

Country Name	The Project for Improvement of Medical Equipment for Children's Hospitals
Ukraine	

### I. Project Outline

Project Cost	E/N Grant Limit: total 938 million yen (1/2) 453 million yen (2/2) 485 million yen	Contract Amount: total 760 million yen (1/2) 383 million yen (2/2) 377 million yen
E/N Date	(1/2) February, 2007 (2/2) February, 2008	
Completion Date	February, 2009	
Implementing Agency	Ministry of Health	
Related Studies	Basic Design Study: April, 2006 – October, 2006	
Contracted Agencies	Consultant(s)	International Techno Center
	Contractor(s)	-
	Supplier(s)	Sirius Corporation (Package 1 of 2/2), Marubeni Corporation (Package 1 of 1/2 and Package 2 of 2/2), Ogawa Seiki (Package 2 of 1/2 and Package 3 of 2/2)
Related Projects (if any)	The Project for Improvement of Medical Equipment in the Ukrainian Children's Specialized Hospital OKHMATDET (Grant Aid, 2000)	
Background	<p>As the population ages and the birthrate declines, the Ukrainian Government announced efforts designed to lower the infant mortality rate, enhance the health of children and make improvements in the field of pediatric care, with particular priority placed on rural rather than urban areas. Against such a background, Japan implemented a General Grant Aid Project for 2000, in order to upgrade medical equipment at the top referral hospitals for pediatric care in Ukraine.</p> <p>In 2001, the Ukrainian government then requested Japan to sponsor a project to upgrade medical equipment at region (<i>oblast</i>) -run children's hospitals, which are considered the secondary level of medical care in Ukraine and the top referral hospitals in the five regions.</p>	
Project Objectives	Outcome	To strengthen and improve medical services at children's hospitals of five regions (Lugansk, Kirovograd, Kharikiv, Dnipropetrovsk, Donetsk) by developing medical equipment.
	Outputs(s)	<p>Japanese Side</p> <ul style="list-style-type: none"> <li>Procurement of 53-55 kinds of medical equipment/hospital for basic diagnostic and treatment activities for operating/ treatment rooms, ICU, clinical laboratories, imaging diagnostic-related and other departments of the targeted regional children's hospitals.</li> </ul> <p>Ukraine Side</p> <ul style="list-style-type: none"> <li>Removal of existing facilities and renovation of CT scanner rooms (Lugansk), arrangement of new CT scanner rooms (Kharikiv) and X-ray rooms (Lugansk, Kirovograd, Dnepropetrovsk, Donetsk)</li> </ul>

### II. Result of the Evaluation

Summary of the Evaluation
<p>In Ukraine, medical service was deteriorating after the collapse of the Soviet Union, as a result of the incomplete reform of healthcare services, or the lack of funding for the maintenance of medical equipment. In addition, due to the decreasing birthrate, the improvement of health condition of new born babies or infants was regarded as an important issue to stop the decrease of the population. As a result, the rehabilitation of medical equipment outside the capital, especially in the eastern part of the country, was a big issue at the time of ex-ante evaluation.</p> <p>This project has largely achieved the improvement of pediatric medical services due to provision of medical equipment that was in need. As for sustainability some problems have been observed in terms of financial aspects and current status of operation and maintenance due to lack of budget financed from the regional governments.</p> <p>For relevance, the project has been highly relevant with Ukraine's development policy, development needs, and Japan's ODA policy at the time of both ex-ante and ex-post evaluation. For efficiency, both the project cost and the project period were within the plan.</p> <p>In the light of above, this project is evaluated to be highly satisfactory.</p>

1 Relevance
<p>This project has been in highly relevant with Ukraine's development policy "enhancement of health of children" as set in "Ukraine Millennium Dev't Goals 2000+5", state program "Children oncology, 2006-2010", and nation-wide program "National Plan in UN Convention on children rights implementation until 2016", development needs "upgrading the medical service in 5 target regions", as well as Japan's ODA policy at the time of both ex-ante and ex-post evaluation. Therefore, relevance of this project is high.</p>
2 Effectiveness/Impact
<p>This project has largely achieved its objective of improvement of pediatric medical care service in 5 regions. Although the degree of achieving the targets varies from hospital to hospital, as a whole, it was observed that most of the major equipment provided by this project is in use, and the targets was achieved relatively well both at target year and ex-post evaluation.</p>

Non-achievement of some indicators is justified by appropriate reasons: the increase in the illness resulted in the increase in referral cases to Kiev (marked with asterisk in the table); other hospitals in the region received the same equipment that resulted in the decrease in the number of examinations than planned. In addition, the particularly lower achievement level in Dnipropetrovsk than others is explained that the data are only about the equipment procured under this project, while all others refer to the total number of examinations including those with use of existing equipment. The increasing quantity of services at the hospital in Dnipropetrovsk can be seen in the number of patients as well as bed utilization that are steadily increasing (see the graph below). All of the five hospitals said that they can now provide medical services that were not possible before the project (e.g., new introduction of CT examinations, more opportunities of ultrasonic diagnosis, improved examination quality and precise diagnoses).

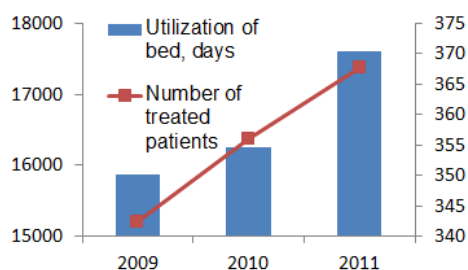
As a result, positive impacts were observed such as the reinforcement of pediatric medical care referral system (as improved medical services enable the hospitals to only refer patients who need specific treatment to Kiev), the reduction of psychological and economic burdens of patients (as they can now receive pediatric care in their region), and the reduction of under-five and infant mortality rates<sup>1</sup>. These effects may have been also contributed by other projects by the State budget or external assistance that took place around the same period of time.

Therefore, effectiveness/impact of this project is high.

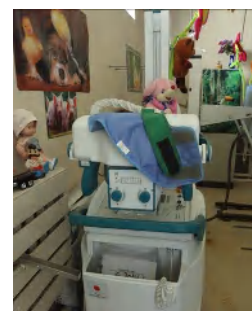
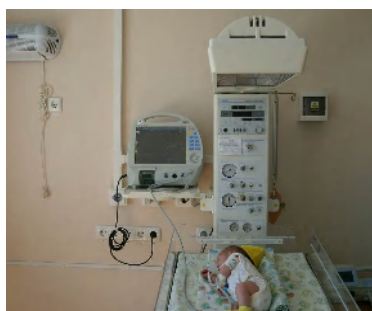
#### Quantitative Effects

Indicator	baseline (year of BD) (2005)	target (target year) (2008)	actual (target year) (2008)	actual (at ex-post evaluation) (2011)
<b>Lugansk Region Children Clinical Hospital (Phase 1/2, Package 1)</b>				
No. of X-ray examinations	10,867	Increase	11,731	12,728
No. of ultrasound examinations	47,230	Increase	60,018	91,058
No. of endoscope examinations	518	Increase	978	1,044
No. of CT scanner examinations	0	Increase	433	692
No. of patients referred from lower-level hospitals	9,244	Increase	13,455	15,807
No. of patients referred to Kiev*	176	Decrease	66	64
<b>Kirovograd Region Children Clinical Hospital (Phase 1/2, Package 2)</b>				
No. of X-ray examinations	14,101	Increase	21,877	25,081
No. of ultrasound examinations	15,541	Increase	16,278	<u>11,209</u>
No. of endoscope examinations	58	Increase	351	469
No. of patients referred from lower-level hospitals	12,065	Increase	13,209	14,024
No. of patients referred to Kiev*	320	Decrease	815	450
<b>Kharkiv Region Children Clinical Hospital No.1 (Phase 2/2, Package 1)</b>				
No. of X-ray examinations	6,241	Increase	8,062	11,746
No. of ultrasound examinations	46,738	Increase	<u>41,185</u>	59,436
No. of endoscope examinations	1,304	Increase	1,350	1,518
No. of patients referred from lower-level hospitals	14,827	Increase	16,349	17,861
No. of patients referred to Kiev*	11	Decrease	5	5
<b>Dnipropetrovsk Region Children Clinical Hospital (Phase 2/2, Package 2)</b>				
No. of X-ray examinations	16,832	Increase	11,357	<u>12,735</u>
No. of ultrasound examinations	76,177	Increase	<u>25,534</u>	<u>28,414</u>
No. of endoscope examinations	2,699	Increase	1,500	<u>2,200</u>
No. of patients referred from lower-level hospitals	13,764	Increase	<u>12,768</u>	<u>21,251</u>
No. of patients referred to Kiev*	5	Decrease	10	7
<b>Donetsk Region Children Clinical Hospital (Phase 2/2, Package 3)</b>				
No. of X-ray examinations	8,109	Increase	8,885 (2009)	8,682
No. of ultrasound examinations	44,004	Increase	45,394 (2009)	49,597
No. of endoscope examinations	3,569	Increase	11,940	11,603
No. of patients referred from lower-level hospitals	8,600	Increase	20,517	21,204
No. of patients referred to Kiev*	252	Decrease	<u>371</u>	<u>395</u>

Sources: each hospital. Note: underlined figures show the non-achievement of the target.



Source: hospital data



Other related indicators (Dnipropetrovsk Region Children Clinical Hospital)

Infant warmer (Kharkiv Region Children Clinical Hospital No.1)

X-ray apparatus (mobile) (Donetsk Region Children Clinical Hospital)

### 3 Efficiency

The outputs of the project were produced mostly as planned, and both the project cost and the project period (in terms of the sum of the project periods of phase 1/2 and phase 2/2) were within the plan (ratio against the plan: 81%, 96%). Therefore, efficiency of this project is high.

### 4 Sustainability

The equipment provided by the project are maintained by the five target hospitals, the implementing agencies. The project has some problem in financial aspects and current status of operation and maintenance due to budget shortage: in the financial aspect, some hospitals do not always receive the requested amount of budget from regional governments; The hospital in Lugansk and Donetsk receive relatively enough budget for the maintenance from the regional governments, while the hospital in Kharikov receives enough budget as a whole from the regional government, but the allocation for the maintenance is not enough. The hospitals in Kirovograd and Dnipropetrovsk have problem of the amount of the total budget. Although the hospitals are making efforts to compensate for the budget deficit by finding other sources such as donations from companies, they still faces deficit. As a result (in the current status of operation and maintenance), some equipment that became out of order are left unused for some time while waiting for the budget to buy spare parts. Also, some spare parts are not available in Ukraine, and the Lugansk hospital did not have information of agents of equipment abroad at the time of the ex-post evaluation though the lists of local agents had been provided to each hospital.

However, no problem has been observed in structural and technical aspects of the implementing agency. In the structural aspect, all the target hospitals are establishing systems and securing human resources required to operate and maintain the project facilities/equipment. As for the technical aspect, skills and opportunities of training/ seminars in other hospitals and educational institutions in the respective cities as well as in the capital required to sustain project effects and operate/maintain equipment are firmly secured. At all of the target hospitals, medical staffs are well qualified with attestation. In case the repair is beyond the capacity of the hospital staff, the hospitals outsource the work to agents.

Therefore, sustainability of this project is fair.

## III. Recommendations & Lessons Learned

### Recommendations for Implementing agency

It is desirable that hospitals make more efforts to increase efficiency of hospital management to raise the budget necessary for the purchase of spare parts, using the limited budget.

### Lessons learned for JICA

In this project, there was such a problem that one of the hospitals could not procure spare parts and some equipment are left unused, because the hospital had lost information of agents for spare parts that had been provided at the completion of the project. In terms of keeping the project effect longer, the information of the agents are very important, therefore, it is recommended to press the executing agency for the appropriate management of the information at the time of the project completion.

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<sup>i</sup> Based on questionnaire and interviewing with those from state government and 5 regional governments, 5 regional hospitals and site visits.