Internal Ex-Post Evaluation for Grant Aid Project

conducted by Balkan Office: March, 2016

Country Name	**Project for Breast Cancer Screening and Prevention Capacity Improvement in the Republic of Serbia**
Republic of Serbia	

I. Project Outline

Background	In Serbia, cancer was the second highest cause of death (19.9%) following cardiovascular diseases (2007), and the main reasons for this situation were the lack of a proper medical screening system and delays in early stage detection and treatment. Especially, breast cancer had a higher incidence rate (25% of all cases of cancer in females), and its early stage detection rate remained at 25%, which was much lower than the average of developed countries (more than 70%). Even worse, the large proportion of breast cancer patients died within three years of the onset of the disease. Thus, the delay in the detection of cancer leads to the high mortality rate, and increases the physical and economic burden on patients as well as on their families, due to the need for treatment for advanced cancer. It also increases the financial burden borne by the state due to expenditure on treatments using anti-cancer agents. In these circumstances, early stage detection of breast cancer was an urgent issue.				
Objectives of the Project	To promote the establishment of the breast cancer screening system in Serbia, by procuring mammography units and related equipment in 39 facilities.				
Outputs of the Project	1. Project Site: 39 health facilities in the country 2. Major Project Component: (i) Procurement of mammography units (digital-type and analogue type) and their related equipment. (ii) Technical training on quality control of mammographic images and equipment accuracy control. 3. Serbian Side: Primary works necessary for the installation of the equipment to be procured, tax exemption, custom clearance, personnel and budget allocation required for implementation of the project, etc.				
Ex-Ante Evaluation	2010	E/N Date	June 30, 2010	Completion Date	September 28, 2011
Project Cost	E/N Grant Limit: 632 million yen, Actual Grant Amount: 280 million yen				
Implementing Agency	Ministry of Health				
Contracted Agencies	Fujita Planning Co., Ltd., Ogawa Seiki Co., Ltd.				

<Special perspectives considered at the ex-post evaluation>

1. Indicators of the qualitative effects: At the ex-ante evaluation, qualitative indicators were not set forth to verify the effectiveness. In the ex-post evaluation, improvement of the accuracy in the breast cancer screening was used as a qualitative indicator, based on the preparatory survey report.
2. Constraints: At the ex-post evaluation, most of the data necessary to verify the effectiveness was not available, because the Ministry of Health is still in the planning stage of conducting the organized breast cancer screening program and the number of the facilities which have joined the program is limited. Also, the target population of the screening changed. Therefore, it could not be judged strictly whether the objective was achieved against the plan.

II. Result of the Evaluation

1 Relevance

<Consistency with the Development Policy of Serbia at the time of ex-ante and ex-post evaluation>

The Project has been in line with the Health Policy (2002), Vision of Health Care in Serbia (2002) and Strategy and Action Plan for Health Care System Reform (2009-2011), the National Breast Cancer Prevention Program that was approved by the Government in 2009. The program was amended in 2013 as the government regulation (Official Gazette of RS, No. 73/2013).

<Consistency with the Development Needs of Serbia at the time of ex-ante and ex-post evaluation>

In Serbia, the early stage breast cancer detection rate was as low as 25% (2005). The delay in the detection of cancer leads to the high mortality rate, and also increases the physical and economic burden on patients as well as on their families Thus, the project has met the needs for early detection of breast cancer.

<Consistency with Japan's ODA Policy at the time of ex-ante evaluation>

Based on the Policy Consultation in 2002, the health and education sectors are priority assistance areas. For provision of the basic social services, the assistance in the health sector included development of the medical equipment and ambulance cars.

<Evaluation Result>

In light of the above, the relevance of the project is high.

2 Effectiveness/Impact

<Effectiveness>

It cannot be exactly judged whether the objective was achieved as planned, because most of the data necessary for verification was not available due to the change in the target group for the organized screening program. Considering this change in the target age group, the planned number of the women who have a screening test for 2013-2014 is calculated as 162,825 (83.5% of 195,000)[1]. The actual number who had a screening test for that period was 150,634. This is slightly less than the recalculated planned figure, but it includes not only organized screening but also opportune, clinical and diagnostic test[2]. It could not be confirmed whether organized breast cancer screening

[1] The population of 50-69 (1,086 thousand) is 83.5% of that of 45-69 (1,302 thousand).

[2] Organized screening is a test of screening mammograms and interpretation of images conducted through calling for the target population. Opportunistic screening means application of screening tests as part of regular inspection. In case a women asks for examination by herself, it is categorized as an

contributed to detection of breast cancer because the obtained data includes were the sum of those of all types of screening. One of the reasons for slightly underreaching the target is that the organized breast cancer screening program[3] has started in 2012, and is still in the process of the gradual expansion. By the time of the ex-post evaluation, 25 facilities have been involved in the program, including 21 of the project target 39 facilities. In order to join the program, the facilities need to satisfy requirements[4] set by the program so that they could offer high quality breast cancer screening, and thus it takes time for the program expansion. Secondly, the facilities, even they started the screening program, have difficulties in notifying the target population on the program because they do not have the latest list of the target population. Also, even though each facility has a staff in charge of the notification, they are not much experienced (volunteers, freshmen, nurses, etc.). Thirdly, unclear demarcation among the medical institutions has caused a delay in organizing the whole screening system. It is supposed that screening has a preventive function to be conducted at the primary level and additional diagnostic procedure is undertaken at the secondary or tertiary level. However, there are still some primary level facilities without screening equipment. The breast cancer screening as a system includes from notification to additional diagnosis, but the protocol for screening has not necessarily been established clearly. The fourth reason is the lack of the available staff. Even though trained radiologists and radiographers are assigned at the facilities, they cannot have sufficient time for the screening-related works because they are busy with other duties such as X-ray radiography, ultrasound, computed tomography (CT), magnetic resonance imaging (MRI), and etc..

As qualitative effects, the accuracy of breast cancer screening has been improved with the procured equipment and technical training by the project. For example, according to MOH, the radiographers at the target facilities have improved their skills for positioning/compressing the breast and developing/processing of radiographed images. Also the radiologists answered that the mimeographs taken by the radiographers have better quality (more optimal resolution and contrast) than before. And, the radiologists have improved their skills for reading radiographed images, as the condition of reading the mammograms has been better due to the procured equipment, according to MOH.

<Impact>

The government started the organized screening program with awareness activities in 2012, but the public understanding and recognition of the screening have not raised to a satisfactory level. Thirteen facilities among the questionnaire-surveyed 33 answered that the public recognition has been improved, but all of 12 interviewed facilities answered that it is not still sufficient. If more breast cancers are discovered at the earlier stage, it is expected that mortality rate form the breast cancer would decrease and that the state expenditure on treatments using anti-cancer would decrease. However, these decreases have not been confirmed yet. MOH considers that it is too early to expect to these changes.

No negative impact on the natural environment has been observed.

<Evaluation Result>

The total number of the women who had a breast cancer screening test almost reached the planned figure, but due to the change of the target population age and insufficient data, its achievement could not be judged exactly. On the other hand, the accuracy of the screening has been improved. Expected impacts such as the mortality rate decrease have not been confirmed since they are too early to be realized at the time of the ex-post evaluation. Thus, the project effectiveness/impact is fair.

Quantitative effects

Indicator	2008-2009 (before the project)	2013-2014 (target year) Target value	2011-2012 Actual value	2013-2014 Actual value
In the project's targeted facilities				
Number of the women who had a breast cancer screening test for 2 years	N.A.	195,000	N.A.	150,634 *1,2
Ratio of the women who had a breast cancer screening test for 2 years	--	--	N.A.	N.A.
Number of discoveries of breast cancer patients (new enrollment) for 2 years	N.A.	3,375	N.A.	N.A.
Ratio of discoveries of breast cancer patients (new enrollment) for 2 years	0.5%	0.5%	N.A.	N.A.
Number of discoveries of early stage breast cancers (cancer tissue of less than 2cm diameter) for 2 years	N.A.	843	N.A.	N.A.
Ratio of discoveries of early stage breast cancers for 2 years	25%	25%	N.A.	N.A.
Total in the country (Supplementary information)				
Population of the women aged 45-69 (thousand)	1,300	--	N.A.	1,302 (45-69) 1,086 (50-69)
Number of the women who had a breast cancer screening test for 2 years	9,000	650,000	N.A.	78,576 *2
Ratio of the women who had a breast cancer screening test for 2 years	--	--	N.A.	19.7%
Number of discoveries of breast cancer patients (new enrollment) for 2 years	8,000	11,250	N.A.	290 *2
Ratio of discoveries of breast cancer patients (new enrollment) for 2 years	0.5%	0.5%	N.A.	0.4%
Number of discoveries of early stage breast cancers (cancer tissue of less than 2cm diameter) for 2 years	2,000	2,812	N.A.	N.A.
Ratio of discoveries of early stage breast cancers for 2 years	25%	25%	N.A.	N.A.

Source: MOH and National Office for Screening.

Note: *1 The figure includes not only organized screening but also opportune, clinical and diagnostic test.

*2 There was a change in the screening target population for the organized screening program, from 45-69 to 50-69.

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opportune test. Clinical test is conducted as diagnostics of unclear clinical findings in symptomatic patients, usually conducted at secondary and tertiary medical institutions. Diagnostic test is conducted when a women already feels certain changes or the earlier mammograms already shows a need for the retest, usually conducted at primary medical institutions.

[3] In the organized screening, women receive notification and visit the facility for the screening test and images interpretation, accompanied with quality control by and reporting to MOH.

[4] Requirements include adequate equipment for screening, sufficient number of radiologists and radiographers according to the targeted population coverage of each health facility, appointed screening coordinator, etc.

3 Efficiency

Outputs were produced as planned. Both the project cost was much less than the plan (ratio against the plan: 44%) due that the project was contracted at even lower bid price than expected due to competitive tendering, and also the project period was within the plan (ratio against the plan: 94%). Therefore, efficiency of the project is high.

4 Sustainability

<Institutional Aspect>

After the project completion, the national program for organized breast cancer screening started. The National Cancer Screening Office is in charge of needs assessment, planning and monitoring of the breast cancer screening program, coordinating trainings for the personnel engaged in the screening. As of August 2015, 25 facilities have joined the program to provide services of breast cancer screening[5]. Although the organizational structure for the organized screening has been mostly established, there is a shortage in the number of the available radiologists and radiographers as the currently assigned personnel have other duties than breast cancer screening services. At the target facilities, 33 more radiologists and 35 more radiographers are needed. Establishment of the overall quality control is another issue. As MOH has not established the Central Committee for Accuracy Control of Mammography Screening yet, quality control of the screening service and performance depends on each of the facilities.

<Technical Aspect>

As expected at the ex-ante evaluation, the radiologists and radiographers at the target facilities received training on the breast cancer screening conducted by the working groups before the equipment was procured. New radiologists and radiographers receive required training before they are included in the organized breast cancer screening, and after they start they have an opportunity to work with more experienced colleagues as OJT. According to MOH, the skills of radiologists and radiographers are sufficient as explained in <Effectiveness> section. The manual on Accuracy/Quality Control developed by the project has been used at most facilities, but reportedly five facilities have not received the manual.

<Financial Aspect>

Since 2013, the budget for cancer-related programs has been allocated to the National Cancer Screening Office under MOH (12 million RSD for 2013 and 2014 each, 25 million RSD for 2015). One-thirds is secured for the breast cancer screening program: 8.3 million RSD for 2015. This amount is sufficient to conduct training for the screening-related personnel, promotion and awareness raising activities and office operation. Expenses for the breast cancer screening of each facility are remunerated by the Health Insurance Fund. The detailed financial data of each target facility was not available. According to the questionnaire survey, all facilities have sufficient resources for regular maintenance of the procured equipment, but some have a sufficient budget for breast cancer screening while others do not due to their other priority issues.

<Current Status of Operation and Maintenance>

The procured equipment has been in good conditions except one digital mammography and two analogue mammography (among 32 mammography machines). There had been a breakdown with the digital mammography in Valjevo, but it was repaired with donations organized by a local radio station and private company. At each facility, the radiology department is responsible for technical issues, such as daily check-up, procurement of spare parts and consumables, in consultation with the registered private company. When there are breakdowns which cannot be dealt with by the facility, it reports to MOH to ask for repair.

<Evaluation Result>

Some problems have been observed in terms of the institutional, financial aspects and current status of operation and maintenance of the implementing agency. Therefore, sustainability of the project is fair.

5 Summary of the Evaluation

With the procured equipment, the national program for breast cancer screening started in 2012. Due to the change in the target population group of the screening, the accurate data was not available, but the number of the women who had a breast cancer screening test almost reached the planned figure. The accuracy of the screening has been improved. The organizational structure for the national screening has been established, but insufficiency of radiologists and radiographers and quality control are still issues. As for the financial aspect, sufficient budget is allocated for the breast cancer screening program, but some facilities face budget constraints for providing screening services. Only three procured equipment remain unrepaired after the breakdown.

In light of the above, this project is evaluated to be satisfactory.

III. Recommendations & Lessons Learned

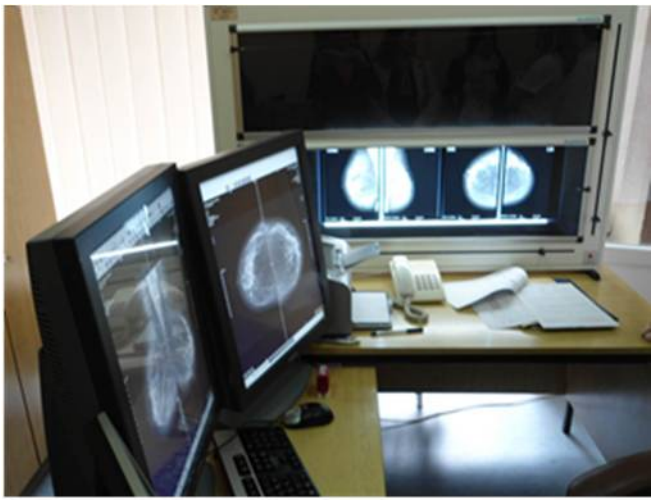
<Recommendations for MOH>

1. To set forth appropriate indicators on the number of the discoveries of breast cancer patients, discoveries of early stage breast cancers and mortality rate from breast cancers for the new screening target population, so that MOH can examine the effects of the organized breast cancer screening. Proper data collection would be possible by utilizing IT network at the facilities.
2. To repair the broken mammography machines in Kraljevo, Zajecar and Negotin so that breast cancer screening can be undertaken properly at these facilities.
3. To secure necessary manpower of the skilled radiologists and radiographers for breast cancer screening services. As well as reducing the burdened tasks of the current personnel so that they could spend more time for screening tests, it is recommended to employ more radiologists and radiographers based on each facility's need.
4. To speed up the network of the facilities for the national program for breast cancer screening. Also by implementing more awareness raising activities, it is expected that more women would have a screening opportunity for early detection of breast cancer.
5. To establish the Central Committee for Accuracy Control of Mammography Screening as much as possible. The committee should ensure the quality control in the country as a whole, by receiving the report from each facility regularly.
6. To apply the project experience (such as equipment development, training of technicians, awareness-raising activities, etc.) in order to establish the prevention programs of other diseases including cervical and colorectal cancers.

<Lessons Learned for JICA>

[5] Besides these 25 facilities, 18 municipalities provide mobile mammography screening. In Serbia, basically there are one medical facility (primary level) in each of 150 municipalities and 24 cities.

1. The digital mammography had a severe damage in a facility and it had been unrepaired due to the financial constraints of the facility and MOH. However, a local radio station and private company organized a donors' dinner and succeeded in collecting necessary resources for the repair. This was realized because the local community was aware of the importance of cancer screening. Thus, it is very important to secure other possible financial sources especially in cases where the implementing agency may face budget constraints for operation and maintenance. If the local community understands the benefits of the project, it can be financially of great help for repair of the procured equipment. In order to ensure such a support, it is effective to conduct awareness raising activities toward the local community not only the target group within the project.



(Reading the mimeographed images at the facility of Krusevac)

(Digital mammography in Valjevo)