1. Project title

Pathological capacity and system improvement for cervical cancer in Cambodia

2. Country name

Cambodia

3. Background

Cancer mortality is increasing in Cambodia. Bureau of International Health Cooperation in National Center for Global Health and Medicine (NCGM) launched a project for early diagnosis and treatment of cervical cancer with Ministry of Health in Cambodia, Cambodian Society of Gynecology and Obstetric (SCGO) and Japan Society of Obstetrics and Gynecology (JSOG) in 2015. The bottleneck for scale-up of the screening program lies in the limited capacity of pathological service. In 2015, there were only 4 pathologists, 15 pathology technologists and 3 public pathology laboratories all over Cambodia with 1.5million population.

A postgraduate course in pathology was created by University of Health Sciences (UHS) in 2015 to increase the number of pathologists. NCGM developed for 3 years from 2017 to support this course and improve the diagnostic ability of pathologist and specimen preparing technique of pathology technologist. As a result, 5 residents became certified as pathologists and the forth new pathology laboratory was established in the public hospital (National Maternal and Child Health Center). The recent global trend, telediagnosis requires an increase in the number of pathology technologists, an improvement of their skills to prepare adequate specimens and an implementation system of telediagnosis. In September 2019, the director of UHS requested us to support the introduction of pathology into the course of medical laboratory technology.

4. Objective

To increase the number of pathologists and pathology technologists receiving basic education in UHS
To strengthen the quality assured pathology service in Cambodia

5. Program outline

The targets of this project are students and teachers in Technical School for Medical Care (TSMC) for Bachelor of Science in Medical Laboratory Technology Bridging from Associated Degree (Bridging course) and in Faculty of Medicine for a postgraduate course in pathology of University of Health Science (UHS). This is the first year of projects for global growth of medical technologies, systems, and services through human resource development.
The main activities for pathology technologists is that course syllabus of pathology are made and lectures and practices about pathology are given in Bachelor of Science in Medical Laboratory Technology Bridging from Associated Degree (Bridging course) of TSMC.
The main activities for pathologists are that lectures and class practices are organised and implemented after subjects of them are identified for a postgraduate course in pathology of UHS under the cooperation of Germany and France through web system because of the global situation of COVID-19, and continuous education is implemented for the graduates of from the first batch of a postgraduate course in pathology of UHS.
The expected outcomes are as follows;
- Basic laboratory education is introduced and implemented in Technical School for Medical Care (TSMC)
- Lectures and practices are organised and implemented for a postgraduate course in pathology of University of Health Science (UHS)
- Continuous education is implemented for young pathologists including the graduates from the first batch of a postgraduate course in pathology of UHS

6. Implementation structure

6-1. Japanese side

Bureau of International Health Cooperation in NCGM will be focal of this project and assist in communication and coordination among project members in both countries. Japanese Society of Clinical Cytology (JSCC) and Japanese Society of Pathology will recommend Japanese experts and training facilities.
6-2. Counterpart country side
The main counterpart will be Faculty of Medicine and Technical School for Medical Care (TSMC) of University of Health Sciences (UHS). Faculty of Medicine will conduct a postgraduate course in pathology in which 6 residents are enrolled as second batch and coordinate lectures by the international partners. TSMC has created Bachelor of Science in Medical Laboratory Technology Bridging from Associated Degree with almost 60 students and coordinate lectures and practices.

7. Indicator	
7-1. Output	<Technologist> 1) Course syllabus of pathology are made in Bachelor of Science in Medical Laboratory Technology Bridging from Associated Degree (Bridging course) of Technical School for Medical Care (TSMC) 2) Lecture and practice about pathology are conducted for 45 hours in the Bridging course <Pathologist> 3) Six residents of the second batch in the postgraduate course in University of Health Science (UHS) take the one general and the one particular lectures at a time (every two sections) 4) Four young pathologists take a case discussion by diseases
7-2. Outcome	<Technologists> 1) Eighty percents of the 60 students in the second batch of Bridging course pass the graduation exam and get bachelor degree of laboratory technology <Pathologists> 1) The residents of the second batch in the postgraduate course understand the class and are evaluated more than 70% after the lectures 2) The pathologists graduated the postgraduate course (first batch) make the same diagnosis with Japanese pathologists in case discussion (more than 70%)
7-3. Impact	<Both Technologists and Pathologists> 1) Bachelor course curriculum (4 years) including pathology is created on the basis of the education contents of Bridging course of Technical School for Medical Care (TSMC) 2) Graduates with a bachelor degree of laboratory technology work as pathology technologists at health facilities in Cambodia 3) The postgraduate course in pathologist and the bachelor course of science in medical laboratory technology in UHS open and continue, and the number of pathologists and pathology technologists are increased 4) Society of pathology is established and the number of members is increased

8. Main activities	
8-1. Training in 2020	
1)	Training in Cambodia (Dispatch 9 Japanese experts and NCGM staff for 1 week in July, September, October and January)
2)	Training in Japan back to back with JSCC annual conference (site visit for 4 days) in November.