

# Improvement of Medical Equipment for the Institute of Child Health and Hospital for Children in Madras



Project Sites Channai (Madras)

## 1. Background of Project

The Institute of Child Health and Hospital for Children (537 beds), located in Channai (formerly Madras,) one of the major cities in Tamil Nadu, India, has been playing a central role in the nation's pediatric medicine since 1968. Since then, the hospital has been providing pediatric medical care to children aged 12 and under. The Institute is also known for its free medical care activities for children from impoverished families, and in fact, 85% of its patients are comprised of such individuals. It also assumes a role of a medical education facility, owing to its affiliation with Madras Medical College. However, factors such as the lack of equipment and the worsening condition of the existing equipment have been an obstruction to the hospital in providing sufficient medical services at all levels – from primary to advanced. The situation prompted the Government of India to draw up a plan called "The Project for the Improvement of Medical Equipment for The Institute of Child Health and Hospital for Children in Madras" and to request the Government of Japan to provide Grant Aid.

## 2. Project Overview

### (1) Period of Cooperation

FY1997

### (2) Type of Cooperation

Grant Aid

### (3) Partner Country's Implementing Organization

Tamil Nadu Health and Family Welfare Department  
Institute of Child Health and Hospital for Children

### (4) Narrative Summary

#### 1) Overall Target

Maternal and child health situations are improved in Tamil Nadu.

#### 2) Project Purpose

Maternal and child health situations are improved at the Institute of Child Health and Hospital for Children.

### 3) Outputs

Medical equipment and facilities are improved at the Institute of Child Health and Hospital for Children.

### 4) Inputs

#### Japanese Side

Grant	667 million yen (E/N amount)
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## 3. Members of the Evaluation Team

JICA India Office  
(Commissioned to FAITH Consultant)

## 4. Period of Evaluation

11 December, 2000 – 15 December, 2000

## 5. Results of Evaluation

### (1) Relevance

Despite the fact that children at the age of 15 and under account for as much as 35% of its total population in India, pediatric care in India has been quite inadequate. This project met the Government of India's agenda, as, in an attempt to address this situation, the Government had set pediatric health and medical care improvement as its primary objective under its 9th Five-year Health Care Plan (1998 – 2002)'s. In addition, an influx of the poor from the surrounding areas to Channai has been steadily increasing, further worsening the city's health and medical services to the poor both in terms of quality and quantity. The younger the children, the more vulnerable they are to illnesses. Since this project helped reduce both the morbidity and mortality rates among children, in this sense, too, the project met the interests of the poor household, provincial and national governments. At the same time, this project contributed to the improvement of The Institute of Child Health and Hospital for Children's functions, which has been in the vanguard of Indian pediatric medicine for many years. Therefore, in this regard, too, the project was also highly relevant.

## (2) Effectiveness

A total of 214 pieces of medical equipment, including ones for ultrasonography, have been installed in the hospital's 27 departments through the project. This improved the hospital's ability in providing medical treatment and strengthened the medical facilities' capability. For example, in 1997, before the medical equipment was improved, surgery conducted at the hospital numbered 9,136. After the improvement, however, this number increased by about 27% to 10,349 in 2000. Moreover, the improvement can also be seen in the hospital's ability to provide medical treatment, as, in comparison to 1997, the ultrasound and biochemical examination rates rose by about 41% and 44% respectively in 2000. Similarly, in comparison to 1997, the institute saw a 19% increase in the number of outpatients in 2000. Although the number of emergency cases doubled from 3,036 in 1997 to 6,797 in 2000, the number of deaths in such cases almost halved from 144 to 74. These numbers suggest that the hospital's ability to render medical treatments and operate facilities properly has dramatically improved through the equipment installed.

After the project implementation, the number of degree holders in pediatric medicine increased from 27 in 1998 to 32 in 2000. Background factors for this include the fact that the medical students now have more clinical training opportunities due to the increase in the number of patients. In other words, with the increase in the number of patients, students have more opportunities to study various cases and to treat serious cases. Another factor, among others, is the fact that the project-provided monitor has enabled students to observe more operations.

In addition, in order to promote public health education for local residents, the project provided a vehicle to travel from 20 to 30 km a day to visit various places including schools.

## (3) Efficiency

The quality, quantity and performance of equipment provided met the hospital's expectation. The costs spent on transportation etc. were also appropriate. Moreover, there were no delays in delivery, therefore, the procurement of equipment was judged to have been carried out smoothly.

## (4) Impact

According to a statistics in 2000, more than one third of the hospital's patients are from outside of Chennai and its surrounding areas. About 5% of the total number of patients are from neighboring provinces. Moreover, the number of patients transferred to other facilities significantly decreased from 3.85% in 1998 to 0.84% in 2000. These numbers suggest that the improved rates of effectiveness of treatment and complete cure have promoted patients' trust more than ever.

## (5) Sustainability

The Government of Tamil Nadu has already staffed the hospital with such personnel as specialized engineers and physicians. In addition, the Government also appro-



Pediatric Operating table

riated about 40 million yen as equipment maintenance costs in FY1999/2000. Similar kinds of assistance from the Government can be expected continuously in the future, therefore, overall, the project's sustainability is recognizable.

However, some uncertainties remain. First of all, necessary manpower to operate equipments may remain insufficient, as there is a shortage of specialized engineers etc. in India. Also, there is a lack of awareness in the necessity of preventive maintenance among the personnel involved. Moreover, the annual maintenance contract between the hospital and supplier is yet to be agreed for some of the equipment. Therefore, the equipment maintenance system is not completely established at this point.

## 6. Lessons Learned and Recommendations

### (1) Lessons Learned

In projects aiming to provide equipment such as this, end-users sometimes depend heavily on delivery and/or maintenance vendors and thus fail to clearly understand how to/how often they should do maintenance on the equipment after the delivery. Therefore, it is desirable to provide end-users with training to learn the basics on maintenance and preventative maintenance techniques, if necessary.

### (2) Recommendations

The significant increase in the number of patients that The Institute of Child Health and Hospital for Children is experiencing may cause a shortage of beds in the future. Thus, it is deemed necessary for the hospital to consider expanding its facility as well as to improve its management efficiency.