Republic of the Union of Myanmar
Ministry of Health and Sports

PROJECT COMPLETION REPORT
ON
THE PROJECT FOR ENHANCEMENT OF MEDICAL EDUCATION IN THE REPUBLIC OF THE UNION OF MYANMAR

SEPTEMBER 2019

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

HM
JR
19-045

Republic of the Union of Myanmar
Ministry of Health and Sports

PROJECT COMPLETION REPORT ON THE PROJECT FOR ENHANCEMENT OF MEDICAL EDUCATION IN THE REPUBLIC OF THE UNION OF MYANMAR

SEPTEMBER 2019

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

Project Completion Report

Project Title: Project for Enhancement of Medical Education in Myanmar

Name: Dr. Tin Tin Lay
Title: Project Director
Name: Toshinori Isogai
Title: Chief Advisor
Submission Date: 6 August 2019

I. Basic Information of the Project

1. Country

The Republic of the Union of Myanmar

2. Title of the Project

Project for Enhancement of Medical Education in Myanmar (PEME)

3. Duration of the Project (Planned and Actual)

From April 2015 to September 2019, 4.5 years (as planned)

4. Background

As of 2014, Myanmar has set out the strategic directions for Universal Health Coverage (UHC), which is expressed as the provision of optimal quality of health care to everyone in the country. Since it is a principal pre-requisite for realization of UHC that supply side readiness of health and medical care is ensured, Human Development for Health (HDH) has been identified as a major priority to promote quality and accessibility of health service in Myanmar. Accordingly, Health Workforce Strategic Plan 2012-2017 describes one of the challenges as pre-service and postgraduate education is needed to be reviewed in order to improve the capacity of the institutions to offer quality programs.

Therefore, academic staff in the universities of medicine in Myanmar need to have more chances to study abroad so as to gain the latest information in field of medicine and public health. Capacity development is also urgently needed for them to acquire global standard of medical skills and knowledge for research work as well as for upgrading educational skills in their research field, which consequently improve the

quality of medical services to Myanmar people.

Facing the challenges in capacity development, the Ministry of Health requested JICA for a technical cooperation project to strengthen the capacity of medical education in Myanmar. The proposed project is expected to enhance the capacity in research, clinical skills and education of the medical universities in Myanmar.

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

5-1 Overall Goal

Quality of medical services in Myanmar is improved.

5-2 Project Purpose

Capacities in research, clinical skills and education in Myanmar are strengthened.

6. Implementing Agency

Department of Medical Science (DMS), Ministry of Health (MoH)

Since Ministry Organization was changed on April 2016, current name is Department of Human Resources for Health (DHRH), Ministry of Health and Sports (MoHS).

II. Results of the Project

1. Results of the Project

1-1 Input by the Japanese side

(1) Amount of input by the Japanese side: 430 million Japanese Yen

(See ANNEX 1-11)

(2) Expert dispatch:

The Japanese side assigned total 5 experts. It is broke down into 4 long-term experts and 1 short-term expert. All experts were based on the project office in Yangon.

(See ANNEX 1-1)

(3) Acceptance of the Myanmar trainees and implementation of the training

The Japanese side accepted 12 long-term trainees on basic medicine to obtain Ph.D. at the Six National Universities Network (hereinafter called SUN) in Japan, SUN consists of Chiba University, Niigata University, Kanazawa University, Okayama University, Nagasaki University and Kumamoto University. A total of 6 areas (Anatomy, Biochemistry, Physiology, Microbiology, Pathology, and Pharmacology) of

basic medicine were included for the training. All long-term trainees returned to Myanmar with their Ph.D. degrees in March 2019.

Also, the Japanese side accepted 55 short-term trainees on clinical medicine focusing on Diagnostic Imaging (Radiology, Obstetrics and Gynecology, Gastroenterology and Clinical Pathology), and Emergency Care (Emergency Medicine and Anesthesiology) from April 2015 to March 2019. Each trainee received 11 weeks of intensive training and acquired knowledge and skills in each specialized area.
Both long-term and short-term trainings in Japan were implemented under the auspices of the Medical Operating Committee of the SUN (Med-SUN) consisted of the deans of medical schools and directors of university hospitals of SUN.

In addition, on Accreditation of Medical Education, 2 professors from Chiba University visited the University of Medicine (1) (hereinafter called UM 1) and the University of Medicine (2) (hereinafter called UM 2) in May 2016 to discuss regarding establishing accreditation system. Afterwards, the Japanese side accepted 7 focal persons from the University of Medicine, the University of Nursing, the MoHS and Myanmar Medical Council as the Project Counterparts Study Tour Program in October 2016 in Japan. The Project Counterparts presented their educational outcomes which were prepared beforehand and received comments and advices, which enabled them to learn the experience of accreditation from Chiba University.

(See ANNEX 1-6, 1-9)

(4) Organized seminars and the other event

Throughout the entire project period, the Project organized 35 clinical medicine dissemination seminars on Pathology, Obstetrics and Gynecology, Radiology, Emergency Care, Anesthesiology and Gastroenterology.

81 Supervisors from the SUN were dispatched to follow up short-term training and support the dissemination seminars. On basic medicine, 12 Supervisors from Japanese universities were dispatched to the Presentation of Ph.D. Dissertations and 4 Supervisors to join to the Accreditation and Medical Education Seminar.

The Project made DVD with ex-trainees and Japanese Supervisors' PPT that were presented at the dissemination seminars. The DVD will be used as educational

materials at the UM 1, UM 2, University of Medicine Mandalay (hereinafter called UMM) and University of Medicine Magway (hereinafter called UMMG).

(See ANNEX 1-2, 1-3, 1-4, 1-5, 2-1)

(5) Equipment provision

The Japanese side provided a “Digital Slide Scanner” to the Pathology Department at UM 1. The Digital Slide Scanner will be used by Myanmar pathologists for case information sharing between Myanmar and Japanese universities. By the end of the Project, a workshop with Nagasaki University using equipment will be held. The Project also provided an “Advanced Trauma Simulator”, “Central Venous Catheterization”, “Child Training Manikin” and “AED Trainer” to the Emergency Department at the 1000 Bedded Hospital in Nay Pyi Taw. Total expenditure of equipment is 5 million Japanese Yen.

In addition, office materials and equipment were provided.

In total, the gross amount of the provided equipment is approximately 5.3 million Japanese Yen.

(See ANNEX 1-10)

(6) Overseas activities cost

The Japanese side has input a total amount of 33.7 million Japanese Yen for the operation of the project activities by the end of September 2019. This includes the research fund (total 6.4 million Japanese Yen) for 12 basic medicine ex-long-term trainees to continue their researches in Myanmar, the expenses for labor costs of project staffs, implementation of all seminars and meetings, equipment, consumables etc.

1-2 Input by the Myanmar side

(1) Counterpart assignment:

The Director General of DHRH, MoHS has served as the Project Director as well as the Chairperson of the Joint Coordinating Committee (JCC). The Rector of UM 1 has been assigned as Acting Project Director, and the Director of Foreign Relation, DHRH, MoHS as Project Manager.

(2) Assignment of trainees to Japan

Myanmar side assigned 12 long-term trainees on basic medicine, 55 short-term trainees on clinical medicine and 7 members of the Project Counterparts for the

Study Tour Program on Accreditation of Medical Education.

(See ANNEX 1-6, 1-9)

(3) Activity participants

Throughout the entire project period, dissemination seminars in clinical medicine were held 35 times, and 1,904 participants, including doctors, nurses and radiographers attended to the seminars. The Follow-up Seminar on Accreditation of Medical Education was held on 31 January to 1 February 2018, and there were 35 participants from the Myanmar side. After the long-term trainees returned to Myanmar, the Project held the Presentation of Ph.D. Dissertations, on 2 April 2019, with the 71 Myanmar side participants.

(See ANNEX 1-5)

(4) Provision of Office and dissemination seminar venues

One project office has been provided with office furniture inside campus of the UM 1, Yangon. The Myanmar side took on the cost of utilities and water. Dissemination seminars were conducted at hospitals and universities.

(5) Other inputs

The MoHS and University of Medicine in Myanmar arranged necessary procedure for holding seminars and accepting Japanese Missions.

(See ANNEX 1-7, 1-8)

1-3 Activities (Planned and Actual)

The project activities were implemented as described in the PDM (Ver. 3) and Plan of Operation (Ver. 3) without significant delay.

(See ANNEX 3)

Table 1: Result of the Activities

Output 1: Research and educational capacities of basic medicine is strengthened in the 4 target universities.	
Planned	Actual
1.1 To receive Myanmar Ph.D. candidates in the SUN in Japan.	The SUN in Japan received 12 Ph.D. candidates from April 2015 to March 2019.

1.2 To assess the current situation in research and education in Myanmar by the instructors of the Ph.D. candidates.	From September to December in 2015, each of Japanese professors who have received 12 Ph.D. candidates visited the University of Medicine in Myanmar.
1.3 To modify the original research plan to response to the national needs.	Since 2015, Myanmar and Japanese side professors started to discuss the research themes of Ph.D. candidates which were expected to contribute and respond to national needs. Between September and December 2015, 12 Japanese professors visited the Ph.D. candidates' research sites, and modifications were made each field reflecting national needs.
1.4 To support the Ph.D. holders to prepare a plan to conduct research activities in Myanmar.	After the Ph.D. holders returned to Myanmar with their degree, the Project held the Ph.D. dissertation seminar to share the research contents. Myanmar side participants were 71 from MoHS and 4 universities in 6 fields of basic medicines.
1.5 To support the Ph.D. holders to conduct research in universities in Myanmar through the Research Fund	The Selection Committee adapted all Ph.D. holders' research plans. The Project provided reagent and consumables to each Ph.D. holders. (See ANNEX 1-13)
Output 2: Quality of the training program on diagnostic imaging and emergency care for cross cutting clinical technology in Myanmar is improved.	
Planned	Actual
2.1 To hold an orientation to introduce the Project framework and planned activities.	Every year, the Project visited 4 universities and held orientation to introduce the Project framework and planned activities for the new short-term trainees and their professors.

2.2 To assess the current situation on clinical training in Myanmar by the instructors in the SUN universities	The 81 Japanese Supervisors visited hospitals and universities in Myanmar, and had meetings with Professors to assess the current situation on clinical trainings during their stay in Myanmar to support the dissemination seminars.
2.3 To prepare the training program in Japan on each field by the responsible universities	The SUN prepared and programed the training curriculum based on the assessment of current clinical situation in Myanmar and focused on the competences required.
2.4 To receive and train Myanmar trainees at the SUN universities in Japan	The SUN received 55 short-term trainees on clinical medicine throughout the entire project period. Each trainee received 11 weeks of training.
Output 3: Deliverables of Outputs 1 and 2 are introduced into the under-and-post graduate medical education in Myanmar.	
Planned	Actual
3.1 To support the Ph.D. holders to hold a seminar to present his/her doctoral dissertations	On 31 March 2017 at JICA Ichigaya in Tokyo, the Project held a Mid-term Research Report Meeting. All Ph.D. candidates made well-organized presentations which showed their hard works and steady progresses in their researches. In March 2019, all 12 Ph.D. candidates obtained their Ph.D. degrees and returned to Myanmar. On 2 April 2019, the Project held the Presentation of Ph.D. Dissertations to share research contents. 12 supervisors from the SUN had participated.
3.2 To support the clinical medicine ex-trainees to organize seminars to disseminate the knowledge/skills they acquired in Japan	Throughout the entire project period, the project organized 35 clinical medicine dissemination seminars. The 81 Japanese Supervisors were dispatched to support the dissemination seminars.

3.3 To make DVD of the dissemination seminars	The Project made DVDs with PPT that ex-trainees and Japanese supervisors presented at the dissemination seminars.
3.4 To support ex-trainees to improve their activities after returning from Japan	The Project provided Pathology equipment to utilize ex-trainees' skills acquired trainings in Japan. Prior to the equipment purchase, the Project organized a debriefing session to professors by the short-term ex-trainee at the UM 1 to introduce Digital Pathology. In addition, Emergency Care equipment was also provided. The equipment is used for the training of emergency staff conducted by ex-trainee. The project recommended and announced to ex-trainees that the Project was ready for cooperation to hold seminars or workshops held by individual ex-trainees by the end of the Project.
3.5 To support MoHS and medical universities in the preparation for accreditation of medical education	The study tour was conducted by the Japanese side in 2016, and held a follow-up seminar in Myanmar in 2018.

2. Achievements of the Project

2-1 Outputs and indicators

(1) Output 1

Monitoring has been conducted throughout the entire project period. Since all the indicators for the Output 1 have been attained, the achievement level is “High”.

Table 2: Achievements of Output 1

Output 1: Research and educational capacities of basic medicine is strengthened in the 4 target universities.

Objectively Verifiable Indicators	Achievement level and progress
1-1 Among 12 Ph.D. candidates, the number of candidates who obtained the degree within the planned period	The 12 Ph.D. candidates obtained their Ph.D. degree in March 2019. As the indicator has been achieved 100 %, Achievement level is “High”
1-2 The number of dissertations, published papers and presentation made by the Ph.D. holders by the end of the Project	All Ph.D. candidates published papers to international journals and one Japanese journal. One of the Ph.D. candidates published 3 papers to international journals during the study period in Japan. In addition, all Ph.D. candidates made presentation both in Japan and Myanmar. As the number of dissertations is sufficient, achievement level is “High” (See ANNEX 1-12)

(2) Output 2

Since all the indicators for the Output 2 have been almost attained, the achievement level is “Fair”.

The Project conducted a questionnaire survey in order to evaluate the achievement level and progress of the training program. According to the result of the survey, all replied short-term trainees and their professors answered that the Project contributed to improve the quality of their lectures and the skills of clinical practices. However, we have taken the result of indicator 2-2 into consideration, the total achievement level of Output 2 is “Fair”.

Table 3: Achievements of Output 2

Output 2: Quality of the training program on diagnostic imaging and emergency care for cross cutting clinical technology in Myanmar is improved.	
Objectively Verifiable Indicators	Achievement level and progress
2-1 The number of doctors/radiologists who received the course completion certificates on the short-term training in	All 55 short-term trainees in FY2015, FY2016, FY2017 and FY2018 were successfully completed their short-term

Japan	trainings in Japan. One short-term trainee in FY 2017 canceled training before dispatch to Japan due to health reasons, and it is not included in the indicator. Achievement level is “High”
2-2 The number of improved lectures/trainings in Myanmar	Ex-trainees have been improving their lectures/practices since returning from Japan. The Project team conducted a questionnaire survey for ex-trainees. According to the survey result, 336 lectures and practices are improved. It accounts for 75% of all respondents. Under 80% to 50%, achievement level is “Fair” according to the JICA Writing Guidelines. In order to improve ex-trainees’ practices, further utilization of equipment which the Japanese side provided is desired.

(3) Output 3

Since all the indicators for the Output 3 have yet to be fully attained, the achievement level is currently “Fair”. Because some activities of Output 3 are still ongoing to the end of the Project.

Table 4: Achievements of Output 3

Output 3: Deliverables of Outputs 1 and 2 are introduced into the under-and-post graduate medical education in Myanmar.	
Objectively Verifiable Indicators	Achievement level and progress
3-1 The number of seminars and symposium etc. organized to share the achievements of the Ph.D. holders with other universities by the end of the Project	It is just a once. After the 12 Ph.D. holders returned to Myanmar in March 2019, the Project held the Presentation of Ph.D. Dissertations to share research contents. Total number of participants was 101, and lively exchanges of opinions have been

	made. However, number of seminars and symposiums held by the Ph.D. holders is not sufficient. Because period was insufficient to organize a seminar after the Ph.D. holders returned to Myanmar. And therefore, the number of seminars and symposiums would be increased from now on. Achievement level is “Fair” (as of 1 May 2019)
3-2 The number of the dissemination seminars and participants on clinical medicines by the end of the Project	Throughout the entire project period, the Project organized 35 clinical medicine dissemination seminars with the great cooperation of the MoHS, University of Medicine in Myanmar, SUN and ex-trainees. The total number of Supervisors who had visited Myanmar to support dissemination seminars is 81, and made the special lecture and presentations. The total number of participants was 1,904. Achievement level is “High”
3-3 The number of the DVD contents of the dissemination seminars	The project made DVDs with presentation power points of short-term ex-trainees and Japanese supervisors. The number of the DVD contents was 107, and 28 DVDs were sent to each of the 4 universities. The Project plans to create more DVDs for the dissemination seminars in 2018 and 2019. Achievement level is “Fair”(as of 31 May 2019) (See ANNEX 2-1)

2-2 Project Purpose and indicators

The achievement level is “Fair”.

All the indicators for the Project Purpose have been almost attained.（See Output 2, Objectively Verifiable Indicators 2-2）

Clinical practice improvements are e.g. the procedure of the ultrasound examination performed by the obstetricians and gynecologists are improved in the actual clinical settings. Also the case numbers of Endoscopic Retrograde Cholangiopancreatography (ERCP), which were conducted by the gastroenterologists, had increased from 200 to 450 (125% increased), and Endoscopic Ultra-Sonography (EUS) increased from 110 to 190 (73% increased) from 2014 to 2017 at Mandalay General Hospital. In addition, an ex-trainee on Emergency Care has conducted clinical training at the 1000 Bedded Hospital regularly with using the provided equipment by the Project. However, the number of improved lectures and practices could increase.

Table 5: Achievements of Project Purpose

Project Purpose: Capacities in research, clinical skills and education in Myanmar are strengthened.	
Objectively Verifiable Indicators	Achievement level and progress
1. The number of future research plans prepared by the Ph.D. holders	In November 2018, all (12) Ph.D. holder’s research plans were adapted by the Selection Committee. Preparations of the researches are in process. Each Ph.D. holder has started applying to each university's ethics board and obtaining estimations for reagents and consumables for their researches. Achievement level is “High”
2. The number of professors and ex-trainees who think lectures and practices (clinical) are improved by the Project.	According to the result of questionnaire survey, all replied professors and ex-trainees have answered that lectures and practices (clinical) are improved by the trainings.

	However, the number of improved lectures and practices could increase in the future.（See Output 2, Objectively Verifiable Indicators 2-2） Achievement level is “Fair”

3. History of PDM Modification

3-1 PDM Ver.1 (Approved in February 2015)

Based on the result of the Detailed Planning Survey on the Project which was conducted in October 2014, the PDM Ver.1 was developed.

3-2 PDM Ver.2 (Approved in March 2018)

According to the results of discussions on the 2nd Joint Coordinating Committee (JCC) on 7 March 2017 and the 3rd JCC on 10 January 2018, the procedures for amendment of R/D were agreed in order to include the activities of accreditation of medical education to Output 3 and to finalize the impact measuring indicators of the Overall Goal.

3-3 PDM Ver.3 (Approved in December 2018)

The purpose of modification is to match the plan with actual activities. Especially, in the original plan, the Project team thought that the DHRH-University Rectors' Monthly Meeting had a function to instruct the whole medical education in Myanmar, however, the Meeting had not have it.

Therefore, we had needed to revise some activities, indicators and wordings related to the Meeting in the PDM. The amendment key points are i) the indicators and means of verifications of the Project　Purpose are changed on the actual basis, ii) Output 2 and 3 are modified to accurate expressions, and iii) along with the modification of Outputs, indicators and means of verifications of outputs and activities had been changed.

4. Others

4-1 Results of Environmental and Social Considerations (if applicable)

In the end, the Project does not fall under the category of projects subject to

environmental and social consideration.

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

In the end, the Project does not fall under the category of projects subject to consideration on gender, peacebuilding, and poverty reduction.

III. Results of Joint Review

1. Results of Review based on DAC Evaluation Criteria

1-1 Relevance

Relevance is evaluated “High”. Implementation of the Project was relevant from the aspects of consistency with Myanmar government`s policies and development needs.

(1) Consistency with policy of Myanmar government

As of 2014, Myanmar has set out the Strategic Directions for Universal Health Coverage (UHC), which is expressed as the provision of optimal quality of health care to everyone in the country. Since it is a principal pre-requisite for realization of UHC that supply side readiness of health and medical care are ensured. Human development for health (HDH) has been identified as a major priority to promote quality and accessibility of health service in Myanmar, and the **National Health Plan (NHP) 2017-2021** has underlined human resources for health (HRH) as one of four pillars; i) Human Resources, ii) Infrastructure, iii) Service Delivery and iv), Health Financing, for progress on UHC. On the other hand, MoHS has made notable efforts to strengthen HRH guided by the Health Workforce Strategic Plan 2012-2017, however, eventually there were significant challenges still remain.

Subsequently, MoHS has developed the Myanmar **Human Resources for Health Strategy 2018-2021**, which has three strategic areas such as i) Planning, ii) Quality, and iii) Governance and Finance, and also there is some contents about enhancement of education and training in the areas of the Quality to realize the plan.

Training of medical doctors is one of priority issues in the development policies of the Myanmar.

Therefore, the Project’s position and purpose are as matched and followed above mentioned governmental policies as making HRH.

(2) Consistency with Myanmar development needs

According to the 2014 Census, Myanmar had a population of 51.48 million. The health status of the Myanmar population is poor both in absolute terms and by comparison to other countries in the region. Life expectancy at birth in Myanmar is 64.7 years, the lowest among ASEAN countries (National Health Plan 2017-21). The maternal mortality ratio is the second highest among ASEAN countries at 200 deaths per 100,000 live births. The under-five mortality rate is 51 deaths per 1,000 live births, as compared with 12 in Thailand and 29 in Cambodia. Malnutrition is highly prevalent with over a third of children under-five stunted (National Health Plan 2017-21).

Human Immunodeficiency Virus (HIV) prevalence (361 per 100,000), and TB incidence (373 per 100,000) are the third and second highest respectively among ASEAN countries. Despite little available data, rates of noncommunicable diseases (NCDs) are believed to be increasing rapidly with an estimated 40% of mortality attributable to NCDs. In addition, recently, the number of deaths caused by traffic accidents has increased significantly, so that MoHS developed Emergency Medicine Department, Master's course and Diploma course in UM1, UM2 and UMM.

Therefore, in Myanmar, there is a need to improve the quantity and quality of doctors in order to respond to the above-mentioned situation, and it can be said that strengthening medical education is in line with that need.

1-2 Effectiveness

The effectiveness is evaluated "Fair" for the following reasons.

Three Outputs, set out in PDM, constitute necessary and sufficient conditions mutually for the achievement of the Project Purpose.

As discussed in II.2-1, all the Outputs were fairly accomplished and it is indicated that steady implementations of activities were made toward the accomplishment of the Project Purpose.

As for the level of achievement of Output 1 affected the level of the Project Purpose indicator1 "The number of future research plans prepared by the Ph.D. holders." which has been highly attained as shown in II 2-2.

As for the level of achievement of Output 2 and Output 3 affected the level of the Project Purpose indicator 2 "The number of professors and ex-trainees who think lectures and practices (clinical) are improved by the Project." has been fairly attained as shown in II 2-2.

In conclusion, the indicator 1 and 2 of the Project Purpose were fully and fairly achieved as results of the Project activities and above-mentioned reasons, so that consistency between the Outputs and the Project Purpose has been almost verified.

In addition, the Project has generated synergic effects on improving quality of medical services together with the medical equipment provided by the JICA's grant aid projects in general hospitals and other teaching hospitals in Yangon, Mandalay and Magway. Especially, in the field of Radiology and OBGY, ex-trainees could effectively use their skills and knowledge they acquired in Japan with that equipment.

1-3 Efficiency

The efficiency of the Project is "High".
The scale of Inputs by JICA was not very large in terms of the number of experts and equipment supplied. These limited Inputs, however, were quite efficiently implemented and well utilized. Thus, the inputs contributed to achieve Outputs. The Project inputs focusing on trainings, which were organized and carried out in Japan proved to be efficient in the Project.

As for the budget aspect, in the original financial plan, the budget amount was 538 million yen and the latest (27 May 2019) budget amount is 430 million yen. The Project team has saved the budget as 20% by streamlining the managing cost, the transportation cost and the meeting cost. In addition, canceling one (1) trainee of clinical medicine training due to a health issue decreased the budget.
In regard to the Project period, there are not changes compared to the original plan. Especially trainings in Japan were conducted smoothly and efficiently.

Training courses in Japan was successful. As they were very efficient and effective, the number of training courses and trainees were basically not changed from the original plan.
Namely, 12 Ph.D. long-term trainings and 55 clinical medicine trainings were carried out at the 6 respective universities in Japan from FY2015 to FY2018. In spite of a large number of trainings and seminars, it is not necessary to extend the Project period for attaining the Output 1 and 2. No one made an extension of training

periods and all participants obtained the certificates and Ph.D. degrees in all the planned field.
Moreover, combination of trainings in Japan and dispatching of Japanese supervisors to dissemination seminars have contributed to the achievement of Output 3 to a significant extent. In this process, firstly, theoretical and practical Myanmar's goals in future medical vision were presented through the training in Japan, and secondly, the results of trainings, skills and knowledge, are disseminated to other doctors and comedical personnel with the support from Japanese supervisors dispatched to Myanmar.

1-4 Impact

It is prospective to continue the momentum of proceeding with the Project's effects and to move towards achievement of the Overall Goal (details mentioned in IV.1).

Eventually, the Project had produced 47 Myanmar clinical doctors and 8 technicians with the advanced medical skills and knowledge, and 12 Ph.D. medical doctors for basic medical researches through training/studying in Japan. After returning to Myanmar, they are expected to teach the knowledge and skills acquired in Japan to their students and colleagues with improved teaching contents and method, in addition to introduce the new systems and materials to their universities and hospitals.

The following positive impacts are confirmed and/or expected by the Project. The SUN has been making concrete relationships with Myanmar medical universities and Myanmar clinical associations through accepting Myanmar doctors. Some supervisors of the SUN have attended Myanmar medical associations' conferences in the field of OBGY and Radiology.

In addition, the project team has found out that 84% of ex-trainees have been keeping in touch with their Japanese university supervisors. This relationship would be something good for the achievement of the Overall Goal.
The Project team couldn't find any negative impacts through the implementation of the Project.

1-5 Sustainability

Sustainability of the Project is evaluated "Fair" because of a lack of the budget of

DHRH.
Policy sustainability is quite high. MoHS is going to keep having the same policy to improve the quality of medical doctors in accordance with the National Health Plan (NHP) 2017-2021 and the Myanmar Human Resources for Health Strategy 2018-2021.

In terms of institutional aspects, the Project has never touched the institutional matters, however, MoHS decided to establish the National Skill Training, Simulation & Research Center which is currently under the construction and it will be completed in early next year (2020). This center will help the Project ex-trainees to continue their research activities and to hold seminars/workshops.

Financial and technical sustainability is not high. Since medical skills, knowledge and technologies are going to develop continuously, DHRH needs to make counter measures to keep up with them. However, it seems that DHRH does not have enough budgets and high advanced technical knowledge to fully follow up the Project. On the other hand, there is some good news regarding to medical research field. MoHS has allocated 3 billion Kyats for medical research in 2019-2020 fiscal years, which is the double of 2018-2019 fiscal years. Also, MoHS has a policy emphasizing the medical research field, and this trend will probably continue from now on, even though it is still not sufficient enough. Anyhow, this trend is going to support to our Ph.D. ex-trainees.
In addition, regarding clinical medicine field, Myanmar medical universities are trying to strengthen the programs of Continuing Professional Development (CPD) to upgrade doctors' skills and knowledge

2. Key Factors Affecting Implementation and Outcomes

Some factors affected implementation and outcomes.

2-1 Transfer of Myanmar counterpart professors in the Medical Universities affected the Output 1 and 2.
Promotion of counterpart professors in the 6 clinical fields and transfer to other medical universities happened sometimes, which affected to develop the skills and researches.

2-2 Health matter of clinical medicine short-term training candidate affected the Output 2.

Health matter of a training candidate caused cancellation of one slot of training among the only two opportunities in OBGY in 2017.

2-3 Transfer of returned trainees affected the Output 3.

Some of the returned trainees are assigned to hospitals/positions where they are not able to fully perform what they have learned from trainings in Japan.

It concerns us that they could not disseminate their knowledge and continue their researches.

2-4 Resignation of ex-trainees in clinical medicine affected the Output 3.

5 clinical medicine ex-trainees resigned from the government services as of 1 May 2019.　(See ANNEX 1-14)

3. Evaluation on the results of the Project Risk Management

Regarding above mentioned risks, the Project took counter measures as follows.

3-1 Transfer of counterpart professors

Promotion of counterpart professors in the 6 clinical fields and transfer to other medical universities happens sometimes, which necessitates careful handover to the successors. Until now, the Project has overcome such cases successfully under the auspices of Rectors in four medical universities.

3-2 Health matter of a clinical medicine short-term training candidate

Health problems of a training candidates caused cancellation of one slot of training among only two opportunities in OBGY in 2017. It is strongly recommended for the FY2018, which is the 4th and final year for clinical training by the Project, that MoHS select healthy candidates as is requested in General Information attached to the Invitation on Nomination of candidates, which was sent from JICA Myanmar Office on 9 November 2018.

3-3 Transfer of returned trainees

Some of the returned trainees are in hospitals/positions where they are not able to fully perform what they have learned from trainings in Japan. However, thanks to the directions by their professors, some of them are in rotation among hospitals in a week to have opportunities to apply to the appropriate positions with their skills.

3-4 Resignation of ex-trainees in clinical medicine

The Project team has found out that the 5 ex-trainees resigned so far. The reasons of resignation are out of the Project's scope, so that the Project could not make any counter measures. However, Project team has felt that it could not be avoided since civil servant doctors' works are hard.

4. Lessons Learnt

Training in Japan is a distinctive characteristic of this Project and the Project has been successfully implemented. The Project team has found out some essential key points for the Project as follows:

4-1 To decide training candidates as early as possible

It is good for candidate to be able to prepare for the training and to control their work schedule. In the Project, DHRH had selected the candidates around half a year before.

4-2 To have dissemination seminars with Japanese supervisors

The Project had dissemination seminars organized by returned ex-trainees with Japanese supervisors. Japanese supervisors had supported participants making presentation contents in Japan, but it is very encouraging for participants to have their supervisors in the attendance, and also it is good for seminar audiences to understand the new knowledge. In fact, 100% participants said that the dissemination seminar with supervisors was excellent.

4-3 To have meetings with each candidate's professors before designing training course in Japan.

It is effective for the institutional capacity development in Myanmar medical universities, because we can design a training course to meet the needs of not only individuals' but also their institutions. Japanese supervisors met with the Myanmar trainees and their professors about the contents of the training when they came to Myanmar to hold a seminar about half a year to two months before the training in Japan. Not only the trainees but also their professors asked for the request for contents of the training in Japan, and this made it possible to incorporate the purpose of individual training and human resource development as an organization.

4-4 To follow up at the ex-trainees' workplace

In the Project, in addition to Japanese supervisors had visited their trainees' workplace in Myanmar before they came to Japan, supervisors visited again after participants returned to Myanmar, so that supervisors could give advises again effectively with the share views formed in Japan.

4-5 To hold a mid-term research report meeting

The Project held "Ph.D. Candidates Mid-term Research Report Meeting" on 31 March 2017.

Attendees were 12 Ph.D. Candidates, Rector and Pro-rector of Myanmar Yangon Medical University 1, Japanese host universities' professors and JICA officials.

Candidates introduced their progress of the research and how to overcome some difficulties of study. Candidates stayed totally 4 years in Japan that was a long period and hard time for them. The Project team believes that the meeting is helpful for them to keep motivations to obtain the Ph.D.

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

1. Prospects to achieve Overall Goal

The Overall Goal "Quality of medical services in Myanmar is improved." is prospected to be achieved to a certain extent related to the 6 clinical fields based on the following reasons:

1-1 As mentioned in III. 1-5 Sustainability, in policy aspects, MoHS will keep having the same policy to improve the quality of medical doctors in accordance with the National Health Plan (NHP) 2017-2021 and the Myanmar Human Resources for Health Strategy 2018-2021.

1-2 The 55 trainees have successfully completed the training program in Japan to ensure that they get the knowledge to achieve the indicators of Overall Goal. 89% of ex-trainees said they would be able to achieve the target indicators of their field of the Overall Goal, and all Japanese professors and Myanmar professors said that they would be able to achieve that within 4 years.

1-3 Project team has confirmed that some ex-trainees are implementing seminars to disseminate the skills and knowledge acquired in Japan by them. For example,

Emergency Care ex-trainee has organized workshops to his trauma teams at his hospital and OBGY ex-trainee has organized workshops about ultrasonic diagnosis to other doctors. Both of activities became their routine activities.

1-4 MoHS has developed Emergency Medicine department, Master course and Diploma course in UM1, UM2 and UMM. The Project has covered the field of Emergency Care and sent 8 Myanmar doctors to Japan who are faculty staff of the above-mentioned department, and had training course in Japan.

1-5 The Project has generated synergic effects on improving quality of medical services together with the provision of medical equipment implemented by the JICA's grant aid projects in general hospitals and other teaching hospitals in Yangon, Mandalay and Magway. Especially, in the field of Radiology and OBGY, ex-trainees could effectively use their skills and knowledge they obtained in Japan with that equipment.

1-6 The National Skill Training, Simulation & Research Center will be established in November 2019, which is under construction now. This center will help the Project ex-trainees to continue their research activities and to hold seminars/workshops to disseminate the Project's outputs.

1-7 JICA Myanmar office will support the ex-trainees through the JICA ex-trainees Alumni Association in order to achieve the Overall Goal.

1-8 Some of the fields of SUN obtained the own financial resources to continue receiving trainees from Myanmar for short-term trainings in Japan, similar to what have been implemented in the Project, after the completion of the Project. (i.e. Okayama University and Niigata University)

Table 6: Overall Goal and Indicators

Overall Goal	Objectively verifiable indicators
Quality of medical services in Myanmar is improved.	1. Radiology: Radiologists: Diagnostic performance throughout every image modalities has been improved in abdominal radiology. Radiographers: The first standardized CT/MRI scanning protocol in Myanmar has been made according to Japan standards and the current situation in Myanmar through Technical Seminars organized by ex-trainees (1-2 times/year). 2. Obstetrics and Gynecology: The number of OBGY doctors who can perform Ultrasound diagnosis has been increased. *(Current situation is almost all OBGY doctors at Yangon General Hospital(YGH), North Okarapa General Hospital, Mandalay General Hospital(MGH） and Magway General Hospital can perform it, as of January 2019 by interview)* 3. Gastroenterology: The number of EUS and ERCP has been increased and the procedure success rate has been increased. The complication rate has been decreased and the operation time has been reduced. *(The numbers of EUS and ERCP is 233 and 471 at YGH, and 190 and 450 at MGH, as of 2017)*

	4. Clinical Pathology: CAMPAS, the Myanmar's pathology educational database, has been fully utilized by uploading and sharing interesting cases as educational material and reference for diagnosis by Myanmar pathologists. *(Some of ex-trainees are using the CAMPAS as of July 2019.)* 5. Emergency care: Computer-based data collection system is introduced for evidence-based medicine in Emergency Departments. The use of Focused Assessment with Sonography for Trauma (FAST) has been increased. 6. Anesthesiology: The new techniques which had not been used in Myanmar but acquired by the training in Japan, such as bronchofiberscope use during thoracic surgery, anesthesia for living-donor liver transplantation, and continuous hemodiafiltration (CHDF) have newly used in Myanmar.

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

2-1 DHRH will manage and monitor the progress of the indicators of Overall Goal with professors of 6 fields of clinical medicine in Myanmar medical universities, and also monitor the progress of ex-trainees' researches in the field of basic medicine research up to Ex-post Evaluation.

2-2 DHRH and medical universities will support the ex-trainees to plan and implement a dissemination seminar to share the skills and knowledge with other doctors and comedical personals.

2-3 DHRH and medical universities will increase the number of seminar/workshop of the Continuing Professional Development (CPD) program in order to improve the quality of working doctors.

3. **Recommendations for the Myanmar side**

3-1 The feature of the Project is making Myanmar medical education staff studying and training at Japanese six universities in Japan in order to improve Myanmar medical education. It is so called TOT (Training of Trainers) project and this project's direct and concrete outputs are just 67 Myanmar ex-trainees, not making systems or plans to emphasize the medical education.
Therefore, DHRH is requested that 62 (5 resigned as of 1 August 2019) ex-trainees would keep working at the medical universities or teaching hospitals, not at basic hospitals. (See ANNEX 1-14)

3-2 Although Project Purpose will be achieved, sustainability is not very strong. For ensuring the sustainability it is necessary to increase the budget for more chances to study abroad so as to gain the latest skills and knowledge, and the budget for seminars/workshops to disseminate them.

3-3 MoHS is recommended to strengthen and improve the ICT conditions not only Wi-Fi but also cable at the teaching hospitals and universities in order to connect to the international medical web sites and related overseas/Japanese universities including SUN to keep relationships easily.

3-4 Continuing Professional Development (CPD) Program need to be strengthened for development and evaluation of medical staffs and faculty member's teaching ability.

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

4-1 In order to assess the achievement of the Overall Goal, it will be needed to conduct Ex-post Evaluation after three (3) years of project completion as one of

requirements of the Japanese Official Development Assistance (ODA) scheme.

4-2 DHRH and JICA will jointly monitor the activities as mentioned in IV-2 to achieve Overall Goal".

4-3 DHRH will monitor the progress of the indicators of Overall Goal and share the results with JICA.

4-4 DHRH will monitor the progress of 12 ex-trainees' researches funded by the Project Research Fund through receiving their research reports, contacting them regularly and as such.

4-5 JICA will monitor and support the activities of the ex-trainees through the JICA Ex-trainees Alumni Association.

4-6 DHRH and JICA will jointly make a plan of the Ex-post Evaluation and implement it.

ANNEX 1: Results of the Project

1-1 List of Experts Dispatched
1-2 List of Dispatched Japanese Supervisors for Dissemination Seminars
1-3 List of Dispatched Japanese Supervisors on Accreditation of Medical Education
1-4 List of Dispatched Japanese Supervisors for the Presentation of Ph.D. Dissertations
1-5 List of Dissemination Seminars
1-6 List of Trainees
1-7 List of Professors and Heads
1-8 List of Rectors and Pro-rectors
1-9 List of Participants for Study Tour on Accreditation of Medical Education
1-10 List of Equipment Provided
1-11 Amount of Input by the Japanese Side
1-12 List of Published Ph.D. Disseminations
1-13 List of Research Titles
1-14 List of Short-term Trainees (transferred history)

ANNEX 2: List of Products Produced by the Project

2-1 Contents of Dissemination Seminar Presentation DVD
2-2 Contents of the Presentation of Ph. D. Dissertations Hand-out Book (April 2, 2019)

ANNEX 3: PDM (all versions)

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

ANNEX 5: Monitoring Sheet (copy) (*)

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

Separate Volume: Copy of Products Produced by the Project

ANNEX 1: Results of the Project

ANNEX 1-1 List of Experts Dispatched

Total number of Long-term Experts - 4

Total number of Short-term Experts - 1

(1) Long-term Experts

PEME Project Team			
No.	Name	Designation	Period
1	Ms. Akiko Tomita	Chief Advisor	2015.7.2-2018.3.31
2	Ms. Naoko Ito	Project Coordinator	2015.7.2-2017.7.1
3	Ms. Miki Asatani	Project Coordinator	2017.6.20-2019.10.1
4	Mr. Toshinori Isogai	Chief Advisor	2018.3.14-2019.9.29

(2) Short-term Expert

PEME Project Team			
No.	Name	Designation	Period
1	Ms. Miki Asatani	Project Coordinator	2016.12.18-2017.4.14

ANNEX 1-2 List of dispatched Japanese Supervisors for Dissemination Seminars

Total number of dispatched Japanese Supervisors – 81

(1) List of dispatched Japanese Supervisors for Dissemination Seminars in 2016

Clinical Pathology			
1	Dr. Junya Fukuoka	Head/Professor, Department of Pathology, Nagasaki University Graduate School of Biomedical Sciences	2016.1.10-2016.1.15
2	Dr. Junya Fukuoka	Head/Professor, Department of Pathology, Nagasaki University Graduate School of Biomedical Sciences	2016.7.18-2016.7.22
3	Mr. Takashi Hori	Assistant Professor, Department of Diagnostic Pathology, Toyama University Hospital	2016.7.18-2016.7.22
4	Dr. Hiroki Karada	Clinical Fellow, Department of Pathology, Nagasaki University Graduate School of Biomedical Sciences	2016.7.18-2016.7.22
5	Mr. Ruben Groen	Cytology Analyst, Department of Pathology, Nagasaki University Hospital	2016.7.18-2016.7.22
Obstetrics and Gynecology			
6	Dr. Takayuki Enomoto	Professor, Department of Obstetrics and Gynecology, Niigata University	2016.5.1-2015.5.5

7	Dr. Koichi Takakuwa	Professor, Director, General Center for Perinatal, Maternal and Neonatal Medicine, Niigata University Hospital	2016.5.1-2015.5.5
8	Dr. Masayuki Yamaguchi	Associate Professor, Department of Obstetrics and Gynecology, Niigata University	2016.5.1-2015.5.5
9	Dr. Kazufumi Haino	Assistant Professor, Department of Obstetrics and Gynecology, Niigata University	2016.5.1-2015.5.5
Radiology			
10	Dr. Kazuto Kozaka	Associate Professor, Department of Radiology, Kanazawa University Graduate School of Medical Science	2016.5.22-2016.5.26
11	Dr. Kotaro Yoshida	Assistant Professor, Department of Radiology, Kanazawa University Graduate School of Medical Science	2016.5.22-2016.5.26
12	Dr. Kosuke Matsubara	Associate Professor, Technologist, Department of Quantum Medical Technology, Faculty of Health Sciences, Kanazawa University	2016.5.22-2016.5.26
Gastroenterology			
13	Dr. Harutoshi Sugiyama	Assistant Professor, Endoscopy Center, Chiba University Hospital	2016.8.3-2016.8.6
Emergency Care			
14	Dr. Yoshito Ujike	Emeritus Professor, Department of Emergency and Critical Care Medicine, Okayama University Graduate School of Medical Science, Dentistry and Pharmaceutical Sciences	2016.6.13-2016.6.18
15	Dr. Atsunori Nakao	Professor/Head, Department of Emergency and Critical Care Medicine, Okayama University Graduate School of Medical Science, Dentistry and Pharmaceutical Sciences	2016.6.12-2016.6.18
16	Dr. Tetsuya Yumoto	Assistant Professor, Department of Emergency and Critical Care Medicine, Okayama University Graduate School of Medical Science	2016.6.12-2016.6.18
17	Ms. Kumiko Hayashi	Clinical Engineer, Emergency Intensive Care Unit, Okayama University Hospital	2016.6.12-2016.6.18
Anesthesiology			
18	Dr. Tatsuo Yamamoto	Professor/Head, Department of Anesthesiology, Kumamoto University Graduate School of Medical Science	2016.5.29-2016.6.1
19	Dr. Katsuyuki Sagishima	Assistant Professor, Department of Intensive Care Medicine, Kumamoto University Hospital	2016.5.29-2016.6.1
20	Dr. Takahiro Nonaka	Research Associate, Department of Anesthesiology, Kumamoto University Hospital	2016.5.29-2016.6.1

(2) List of dispatched Japanese Supervisors for Dissemination Seminars in 2017

Clinical Pathology			
1	Dr. Junya Fukuoka	Head/Professor, Department of Pathology, Nagasaki University Graduate School of Biomedical Science	2017.5.30-2017.5.6
2	Dr. Daisuke Niino	Professor, Department of Pathology, Nagasaki University Graduate School of Biomedical Sciences	2017.5.30-2017.5.5
3	Dr. Yuko Akazawa	Assistant Professor, Department of Pathology, Nagasaki University Graduate School of Biomedical Sciences	2017.4.29-2017.5.2
4	Mr. Ruben Groen	Cytology Analyst, Department of Pathology, Nagasaki University Hospital	2017.4.29-2017.5.5
Obstetrics and Gynecology			
5	Dr. Takayuki Enomoto	Professor, Department of Obstetrics and Gynecology, Niigata University	2017.2.21-2017.2.24
6	Dr. Masayuki Yamaguchi	Associate Professor, Department of Obstetrics and Gynecology, Niigata University	2017.2.21-2017.2.26
7	Dr. Kazufumi Haino	Assistant Professor, Department of Obstetrics and Gynecology, Niigata University	2017.2.21-2017.2.26
8	Dr. Kentaro Sugino	Clinical Fellow, Maternal and Neonatal Medicine, Niigata University Hospital	2017.2.21-2017.2.26
9	Dr. Yutaro Mori	Clinical Fellow, Maternal and Neonatal Medicine, Niigata University Hospital	2017.2.21-2017.2.26
Radiology			
10	Dr. Kazuto Kozaka	Associate Professor, Department of Radiology, Kanazawa University Graduate School of Medical Science	2017.5.14-2017.5.17
11	Dr. Tadanori Takata	Chief Radiological Technologist, Department of Diagnostic Radiology, Kanazawa University Hospital	2017.5.14-2017.5.17
12	Mr. Hiroyuki Hayashi	Radiological Technologist, Department of Diagnostic Radiology, Kanazawa University Hospital	2017.5.14-2017.5.17
Gastroenterology			
13	Dr. Harutoshi Sugiyama	Assistant Professor, Endoscopy Center, Chiba University Hospital	2017.8.9-2017.8.12
14	Dr. Rintaro Mikata	Assistant Professor, Department of Gastroenterology, Chiba University Hospital	2017.8.9-2017.8.12
15	Dr. Hiroshi Ohyama	Assistant Professor, Department of Medical Oncology, Chiba University Hospital	2017.8.9-2017.8.12

Emergency Care			
16	Dr. Atsunori Nakao	Professor/Head, Department of Emergency and Critical Care Medicine, Okayama University Graduate School of Medical Science, Dentistry and Pharmaceutical Sciences	2017.6.18-2017.6.22
17	Dr. Taihei Yamada	Assistant Professor, Department of Emergency and Critical Care Medicine, Okayama University Hospital	2017.6.18-2017.6.22
18	Dr. Akemi Ando	Department of General Medicine, Okayama University Graduate School of Medical Science, Dentistry and Pharmaceutical Sciences	2017.6.18-2017.6.24
19	Mr. Takahiro Hirayama	Clinical Engineer, Department of Clinical Engineering, Okayama University Hospital	2017.6.18-2017.6.24
Anesthesiology			
20	Dr. Tatsuo Yamamoto	Professor/Head, Department of Anesthesiology, Kumamoto University Graduate School of Medical Science	2017.6.25-2017.6.29
21	Dr. Michiko Sugita	Associate Professor, Department of Anesthesiology, Kumamoto University Hospital	2017.6.25-2017.6.29
22	Dr. Maya Morinaga	Medical Staff, Department of Anesthesiology, Kumamoto University Hospital	2017.6.25-2017.6.29

(3) List of dispatched Japanese Supervisors for Dissemination Seminars in 2018

Clinical Pathology			
1	Dr. Junya Fukuoka	Head/Professor, Department of Pathology, Nagasaki University Graduate School of Biomedical Sciences	2018.2.9-2018.2.12
2	Dr. Han-Seung Yoon	Visiting Professor, Department of Pathology, Nagasaki University Graduate School of Biomedical Sciences	2018.2.8-2018.2.13
3	Dr. Kishio Kuroda	Assistant Professor, Department of Pathology, Nagasaki University Graduate School of Biomedical Sciences	2018.2.8-2018.2.13
Obstetrics and Gynecology			
4	Dr. Takayuki Enomoto	Professor, Department of Obstetrics and Gynecology, Niigata University	2018.5.21-2018.5.25
5	Dr. Masayuki Yamaguchi	Associate Professor, Department of Obstetrics and Gynecology, Niigata University	2018.5.21-2018.5.25
6	Dr. Kazufumi Haino	Assistant Professor, Department of Obstetrics and Gynecology, Niigata University	2018.5.21-2018.5.25

7	Dr. Mina Itsukaichi	Assistant Professor, Department of Obstetrics and Gynecology, Niigata University	2018.5.21-2018.5.25
8	Dr. Haruka Ueda	Clinical Fellow, Department of Obstetrics and Gynecology, Niigata University	2018.5.21-2018.5.25
Radiology			
9	Dr. Kazuto Kozaka	Associate Professor, Department of Radiology, Kanazawa University Graduate School of Medical Science	2018.5.6-2018.5.10
10	Dr. Satoshi Kobayashi	Professor, Dept. of Quantum Medical Technology, Kanazawa University Graduate School of Medical Sciences	2018.5.6-2018.5.10
11	Dr. Naoki Ohno	Assistant Professor, Faculty of Health Sciences, Institute of Medical, Pharmaceutical and Health Sciences, Kanazawa University	2018.5.6-2018.5.10
Gastroenterology			
12	Dr. Harutoshi Sugiyama	Assistant Professor, Endoscopy Center, Chiba University Hospital	2018.8.28-2018.9.1
13	Dr. Yotaro Iino	Assistant professor, Medical Oncology, Chiba University	2018.8.28-2018.9.1
Emergency Care			
14	Dr. Atsunori Nakao	Professor/Head, Department of Emergency and Critical Care Medicine, Okayama University Graduate School of Medical Science, Dentistry and Pharmaceutical Sciences	2018.10.2-2018.10.5
15	Dr. Yasuaki Yamakawa	Assistant professor, Department of Healthcare and Disaster medicine, Okayama University Graduate School of Medical Science, Dentistry and Pharmaceutical Sciences	2018.10.2-2018.10.6
16	Mr. Takahiro Hirayama	Clinical Engineer, Department of Clinical Engineering, Okayama University Hospital	2018.10.2-2018.10.6
Anesthesiology			
17	Dr. Tatsuo Yamamoto	Professor/Head, Department of Anesthesiology, Kumamoto University Graduate School of Medical Science	2018.6.24-2018.6.28
18	Dr. Michiko Sugita	Associate Professor, Department of Anesthesiology, Kumamoto University Hospital	2018.6.24-2018.6.28
19	Mr. Toshikazu Harada	Clinical Engineer, Kumamoto University Hospital	2018.6.24-2018.6.28

(4) List of dispatched Japanese Supervisors for Dissemination Seminars in 2019

Clinical Pathology			
1	Dr. Junya Fukuoka	Head/Professor, Department of Pathology, Nagasaki University Graduate School of Biomedical Sciences	2019.1.10-2019.1.14
2	Dr. Andrey Bychkov	Director of Digital Pathology, Department of Pathology Kameda Medical Center	2019.1.10-2019.1.14
3	Dr. Kishio Kuroda	Assistant Professor, Department of Pathology, Nagasaki University Graduate School of Biomedical Sciences	2019.1.10-2019.1.14
Obstetrics and Gynecology			
4	Dr. Takayuki Enomoto	Professor, Department of Obstetrics and Gynecology, Niigata University	2019.1.21-2019.1.25
5	Dr. Masayuki Yamaguchi	Associate Professor, Department of Obstetrics and Gynecology, Niigata University	2019.1.21-2019.1.25
6	Dr. Kazufumi Haino	Assistant Professor, Department of Obstetrics and Gynecology, Niigata University	2019.1.21-2019.1.25
7	Dr. Keiichi Tanaka	Emeritus Professor, Niigata University Agano City Hospital, Department of OBGY	2019.1.21-2019.1.25
8	Dr. Tomoyuki Sekizuka	Clinical Fellow, Department of Obstetrics and Gynecology, Niigata University	2019.1.21-2019.1.25
Radiology			
9	Dr. Kotaro Yoshida	Assistant Professor, Department of Radiology, Kanazawa University Graduate School of Medical Science	2019.5.19-2019.5.22
10	Dr. Hiroshi Kawashima	Faculty of Health Science, Institute of Medical, Pharmaceutical and Health Science, Kanazawa University	2019.5.19-2019.5.22
11	Ms. Haruna Yokoyama	Radiological Technologist, Department of Diagnostic Radiology, Kanazawa University Hospital	2019.5.19-2019.5.22
Gastroenterology			
12	Dr. Harutoshi Sugiyama	Assistant Professor at Endoscopy Center, CHIBA University Hospital	2019.7.21-2019.7.24
13	Dr. Izumi Ohno	Assistant Professor, Department of Gastroenterology, Graduate School of Medicine, Chiba University	2019.7.21-2019.7.24
14	Dr. Keisuke Koroki	Clinical Fellow, Chiba University Hospital	2019.7.21-2019.7.24
Emergency Care			
15	Dr. Atsunori Nakao	Professor/Head, Okayama University Graduate School of Medical Science	2019.5.26-2019.5.30
16	Dr. Hiromichi Naito	Associate Professor, Okayama University Hospital, Advanced Emergency and Critical Care Center	2019.5.26-2019.5.30

17	Dr. Takaaki Osako	Lecturer, Dept. of Emergency Healthcare and Disaster Medicine, Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Okayama University	2019.5.26-2019.5.30
Anesthesiology			
18	Dr. Tatsuo Yamamoto	Professor/Head, Department of Anesthesiology, Kumamoto University Graduate School of Medical Science	2019.6.2-2019.6.5
19	Dr. Michiko Sugita	Associate Professor, Department of Anesthesiology, Kumamoto University Hospital	2019.6.2-2019.6.5
20	Dr. Takahiro Nonaka	Medical staff, Anesthesiology Department, Kumamoto University Hospital	2019.6.2-2019.6.5

ANNEX 1-3 List of Dispatched Japanese Supervisors on Accreditation of Medical Education

Total number of Dispatched Japanese Supervisors – 4

(1) Exchange information on Integrated Education

1	Dr. Masahiro Tanabe	Professor Emeritus, Chiba University, and Chancellor, Chiba Prefectural University of Health Science	2016.5.15-2016.5.18
2	Dr. Hiroshi Shirasawa	Vice Dean and Professor, Graduate School of Medicine, Chiba University	2016.5.15-2016.5.18

(2) Accreditation of Medical Education follow-up semina

1	Dr. Shoichi Ito	Associate Professor, Office of Medial Education, Chiba University School of Medicine	2018.1.28-2018.2.2
2	Dr. Daniel Salcedo	Assistant Professor, Health Professional Development Center, Chiba University Hospital	2018.1.28-2018.2.2

ANNEX 1-4 List of Dispatched Japanese Supervisors for the Presentation of Ph.D. Dissertations

Total number of Dispatched Japanese Supervisors – 12

No.	Name	Designation	Period
1	Dr. Toshinari Takamura	Professor, Department of Endocrinology and Metabolism, Faculty of Medicine, Institute of Medical, Pharmaceutical and Health Sciences, Graduate School of Medical Science, Kanazawa University	2019.4.1-2019.4.4

2	Dr. Kazuaki Yoshioka	Associate Professor, Faculty of Medicine, Institute of Medical, Pharmaceutical and Health Sciences, Graduate School of Medical Science, Kanazawa University	2019.4.1-2019.4.4
3	Dr. Akira Hata	Professor, Department of Public Health, Graduate School of Medicine, Chiba University	2019.4.1-2019.4.4
4	Dr. Shuzo Matsushita	Professor & Chairman, Matsushita Project Laboratory, Center for AIDS Research, Kumamoto University	2019.4.1-2019.4.4
5	Dr. Yasuaki Shibata	Associate Professor, Department of Histology and Cell Biology, Nagasaki University School of Biomedical Sciences	2019.4.1-2019.4.4
6	Dr. Reiko Saito	Prof., Division of International Health (Public Health), Niigata University	2019.4.1-2019.4.4
7	Dr. Masahiro Nishibori	Professor, Department of Pharmacology, Division of Biophysiological Sciences, Okayama University Graduate School of Medicine, Dentistry & Pharmaceutical Sciences	2019.4.1-2019.4.4
8	Dr. Atsunori Kamiya	Professor, Department of Cellular Physiology, Division of Biophysiological Sciences, Okayama University Graduate School of Medicine, Dentistry & Pharmaceutical Sciences	2019.4.1-2019.4.4
9	Dr. Fanyan Wei	Associate Professor, Department of molecular Physiology, Faculty of Life sciences, Kumamoto University	2019.4.1-2019.4.3
10	Dr. Yoichi Ajioka	Professor, Division of Molecular and Diagnostic pathology, Niigata University Graduate School of Medical and Dental Sciences	2019.4.1-2019.4.4
11	Dr. Junya Fukuoka	Professor, Dept. of Pathology, Nagasaki University	2019.4.1-2019.4.3
12	Dr. Hiroshi Shirasawa	Dean, Professor, National University Corporation Chiba University Graduate School of Medical and Pharmaceutical Science	2019.4.1-2019.4.3

ANNEX 1-5 List of Dissemination Seminars

Total number of seminars - 35

Total number of participants - 1,904

(1) Dissemination Seminar for FY2015 Ex-trainees (conducted in 2016)

Field	Japanese University (No. of supervisors)	Date (in 2017)	Venue	Participants	Total 559
(Diagnostic Imaging)					Sub 270
Radiology	Kanazawa University (3)	23 May 24 May	YGH MGY	40 Doctors + 30 Technologists 51 Doctors + 30 Technologists	

OBGY	Niigata University (4)	3 May	CWH	27 Doctors	
Clinical Pathology	Nagasaki University (4)	11 Jan 20 July	JICA UM1	18 Doctors 41 Doctors + 16 Technologists	
Gastroenterology	Chiba University (1)	4 Aug	YGH	17 Doctors	
(Emergency Medicine)					Sub 289
Emergency Care	Okayama University (4)	14 June 16 June	UM1 UMM	117 Doctors 120 Doctors	
Anesthesiology	Kumamoto University (3)	31 May	YGH	52 Doctors	

(2) Dissemination Seminar for FY2016 Ex-trainees (conducted in 2017)

Field	Japanese University (No. of supervisors)	Date (in 2017)	Venue	Participants	Total 483
(Diagnostic Imaging)					Sub 293
Radiology	Kanazawa University (3)	16 May	UM2	55 Doctors + 50 Technologists	
OBGY	Niigata University (5)	22-23 Feb	UM2	43 Doctors	
Clinical Pathology	Nagasaki University (4)	2 May 4 May	UMMG UM2	27 Doctors + 3 Technologists 90 Doctors + 5 Technologists	
Gastroenterology	Chiba University (3)	11 Aug	YGH	20 Doctors	
(Emergency Medicine)					Sub 190
Emergency Care	Okayama University (4)	20 June 21 June	UMM UM1	40 Doctors 50 Doctors	
Anesthesiology	Kumamoto University (3)	27 June 28 June	UMM UM2	30 Doctors 70 Doctors	

(3) Dissemination Seminar for FY2017 Ex-trainees (conducted in 2018)

Field	Japanese University (No. of supervisors)	Date (in 2018)	Venue	Participants	Total 582
(Diagnostic Imaging)					Sub 403
Radiology	Kanazawa University (3)	7 May 8 May	YGH UMM	78 Doctors + Technologists 95 Doctors + Technologists	
OBGY	Niigata University (5)	23 May 24 May	MDY YGN	28 42	
Clinical Pathology	Nagasaki University (3)	9 Feb. 11 Feb.	UM2 UMM	75 Doctors + Technologists 56 Doctors + Technologists	
Gastroenterology	Chiba University (2)	30 Aug.	YGH	29 Doctors + Nurses	
(Emergency Medicine)					Sub 179
Emergency Care	Okayama University (3)	3 Oct. 4 Oct.	UMM UM1	51 45	

Anesthesiology	Kumamoto University (3)	26 Jun. 27 Jun.	UMM UM2	38 45	

(4) Dissemination Seminar for FY2018 Ex-trainees (conducted in 2019)

Field	Japanese University (No. of supervisors)	Date (in 2019)	Venue	Participants	Total 280
(Diagnostic Imaging)					Sub 192
Radiology	Kanazawa University (3)	20 May	UM2	83 Doctors + Technologists	
OBGY	Niigata University (5)	23 Jan	UMMG	25	
Clinical Pathology	Nagasaki University (3)	11 Jan	UM1	62	
Gastroenterology	Chiba University (2)	July	UM2	22 Doctors + Nurses	
(Emergency Medicine)					Sub 88
Emergency Care	Okayama University (3)	28 May	UM1	41	
Anesthesiology	Kumamoto University (3)	3 June	UM2	47	

ANNEX 1-6 List of Trainees

Total number of Long-term Trainees on Basic Medicine – 12

Total number of Short-term Trainees on Clinical Medicine - 55

(1) Long-term Trainees on Basic Medicine (as of Mar. 2015)

No.	Name	Title	Designation
1	Dr. Nandar Tun	Assistant Lecturer	Dept. of Anatomy, UM2
2	Dr. Kyaw Thiha	Lecturer	Dept. of Biochemistry, UM Magway
3	Dr. Swe Mar Oo	Assistant Lecturer	Dept. of Biochemistry, UM2
4	Dr. Hein Min Latt	Assistant Lecturer	Dept. of Physiology, UM Mandalay
5	Dr. Khin Thuzar Aung	Asso. Professor	Dept. of Physiology, UM2
6	Dr. Ei Ei Mon	Lecturer	Dept. of Pharmacology, UM2
7	Dr. Soe Soe Htwe	Lecturer	Dept. of Pharmacology, UM2
8	Dr. Aye Pa Pa Tun	Assistant Lecturer	Dept. of Pathology, UM Mandalay
9	Dr. Aung Myo Hlaing	Assistant Lecturer	Dept. of Pathology, UM2
10	Dr. Khin Thu Zar Htwe	Lecturer	Dept. of Microbiology, UM Mandalay
11	Dr. Win Thida	Lecturer/Head	Dept. of Microbiology, University of Nursing, Yangon
12	Dr. Nan Nwe Win	Lecturer	Dept. of Microbiology, UM1

(2) Short-term Trainees on Clinical Medicine in 2015 (as of Apr. 2015)

No.	Name	Title	Designation
1	Dr. Tin Nwe Oo	Lecturer	Dept. of Pathology, UM1
2	Dr. Su Nandar Myint	Assistant Lecturer	Dept. of Pathology, UM1
3	Dr. Win Win Aye	Lecturer	Dept. of Obstetrics and Gynecology, UM1
4	Dr. Wint Lay Naing	Lecturer	Dept. of Obstetrics and Gynecology, UM1
5	Dr. Yamin Yupar Tun	Radiologist	Yangon Children Hospital
6	Daw Myat Thinzar Win	Radiological technologist	Yangon General Hospital
7	Dr. Myint Myint Kyi	Assistant Lecturer	Dept. of Radiology, UM Mandalay
8	Daw Theingi Chaw	Radiological technologist	West General Hospital
9	Dr. Aung Myo Naing	Specialist	Dept. Emergency, Yangon General Hospital
10	Dr. Nyein Chan	Specialist	Dept. of Emergency, Mandalay General Hospital
11	Dr. Khin Kantkaw	Assistant Lecturer	Dept. of Anesthesiology, UM1
12	Dr. Lun Naing	Consultant	Dept. of Anesthesiology, New Yangon General Hospital
13	Dr. Swe Mon Mya	Consultant	Gastroenterology Dept., Yangon General Hospital
14	Dr. Sandar Win	Fellow	Gastroenterology fellow, UM1

(3) Short-term Trainees on Clinical Medicine in 2016 (as of Apr. 2016)

No.	Name	Title	Designation
1	Dr. Moe Thida Aye	Asso. Professor	Dept. of Pathology, UM2
2	Dr. Su Han Htet	Lecturer	Dept. of Pathology, UM Magway
3	Dr. Soe Soe	Lecturer	Dept. of Obstetrics and Gynecology, UM2
4	Dr. Cherry Khaing	Lecturer	Dept. of Obstetrics and Gynecology, UM Mandalay
5	Dr. Thet Lin Aung	Assistant Lecture	Dept. of Radiology, UM2
6	Daw Thazin Aung	Radiological technologist	Yangon General Hospital
7	Dr. Khaing Khaing Win	Assistant Lecturer	Dept. of Radiology, UM2
8	Daw Tin Thuzar Win	Radiological technologist	Department of Medical Imagine Technology, UMT Yangon
9	Dr. Than Latt Aung	Specialist	Dept. of Emergency, UM1
10	Dr. Tin Kyaw	Specialist	Dept. of Emergency, UM Mandalay

11	Dr. Yin Myat Swe	Assistant Lecturer	Dept. of Anesthesiology, UM2
12	Dr. Zaw Myat Tun	Lecturer	Dept. of Anesthesiology, UM Mandalay
13	Dr. Kyaw Lun Aung Hmu	Specialist	Dept. of Gastroenterology, UM Mandalay
14	Dr. Wai Phyo Aung	Specialist	Dept. of Gastroenterology, UM2

(4) Short-term Trainees on Clinical Medicine in 2017 (as of Apr. 2017)

No.	Name	Title	Designation
1	Dr. Aye Aye Mon	Lecturer	Dept. of Pathology, UM Mandalay
2	Dr. Thant Thant Zaw	Lecturer	Dept. of Pathology, UM2
3	Dr. Thinn Wah Wah Khin	Lecturer	Dept. of Obstetrics and Gynecology, UM Mandalay
4	Dr. Wah Wah Lin Maung	Consultant	Dept. of Radiology, Yangon General Hospital
5	Daw Thandar Htoo	Radiological technologist	Magway General Hospital
6	Dr. Tin Thandar Myo	Asso. Professor	Dept. of Radiology, UM Mandalay
7	Daw Yin Nway Oo	Assistant Lecturer, Radiological technologist	Department of Medical Imagine Technology, UMT Mandalay
8	Dr. Ne Naing Tun	Consultant	Dept. of Emergency, Mandalay General Hospital
9	Dr. Cho Thazin Hpu	Medical Officer	Dept. of Emergency, Yangon General Hospital
10	Dr. Thu Zar Swe	Assistant Lecturer	Dept. of Anesthesiology, UM Mandalay
11	Dr. Thiri Tun	Medical Officer	Dept. of Anesthesiology, North Okkalapa General Hospital
12	Dr. Naing Lin	Lecturer	Dept. of Gastroenterology, UM Mandalay
13	Dr. Mya Thet Nwe	Consultant	Dept. of Gastroenterology, Yangon General Hospital

(5) Short-term Trainees on Clinical Medicine in 2018 (as of Apr. 2018)

No.	Name	Title	Designation
1	Dr. Zun Pwint Oo	Assistant Lecturer	Dept. of Pathology, UM Mandalay
2	Dr. Nyi Nyi Wai Yan Zaw	Assistant Lecturer	Dept. of Pathology, UM Magway
3	Dr. Aye Nyein San	Lecturer	Dept. of Obstetrics and Gynecology, UM2
4	Dr. Nwe Ni Win	Assistant Lecturer	Dept. of Obstetrics and Gynecology, UM Magway
5	Dr. Thet Htar Lwin	Assistant Lecturer	Dept. of Radiology, UM2
6	Daw K Khine Yu	Radiological technologist	North Okkalapa General Hospital
7	Dr. May Thin Zi Soe	Assistant Lecturer	Dept. of Radiology, UM Magway

8	Daw Htar Htar Zaw	Radiological technologist	Mandalay General Hospital
9	Dr. Chaw Su Su Khaing	Medical Officer	Dept. of Emergency, Mandalay General Hospital
10	Dr. Thazin	Assistant Surgeon	Dept. of Emergency, North Okkalapa General Hospital
11	Dr. Soe Sandar Htun	Medical Officer	Dept. of Anesthesiology, Yangon General Hospital
12	Dr. Thet Thet Aung	Lecturer	Dept. of Anesthesiology, UM2
13	Dr. Min Htun	Specialist	Dept. of Gastroenterology, UM Mandalay
14	Dr. Thet Mar Win	Lecturer	Dept. of Gastroenterology, UM2

ANNEX 1-7 List of Professors and Heads

(1) Professor and Head on Basic Medicine (as of April 2019)

No.	Name	Title	Designation
1	Dr. Nyo Nyo Myint	Professor/Head	Dept. of Anatomy, UM2
2	Dr. Myat Mon Khine	Professor/Head	Dept. of Biochemistry, UM Magway
3	Dr. May Pyone Kyaw	Professor/Head	Dept. of Biochemistry, UM2
4	Dr. Nwe Nwe Yee	Professor/Head	Dept. of Physiology, UM Mandalay
5	Dr. Ohnmar Myint Thein	Professor/Head	Dept. of Physiology, UM2
6	Dr. Shin Hnaung Lwin	Professor/Head	Dept. of Pharmacology, UM2
7	Dr. San San Hlaing	Professor/Head	Dept. of Pathology, UM Mandalay
8	Dr. Khin Thida Aung	Professor/Head	Dept. of Pathology, UM2
9	Dr. Cho Cho Oo	Professor/Head	Dept. of Microbiology, UM Mandalay
10	Dr. Wah Win Htike	Professor/Head	Dept. of Microbiology, UM1

(2) Professor and Head on Clinical Medicine (as of April 2019)

No.	Name	Title	Designation
1	Dr. Myint Myint Nyein	Professor/Head	Dept. of Pathology, UM1
2	Dr. Khin Thida Aung	Professor/Head	Dept. of Pathology, UM2
3	Dr. San San Hlaing	Professor/Head	Dept. of Pathology, UM Mandalay
4	Dr. Nyo Me May Thyn	Professor/Head	Dept. of Pathology, UM Magway
5	Dr. San San Myint	Professor/Head	Dept. of Obstetrics and Gynecology, UM1
6	Dr. Saw Kler Ku	Professor/Head	Dept. of Obstetrics and Gynecology, UM2

7	Dr. Nwe Mar Tun	Professor/Head	Dept. of Obstetrics and Gynecology, UM Mandalay
8	Dr. Khin May Thinn	Professor/Head	Dept. of Obstetrics and Gynecology, UM Magway
9	Dr. Khin Lay Su	Professor/Head	Dept. of Radiology, UM1
10	Dr. Than Than Nwe	Professor/Head	Dept. of Radiology, UM2
11	Dr. Aung Cho Tun	Professor/Head	Dept. of Radiology, UM Mandalay
12	Dr. Khin Mar Shein	Professor/Head	Dept. of Radiology, UM Magway
13	Dr. Thein Myint	Professor/Head	Dept. of Gastroenterology, UM1
14	Dr. Than Than Aye	Professor/Head	Dept. of Gastroenterology, UM2
15	Dr. Nwe Ni	Professor/Head	Dept. of Gastroenterology, UM Mandalay
16	Dr. Zaw Wai Soe	Rector, Professor/Head	Dept. of Emergency, UM1
17	Dr. Maw Maw Oo	Professor/Head	Dept. of Emergency, UM1
18	Dr. Khine Shwe Wah	Professor/Head	Dept. of Emergency, UM2
19	Dr. Aye Thiri Naing	Professor/Head	Dept. of Emergency, UM Mandalay
20	Dr. Mu Mu Naing	Professor/Head	Dept. of Anesthesiology, UM1
21	Dr. Aung Kyi	Professor/Head	Dept. of Anesthesiology, UM2
22	Dr. Yi Sanda Thein	Professor/Head	Dept. of Anesthesiology, UM Mandalay
23	Dr. Cho Cho Lwin	Professor/Head	Dept. of Anesthesiology, UM Magway

ANNEX 1-8 List of Rectors and Pro-rectors (as of April 2019)

No.	Name	Title	Designation
1	Prof. Dr. Zaw Wai Soe	Rector	University of Medicine (1)
2	Prof. Dr. Theingi Myint	Pro-rector	University of Medicine (1)
3	Prof. Dr. Aye Tun	Rector	University of Medicine (2)
4	Prof. Dr. Aye Thida	Pro-rector	University of Medicine (2)
5	Prof. Dr. Khin Maung Lwin	Rector	University of Medicine Mandalay
6	Prof. Dr. Aye Aye Chit	Pro-rector	University of Medicine Mandalay
7	Prof. Dr. Htay Hla	Rector	University of Medicine Magway
8	Prof. Dr. Hla Win Myint	Pro-rector	University of Medicine Magway

ANNEX 1-9 List of Participants for Study Tour on Accreditation of Medical Education

(2016.10.10-2016.10.14)

No.	Name	Title	Designation
1	Prof. Dr. Zaw Wai Soe	Rector	University of Medicine (1)
2	Prof. Dr. Aye Aung	Rector	University of Medicine (2)
3	Prof. Dr. Khin Maung Lwin	Rector	University of Medicine Mandalay
4	Prof. Dr. Aye Tun	Rector	University of Medicine Magway
5	Prof. Dr. Myat Thandar	Rector	University of Nursing, Yangon
6	Dr. Tin Tun	Deputy Director General	Academic Affairs, DHPRDM
7	Prof. Dr. Khin Maung Aye	Vice President	Myanmar Medical Council

ANNEX 1-10 List of Equipment Provided

(1) Digital Slide Scanner

Name of Item		Model No./Brand	Qty	Sub Total Price (USD)	Purchased Year	Hand-Over Date	Condition
1	EasyScan Pro	Motic	1	33,000	2018	September 2019	Good
2	Monitor	Dell U2412M	1		2018	ditto	Good
3	Computer Host	Dell 7040MT	1		2018	ditto	Good

(2) Emergency Equipment

Name of Item		Model No./Brand	Qty	Sub Total Price (USD)	Purchased Year	Hand-Over Date	Condition
1	AED Trainer	TRN-500-1, HeartSine	4	3,200	2019	September 2019	Good
2	Advanced Trauma Simulator	GD/J110, General Doctor	1	1,487	2019	ditto	Good
3	Advanced Trauma Limb	GD/J110-4, General Doctor	1	425	2019	ditto	Good
4	Cantral Venous Catheterization	090019, Laerdal IV Torso Laerdal Medical	1	1,715	2019	ditto	Good
5	Child Mmanikin	1811-00150, Resusci Junior QCPR / Leardal Medical	1	4,905	2019	ditto	Good
			Total	11,732			

(3) Office Material

Name of Item		Model No./Brand	Qty	Sub Total Price (USD)	Purchased Year	Hand-Over Date	Condition
1	Color Printer	Fuji Xerox DPCM215 FW	1	528	2015	September 2019	Good
2	Desktop PC	Lenovo C460 (i3)	3	599	2015	ditto	Good
3	Copy Machine with Stand	Sharp AR-5623D with Pedestal AR-16D	1	1,680	2015	ditto	Good
4	Laptop PC	Lenovo IdeaPad S410P (i7)	2	933	2015	ditto	Good
5	Projector	NEC NP-V311X	1	590	2017	ditto	Good
6	Camera	Canon Powershot G1X	1	550	2018	ditto	Good
			Total	4,880			

ANNEX 1-11 Amount of Input by the Japanese Side

JICA Contribution on Expenditure (JPY) (as of 27 May 2019)

JFY2014 4/2015-3/2015	JFY2015 4/2015-3/2016	JFY2016 4/2016-3/2017	JFY2017 4/2017-3/2018	JFY2018 4/2018-3/2019	JFY2019 4/2019-9/2019
3,745,000	99,425,000	99,120,000	94,958,000	95,561000	37,400,000

Total Expenditure (JPY) – 430,209,000

ANNEX 1-12 List of Published Ph.D. Disseminations

No.	Name	Title of dissertation	Journal name
1	Dr. Nandar Tun	Histone deacetylase inhibitors suppress transdifferentiation of gonadotrophs to prolactin cells and proliferation of prolactin cells induced by diethylstilbestrol in male mouse pituitary	Histochemistry and Cell Biology
2	Dr. Kyaw Thiha	Investigation of Novel Variations of *ORAI1* Gene and their Association with Kawasaki Disease	Journal of Human Genetics, https://doi.org/10.1038/s10038-019-0588-2
3	Dr. Swe Mar Oo	Dept. of Biochemistry, UM2 Serum selenoprotein P, but not selenium, predicts future hyperglycemia in a general Japanese population	Scientific Reports Journal, Volume 8, Issue 1, article number 16727
4	Dr. Hein Min Latt	Oxytocin Inhibits Corticosterone-induced Apoptosis in Primary Hippocampal Neurons	Neuroscience, 379:383–389
5	Dr. Khin Thuzar Aung	The class II phosphoinositide 3-kinases PI3K-C2α and PI3K-C2β differentially regulate clathrin-dependent pinocytosis in human vascular endothelial cells	The Journal of Physiological Sciences, Volume 69, Issue 2, pp 263-280

6	Dr. Ei Ei Mon	Regulation of mitochondrial iron homeostasis by sideroflexin 2	The journal of Physiological Sciences Volume March 2019, Vol 69, Issue 2,pp 359-373
7	Dr. Soe Soe Htwe	Inter-alpha inhibitor proteins maintain neutrophils in a resting state by regulating shape and reducing ROS production	Blood Advances, Volume 2, Number 15
8	Dr. Aye Pa Pa Tun	Clinicopathological and Immunohistochemical Characteristics of Small Intestinal Adenocarcinoma	Niigata Medical Journal, 2019
9	Dr. Aung Myo Hlaing	Expression of phosphatase and tensin homolog and programmed cell death ligand 1 in adenosquamous carcinoma of the lung	Biochemical and Biophysical Research Communications (Elsevier), Volume 503, Issue 4
10	Dr. Khin Thu Zar Htwe	Phylogeographic analysis of human influenza A and B viruses in Myanmar, 2010–2015	PLoS ONE, 14(1): e0210550
11	Dr. Win Thida	The role of conventional antibodies targeting the CD4 binding site and CD4-induced epitopes in the control of HIV-1 CRF01_AE viruses	Biochemical and Biophysical Research Communications, Volume 508, Issue 1 DOI - 10.1016/j.bbrc.2018.11.063
12	Dr. Nan Nwe Win	Discrepancy between hepatitis C virus genotypes and NS4-based serotypes: Association with their subgenomic sequences	International Journal of Molecular Sciences, Vol.18, No.1

ANNEX 1-13 List of Research Titles (as of 1 September 2018)

No.	Name	Designation	Research title
1	Dr. Nandar Tun	Dept. of Anatomy, UM2	Involvement of H3K9ac upon proliferative activity and apoptotic of pancreatic beta cells in human foetal and neonatal autopsy cases
2	Dr. Kyaw Thiha	Dept. of Biochemistry, UM Magway	Endothelial Nitric Oxide Synthase Gene Polymorphisms and the Risk of Hypertension in Magway Region
3	Dr. Swe Mar Oo	Dept. of Biochemistry, UM2	Effect of regular exercise on peripheral blood mitochondrial DNA copy number and its association with plasma selenoprotein P level in apparently healthy young adults in Myanmar
4	Dr. Hein Min Latt	Dept. of Physiology, UM Mandalay	The effects of Mindfulness Practice on Salivary Markers of Stress and Inflammation and Salivary Oxytocin in Short-Term and Long-Term Mediators
5	Dr. Khin Thuzar Aung	Dept. of Physiology, UM2	Maternal plasma level of hypoxic, antiangiogenic and angiogenic factors and neonatal outcomes in preeclampsia
6	Dr. Ei Ei Mon	Dept. of Pharmacology, UM2	The association of ferritin and hepcidine in type 2 diabetes patients

7	Dr. Soe Soe Htwe	Dept. of Pharmacology, UM2	Antithrombin III (AT III) attenuates formyl-methionyl-leucyl-phenylalanine (fMLP)-induced neutrophil activation
8	Dr. Aye Pa Pa Tun	Dept. of Pathology, UM Mandalay	Mismatch repair (MMR) protein defects and their clinicopathological characteristics in endometrial carcinoma
9	Dr. Aung Myo Hlaing	Dept. of Pathology, UM2	Morphological evaluation of tumor and Tumor-Infiltrating Lymphocytes (TILs) in breast cancer, uterine cervical cancer, ovarian cancer and endometrial cancer based on Ultrahigh-density pile-up array method
10	Dr. Khin Thu Zar Htwe	Dept. of Microbiology, UM Mandalay	Epidemiology and Molecular analysis of Human Respiratory Syncytial Virus in Mandalay, Myanmar, 2019
11	Dr. Win Thida	Dept. of Microbiology, University of Nursing,Yangon	The prevalence of nasal and hand carriage of Staphylococcus aureus among nursing students at University of Nursing, Yangon
12	Dr. Nan Nwe Win	Dept. of Microbiology, UM1	Seroprevalence of hepatitis A virus (HAV) and hepatitis E virus (HEV) in the patients presenting with acute hepatitis in Myanmar

ANNEX 1-14 List of Short-term Trainees (transferred history)

	Field and Japanese University	FY2015 Trainees	FY2016 Trainees	FY2017 Trainees	FY2018 Trainees
1	Clinical Pathology Nagasaki University	Dr. Tin Nwe Oo	Dr. Moe Thida Aye	Dr. Aye Aye Mon	Dr. Zun Pwint Oo
		UM1→Resign	UM2	UM Mandalay → UMMG	UM Mandalay
2		Dr. Su Nandar Myint	Dr. Su Han Htet	Dr. Thant Thant Zaw	Dr. Nyi Nyi Wai Yan Zaw
		UM1	UM Magway → UMTaungyi	UM2 → University of Dental Medicine	UMMG
3	Obstetrics & Gynecology Niigata University	Dr. Win Win Aye	Dr. Soe Soe	Dr. Thinn Wah Wah Khin	Dr. Aye Nyein San
		UM1→Resign	UM2 → UMMG	UMM	UM2
4		Dr. Wint Lay Naing	Dr. Cherry Khaing		Dr. Nwe Ni Win
		UM1, Central Wmen's Hospital	UM Mandalay		UMMG

5	Radiology Kanazawa University	Dr. Yamin Yupar Tun	Dr. Thet Lin Aung	Dr. Wah Wah Lin Maung	Dr. Thet Htar Lwin
		UM1, Yangon Children Hospital	UM2→UMMagway	YGH	UM2
6		Daw Myat Thinzar Win	Daw Thazin Aung	Daw Thandar Htoo	Daw K Khine Yu
		YGH→Resign	YGH	Magway General Hospital	North Okkalapa GH
7		Dr. Myint Myint Kyi	Dr. Khaing Khaing Win	Dr. Tin Thandar Myo	Dr. May Thin Zi Soe
		UM Mandalay	UM Magway → UM2	UM Mandalay	UMMG
8		Daw Theingi Chaw	Daw Tin Thuzar Win	Daw Yin Nway Oo	Daw Htar Htar Zaw
		West Yangon Hospital /YGH	UMT-Yangon	UMT-Mandalay→ Resign	Mandalay General Hospital
9	Emergency Okayama University	Dr. Aung Myo Naing	Dr. Than Latt Aung	Dr. Ne Naing Tun	Dr. Chaw Su Su Khaing
		UM1	UM1 →1000 Bedded Hospital NPT	Mandalay General Hospital	Mandalay General Hospital
10		Dr. Nyein Chan	Dr. Tin Kyaw	Dr. Cho Thazin Hpu	Dr. Thazin
		UM Mandalay	UM Mandalay	YGH	North Okkalapa GH
11	Anesthesiology Kumamoto University	Dr. Khin Kantkaw	Dr. Yin Myat Swe	Dr. Thu Zar Swe	Dr. Soe Sandar Htun
		UM1	UM2	UM Mandalay	500 Specialty Hospital → Hakha General Hospital
12		Dr. Lun Naing	Dr. Zaw Myat Tun	Dr. Thiri Tun	Dr. Thet Thet Aung
		NYGH	UM Mandalay	North Okkalapa GH	UM2
13	Gastroenterology Chiba University	Dr. Swe Mon Mya	Dr. Kyaw Lun Aung Hmu	Dr. Naing Lin	Dr. Min Htun (male)
		UM1	UM Mandalay	UM Mandalay	UM Mandalay
14		Dr. Sandar Win	Dr. Wai Phyo Aung	Dr. Mya Thet Nwe	Dr. Thet Mar Win
		UM1	UM2→Resign	YGH	UM2

ANNEX 2: List of Products Produced by the Project

2-1 Contents of Dissemination Seminar Presentation DVD

2-2 Contents of the Presentation of Ph. D. Dissertations Hand-out Book (April 2, 2019)

ANNEX 2: List of Products Produced by the Project

2-1 Contents of Dissemination Seminar Presentation DVD

DVDs which contain the presentations by the Clinical Medicine ex-trainees in the 6 fields, Pathology, Obstetrics & Gynecology, Radiology, Emergency, Anesthesiology and Gastroenterology, in FY2015 and FY2016 as well as the ones by some of Japanese supervisors.

(designation is at the time of training departure)

1 Clinical Pathology – Nagasaki University

Year	Name	Designation	Presentation Title
FY2015	Dr. Su Nandar Myint	Assistant Lecturer, Pathology Dept, UM1 for Breast Pathology, Yangon	Breast pathology
	Dr. Junya FUKUOKA	Professor, Nagasaki University Graduate School of Biomedical Sciences Nagasaki Educational and Diagnostic Center of Pathology	Introduction of Digital Pathology for practice
	Dr. Takashi HORI	Assistant Professor, Department of Diagnostic pathology, Toyama University Hospital	Bases of Histopathological Techniques and Procedure
	Mr. Ruben Groen	Candidate for Master of Science Nagasaki University - School of Tropical Medicine and Global Health	Introduction to Digital Cytology
FY2016	Dr. Moe Thida Aye	Associate Professor, Department of Clinical Pathology University of Medicine (2), Yangon	Thyroid Gland Pathology
	Dr. Su Han Htet	Lecturer, Department of Clinical Pathology University of Magway	Experience on Training of Clinical Pathology in Nagasaki University Hospital
	Mr. Ruben GROEN	Cytology Analyst, Department of Pathology, Nagasaki University Hospital	Cytological sample processing techniques
FY2017	Dr. Aye Aye Mon	Lecturer, Department of Pathology, UM Mandalay	Dissemination Seminar on Short Term Training on clinical Pathology In FY 2017
	Dr. Thant Thant Zaw	Lecturer, Department of Pathology, UM2	2017 Short Term Training in Nagasaki University Hospital
	Dr. Han-Seung YOON	Visiting Professor, Department of Pathology, Nagasaki University Graduate School of Biomedical Sciences	- Cut-up and inking breast specimens - Key points in Breast Pathology Diagnosis
	Dr. Kishio KURODA	Assistant Professor, Department of Pathology, Nagasaki University Graduate School of Biomedical Sciences	Tips of pathological findings for gastrointestinal ESD.
	Dr. Junya FUKUOKA	Professor, Nagasaki University Graduate School of Biomedical Sciences Nagasaki Educational and Diagnostic Center of Pathology	Pathology of the lung - How to approach to the case? – with web-communication session
FY2018	Dr. Zun Pwint Oo	Assistant Lecturer, Department of Pathology, UMMandalay	Short-term training in clinical pathology (lung pathology) at Nagasaki university Hospital for PEME, JICA

	Dr. Nyi Nyi Wai Yan Zaw	Assistant Lecturer, Department of Pathology, UMMagway	Short-term Training on Lung Pathology at Nagasaki Hospital
	Dr. Andrey BYCHKOV	Director of Digital Pathology, Department of Pathology, Kameda Medical Center	Reporting thyroid surgicals, A checklist for Pathologists
	Dr. Kishio KURODA	Assistant Professor, Department of Pathology, Nagasaki University Graduate School of Biomedical Sciences	Introduction of Digital Pathology
	Dr. Junya FUKUOKA	Professor, Nagasaki University Graduate School of Biomedical Sciences Nagasaki Educational and Diagnostic Center of Pathology	Pulmonary Pathology - basic and beyond -

2 Obstetrics & Gynecology – Niigata University

Year	Name	Designation	Presentation Title
FY2015	Dr. Win Win Aye	Lecturer, Dept. of Obstetrics and Gynecology, UM1, Central Women's Hospital, Yangon	Basic Obstetrics Ultrasound
	Dr. Wint Lay Naing	Lecturer, Dept. of Obstetrics and Gynecology, UM1, Central Women's Hospital, Yangon	Assessment of Fetal Growth, Liquor Volume and Placenta
FY2016	Dr. Soe Soe	Lecturer Department of Obstetrics & Gynecology, University of Medicine (2) Yangon	Diagnosis of Gynecological Disorder by Ultrasound
	Dr. Cherry Khaing	Lecturer, Department of Obstetrics & Gynecology, University of Medicine Mandalay	Assessment of Fetal Well-Being Using Ultrasound
	Dr. Kazufumi HAINO	Associate Professor, Department of OBGY, Niigata University	Detection of fetal anomalies and Doppler study
	Dr. Masayuki YAMAGUCHI	Associate Professor, Department of OBGY, Niigata University	Detection of fetal anomalies and Doppler Study -the section for normal findings-
FY2017	Dr. Thinn Wah Wah Khin	Lecturer, Dept. of Obstetrics and Gynecology, UM Mandalay	Ultrasound in Female Infertility
	Dr. Mina ITSUKAICHI	Assistant Professor, Department of OBGY, Niigata University	Maternal and Pregnancy-Related Mortality in Japan
	Dr. Kazufumi HAINO	Associate Professor, Department of OBGY, Niigata University	Ultrasound evaluation of fetal abnormalities and doppler study
	Dr. Masayuki YAMAGUCHI	Associate Professor, Department of OBGY, Niigata University	Normal fetal findings in prenatal ultrasound scanning
	Dr. Takayuki ENOMOTO	Professor, Department of Obstetrics and Gynecology (OBGY), Niigata University	Management of Malignant lesions of The uterine Cervix
FY2018	Dr. Aye Nyein San	Lecturer, Dept. of Obstetrics and Gynecology, UM2	2nd Trimester Anomaly Scan
	Dr. Nwe Ni Win	Assistant Lecturer, Dept. of Obstetrics and Gynecology, UM Magway	FIRST TRIMESTER SCREENING
	Dr. Kenichi TANAKA	Emeritus Professor, Department of OBGY, Niigata University	Preventing mother-to-child transmission of HIV in Japan
	Dr. Kazufumi HAINO	Associate Professor, Department of OBGY, Niigata University	Ultrasound evaluation of fetal abnormalities and Doppler study

	Dr. Masayuki YAMAGUCHI	Associate Professor, Department of OBGY, Niigata University	Normal fetal findings in prenatal ultrasound scanning
	Dr. Takayuki ENOMOTO	Professor, Department of Obstetrics and Gynecology (OBGY), Niigata University	Management of Malignant lesions of The uterine Cervix During Pregnancy

3 Radiology – Kanazawa University

Year	Name	Designation	Presentation Title
FY2015	Dr. Yamin Yupar Tun	Consultant Radiologist, Yangon Children Hospital, Yangon	Imaging in Common Focal Hepatic Lesions
	Daw Myat Thinzar Win	Technologist Yangon General Hospital, Yangon	CT & MRI
	Dr. Myint Myint Kyi	Assistant Lecturer, Dept. of Radiology, University of Medicine, Mandalay *as of Jan. 2016	Multistep Carcinogenesis of Hepatocellular Carcinoma
	Daw Theingi Chaw	Technologist Radiology Dept,, West General Hospital, Yangon	CT & MRI
	Dr. Kosuke Matsubara	Associate Professor, Technologist, Department of Quantum Medical Technology, Faculty of Health Sciences, Kanazawa University	CT: Dose of Radiation (Appropriate Measurement)
FY2016	Dr. Thet Lin Aung	Assistant Lecturer, Department of Radiology, University of Medicine (2) Yangon	Intracranial Tumors
	Daw Thazin Aung	Technologist, Department of Radiology, Yangon General Hospital, Yangon	Fat suppression techniques in MRI
	Dr. Khaing Khaing Win	Assistant Lecturer, Department of Radiology, University of Medicine (2), Yangon	Pelvic MRI in carcinoma of the Endometrium and Cervix
	Daw Tin Thuzar Win	Assistant Lecturer, Department of Medical Imagine Technology, University of Medical Technology, Yangon	Introduction of Japanese Education System for Radiographers in Kanazawa University, Types and Clinical Application of Dual Energy CT, SNR Measurement in MRI
	Dr. Tadanori TAKATA	Radiographer, Kanazawa University Hospital	Dual Energy CT Imaging
FY2017	Dr. Wah Wah Lin Maung	Consultant, Yangon General Hospital	Imaging Challenge in Cholangiocarcinoma by CT and MRI
	Daw Thandar Htoo	Radiographer, Magway General Hospital	MRI artifact
	Dr. Tin Thandar Myo	Asso. Professor, Dept. of Radiology, UM Mandalay	Pancreatic neoplasms: Up-to-date, What's radiologists should know
	Daw Yin Nway Oo	Assistant Lecturer, Department of Medical Imagine Technology, UMT Mandalay	- Introduction to Compressed Sensing - Flow Phenomena
	Dr. Naoki OHNO	Assistant Professor, Faculty of Health Sciences, Institute of Medical, Pharmaceutical and Health Sciences, Kanazawa University	Diffusion MRI: The Basic Principles and Clinical Applications

	Dr. Kazuto KOZAKA	Associate Professor, Department of Radiology, Kanazawa University Graduate School of Medical Sciences	Radiology Update: Acute cholangitis
	Dr. Satoshi KOBAYASHI	Professor, Dept. of Quantum Medical Technology, Kanazawa University Graduate School of Medical Sciences	Differentiation between benign and malignant lesion on the multistep hepatocarcinogenesis process
FY2018	Dr. Thet Htar Lwin	Assistant Lecturer, Dept. of Radiology, UM2	Hepatobiliary protocol and clinical applications based on LI-RADS v2018
	Daw K Khine Yu	Radiographer, North Okkalapa General Hospital	Coronary CTA
	Dr. May Thin Zi Soe	Assistant Lecturer, Dept. of Radiology, UM Magway	Ovarian Masses: What Do We Look For?
	Daw Htar Htar Zaw	Radiographer, Mandalay General Hospital	Cardiac MRI
	Ms. Haruna YOKOYAMA	Radiological Technologist, Department of Diagnostic Radiology, Kanazawa University Hospital.	Breast cancer and digital mammography
	Dr. Hiroki KAWASHIMA	Assistant Professor. Faculty of Health Sciences, Institute of Medical, Pharmaceutical and Health Sciences, Kanazawa University	Image quality evaluation of CT: Let's start measurements
	Dr. Kotaro YOSHIDA	Assistant Professor. Department of Radiology, Kanazawa University Graduate School of Medical Science	CT and MRI findings of various diseases of GI, GU, and GY; Diagnosis please

4 Emergency – Okayama University

Year	Name	Designation	Presentation Title
FY2015	Dr. Aung Myo Naing	Emergency Medicine Specialist, Emergency Dept. Yangon General Hospital, Yangon	Training in Okayama University Hospital
	Dr. Nyein Chan	Emergency Medicine Specialist, Emergency Dept. Mandalay General Hospital	Emergency Medicine Training in Japan
	Dr. Yoshihito UJIKE	Emeritus Professor, Okayama University Graduate School of Medical Science	Difficult Airway Management in Emergency Room Emergency Medicine and Emergency System in Japan
	Dr. Atsunori NAKAO	Professor and Head, Department of Emergency and Critical Care Medicine, Okayama University Graduate School of Medical Science	Acute Care Surgery & REBOA for Massive Bleeding Disaster and Disaster Medical Team in Japan
	Dr. Tetsuya YUMOTO	Assistant Professor, Department of Emergency and Critical Care Medicine, Okayama University Graduate School of Medical Science	Ultrasound in Emergency Medicine Trauma Care in Japan
	Ms. Kumiko HAYASHI	Medical Engineer, Emergency Intensive Care Unit, Okayama University Hospital	Hemopurification for critically ill patients in ICU Role of Clinical Engineer in Japan
FY2016	Dr. Than Latt Aung	Emergency Medicine Specialist, Emergency Department University of Medicine (1) Yangon	What I have learned in the Emergency Training

	Dr. Tin Kyaw	Emergency Medicine Specialist, Emergency Department University of Medicine Mandalay	Experiences in Emergency Medicine Training in Okayama, Japan
FY2017	Dr. Ne Naing Tun	Consultant, Mandalay General Hospital	Short- term Training on Emergency and Critical Care Medicine in FY 2017 for Project for Enhancement of Medical Education in Myanmar
	Dr. Cho Thazin Hpu	Medical Officer, Yangon General Hospital	Dissemination Seminar On PEME trainig
	Mr. Takahiro HIRAYAMA	Clinical Engineer, Emergency Intensive Care Unit, Okayama University Hospital	Respiratory therapy in emergency patients
	Dr. Yasuaki YAMAKAWA	Assistant Professor, Dept. of Emergency Healthcare and Disaster Medicine, Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Okayama University	Creating and utilization of the Medical Data Bank.
FY2018	Dr. Chaw Su Su Khaing	Medical Officer, Mandalay General Hospital	In Japan: As a PEME candidate
	Dr. Thazin	Assistant Surgeon, North Okkalapa General Hospital	Emergency and Critical Care Training in Okayama
	Dr. Takaaki OSAKO	Lecturer, Dept. of Emergency Healthcare and Disaster Medicine, Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Okayama University	Shock and Trauma in pediatric patients
	Dr. Hiromichi NAITO	Asso. Prof., Okayama University Hospital, Advanced Emergency and Critical Care Center	Post Cardiac Arrest Syndrome and Target Temperature Management
	Dr. Atsunori NAKAO	Professor and Head, Department of Emergency and Critical Care Medicine, Okayama University Graduate School of Medical Science	Triage for disaster

5 Anesthesiology – Kumamoto University

Year	Name	Designation	Presentation Title
FY2015	Dr. Khin Kant Kaw	Assistant Lecturer, Dept. of Anesthesiology, UM1, Yangon	General Anaesthesia and Intensive care medicine
	Dr. Lun Naing	Consultant Anesthesiologist, New Yangon General Hospital, Yangon	Thoracic Anaesthesia, Transplant Anaesthesia and Intensive Care
FY2016	Dr. Yin Myat Swe	Assistant Lecturer, Department of Anesthesiology University of Medicine (2) Yangon	Anesthesiology Training and Skill Acquired at Kumamoto University
	Dr. Zaw Myat Tun	Lecturer, Department of Anesthesiology University of Medicine Mandalay	Thoracic Anaesthesia
	Dr. Tatsuo YAMAMOTO	Professor and Head, Department of Anesthesiology, Kumamoto University Graduate School of Medical Science	Anesthesiology Training Program at Kumamoto University

	Dr. Michiko SUGITA	Associate Professor, Department of Anesthesiology, Kumamoto University Hospital	Preoperative fasting and the evaluation of gastric content
FY2017	Dr. Thu Zar Swe	Assistant Lecturer, Dept. of Anesthesiology, UM Mandalay	FY2017 Short Term Training on Clinical Medicine Kumamoto University Hospital
	Dr. Thiri Tun	Medical Officer, North Okkalapa General Hospital	Training at Kumamoto University Hospital
	Mr. Toshikazu HARADA	Clinical Engineer, Kumamoto University Hospital	Management and practicality of continuous renal replacement therapy(CRRT) of KUH
	Dr. Michiko SUGITA	Associate Professor, Department of Anesthesiology, Kumamoto University Hospital	Perioperative management of liver transplantation in Kumamoto University
	Dr. Tatsuo YAMAMOTO	Professor and Head, Department of Anesthesiology, Kumamoto University Graduate School of Medical Science	Training program at Kumamoto University
FY2018	Dr. Soe Sandar Htun	Medical Officer, Yangon General Hospital	FY2018 Short Term Training on Clinical Medicine, Kumamoto University Hospital
	Dr. Thet Thet Aung	Lecturer, Dept. of Anesthesiology, UM2	
	Dr. Takahiro NONAKA	Medical staff, Anesthesiology Department, Kumamoto University Hospital	Clinical tips for pediatric anesthesia
	Dr. Michiko SUGITA	Associate Professor, Department of Anesthesiology, Kumamoto University Hospital	Intraoperative monitoring -advance and practice-
	Dr. Tatsuo YAMAMOTO	Professor and Head, Department of Anesthesiology, Kumamoto University Graduate School of Medical Science	Training program at Kumamoto University

6 Gastroenterology – Chiba University

Year	Name	Designation	Presentation Title
FY2015	Dr. Swe Mon Mya	Consultant Gastroenterologist, Gastroenterology Dept., Yangon General Hospital, Yangon	Training at Chiba University Hospital
	Dr. Sandar Win	Gastroenterology fellow, Gastroenterology Dept., UM1, Yangon	The Role of ERCP in Biliary Strictures
	Dr. Harutoshi SUGIYAMA	Assistant Professor, Department of Endoscopic Diagnosis and Therapeutics (Gastroenterology), CHIBA University Hospital	Basic technique of selective biliary cannulation and EUS
FY2016	Dr. Kyaw Lun Aung Hmu	Specialist, Department of Gastroenterology University of Medicine Mandalay	ENDOSCOPIC Management of Choledocholithiasis
	Dr. Wai Phyo Aung	Specialist, Department of Gastroenterology University of Medicine (2) , Yangon	Gastroenterology Training at Chiba University Hospital, Biliary / Pancreatic stenting
	Dr. Harutoshi SUGIYAMA	Assistant Professor, Department of Endoscopic Diagnosis and Therapeutics (Gastroenterology), CHIBA University Hospital	Trans Pancreatic Precut Papillotomy and Needle Knife Precutting

	Dr. Rintaro MIKATA	Assistant Professor, Department of Gastroenterology, Chiba University Hospital	EUS-guided trasumulral drainage (EUS-GTD) and Endoscopic necrosectomy (EN)
	Dr. Hiroshi OHYAMA	Assistant Professor, Department of Medical Oncology, Chiba University Hospital	Endoscopic treatment for painful pancreatic stones
FY2017	Dr. Naing Lin	Lecturer, Dept. of Gastroenterology, UM Mandalay	How to treat biliary stricture & experience in Chiba University Hospital
	Dr. Mya Thet Nwe	Consultant, Yangon General Hospital	ENDOSCOPIC MANAGEMENT OF COMMON BILE DUCT STONES
	Dr. Yotaro IINO	Assistant professor, Medical Oncology, Chiba University	EUS-FNA
	Dr. Harutoshi SUGIYAMA	Assistant Professor, Department of Endoscopic Diagnosis and Therapeutics (Gastroenterology), CHIBA University Hospital	- TIPS for treatment of difficult bile duct stones and severe biliary stricture - TIPS for the training of ERCP
FY2018	Dr. Min Htun	Specialist, Dept. of Gastroenterology, UM Mandalay	
	Dr. Thet Mar Win	Lecturer, Dept. of Gastroenterology, UM2	
	Dr.		
	Dr.		
	Dr. Harutoshi SUGIYAMA	Assistant Professor, Department of Endoscopic Diagnosis and Therapeutics (Gastroenterology), CHIBA University Hospital	

2-2 Contents of the Presentation of Ph. D. Dissertations Hand-out Book (April 2 2019)

No.	Name	Title	University
1.	Dr. Nandar Tun	Histone deacetylase inhibitors suppress transdifferentiation of gonadotrophs to prolactin cells and proliferation of prolactin cells induced by diethylstilbestrol in male mouse pituitary	University of Medicine 2
2.	Dr. Kyaw Thiha	Investigation of Novel Variations of *ORAI1* Gene and their Association with Kawasaki Disease	University of Medicine Magway
3.	Dr. Swe Mar Oo	Serum selenoprotein P, but not selenium, predicts future hyperglycemia in a general Japanese population	University of Medicine 2
4.	Dr. Hein Min Latt	Oxytocin Inhibits Corticosterone-induced Apoptosis in Primary Hippocampal Neurons	University of Medicine Mandalay
5.	Dr. Khin Thuzar Aung	The class II phosphoinositide 3-kinases PI3K-C2α and PI3K-C2β differentially regulate clathrin-dependent pinocytosis in human vascular endothelial cells	University of Medicine 2
6.	Dr. Ei Ei Mon	Regulation of mitochondrial iron homeostasis by sideroflexin 2	University of Medicine 2
7.	Dr. Soe Soe Htwe	Inter-alpha inhibitor proteins maintain neutrophils in a resting state by regulating shape and reducing ROS production	University of Medicine 2

8.	Dr. Aye Pa Pa Tun	Clinicopathological and Immunohistochemical Characteristics of Small Intestinal Adenocarcinoma	University of Medicine Mandalay
9.	Dr. Aung Myo Hlaing	Expression of phosphatase and tensin homolog and programmed cell death ligand 1 in adenosquamous carcinoma of the lung	University of Medicine 2
10.	Dr. Khin Thu Zar Htwe	Phylogeographic analysis of human influenza A and B viruses in Myanmar, 2010–2015	University of Medicine Mandalay
11.	Dr. Win Thida	Isolation of HIV-1 envelope glycoproteins from subtype B and CRF01_AE viruses in Japan and Vietnam and the analysis of their sensitivity to various antibodies	University of Nursing, Yangon
12.	Dr. Nan Nwe Win	Discrepancy between hepatitis C virus genotypes and NS4-based serotypes: Association with their subgenomic sequences	University of Medicine 1

ANNEX 3: PDM (all versions)

Project Design Matrix

Project Title: Project for Enhancement of Medical Education in Myanmar

Project Period: April 2015 - September 2019 (4.5 years)

Target Group (= Direct beneficiaries): The long-term and short-term trainees and their colleagues in the 4 target medical universities

In-direct beneficiaries: Medical staffs in the hospitals affiliated to the target universities, the state hospitals and the district hospitals

Implementing Agency: Department of Medical Science (DMS), Ministry of Health, The Republic of the Union of Myanmar

Project Site: University of Medicine (1) Yangon, University of Medicine (2) Yangon, University of Medicine Mandalay, University of Medicine Magway and teaching hospitals affiliated to the universities.

Version: 1.1

Date: November 26, 2014

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATIONS	IMPORTANT ASSUMPTIONS
Quality of medical services in Myanmar is improved.	1. The percentage of pregnant women whose abnormal pregnancy is found at the early stage in a pregnancy check-up taken in the hospitals affiliated to the 4 target universities. 2. The percentage of clients whose cancer is detected at the early stage taken in the hospitals affiliated to the 4 target universities. 3. The number of cases in which the duration from the time when a client visited the hospitals to the time when the treatment was provided to him/her is reduced.	1. Hospital records 2. Hospital records 3. Hospital records	- Leadership and commitment of the GoM toward the UHC are sustained.
PROJECT PURPOSE Capacities in research, clinical skills and education in Myanmar are strengthened.	1. The training programme on the target fields is introduced in the under-and-post graduate education in Myanmar by the end of the Project 2. The ex-trainees for the training in Japan and their ex-trainees for the TOTs take their knowledge and skills into practice regularly by the end of the Project.	1-1. Records of the monthly meetings between DMS and the university rectors 1-2. Project monitoring reports 2-1. Project monitoring reports 2-2. A questionnaire survey and observations in the sites	- The majority of the target group of the Project (direct beneficiaries of the Project) and the beneficiaries of the TOT continue working in the medical universities and its affiliated hospitals in Myanmar.

OUTPUTS	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATIONS	IMPORTANT ASSUMPTIONS
1. Research and educational capacities of basic medicine is strengthened in the 4 target universities. 6 fields of Basic Medicine: Anatomy, Biochemistry, Physiology Microbiology, Pathology, Pharmacology	1-1. Among 12 Ph.D. candidates, the number of candidates who obtained the degree within the planned period. 1-2. The number of dissertations presented by the Ph.D. holders at a seminar by the end of the Project. 1-3. The number of seminars and symposium etc. organized to share the achievements of the Ph.D. holders with other universities by the end of the Project.	1-1. Project monitoring reports 1-2. Project monitoring reports 1-3. Project monitoring reports	
2. Quality of the training programme on diagnostic imaging and emergency care for cross cutting clinical technology is improved. Fields of Clinical Medicine: Diagnostic Imaging (Radiology, Obstetrics and Gynecology, Gastroenterology and Clinical Pathology) and Emergency Care (Emergency and Anesthesiology)	2-1. Knowledge and skills of how to utilize X-ray, ultrasound, CT, MRI and endoscope is improved: (a) the number of doctors/radiologists who received the course completion certificates on the short-term training in Japan. (b) the number of seminars organized by the counterparts with the course completion certificate (c) the number of participants in the seminar organized by the counterparts with the course completion certificate 2-2. Each training programme on 4 fields (radiology, obstetrics and gynecology, gastroenterology and clinical pathology) to improve the diagnostic imaging is finalized by the end of the Project. 2-3. Knowledge and skills of ICU management with focus on emergency and anesthesiology is improved: (a) the number of doctors who received the course completion certificate on the short-term training in Japan. (b) the number of seminars organized by the counterparts with the course completion certificate. (c) the number of participants in the seminar organized by the counterparts with the course completion certificate. 2-4. Each training programme on 2 fields (emergency and anesthesiology) to improve	2-1. (a) Training records (b) Records of the seminars organized by the CPs (c) Records of the seminars organized by the CPs 2-2. Project monitoring reports 2-3. (a) Training records (b) Records of the seminars organized by the CPs (c) Records of the seminars organized by the CPs 2-4. Project monitoring reports	

3. Deliverables of Outputs 1 and 2* are officially agreed to be introduced into the under-and-post graduate medical education in Myanmar. * Deliverables: Doctoral dissertations on basic medicines, future research plan and specific plan to introduce the new research methods into the under-and-post graduate medical education (Output 1) and the training programme on Clinical Medicines in the 6 fields (Output 2)	emergency care is finalized by the end of the Project. 3-1. The number of future research plans prepared by the Ph.D. holders and obtain agreement from his/her university within 3 months after his/her return to Myanmar. 3-2. The number of plans on how to apply the obtained methods/skills to the under-and-post graduate medical education which is prepared by the Ph.D. holders at a seminar and obtain agreement from his/her university within 3 months after his/her return to Myanmar. 3-3. The training programme on diagnostic imaging is officially approved by the MoH/DMS by the end of the Project to be ready for introducing to the under-and-post graduate medical education. 3-4. The training programme on emergency care is officially approved by the MoH/DMS by the end of the Project to be ready for introducing to the under-and-post graduate medical education.	3-1. University records 3-2. University records 3-3. Minutes of the DMS-University rectors' monthly meeting 3-4. Minutes of the DMS-University rectors' monthly meeting	
ACTIVITIES	INPUTS		PRECONDITIONS
1-1. To receive Myanmar Ph.D. candidates in the SUN in Japan 1-2. To assess the current situation in research and education in Myanmar by the instructors of the Ph.D. candidates 1-3. To modify the original research plan to response to the national needs 1-4. (Upon the completion of the Ph.D. Programme) To support the Ph.D. holders to prepare a plan to conduct research activities in Myanmar and a plan to reflect the obtained skills into the under-and-post graduate medical education in Myanmar 1-5. To support the Ph.D. holders to hold a seminar to present his/her doctoral dissertations and plans prepared under Activity 1-4	Government of Japan 1) Experts to be assigned to the Project - Chief Advisor - Project Coordinator - Basic Medicine (Anatomy, Biochemistry, Physiology, Microbiology, Pathology, Pharmacology) - Radiology - Obstetrics and Gynecology - Gastroenterology - Clinical Pathology - Emergency - Anesthesiology - Other experts mutually agreed upon as deemed necessary 2) Costs to receive the Myanmar trainees to the long term and short-term training in Japan	Government of Myanmar 1) Counterparts assigned to the Project - Project Director - Acting Project Director - Project Manager - Administrative personnel 2) Project Office 3) Supply or replacement of machinery, equipment, instruments, vehicles, tools, spare parts, etc. 4) Running expenses for the Project implementation	- There is no drastic change in the policy/strategy on development of HRH in Myanmar S

2-1. To hold an orientation to introduce the Project framework and the planned activities 2-2. To assess the current situation on clinical training by the instructors in the SUN universities 2-3. (Based on the results of Activity 2-2) To prepare the training programmes on each field by the responsible universities 2-4. To assign the selected top-level Myanmar counterparts to the short-term training in Japan 2-5. To develop the training materials during the training in Japan 2-6. (Upon the return to Myanmar) To support the ex-trainees to organize seminar(s) to teach his/her students and fellow doctors 2-7. To modify the training programmes based on the results of the seminar(s) 3-1. To support in holding the DMS-university rectors' monthly meeting with participation of the DOH regularly 3-2. (At the monthly meetings) To review the doctoral dissertations and plans submitted by the Ph.D. holders and prepare a specific plan to introduce the new research methods into the under-and-post graduate medical education. 3-3. (At the monthly meeting) To review the training materials on each 6 fields and prepare a specific plan to introduce the programmes into the under-and-post graduate medical education.	3) Machinery and Equipment - (Minor) Equipment/instrument/materials for clinical training - Equipment/materials for administration and management of the Project (computers, printers, office software, etc.)		

Project Title: Project for Enhancement of Medical Education in Myanmar

Activities / Sub-Activities		1st Year (2015)				2nd Year (2016)				3rd Year (2017)				4th Year (2018)				5th Year (2019)			
		Ⅰ	Ⅱ	Ⅲ	Ⅳ	Ⅰ	Ⅱ	Ⅲ	Ⅳ	Ⅰ	Ⅱ	Ⅲ	Ⅳ	Ⅰ	Ⅱ	Ⅲ	Ⅳ	Ⅰ	Ⅱ	Ⅲ	Ⅳ
Output 1: Research and educational capacities of basic medicine is strengthened in the target 4 universities.																					
1.1 To receive Myanmar Ph.D candidates in the SUN in Japan.	Plan																				
	Actual																				
1.2 To assess the current situation in research and education in Myanmar by the instructors of the Ph.D candidates.	Plan																				
	Actual																				
1.3 To modify the original research plan to response to the national needs.	Plan																				
	Actual																				
1.4 To support the Ph.D holders to prepare a plan to conduct research activities in Myanmar and a plan to reflect the obtained skills into the under-and-post graduate medical education in Myanmar.	Plan																				
	Actual																				
1.5 To support the Ph.D holders to hold a seminar to present their doctoral dissertation and plans prepared as Activity 1.4.	Plan																				
	Actual																				
Output 2: Quality of training programme on diagnostic imaging and emergency care for cross cutting clinical skills is improved																					
2.1 To hold an orientation to introduce the Project framework and planned activities.	Plan																				
	Actual																				
2.2 To assess the current situation on clinical skills and training by instructors in the SUN universities.	Plan																				
	Actual																				
2.3 To prepare the training programmes on each field by the responsible universities.	Plan																				
	Actual																				
2.4 To assign the selected top-level Myanmar counterparts to the short-term training in Japan.	Plan																				
	Actual																				
2.5 To develop the training materials during the training in Japan.	Plan																				
	Actual																				
2.6 To support the ex-trainees to organize the seminar(s) to teach his/her students and colleagues.	Plan																				
	Actual																				
2.7 To modify the training programme based on the results of the seminar(s).	Plan																				
	Actual																				
Output 3: Deliverables of Output 1 and Output 2 are officially introduced into the under-and-post graduate medical education in Myanmar.																					
3.1 To support in holding the DMS-University Rectors' monthly meeting with participants of DOH regularly.	Plan																				
	Actual																				
3.2 To review the doctoral dissertations and the plans submitted by the Ph.D holders and prepare a specific plan to introduce the new research methods into the under-and-post gradate medical education.	Plan																				
	Actual																				
3.3 To review the training materials on each 6 field and prepare a specific plan to introduce the programmes into the under-and-post graduate medical education.	Plan																				
	Actual																				

Project Design Matrix

Project Title: Project for Enhancement of Medical Education in Myanmar

Project Period: April 2015 - September 2019 (4.5 years)

Target Group (= Direct beneficiaries): The long-term and short-term trainees and their colleagues in the 4 target medical universities

In-direct beneficiaries: Medical staffs in the hospitals affiliated to the target universities, the state hospitals and the district hospitals

Implementing Agency: Department of Human Resources for Health (DHRH), Ministry of Health and Sports (MoHS), The Republic of the Union of Myanmar

Project Site: University of Medicine (1) Yangon, University of Medicine (2) Yangon, University of Medicine Mandalay, University of Medicine Magway and teaching hospitals affiliated to the universities.

Version: 2

Date: January 11, 2018

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATIONS	IMPORTANT ASSUMPTIONS
【Overall Goal】 Quality of medical services in Myanmar is improved.	1. Radiology: Radiologists: Diagnostic performance throughout every image modalities has been improved in abdominal radiology. Radiographers: The first standardized CT/MRI scanning protocol in Myanmar have been made according to Japan standards and the current situation in Myanmar through Technical Seminars organized by ex-trainees (1-2 times/year). 2. Obstetrics and Gynecology: The number of OBGY doctors who can perform Ultrasound diagnosis has been increased. 3. Gastroenterology: The number of EUS and ERCP has been increased and the procedure success rate has been increased. The complication rate has been decreased and the operation time has been reduced.	1. Radiologists: To interview with Myanmar Professors and ex-trainees at UM1, UM2, UMM Radiographers: To confirm the protocols To interview with Myanmar Professors and ex-trainees at YGH, Magway GH, UMT-Y, UMT-M 2. To interview with Myanmar Professors and ex-trainees at UM1, UM2, UMM, UMMG 3. To check the hospital record at YGH, Sanpya GH, MGH - number of EUS, ERCP - procedure success rate - complication rate - operation time	- Leadership and commitment of the GoM toward the UHC are sustained.

	4. Clinical Pathology: CAMPAS, the Myanmar's pathology educational database, has been fully utilized by uploading and sharing interesting cases as educational material and reference for diagnosis by Myanmar pathologists. 5. Emergency care: Computer-based data collection system is introduced for evidence-based medicine in Emergency Departments. The use of Focused Assessment with Sonography for Trauma (FAST) has been increased. 6. Anesthesiology: The new techniques which had not been used in Myanmar but acquired by the training in Japan, such as bronchofiberscope use during thoracic surgery, anesthesia for living-donor liver transplantation, and continuous hemodiafiltration (CHDF) have newly used in Myanmar.	4. To check the numbers in CAMPAS record - upload cases - registered pathologists - viewers 5. To check the database at EDs in YGH, North Okkalapa GH, MGH, NPT GH - number of data items collected and analyzed - resuscitated cases - survival rate - FAST cases 6. To check the hospital record at YGH, NYGH, North Okkalapa GH, MGH - bronchofiberscope in thoracic surgery -anesthesia for liver transplantation -continuous hemodiafiltration (CHDF)	
PROJECT PURPOSE Capacities in research, clinical skills and education in Myanmar are strengthened.	OBJECTIVELY VERIFIABLE INDICATORS 1. The training programme on the target fields is introduced in the under-and-post graduate education in Myanmar by the end of the Project 2. The ex-trainees for the training in Japan and their ex-trainees for the TOTs take their knowledge and skills into practice regularly by the end of the Project.	1-1. Records of the monthly meetings between DHRH and the university rectors 1-2. Project monitoring reports 2-1. Project monitoring reports 2-2. A questionnaire survey and observations in the sites	- The majority of the target group of the Project (direct beneficiaries of the Project) and the beneficiaries of the TOT continue working in the medical universities and its affiliated hospitals in Myanmar.
OUTPUTS	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATIONS	IMPORTANT ASSUMPTIONS
1. Research and educational capacities of basic medicine is strengthened in the 4 target universities.	1-1. Among 12 Ph.D. candidates, the number of candidates who obtained the degree within the planned period. 1-2. The number of dissertations presented by the	1-1. Project monitoring reports	

6 fields of Basic Medicine: Anatomy, Biochemistry, Physiology Microbiology, Pathology, Pharmacology 2. Quality of the training programme on diagnostic imaging and emergency care for cross cutting clinical technology is improved. Fields of Clinical Medicine: Diagnostic Imaging (Radiology, Obstetrics and Gynecology, Gastroenterology and Clinical Pathology) and Emergency Care (Emergency and Anesthesiology)	Ph.D. holders at a seminar by the end of the Project. 1-3. The number of seminars and symposium etc. organized to share the achievements of the Ph.D. holders with other universities by the end of the Project. 2-1. Knowledge and skills of how to utilize X-ray, ultrasound, CT, MRI and endoscope is improved: (a) the number of doctors/radiologists who received the course completion certificates on the short-term training in Japan. (b) the number of seminars organized by the counterparts with the course completion certificate (c) the number of participants in the seminar organized by the counterparts with the course completion certificate 2-2. Each training programme on 4 fields (radiology, obstetrics and gynecology, gastroenterology and clinical pathology) to improve the diagnostic imaging is finalized by the end of the Project. 2-3. Knowledge and skills of ICU management with focus on emergency and anesthesiology is improved: (a) the number of doctors who received the course completion certificate on the short-term training in Japan. (b) the number of seminars organized by the counterparts with the course completion certificate. (c) the number of participants in the seminar organized by the counterparts with the course completion certificate. 2-4. Each training programme on 2 fields (emergency and anesthesiology) to improve emergency care is finalized by the end of the Project.	1-2. Project monitoring reports 1-3. Project monitoring reports 2-1. (a) Training records (b) Records of the seminars organized by the CPs (c) Records of the seminars organized by the CPs 2-2. Project monitoring reports 2-3. (a) Training records (b) Records of the seminars organized by the CPs (c) Records of the seminars organized by the CPs 2-4. Project monitoring reports	

3. Deliverables of Outputs 1 and 2* are officially agreed to be introduced into the under-and-post graduate medical education in Myanmar. * Deliverables: Doctoral dissertations on basic medicines, future research plan and specific plan to introduce the new research methods into the under-and-post graduate medical education (Output 1) and the training programme on Clinical Medicines in the 6 fields (Output 2)	3-1. The number of future research plans prepared by the Ph.D. holders and obtain agreement from his/her university within 3 months after his/her return to Myanmar. 3-2. The number of plans on how to apply the obtained methods/skills to the under-and-post graduate medical education which is prepared by the Ph.D. holders at a seminar and obtain agreement from his/her university within 3 months after his/her return to Myanmar. 3-3. The training programme on diagnostic imaging is officially approved by the MoHS/DHRH by the end of the Project to be ready for introducing to the under-and-post graduate medical education. 3-4. The training programme on emergency care is officially approved by the MoHS/DHRH by the end of the Project to be ready for introducing to the under-and-post graduate medical education.	3-1. University records 3-2. University records 3-3. Minutes of the DHRH-University rectors' monthly meeting 3-4. Minutes of the DHRH-University rectors' monthly meeting	
ACTIVITIES	INPUTS		PRECONDITIONS
1-1. To receive Myanmar Ph.D. candidates in the SUN in Japan 1-2. To assess the current situation in research and education in Myanmar by the instructors of the Ph.D. candidates 1-3. To modify the original research plan to response to the national needs 1-4. (Upon the completion of the Ph.D. Programme) To support the Ph.D. holders to prepare a plan to conduct research activities in Myanmar and a plan to reflect the obtained skills into the under-and-post graduate medical education in Myanmar 1-5. To support the Ph.D. holders to hold a seminar to present his/her doctoral dissertations and plans prepared under Activity 1-4	Government of Japan 1) Experts to be assigned to the Project - Chief Advisor - Project Coordinator - Basic Medicine (Anatomy, Biochemistry, Physiology, Microbiology, Pathology, Pharmacology) - Radiology - Obstetrics and Gynecology - Gastroenterology - Clinical Pathology - Emergency - Anesthesiology - Other experts mutually agreed upon as deemed necessary 2) Costs to receive the Myanmar trainees to the long term and short-term training in Japan	Government of Myanmar 1) Counterparts assigned to the Project - Project Director - Acting Project Director - Project Manager - Administrative personnel 2) Project Office 3) Supply or replacement of machinery, equipment, instruments, vehicles, tools, spare parts, etc. 4) Running expenses for the Project implementation	- There is no drastic change in the policy/strategy on development of HRH in Myanmar

2-1. To hold an orientation to introduce the Project framework and the planned activities 2-2. To assess the current situation on clinical training by the instructors in the SUN universities 2-3. (Based on the results of Activity 2-2) To prepare the training programmes on each field by the responsible universities 2-4. To assign the selected top-level Myanmar counterparts to the short-term training in Japan 2-5. To develop the training materials during the training in Japan 2-6. (Upon the return to Myanmar) To support the ex-trainees to organize seminar(s) to teach his/her students and fellow doctors 2-7. To modify the training programmes based on the results of the seminar(s) 3-1. To support in holding the DHRH-university rectors' monthly meeting with participation of the DOH regularly 3-2. (At the monthly meetings) To review the doctoral dissertations and plans submitted by the Ph.D. holders and prepare a specific plan to introduce the new research methods into the under-and-post graduate medical education. 3-3. (At the monthly meeting) To review the training materials on each 6 fields and prepare a specific plan to introduce the programmes into the under-and-post graduate medical education. 3-4 To support MoHS and medical universities in the preparation for accreditation of medical education	3) Machinery and Equipment - (Minor) Equipment/instrument/materials for clinical training - Equipment/materials for administration and management of the Project (computers, printers, office software, etc.)		

Plan of Operation (PO)

Version 2

Project Title: Project for Enhancement of Medical Education in Myanmar

Dated: January 2018 (PO Original: November 26, 2014)

Period of Project: April 2015 - September 2019 (4.5 years)

Inputs	Plan/Actual	1st Year (2015) I	II	III	IV	2nd Year (2016) I	II	III	IV	3rd Year (2017) I	II	III	IV	4th Year (2018) I	II	III	IV	5th Year (2019) I	II	III	IV	Remarks	Monitoring: Issue	Monitoring: Solution
Expert																								
LT Chief Advisor	Plan																							
	Actual																							
LT Project Coordinator	Plan																							
	Actual																							
ST Basic Medicine (Anatomy, Biochemistry, Physiology, Microbiology, Pathology, Pharmacology)	Plan																							
	Actual																							
ST Clinical Medicine (Radiology, Obstetrics and Gynecology, Gastroenterology, Clinical Pathology, Emergency, Anesthesiology)	Plan																							
	Actual																							
Other experts mutually agreed upon as deemed necessary	Plan																							
	Actual																							
Equipment																								
(Minor) Equipment/instrument/materials for clinical training	Plan																							
	Actual																							
Office Equipment/materials for administration and management of the Project (computers, printers, office software, etc.)	Plan																							
	Actual																							
Training in Japan																								
*Please refer to the activities for Output 1 & 2.	Plan																							
	Actual																							
In-country/Third country Training																								
*No plan as of Nov 2014.	Plan																							
	Actual																							

Activities / Sub-Activities	Plan/Actual	1st Year (2015) I	II	III	IV	2nd Year (2016) I	II	III	IV	3rd Year (2017) I	II	III	IV	4th Year (2018) I	II	III	IV	5th Year (2019) I	II	III	IV			Monitoring: Issue	Monitoring: Solution
Output 1: Research and educational capacities of basic medicine is strengthened in the target 4 universities.																						Output 1			
1.1 To receive Myanmar Ph.D candidates in the SUN in Japan.	Plan																								
	Actual																								
1.2 To assess the current situation in research and education in Myanmar by the instructors of the Ph.D candidates.	Plan																								
	Actual																								
1.3 To modify the original research plan to response to the national needs.	Plan																								
	Actual																								
1.4 To support the Ph.D holders to prepare a plan to conduct research activities in Myanmar and a plan to reflect the obtained skills into the under-and-post graduate medical education in Myanmar.	Plan																								
	Actual																								
1.5 To support the Ph.D holders to hold a seminar to present their doctoral dissertation and plans prepared as Activity 1.4.	Plan																								
	Actual																								
Output 2: Quality of training programme on diagnostic imaging and emergency care for cross cutting clinical skills is improved.																						Output 2			
2.1 To hold an orientation to introduce the Project framework and planned activities.	Plan																								
	Actual																								
2.2 To assess the current situation on clinical skills and training by instructors in the SUN universities.	Plan																								
	Actual																								
2.3 To prepare the training programmes on each field by the responsible universities.	Plan																								
	Actual																								
2.4 To assign the selected top-level Myanmar counterparts to the short-term training in Japan.	Plan																								
	Actual																								
2.5 To develop the training materials during the training in Japan.	Plan																								
	Actual																								
2.6 To support the ex-trainees to organize the seminar(s) to teach his/her students and colleagues.	Plan																								
	Actual																								
2.7 To modify the training programme based on the results of the seminar(s).	Plan																								
	Actual																								
Output 3: Deliverables of Output 1 and Output 2 are officially introduced into the under-and-post graduate medical education in Myanmar.																						Output 3			
3.1 To support in holding the DHRH-University Rectors' monthly meeting with participants of DMS regularly.	Plan																								
	Actual																								
3.2 To review the doctoral dissertations and the plans submitted by the Ph.D holders and prepare a specific plan to introduce the new research methods into the under-and-post gradate medical education.	Plan																								
	Actual																								
3.3 To review the training materials on each 6 field and prepare a specific plan to introduce the programmes into the under-and-post graduate medical education.	Plan																								
	Actual																								
3.4 To support MoHS and medical universities in the preparation for accreditation of medical education.	Plan																								
	Actual																								

Duration / Phasing	Plan / Actual																											
Monitoring Plan	Plan	1st Year (2015)				2nd Year (2016)				3rd Year (2017)				4th Year (2018)				5th Year (2019)				Remarks	Issue	Solution
	Actual	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV			
Monitoring																								
Joint Coordinating Committee (JCC): once a year and when required	Plan					■				■				■					■					
	Actual					▒				▒														
Set-up/Revision of the Detailed Plan of Operation: when required	Plan																							
	Actual																							
Submission of Monitoring Sheet: twice a year	Plan							■		■			■		■		■		■		■			
	Actual							▒			▒		▒											
Monitoring Mission from Japan: to be planned.	Plan																							
	Actual																							
Joint Monitoring: to be planned.	Plan																							
	Actual																							
Post Monitoring: to be planned.	Plan																							
	Actual																							
Reports / Documents																								
Monthly Report (Japanese)	Plan	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■					
	Actual	▒	▒	▒	▒	▒		▒	▒	▒	▒	▒	▒											
Project Completion Report	Plan																				■			
	Actual																							
Public Relations (PR)																								
Web-site (Japanese language, onto the JICA Homepage): quarterly	Plan			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■			
	Actual			▒	▒	▒	▒	▒	▒															
Newsletter (English language: Email a PDF file): quarterly	Plan			■		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■			
	Actual			▒		▒	▒	▒	▒	▒			▒											
Facebook (English: Upload activity photos):	Plan						■																	
	Actual						▒																	
Other	Plan																							
	Actual											▒												

Project Design Matrix

Project Title: Project for Enhancement of Medical Education in Myanmar

Project Period: April 2015 - September 2019 (4.5 years)

Target Group (= Direct Beneficiaries): The long-term and short-term trainees and their colleagues in the 4 target medical universities

In-direct beneficiaries: Medical staffs in the hospitals affiliated to the target universities, the state hospitals and the district hospitals

Implementing Agency: Department of Human Resources for Health (DHRH), Ministry of Health and Sports (MoHS), The Republic of the Union of Myanmar

Project Site: University of Medicine (1) Yangon, University of Medicine (2) Yangon, University of Medicine Mandalay, University of Medicine Magway and teaching hospitals affiliated to the universities.

Version: 3

Date: November 1, 2018

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATIONS	IMPORTANT ASSUMPTIONS
【Overall Goal】 Quality of medical services in Myanmar is improved.	1. Radiology: Radiologists: Diagnostic performance throughout every image modalities has been improved in abdominal radiology. Radiographers: The first standardized CT/MRI scanning protocol in Myanmar have been made according to Japan standards and the current situation in Myanmar through Technical Seminars organized by ex-trainees (1-2 times/year). 2. Obstetrics and Gynecology: The number of OBGY doctors who can perform Ultrasound diagnosis has been increased. 3. Gastroenterology: The number of EUS and ERCP has been increased and the procedure success rate has been increased. The complication rate has been decreased and the operation time has been reduced.	1. Radiologists: To interview with Myanmar Professors and ex-trainees at UM1, UM2, UMM Radiographers: To confirm the protocols To interview with Myanmar Professors and ex-trainees at YGH, Magway GH, UMT-Y, UMT-M 2. To interview with Myanmar Professors and ex-trainees at UM1, UM2, UMM, UMMG 3. To check the hospital record at YGH, Sanpya GH, MGH - number of EUS, ERCP - procedure success rate - complication rate - operation time	- Leadership and commitment of the GoM toward the UHC are sustained.

	4. Clinical Pathology: CAMPAS, the Myanmar's pathology educational database, has been fully utilized by uploading and sharing interesting cases as educational material and reference for diagnosis by Myanmar pathologists. 5. Emergency care: Computer-based data collection system is introduced for evidence-based medicine in Emergency Departments. The use of Focused Assessment with Sonography for Trauma (FAST) has been increased. 6. Anesthesiology: The new techniques which had not been used in Myanmar but acquired by the training in Japan, such as bronchofiberscope use during thoracic surgery, anesthesia for living-donor liver transplantation, and continuous hemodiafiltration (CHDF) have newly used in Myanmar.	4. To check the numbers in CAMPAS record - upload cases - registered pathologists - viewers 5. To check the database at EDs in YGH, North Okkalapa GH, MGH, NPT GH - number of data items collected and analyzed - resuscitated cases - survival rate - FAST cases 6. To check the hospital record at YGH, NYGH, North Okkalapa GH, MGH - bronchofiberscope in thoracic surgery -anesthesia for liver transplantation -continuous hemodiafiltration (CHDF)	
NARRATIVE SUMMARY	**OBJECTIVELY VERIFIABLE INDICATORS**	**MEANS OF VERIFICATIONS**	**IMPORTANT ASSUMPTIONS**
[Project Purpose] Capacities in research, clinical skills and education in Myanmar are strengthened.	1. The number of future research plans prepared by the Ph.D. holders 2. The number of professors and ex-trainees who think lectures and practices (clinical) are improved by the project.	1. Project monitoring reports 2. Questionnaire survey	- The majority of the target group of the Project (direct beneficiaries of the Project) and the beneficiaries of the TOT (training of trainers) continue working in the medical universities and its affiliated hospitals in Myanmar.

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATIONS	IMPORTANT ASSUMPTIONS
[Outputs]			
1. Research and educational capacities of basic medicine is strengthened in the 4 target universities. 6 fields of Basic Medicine: Anatomy, Biochemistry, Physiology Microbiology, Pathology, Pharmacology	1-1 Among 12 Ph.D. candidates, the number of candidates who obtained the degree within the planned period 1-2 The number of dissertations, published papers and presentation made by the Ph.D. holders by the end of the Project	1-1. Project monitoring reports 1-2. A questionnaire survey	
2. Quality of the training programme on diagnostic imaging and emergency care for cross cutting clinical technology in Myanmar is improved. Fields of Clinical Medicine: Diagnostic Imaging (Radiology, Obstetrics and Gynecology, Gastroenterology and Clinical Pathology) and Emergency Care (Emergency and Anesthesiology)	2-1 The number of doctors/radiologists who received the course completion certificates on the short-term training in Japan 2-2 The number of improved lectures/trainings in Myanmar	2-1. Project monitoring reports 2-2. A questionnaire survey	
3. Deliverables of Outputs 1 and 2* are introduced into the under-and-post graduate medical education in Myanmar. * Deliverables: Doctoral dissertations on basic medicines, future research plan (Output 1) and the essence of the raining in Japan on Clinical Medicines in the 6 fields (Output 2)	3-1 The number of seminars and symposium etc. organized to share the achievements of the Ph.D. holders with other universities by the end of the Project 3-2 The number of the dissemination seminars and participants on clinical medicines by the end of the Project 3-3 The number of the DVD contents of the dissemination seminars	3-1 A questionnaire survey 3-2 Project monitoring reports 3-3 Project monitoring reports	

ACTIVITIES	INPUTS		PRECONDITIONS
1-1. To receive Myanmar Ph.D. candidates in the SUN in Japan 1-2. To assess the current situation in research and education in Myanmar by the instructors of the Ph.D. candidates 1-3. To modify the original research plan to response to the national needs 1-4. (Upon the completion of the Ph.D. Programme) To support the Ph.D. holders to prepare a plan to conduct research activities in Myanmar. 1-5. To support the Ph.D. holders to conduct research in universities in Myanmar through the Research Fund 2-1. To hold an orientation to introduce the Project framework and the planned activities 2-2. To assess the current situation on clinical training in Myanmar by the instructors in the SUN universities 2-3. (Based on the results of Activity 2-2) To prepare the training programmes in Japan on each field by the responsible universities 2-4 To receive and train Myanmar trainees at the SUN universities in Japan 3-1. To support the Ph.D. holders to hold a seminar to present his/her doctoral dissertations 3-2. To support the clinical medicines ex-trainees to organize seminars to disseminate the knowledge/skills they acquired in Japan 3-3 To make DVD of the dissemination seminars 3-4 To support ex-trainees to improve	Government of Japan 1) Experts to be assigned to the Project - Chief Advisor - Project Coordinator - Basic Medicine (Anatomy, Biochemistry, Physiology, Microbiology, Pathology, Pharmacology) - Clinical Medicine (Radiology, Obstetrics and Gynecology, Gastroenterology, Clinical Pathology, Emergency, Anesthesiology) - Other experts mutually agreed upon as deemed necessary 2) Costs to receive the Myanmar trainees to the long term and short-term training in Japan 3) Machinery and Equipment - (Minor) Equipment/instrument/materials for Ph.D. holders' research and clinical training under the projects - Equipment/materials for administration and management of the Project (computers, printers, office software, etc.)	Government of Myanmar 1) Counterparts assigned to the Project - Project Director - Acting Project Director - Project Manager - Administrative personnel 2) Project Office 3) Supply or replacement of machinery, equipment, instruments, vehicles, tools, spare parts, etc. 4) Running expenses for the Project implementation	- There is no drastic change in the policy/strategy on development of HRH (human resources for health) in Myanmar

their activities after returning from Japan 3-5 To support MoHS and medical universities in the preparation for accreditation of medical education			

Plan of Operation (PO)

Version 3

Project Title: Project for Enhancement of Medical Education in Myanmar

Dated: November 1, 2018 (PO ver.2: January 2018)

Period of Project: April 2015 - September 2019 (4.5 years)

Inputs	Plan / Actual	1st Year (2015) I II III IV	2nd Year (2016) I II III IV	3rd Year (2017) I II III IV	4th Year (2018) I II III IV	5th Year (2019) I II III IV	Remarks	Monitoring: Issue	Monitoring: Countermeasures
Expert									
LT Chief Advisor	Plan								
	Actual								
LT Project Coordinator	Plan								
	Actual								
ST Basic Medicine (Anatomy, Biochemistry, Physiology, Microbiology, Pathology, Pharmacology)	Plan								
	Actual								
ST Clinical Medicine (Radiology, Obstetrics and Gynecology, Gastroenterology, Clinical Pathology, Emergency, Anesthesiology)	Plan						Clinical medicin dissemination seminars		
	Actual								
Other experts mutually agreed upon as deemed necessary	Plan								
	Actual								
Equipment									
(Minor) Equipment/instrument/materials for clinical training	Plan						a.A digital slide scanner for Pathology b.Training equipment for Emargency medicine		
	Actual								
Office Equipment/materials for administration and management of the Project (computers, printers, office software, etc.)	Plan								
	Actual								
Training in Japan									
*Please refer to the activities for Output 1 & 2.	Plan								
	Actual								

Activities / Sub-Activities	1st Year (2015) I II III IV	2nd Year (2016) I II III IV	3rd Year (2017) I II III IV	4th Year (2018) I II III IV	5th Year (2019) I II III IV	Remarks	Monitoring: Issue	Monitoring: Countermeasures
Output 1: Research and educational capacities of basic medicine is strengthened in the target 4 universities.						Output 1		
1.1 To receive Myanmar Ph.D candidates in the SUN in Japan. Plan								
Actual								
1.2 To assess the current situation in research and education in Myanmar by the instructors of the Ph.D candidates. Plan								
Actual								
1.3 To modify the original research plan to response to the national needs. Plan								
Actual								
1.4 To support the Ph.D. holders to prepare a plan to conduct research activities in Myanmar. Plan								
Actual								
1.5 To support the Ph.D. holders to conduct research in universities in Myanmar through the Research Fund Plan						Activities: call, proposal evaluation and purchasing		
Actual								
Output 2: Quality of training programme on diagnostic imaging and emergency care for cross cutting clinical skills is improved.						Output 2		
2.1 To hold an orientation to introduce the Project framework and planned activities. Plan								
Actual								
2.2 To assess the current situation on clinical training in Myanmar by the instructors in the SUN universities Plan								
Actual								
2.3 To prepare the training programmes in Japan on each field by the responsible universities Plan								
Actual								
2.4 To receive and train Myanmar trainees at the SUN universities in Japan Plan						Clinical medicine short term training on 6 fieald		
Actual								
Output 3: Deliverables of Output 1 and Output 2 are officially introduced into the under-and-post graduate medical education in Myanmar.						Output 3		
3.1 To support the Ph.D. holders to hold a seminar to present his/her doctoral dissertations Plan						Presentation on Ph.D. dissertations Presentation on ex-trainees activities		
Actual								
3.2 To support the clinical medicines ex-trainees to organize seminars to disseminate the knowledge/skills they acquired in Japan Plan						Clinical dissemination seminars on clinical 6 fieals		
Actual								
3.3 To make DVD of the dissemination seminars Plan								
Actual								
3.4 To support ex-trainees to improve their activities after returning from Japan Plan						b.Purchasing equipment -A digital slide scanner for Pathology -Training equipment for Emargency medicine c.Workshop		
Actual								
3.5 To support MoHS and medical universities in the preparetion for accreditation of medical education Plan								
Actual								

Monitoring Plan	Plan / Actual	1st Year (2015) I	II	III	IV	2nd Year (2016) I	II	III	IV	3rd Year (2017) I	II	III	IV	4th Year (2018) I	II	III	IV	5th Year (2019) I	II	III	IV	Remarks	Issue	Countermeasures
Monitoring																								
Joint Coordinating Committee (JCC): once a year and when required	Plan																							
	Actual																							
Set-up/Revision of the Detailed Plan of Operation: when required	Plan																					Revise PDM and PO		
	Actual																							
Submission of Monitoring Sheet: twice a year	Plan																							
	Actual																							
Reports / Documents																								
Monthly Report (Japanese)	Plan																							
	Actual																							
Project Completion Report	Plan																							
	Actual																							
Public Relations (PR)																								
Web-site (Japanese language, onto the JICA Homepage): quarterly	Plan																					Web-site news were updated when major activities conducted.		
	Actual																							
Newsletter (English language: Email a PDF file): quarterly	Plan																					News letters were issued through email to about 180 persons related in September		
	Actual																							
Facebook (English: Upload activity photos):	Plan																							
	Actual																							
Other	Plan																					Updated the project pictures of JICA ODA site.		
	Actual																							


ジャイカ
JICA