

Country Name	Project for Improvement of Equipment for National Center of Rehabilitation and Prosthesis of Invalids
Republic of Uzbekistan	

**I. Project Outline**

Background	In Uzbekistan, there were 772,314 persons with disabilities (PWD) in 2008, among which 539,621 had completely lost labor ability. The Ministry of Labor and Social Protection of Population has made efforts to promote medical-social rehabilitation of PWD. However, most of the facilities and equipment for support of PWD were deteriorating, and resulted in poor services including those of the National Center of Rehabilitation and Prosthesis of Invalids (the Center). The Center was a top referral facility, which receives the patients from the whole part of the county and provides advanced medical treatment and rehabilitation. The Center also functions as an educational facility which provides training for orthopedists and rehabilitation technicians. Under these situations, upgrade of the facilities and medical and rehabilitation equipment was an urgent issue to improve quality and quantity of the services.				
Objectives of the Project	To improve services provided by the Center in Tashkent by procuring equipment for rehabilitation and orthopedics and providing technical training to the personnel of the Center on operation and maintenance of the procured equipment.				
Outputs of the Project	<ol style="list-style-type: none"> <li>1. Project Site: Tashkent (2 facilities: Territory 1 and Territory 2)</li> <li>2. Japanese Side: (1) Procurement of equipment in the Center related to physiotherapy, laboratory, x-ray, operation &amp; ICU, diagnosis and others., (2) Technical training on operation and preventive maintenance of the procured equipment, focusing on (i) use of the Passport (record sheet for operation and maintenance of the equipment) and (ii) maintenance based on the developed schedule.</li> <li>3. Uzbekistani Side: Preparation of the rooms for installation of the procured equipment, renovation of the rooms for the x-ray protection, tax exemption, etc.</li> </ol>				
Ex-Ante Evaluation	2009	E/N Date	February 19, 2009	Completion Date	April 16, 2010
Project Cost	E/N Grant Limit: 441 million yen, Actual Grant Amount: 363 million yen				
Implementing Agency	National Rehabilitation and Prosthesis Centre for People with Disabilities (the Center) (former Republican Center for PWD with locomotive system problems)				
Contracted Agencies	International Techno Center Co., Ltd., Mitsubishi Corporation				

**II. Result of the Evaluation**

1 Relevance
<p>This project has been highly consistent with Uzbekistan's development policy at the time of both ex-ante and ex-post evaluation. Enhancement of rehabilitation services for and social protection of PWD has been emphasized in the "Law on Social Security of Disabled People in the Republic of Uzbekistan" (1991), "Program of Activities on Further Strengthening Addressed Social Protection and Social Services for Lonely Aged, Retires and Person with Disabilities 2007-2010," Cabinet's Resolution No.307 in 2010, and President's Decree No.1542 in 2011. It has been in line with needs for improvement of quality and effectiveness of rehabilitation services. Also, this project was consistent with Japan's ODA policy at the time of ex-ante evaluation, which put one of its priorities on supporting to enhance the quality of healthcare, including possible preventive care programs, as cited in the Country Assistance Program to the Republic of Uzbekistan (2006).</p> <p>Therefore, relevance of this project is high.</p>

2 Effectiveness/Impact
<p>This project has largely achieved its objective of "improving services provided by the Center regarding rehabilitation and orthopedics," by fully utilizing all the procured equipment. Compared to the situation before the project, the number of surgeries on disk herniation and the number of inpatients increased, and the average days of hospitalization decreased in 2011 (see the chart below for the details). On the other hand, the number of diagnoses of CT scan did not reach the target figure in 2011 and the number of surgeries other than disk herniation and charged health check-ups did not increase as planned. It is because the services of the Center were stopped in 2011-2012 due to the facility renovation. Also, diagnoses of CT scan were suspended during its breakdown in late 2011 and early 2013<sup>1</sup>. After the renovation work, indicator 3 (the number of surgeries excluding disk herniation) and indicator 6 (charged health check-ups) reached the target figure in 2013.</p> <p>The improved quality of services, such as diversification of available diagnoses and rehabilitation menus at the Center, improvement in accuracy of the diagnoses and patients' satisfaction, etc. was observed at the time of ex-post evaluation. More concretely, the Center can conduct diagnoses for acute disturbance of the blood circulation in the brain, detailed planning of reconstructive surgeries, etc., which was not available before the Project. Also, new medical rehabilitation menus such as correction of the spine using transpedicular fixation, endoscopic removal of spinal disc herniation, etc. were added after the project, .</p> <p>As for impacts, the following positive impacts have been observed as expected at the time of ex-ante evaluation. First, the number of referred patients to the Center from other facilities increased from 20 in 2008 to 58 in 2013 due to supply and use of</p>

<sup>1</sup> Even during the renovation works, some departments partly had been working, particularly surgery on disk herniation and the Centre had provided medical services for inpatients as well. Therefore, some indicators were not affected by the renovation works.

high technological medical equipment at the Center. Second, the training provided by the Center has been improved. As a result of installment of such as physiotherapy and diagnostics medical equipment and training devices procured by the project, the Center improved their knowledge and gained new skills in the field of comprehensive rehabilitation of PWD. And two to three training courses have been conducted every year for the staff of the Center and specialists from other regions of Uzbekistan. The Center answered that all the staff who participated in the training came to understand the importance of daily preventive maintenance. Third, more PWDs became able to physically perform a certain type of work after the rehabilitation than before; the percentage increased from 21.4% in 2009 to 30.0% in 2014. No negative impact on the natural impact has been observed. There were no land acquisition and resettlement.

Therefore, effectiveness/impact of this project is high .

#### Quantitative Effects

Indicators	Year 2007 (before the project) Actual Value	Year 2011 (target year) Target Value	Year 2011 (target year) Actual Value	Year 2013 (ex-post evaluation) Actual Value
Indicator 1: Number of diagnoses of CT scan	0	2,000	1,744	1,459
Indicator 2: Number of surgeries on disk herniation	174	Increase from 174	251	573
Indicator 3: Number of surgeries excluding disk herniation	809	Increase from 809	513	1,357
Indicator 4: Number of inpatients	4,193	Increase from 4,193	4,723	5,205
Indicator 5: Average days of hospitalization	14.3	Decrease from 14.3	14.0	13.3
Indicator 6: Number of charged health check-ups	4,154	Increase from 4,154	3,208	4,783

(Source) The Center.

#### 3 Efficiency

The outputs of the project were produced with minor changes in terms of the installation place, and manufacturer and country of the origin of the procured equipment. The project cost was within the plan (ratio against the plan: 82%), but the project period exceeded the plan (140%). Therefore, efficiency of the project is fair.

#### 4 Sustainability

The equipment procured by the project have been operated and maintained by the Center. At the time of ex-post-evaluation, the Center is still operated under the Ministry of Labor and Social Protection of Population. And, the Center consists of the two sub centers: Territory I and Territory II. The total number of employees at the Center has slightly increased from 2008 to 2013 and this number is considered to be sufficient. While the situation that no section or technician is responsible exclusively for maintenance of the medical equipment at the Center has still been the same since the time at the ex-ante evaluation, the Center, when need arises, has a contract for operation and maintenance (O&M) with Mangnum Medical and Phillips Companies which send its technicians to fix broken equipment. Further, users of the equipment such as physicians and staff conduct routine O&M.

In the technical aspect, many physicians have sufficient skills for O&M because they had received overseas training on endoscopic surgery even before the project. As to those who gained knowledge and skills from the training conducted as a part of the project, they can also operate the high quality equipment in their daily professional activities. For the new physicians and personnel who joined the Center after the project, the training was conducted on O&M of the equipment and they have no difficulty in O&M of the equipment and they are using the “passport for O&M of the equipment<sup>2</sup>.” The manuals for O&M of the procured equipment are accessible to all the personnel who need to refer to.

With regard to the financial aspect, the Center has no major problem for O&M of the procured equipment. The income from the charged services for 2013 was 1,911 million sum<sup>3</sup>, which is more than double of 2008 (864 million sum). Also the budget for O&M of the procured equipment has increased drastically, 9 million sum in 2008 to 90 million sum in 2013. This budget covers also for the equipment which the Center itself has purchased.

So as to the current status of O&M of the equipment, the Center has not faced serious breakdown problems by the time of ex-post evaluation. The maintenance plan has been prepared for daily checking and it has been conducted. The checking record such as operating time, breakdown etc., has been kept in the “passport.” Spare parts and consumables have been obtained without any difficulty, based on the filled “passport.”

The project has no problem in the institutional, technical and financial aspect and the current status of O&M of the Center. Therefore, sustainability of this project effect is high.

<sup>2</sup> The “passport” has been used for preventive maintenance of the procured equipment, which keeps information such as record of operation and breakdown. The O&M system with the use of the passport was originally introduced by a JICA volunteer dispatched to the Republican Scientific Center for Emergency Medical Care. The equipment procured by JICA in 2001 was well utilized at the time of Basic Design Study, and the system was effectively functioning. (source: Annex 6 (Soft Component Plan), Basic Design Study Report, 2008.)

<sup>3</sup> 1000 sum are approximately equivalent to 44 yen as of August 2014.

## 5 Summary of the Evaluation

This project has largely achieved its objective, “improvement of the services provided by the Center regarding rehabilitation and orthopedics.” There has been improvement in the numbers of surgeries on disk herniation, number of inpatients and hospitalization days, while the situation has not been improved in terms of the number of diagnoses of CT scan, number of surgeries other than disk herniation and charged health check-ups in the target year. However, the number of surgeries excluding disk herniation and charged health check-ups has reached the target value in 2013-. As for impact, positive impacts have been observed including strengthened referral system and improved training at the Center. Regarding efficiency, the project period exceeded the plan, although the cost was within the plan.

As for sustainability, the Center has no problem in the institutional financial and technical aspects and the current status of O&M. In light of the above, this project is evaluated to be highly satisfactory.

## III. Recommendations & Lessons Learned

### Lessons Learned to JICA

- At the designing stage of this project, the survey was conducted to understand O&M system in Uzbekistan. The survey revealed the effectiveness of the “passport” which was introduced by JOCV and still utilized at the Republican Scientific Center for Emergency Medical Care. This “passport” system was co-opted in the project, and it is functioning up to the time of the ex-post evaluation. Thus, examining the existing appropriate system in the target country is crucial to increase the effectiveness and also sustainability of the project effects.



(Rehabilitation services provided with the procured equipment.)