



Pilot project to eradicate gastric cancer in the country

Lhakpa Tshering

A gastric cancer eradication pilot project will be implemented at Dawakha BHU catchment areas from October 2019 to September 2022. Dawakha has reported the highest stomach cancer rate in the country.

With the pilot project gets underway, it would prevent the incidence and death of gastric cancer through effective screening and eradication of *Helicobacter pylori* (*H. pylori*). It will further improve the early detection of gastric through endoscopy.

This project expects the inhabitants of Dawakha to understand the risk of *H. pylori* and actively participate in medical check-up. Consequently, more than 50 percent of inhabitants who is older than 20 years old (1,500) in Dawakha would go to medical check-up.

The pilot project will target Thimphu and inhabitants of Dawakha sub-district. It will also create a successful model case by teaching necessary measures for eradicating gastric cancer to the residents and medical personnel in certain areas.

The findings from this project will be used to guide and support development of national gastric cancer control program. It will roll-out nationwide program to reduce incidence and mortality of gastric cancer.

The project is also exploring fund to procure latest ad high-end endoscopy machine that can improve the detection rate of early gastric cancer.

This pilot project is initiated by the Khesar Gyalpo University of Medical Sciences of Bhutan (KGUMSB), Ministry of Health, Jigme Dorji Wangchuk National Referral Hospital (JDWRNR) and a nonprofit organization Zero *Helicobacter* IGAN Network of Japan (HIGAN).

This project will be funded by the Japan International Cooperation Agency (JICA) and HIGAN. The executing agency for technical cooperation of the government of Japan, JICA will implement



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the project under the JICA Partnership Program in collaboration with HIGAN.

Evidence from other countries suggests that major proportion of stomach cancer is attributed to infection by *H. pylori*.

Studies in Bhutan suggest the prevalence of *H. pylori* infection ranges from 66 percent in children to 80 percent in patients presenting gastric problems. The *H. pylori* bacteria isolated in Bhutan are known to be the most carcinogenic strain in the world.

A professor with HIGAN, Yomiko Kamogawa said that gastric cancer is a most frequent cancer in Bhutan. "The major cause of gastric cancer is known to be *H. pylori* infection," she said. "The prevalence of *H. pylori* is extremely high and bacterial strain is highly toxic like Japan."

She said Japan used to be one of the countries suffered with gastric cancer. "To overcome this problem, we developed screening for GCA and introduce eradication therapy," she said. "On the process for doing this, we developed several special techniques such as endoscopic detection and operation."

Yomiko Kamogawa said the epidemiology data from this pilot project will give important information to the nationwide strategy for the eradication of gastric cancer in Bhutan in the future. "We are happy to share the knowledge the

countries that has similar problem with us," she said.

The project would help to strengthen laboratory capacity of Bhutan to detect *H. pylori* infection and assessment of efficacy of *H. pylori* treatment.

The president of KGUMSB, Dr KP Tshering said that gastric cancer remains a significant public health issue in the country. "Japan has done a wonderful job in controlling the gastric cancer," he said. "We are excited to collaborate on this pilot project."

Through this project, he said the people are expected to benefit on advocacy, education in stomach cancer and *H. pylori* bacteria infection. "The awareness of *H. pylori* is very poor in the country including the medical field."

As a part of this project, eight medical doctors are being trained to conduct advance endoscopy to detect early gastric cancer taking Train-the-Trainer approach.

The agencies agreed to work out the details of activities and measures to be taken by JICA, KGUMSB and MoH concerning the pilot project.

To implement the project efficiently and effectively, JICA will supervise the overall implementation of the project and bear only those expenses it considers necessary. It will maintain ownership of the equipment to be procured through its funding for the implementation of the project.

The authorities concerned of KGUMSB will provide necessary information such as data, map and documents and information about details on security conditions.

The authorities concerned of health ministry will provide necessary information such as inhabitant's health data at project site. It will be responsible to provide Bhutanese laboratory technicians to examine inhabitants' samples.

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JDWRNH will provide necessary information such as endoscopic data and documents. With the health ministry, it will allow medical personnel to attend endoscopic training performed by HIGAN.

The medical procedure to take blood sample from inhabitants in Dawakha will be done by KGUMSB and MoH at their own risk and responsibility.

While the laboratory scientists in Royal Center for Disease Control acquire the methods for *H. pylori* detection test as well as for antibiotics resistance, the medical doctors in Bhutan acquire the skill for detecting gastric cancer.

HIGAN will inform the risks of gastric cancer and *H. pylori* to inhabitants of Dawakha and introduce the methods for detection of *H. pylori* to Bhutanese

laboratory technicians, give an instruction for the detection of gastric cancer by endoscopy to the Bhutanese medical doctors.

HIGAN has visited Bhutan in 2010, 2014 and 2015 to examine infection status of *H. pylori* in Bhutan by endoscopy. It performed about 800 endoscopy and found about 80 percent of population is infected with *H. pylori*.

It also found that the majority of *H. pylori* in Bhutan are highly virulent, and resistant to Metronidazole (one of antibiotics that used to use for eradication of *H. pylori*).

The cervical and stomach cancers constituted the majority of the cancer burden in the country. It is one of the leading causes of cancer-related deaths.

The population-based cancer registry maintained at the national referral hospital recorded 2,648 cancer cases from 2014-2017 of which 954 individuals died.

The average annual incidence of cervical cancer is 25 per 100,000 populations with similar incidence of stomach cancer at 24 per 100,000 populations.

Stomach cancer causes the highest mortality amongst all cancers with 12 deaths per 100,000 populations. Currently most stomach cancer cases are detected at late stage. Thus, it makes difficult with majority of cases ends up dying.