

Developing a Public Health Training and Research Partnership between Japan and Vietnam

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Abstract

Development of academic partnerships between developing and developed countries is a sustainable approach to build research capacity in the developing world. International collaboration between the Department of Public Health of Fukushima Medical University School of Medicine in Japan and the University of Medicine and Pharmacy, Ho Chi Minh City in Vietnam began in 2002. The relationship has now grown into multifaceted efforts in public health research and education. During the past five years, two joint research projects were launched. Education projects included an epidemiology training course for Vietnamese physicians that has been carried out twice, an overseas public health elective for Japanese medical students that has been offered three times, and additional exchanges of medical professionals. The present article summarizes our past partnership activities and discusses several issues that need to be resolved in hopes of better promoting similar networks between Asian countries.

Key Words: *Public Health Professional Education, Medical Education, Epidemiology, International Educational Exchange*

Introduction

Despite worldwide promotion of evidence-based decision making at all levels of the health field, strengthening research capacity in developing regions remains one of the world's unmet challenges.¹ In response, several organizations from developed countries have initiated and expanded postgraduate training in public health, epidemiology, biostatistics and other related disciplines in developing countries.² Such training opportunities have the potential to result in continued collaborations, rather than ending in a one-way flow of support from developed to developing countries. Indeed, the promotion of research partnerships between developing and developed countries is a sustainable approach to build research capacity in the developing world.^{1,3}

International academic partnerships between countries in the same region are advantageous in that they facilitate exchanges of researchers and cross-border training. Additionally, such countries typically share similar public health issues⁴ and cultural backgrounds. Public health, in particular, is a multi-disciplinary field and international collaborative efforts contribute enormously to the educational and research activities at participating institutions. The Asia-Pacific Academic Consortium for Public Health promotes partnerships in the region to improve public health research and practice.⁵ An international partnership between the Department of Public Health of Fukushima Medical University School of Medicine in Japan (PHFMU) and the University of Medicine and Pharmacy, Ho Chi Minh City in Vietnam (UMP) began in 2002 between two individuals, and now has been expanded to include many academic collaborations in public health research and education. The present article summarizes our past partnership activities and discusses several issues that need to be resolved in hopes of better promoting similar networks between Asian countries.

Beginning and Expansion of Partnership Activities

Prior to the beginning of the partnership between PHFMU and UMP, the Population Council, Vietnam and the Department of Obstetrics and Gynecology at UMP organized a reproductive health research training course in 2000. Processes, outcomes and lessons learned from the project were reported previously.² After completion of the course, a Japanese main lecturer from PHFMU and a

Vietnamese teaching assistant from the course formed a partnership after joining Japan Cooperation Agency's project as experts in 2002 (Table 1).⁶

The partnership between the two universities continued and expanded gradually in research, as well as undergraduate and post-graduate medical education. A maternal and child health-related joint research project was launched in 2004, followed by a second series in 2006. Results from a Japanese survey site have already been published,⁷ and results from a Vietnamese site are forthcoming. In 2004, PHFMU created the International Health Elective Training for fifth-year medical students. Thus far, 6 students have visited Vietnam. In the same year, UMP invited PHFMU teaching staff to organize an intensive research training course for university physicians, which now has been carried out twice. Additionally, there have been exchanges of physicians and graduate students. The International Health Elective Training and PHFMU research training course for Vietnamese physicians are described in detail below.

International Health Elective Training for Fifth-Year Medical Students from Fukushima Medical University

A recent survey of medical students at 11 medical schools in Japan reported that over a third of them were interested in international health.⁸ Several Japanese medical schools have reported their achievements from offering overseas elective clinical training,^{9,10} but to our knowledge PHFMU's International Health Elective Training is the first from Japan to incorporate overseas public health training into medical education.

Fukushima Medical University offers a 7-week elective research training for every fifth-year medical student. Each student selects from one of nine basic and social science departments. During the past three years, 17 students selected PHFMU, 6 of them participated in the International Health Elective Training and visited Vietnam. A problem-based learning method is applied, and students in groups of two to three persons propose a topic, develop a research plan, and carry out a survey under supervision of an assigned teaching staff. The overseas program is officially approved by the school dean. All travel expenses, including travel insurance, are the responsibility of the students. All students are required to obtain written consent from their parents.

Research topics of past participants include a simulated development of a reproductive health project in Vietnam (2004), an international comparison of maternal and child health services (2004), and obstetrical medical education (2006). A total of six students completed these research projects and were asked to self-evaluate their achievements during the elective training in four areas: knowledge acquisition, learning process, results dissemination, and overall achievement. The results were as follows: majority of students ranked their knowledge acquisition highly (4 for basic knowledge and 5 for advanced public health knowledge); 4 students ranked the setting of a research aim highly, but only one student ranked time management highly, 5 students ranked their contribution as a group member highly, 4 students ranked report writing and presentation highly, and 5 students ranked their overall achievement highly. Self-evaluation regarding time management was generally low due to the short time frame to arrange overseas activities.

After completion of this elective training, one student from the first-year program was awarded the International Health Cooperation Fieldwork Fellowship. This fellowship was established in 1994 to offer field training in the Philippines. Average 10 medical students from Japan were selected to receive this Fellowship annually. In addition, a student's 2005 training experience was published by a peer-reviewed university journal¹¹ and another report of a student's 2006 experience has been submitted for consideration of publication.

Research Training Course for Physicians at the University of Medicine and Pharmacy, Ho Chi Minh City

The Research Training Course organized by PHFMU and UMP targeted UMP physicians and university lecturers. It offered training in basic epidemiology and practical survey skills that apply to daily clinical practice. Research topics included maternal and child health, lifestyle-related diseases and gerontology. These are subjects that often coincide with the needs of developing countries in tackling traditional and emerging health problems. Course announcements were distributed via leaflets and participants were selected by Vietnamese teaching staff. Course I was 2 weeks in length, but Course II was shortened to three days due to difficulty in adjusting teaching staff's schedules. Lectures were given mainly by three

lecturers, two Japanese and one Vietnamese, with assistance from two graduates of the training course in 2000. The lectures were conducted in English with translation into Vietnamese. Course materials in English were distributed prior to the course. Curricula of the two courses are shown in Table 2. Group projects were included in Course I and short in-class group exercises were included in Course II so that participants could apply knowledge and skills they acquired in lectures. Evaluations were based on participation rates and an examination on the last day in Course I, and on participation rates only in the Course II due to its short duration. Successful participants were given a certificate from UMP and PHFMU.

The number of students registered for the course was 36 in Course I and 45 in Course II. The course completion rate was 81% (29 participants) in Course I and 78% (35 participants) in Course II. Participants were tested on basic epidemiology knowledge before and after Course I. The median percentage score increased from 44% in the pre-test to 67% in the post-test. In Course II, only the post-test was carried out and the median score was 56%. Table 3 shows the results of the course evaluation by participants and self-evaluation of their progress reaching training objectives. Participants in both courses rated the usefulness of the course, topic selection, and course materials highly, but the rating was higher in Course I. Eighty-two percent of the participants indicated that their knowledge and skills increased in Course I, but the proportion was much lower (60%) among the first-time attendees of Course II. It was noteworthy that all of the 12 second-time attendees indicated that they gained confidence in designing and conducting research.

Despite the heavy clinical duties, attendance in the full-time course was as high as the part-time course in 2000,² and was rated highly. However, relatively lower final test scores, course evaluations, and self-evaluated confidence to design and conduct research in Course II may be caused in part by the short duration of the course and lack of a group project. It is recommended future course to extend the duration and to include group projects following the format of the Course I.

Future Expansion of Partnership

The Asia-Pacific Academic Consortium for Public Health listed four key elements for developing partnerships between countries in the Asia-Pacific region: 1) network formation and expansion, 2) research coordination, 3) cross-institutional

communication and instruction and 4) promotion of self-sufficiency.⁵ The Japan-Vietnam partnership we have described here covered the first three elements. In addition, factors that contributed to the successful operation of this collaborations could be regular contacts and visits, mutually agreed aims and funding, and inclusion of research and training activities that are mutually beneficial to participating institutions.

For further expansion and increase in sustainability of this collaboration, three issues need to be considered. The first issue is to strengthen an intra-institutional link at the Fukushima Medical University. At present, only one department is involved in the above-described activities on the Japanese side, whereas several departments and university-affiliated hospitals are involved under approval of a university dean on the Vietnamese side. Multiple links within an institution can lead to further expansion of an international partnership. The second issue, which relates to the first, is the financial matters. The research training course, for example, has been carried out based on mutual funding in which each university paid the international travel fee for one of the two Japanese lecturers. It is critical to not only seek partners from other departments in the Fukushima Medical University that share and participate in the scope of this work, but also funding support. Publicizing achievements of the partnership activities through electronic channels and academic journals is one of the ways of attracting researchers on the Japanese side. The third issue is related to the Consortium's fourth element, which is to promote self-sufficiency. Japanese researchers in particular have been taking a lead in designing and conducting research. More effort, however, is needed to encourage Vietnamese researchers to become principle investigators and to assist them in developing research proposals that respond to their country's specific needs. Securing financial resources, with the support of the Japanese, to fund these proposals also demands attention.

Now as the international collaborative program continues, a systematic multi-level evaluation is needed to routinely evaluate the magnitude of the program's impact. The Centers for Disease Control in the United States, for example, has been providing training programs in applied epidemiology for health professionals in various countries.¹² Their early report suggested that each program undergoes external evaluation every 3 years to assess the quality and management of the training, outcomes, and relationships with related governmental agencies and health authorities. In regard to evaluation design,

previous capacity developing programs reported usage of multi-level frameworks, one of which included the following 4 levels; 1) reactions (participants' evaluation of the training), 2) learning (short-term evaluation of gains in knowledge or skills), 3) behavior change (mid- to long-term organizational analysis and participants' career assessment), and 4) results (participants' continuous involvement in research).¹³ The first two levels of the evaluation framework are reported in the present study. The last two levels of evaluation need to be included and discussed among Japanese and Vietnamese program members in the future.

This paper summarized 5 years of collaboration between PHFMU in Japan and UMP in Vietnam. The partnership began on an individual basis and expanded to a multifaceted partnership in research and education. Two Vietnamese physicians from the group are currently involved in establishing a clinical epidemiology unit at a new hospital, which may lead to future expansion of the activities. This collaboration is still in the early phase of its development, but it is hoped it will have greater beneficial consequences for all institutions involved with continuous efforts and expansion.

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Table 1. Expansion of collaboration between the Department of Public Health of Fukushima Medical University School of Medicine (PHFMU) in Japan and the University of Medicine and Pharmacy, Ho Chi Minh City (UMP) in Vietnam

	Joint research projects (VN ↔ JP) ^a	Epidemiology training (VN ← JP)	Medical education (VN → JP)	Other activities (VN ↔ JP)
2002	Community survey on reproductive tract infections (RTI) in Vietnam was carried out by experts from PHFMU and UMP as a part of Japan International Cooperation Agency's (JICA) reproductive health project. ⁶			
2003				
2004	Research project on unintended pregnancy, funded by the Japan Society for the Promotion of Science (JSPS), was carried out in both countries. ⁷	Research Training Course I was carried out at UMP.	International Health Elective Training 2004 was carried out. Two fifth-year medical students of PHFMU who selected International Health in their 7-week elective course visited JICA project and interviewed physicians from UMP.	Two Vietnamese physicians from UMP-affiliated hospitals were trained at PHFMU as a part of JICA's counterpart training.
2005			International Health Elective Training 2005 was carried out and two students from PHFMU visited UMP. ¹¹	
2006	Research project on child rearing, funded by the JSPS, started in both countries. Two Vietnamese physicians from UMP were invited to Japan.	Research Training Course II was carried out at UMP.	International Health Elective Training 2006 was carried out, and two students from PHFMU visited UMP.	Graduate students from PHFMU started a research project in collaboration at UMP.

Note:

a. Flow of support is indicated in parenthesis.

Table 2. Curricula of Research Training Courses I and II at the University of Medicine and Pharmacy, Ho Chi Minh City

Research Training Course I		
	Morning (9:00-11:30)	Afternoon (13:30-16:30)
First Week	Study design Epidemiology in Gerontology	Critical appraisal of medical articles Research protocol
Second Week	Survey techniques Basic biostatistics Presentation of one medical article (Group work)	Development and presentation of research protocol (Group work)
Research Training Course II		
	Morning (9:00-11:00)	Afternoon (14:00-16:00)
First day	Basic epidemiology *	Examples of epidemiology surveys on maternal and child health, lifestyle-related diseases, and gerontology
Second day	Survey techniques *	
Third day	Basic biostatistics*	

* Includes in class group exercises

Table 3. Course evaluation by participants of Research Training Courses I and II and their self-evaluation of progress reaching training objectives

	Course evaluation (% of superior) ^a		
	Course I (N=39)	Course II (N=37)	
Usefulness of the course	97	89	
Selection of topics	92	78	
Course material	92	84	
	Self-evaluation of progress reaching training objectives (% of agree) ^b		
	Course I (N=39)	Course II	
		First time attendees (N=25)	Second time attendees (N=12)
My confidence to conduct research increased.	82	60	100
I have improved my skills to design a study.	72	76	100

Notes:

a. Five-level scale ranging from 1 (poor) to 5 (superior) was used, and the numbers in the table are the proportions of the sum of 4 and 5.

b. Likert-scale ranging from very disagree to very agree was used, and the numbers in the table are the proportions of the sum of agree and very agree.