospital.</p> <p>2-2 Establish a new committee in charge of clinical training.</p> <p>2-3 Hold monthly meetings for clinical training.</p> <p>2-4 Document process, experiences, outcomes, and lessons learned of the clinical training for medical students/doctors at the Setthathirath Hospital.</p> <p>2-5 Hold seminars of clinical training in collaboration with four teaching hospitals, the Ministry of Health and the University of Health Science.</p> <p>2-6 Arrange external audit.</p>	<p>2. Training of counterpart personnel in Japan Medical Education</p> <p>3. Equipment/materials Equipment for Medical Education, Equipment for Clinical Medicine for Educational Purposes</p>		<p>Pre-conditions</p> <p>Cooperation and agreement on the project implementation are obtained from the MOH.</p>
<p>3-1 Draw up the programs and curriculums of training of trainers (TOT).</p> <p>3-2 Prepare teaching materials for TOT.</p> <p>3-3 Conduct TOT for medical doctors working for four (4) teaching hospitals and provincial hospitals in the areas of pedagogy, problem-based learning clinical training, clinical presentations, training management by team approach and teaching system, self-learning, etc.</p> <p>3-4 Set up the monitoring criteria for trainers of clinical training.</p> <p>3-5 Monitor and evaluate trainers of clinical training.</p>			

2. Project Design Matrix (PDM) Version 1

Annex 4: PDM₁

Project Name : Project for Medical Education and Research of the Setthathirath Hospital in the Lao PDR Target Group : Doctors involved in clinical training

Target Area : Setthathirath Hospital

Project Period : 2007 – 2010 (3 years)

Date : 25 June, 2009

Version : No. 1

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
<p>Super Goal Skills, knowledge, and attitude of medical doctors in the whole country are improved.</p>	<ol style="list-style-type: none"> 1. The number of patients coming to district hospitals increases. 2. The number of medical doctors at district hospitals increases. 	<ol style="list-style-type: none"> 1. Annual Report from Ministry of Health 2. Annual Report from Ministry of Health 	
<p>Overall Goal Quality of clinical training for medical doctors in the Lao PDR is improved.</p>	<ol style="list-style-type: none"> 1. Achievement of undergraduate / Family Medicine Specialist Programs increases. 	<ol style="list-style-type: none"> 1. Comparison of baseline and end surveys 	<p>Family Medicine Specialist Program is continued</p>
<p>Project Purpose Quality of undergraduate clinical trainings and early postgraduate clinical trainings for those who graduated from Faculty of Medical Sciences within two years at the Setthathirath Hospital is improved.</p>	<ol style="list-style-type: none"> 1. Satisfaction of trainees who completed clinical trainings at the Setthathirath Hospital increases. 2. Evaluation (Reputation) of clinical training at the Setthathirath Hospital from the professional organization is enhanced 	<ol style="list-style-type: none"> 1. Report of evaluation by medical students/ family medicine residents in issued by Academic Affair of University of Health Sciences 2. Hearing survey from other teaching hospitals and MOH 	<p>The number of medical students are not increased drastically</p>
<p>Outputs</p> <ol style="list-style-type: none"> 1. Knowledge and know-how on clinical training of the Setthathirath Hospital as a teaching hospital is expanded. 2. The training management system is improved at the Setthathirath Hospital. 3. Capacities of trainers of clinical trainings for medical students/doctors are strengthened. 	<ol style="list-style-type: none"> 1-1. The number of monthly book for loan in library (target: 4 books per student per year) 1-2. Status of textbooks use in the clinical education 1-3. Status of usage of Clinical Learning Center and simulators 1-4. The percentage of blanks in the medical records decreases. 2-1 The number of TMC meetings (target: 60) 2-2 Frequency of re-write weekly schedule related with Medical Teaching Unit (MTU) (target: once a week) 2-3 Medical students/family medicine residents feel that training by clinical trainers improved. 2-4 Findings used for further improvement in Internal Monitoring 2-5 Human Resource Technical Working Group (HR-TWG) recognizes the clinical education model in Setthathirath Hospital as a model 3-1 The number of Medical Education Seminars (target: 8 times) 3-2 The number of TOT workshops (target: 15 times) 3-3 The number of monitoring for clinical trainers (target: 8 times) 3-4 Clinical trainers feel TOT has improved teaching skills 3-5 The number of issued newsletters and posters (7 and 1 time respectively) 	<ol style="list-style-type: none"> 1-1. List for loan-out books from the library 1-2. Hearing from clinical trainers 1-3. Hearing from clinical trainers 1-4. Sampling survey results of medical record in four major departments 2-1. Record of TMC meetings 2-2. Frequency of re-writing schedule board 2-3. Hearing from medical students/residents 2-4. Minutes of Internal Monitoring 2-5. Minutes of HR-TWG meetings 3-1. Programs of Medical Education Seminars and TOTs 3-2. TOT programs 3-3. Monitoring reports of clinical trainers 3-4. Hearing from clinical trainers 3-5. Newsletters and posters 	<p>The MOH continues to secure the budget for the clinical trainings at the educational hospitals.</p>

<p>Activities</p> <p>1-1 Conduct baseline survey on clinical training for medical doctors.</p> <p>1-2 Produce textbooks to acquire standardized basic clinical competencies</p> <p>1-3 Activate the library to utilize reference books</p> <p>1-4 Build Clinical Learning Center and provide practical training using simulators</p> <p>1-5 Improve the contents and management system of medical records</p> <p>1-6 Develop learning materials for case conference or references for medical students/residents</p> <hr/> <p>2-1 Develop the mission of clinical training for medical education viewpoint at the Sethathirath Hospital.</p> <p>2-2 Establish a new committee (Teaching Management Committee: TMC) in charge of clinical training.</p> <p>2-3 Hold monthly TMC meetings for clinical training.</p> <p>2-4 Accumulate the minutes of TMC meetings</p> <p>2-5 Improve the function of Medical Teaching Unit (MTU)</p> <p>2-6 Establish Internal Monitoring system.</p> <p>2-7 Promote project outputs through the Human Resource Technical Working Group organized by Ministry of Health</p> <hr/> <p>3-1 Develop the programs of trainings of trainers (TOT).</p> <p>3-2 Prepare teaching materials for TOT.</p> <p>3-3 Conduct TOT for medical doctors working for four teaching hospitals and provincial hospitals.</p> <p>3-4 Organize Medical Education Seminar for clinical trainers</p> <p>3-5 Set up the monitoring criteria for clinical trainers who participate in TOT.</p> <p>3-6 Monitor and evaluate clinical trainers who participated in TOT.</p> <p>3-7 Disseminate the idea of medical education through newsletters and a poster</p>	<p>Inputs</p> <p>Japanese side</p> <p>1. Experts</p> <ul style="list-style-type: none"> - Chief Advisor - Medical Education - Pedagogy - Evidence Based Medicine - Epidemiology - Internal Medicine - Medical Record Management - Emergency Medicine - Clinical Laboratory - Clinical Pathology - Training Management and Evaluation <p>Note: The number of experts will be smaller than the number of above-mentioned fields, because some experts will be in charge of several fields. At the moment, such envisaged examples are as follows:</p> <ul style="list-style-type: none"> - Chief Advisor/ Medical Education/Pedagogy - Evidence Based Medicine/Epidemiology <p>2. Training of counterpart personnel in Japan</p> <ul style="list-style-type: none"> - Medical Education <p>3. Equipment/materials</p> <ul style="list-style-type: none"> - Equipment for Medical Education - Equipment for Clinical Medicine for Educational Purposes <p>Lao side</p> <p>1. Personnel</p> <ul style="list-style-type: none"> - Project Director - Project Manager - Counterpart personnel <p>2. Provision of the project office and facilities necessary for the implementation of the project</p> <p>3. Others</p> <ul style="list-style-type: none"> - Administrative and operational costs - Running costs for electricity, water, etc. 	<p>1. Clinical trainers continue working as teaching doctors.</p> <p>2. The number of patients is not reduced drastically at the Sethathirath Hospital.</p> <hr/> <p>Pre-conditions</p> <p>Cooperation and agreement on the project implementation are obtained from the MOH.</p>
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