

Evaluation Summary

1. Outline of the Project		
Country: People's Republic of China		Project Title: Hospital Infection Control Project in Guangzhou
Issue / Sector: Health – Health System		Cooperation Scheme: Technical Cooperation Project
Division in Charge: JICA China Office		Total Cost: 269 million yen
Period of Cooperation	December 15, 2005 to December 14, 2008	Partner Country's Implementing Organizations: Guangzhou Municipal Science and Technology Bureau, The First Affiliated Hospital of Guangzhou Medical College (FAH-GMC), Guangzhou Institute of Respiratory Disease (GIRD), Guangzhou Center for Disease Control and Prevention (GZCDC)
		Supporting Organizations in Japan: Kobe City Medical Center General Hospital, Fukuoka Children's Hospital and Medical Center for Infectious Diseases, Fukuoka Institute of Health and Environmental Sciences, Kobe Institute of Health, Fukuoka City Institute for Hygiene and the Environment, National Institute of Infectious Diseases, International Medical Center of Japan, Sendai Medical Center
1-1 Background of the Project		
<p>The Severe Acute Respiratory Syndrome (SARS) broke out in 2002, which infected more than 5,000 people and caused tremendous suffering. It was reported that an insufficient infectious disease surveillance system in the initial stage of the disease prevalence and secondary infections in hospitals were the main causes of the infection expansion. In other words, the spread of infectious diseases was not prevented properly at that time since CDCs in charge of infection surveillance and hospitals did not establish a proper partnership to detect the trend of the disease prevalence at the local level and to take prompt preventive measures. Also, coping with serious infectious diseases including SARS is premised on routine hospital infection management such as the establishment of an infection control team and thorough implementation of standard preventive measures. Each hospital in Guangzhou, however, did not make these basic measures function practically.</p> <p>In response to the situations described above, the Chinese Government made a request to the Japanese Government for technical cooperation aiming at capacity strengthening regarding infectious disease control in Guangzhou. After a series of preliminary studies, JICA launched the “Hospital Infection Control Project in Guangzhou”, scheduled for three years from December 2005, with the purposes of disseminating the know-how of nosocomial infection management in hospitals and developing CDCs' capacity regarding infectious disease control including pathogen detection techniques.</p>		

1-2 Project Overview

(1) Overall Goal

Infection control measures including prevention of serious infectious diseases in Guangzhou are strengthened.

(2) Project Purposes

- 1) FAH-GMC & GIRD, as model facilities, disseminate their experiences regarding hospital infection management (including prevention of serious infectious diseases) to major medical institutions in Guangzhou.
- 2) GZCDC plays a sufficient role in providing technical instruction regarding hospital infection control (including prevention of serious infectious diseases).

(3) Outputs

- 1) The hospital infection management system of FAH-GMC & GIRD as a general hospital is functional.
- 2) FAH-GMC & GIRD medical staff's capacity to respond to an onset of serious infectious diseases is improved.
- 3) FAH-GMC & GIRD laboratory staff's examination techniques are improved.
- 4) Manuals and education tools regarding hospital infection management are prepared.
- 5) Other medical institutions are able to access information regarding knowledge and experiences on hospital infection management.
- 6) GZCDC's capacity to detect major pathogens is improved.
- 7) GZCDC's capacity for surveillance and instruction on hospital infection control to relevant medical institutions is improved.
- 8) The partnership regarding hospital infection control (including prevention of serious infectious diseases) between FAH-GMC & GIRD and GZCDC is strengthened.

(4) Inputs

Japanese side: dispatch of long-term experts: 2 people in total
dispatch of short-term experts: 35 people in total
trainees received in Japan: 39 people in total
equipment: 6.67 million RMB (103.33 million JPY)
local cost: 1.36 million RMB (21.12 million JPY)

Chinese side: assignment of counterparts: 25 people
land and facilities provision
local cost: 0.96 million RMB (14.95 million JPY)

2. Evaluation Team			
Members of Evaluation Team	Leader	Mr. Masaya Fujimoto	Deputy Resident Representative, JICA China Office
	Hospital Infection Control	Dr. Tunekazu Haruta	Director, Department of Pediatrics and Infectious Diseases, Kobe City Medical Center General Hospital
	Infectious Diseases	Dr. Tomonobu Aoki	Executive Director, Fukuoka Children's Hospital and Medical Center for Infectious Diseases
	Public Health	Dr. Takesumi Yoshimura	Director, Fukuoka Institute of Health and Environmental Sciences
	Evaluation Planning	Ms. Michiko Kuwauchi	Assistant Resident Representative, JICA China Office
	Evaluation and Analysis	Mr. Akira Ogasawara	Construction Project Consultants, Inc.
Evaluation Period	June 22, 2008 to July 3, 2008		Type of Evaluation: Terminal Evaluation
3. Results of Evaluation			
3-1 Achievement Level			
(1) Achievement of the Outputs			
1) Output 1: the hospital infection management system of FAH-GMC & GIRD as a general hospital is functional.			
<p>The hospital infection management system has been strengthened by establishing 7 Infection Control Teams (ICTs) during the project implementation, lead by the Hospital Infection Management Committee and the Hospital Infection Management Division. The rate of missing reports on hospital infections has decreased from 9.5% in 2005 to 7.3% in 2006 and to 2.5% in 2007. Therefore it can be said that FAH-GMC & GIRD's hospital infection management system is about to function.</p>			
2) Output 2: FAH-GMC & GIRD medical staff's capacity to respond to an onset of serious infectious diseases is improved.			
<p>During the project implementation, several lectures and a total of 4 exercises and/or training on serious infectious diseases were conducted, one of which was the case where FAH-GMC & GIRD actually received a suspected gas gangrene patient (a victim of the 2008 Sichuan Wenchuan earthquake) as a practical exercise. Therefore the capacity to respond to an onset of serious infectious diseases has been improved.</p>			

- 3) Output 3: FAH-GMC & GIRD laboratory staff's examination techniques are improved.

During the project implementation, FAH-GMC & GIRD newly added 6 pathogens which can be examined. The detection rate of examination was increased from 30.5% at the mid-term evaluation up to 33.4% at the terminal evaluation. Although FAH-GMC & GIRD's examination techniques have been improved to some extent, the capacity to analyze and disseminate information on examination results more appropriately is required to be developed in order to utilize the examination data more effectively for hospital infection control.

- 4) Output 4: manuals and education tools regarding hospital infection management are prepared.

A variety of forms of implementation manuals and educational materials on hospital infection management have been developed and distributed and a training tool on the Internet has been established. The ratio of FAH-GMC & GIRD staff who owns these manuals and tools was increased up to 75% at the time of the terminal evaluation. Therefore it can be said that the manuals and tools have been relatively broadly shared by various means.

- 5) Output 5: other medical institutions are able to access information regarding knowledge and experiences on hospital infection management.

The Japan-China High Level Seminar on Hospital Infection Control was held twice in January and December 2008. In addition, lectures at the Guangdong and Guangzhou Medical Association and short-term training courses receiving 35 trainees from 33 medical institutions in total have been conducted and a "Hospital Infection Control Course" for students of the Guangzhou Medical College was established. The regular dissemination of related information on the Internet (updated every three months) and in medical journals (published every month) has been promoted. Therefore it can be said that the opportunities for other medical institutions to gain access to the knowledge and experiences on FAH-GMC & GIRD's hospital infection management have been increased.

- 6) Output 6: GZCDC's capacity to detect major pathogens is improved.

GZCDC newly added 19 pathogens which can be examined and 11 methods of pathogen examination. The rapidity and accuracy of examination have also been improved. Therefore GZCDC's capacity regarding pathogen examination has been strengthened. In addition, the capacity of GZCDC and lower-level CDCs for extraction, preservation and transportation of pathogens has been improved.

- 7) Output 7: GZCDC's capacity for surveillance and instruction on hospital infection control to relevant medical institutions is improved.

The Hospital Infection Control Division was newly established in September 2007 and the surveillance of the quality of disinfection and infection factors at 95 medical institutions was conducted. Also, GZCDC staff received training on hospital infection control and therefore GZCDC's capacity for instruction on hospital infection control has been developed.

- 8) Output 8: the partnership regarding hospital infection control (including prevention of serious infectious diseases) between FAH-GMC & GIRD and GZCDC is strengthened.

This output was newly added based on the recommendation of the mid-term evaluation. Then FAH-GMC & GIRD and GZCDC agreed to hold periodical meetings and they had their first meeting in May, 2008. They keep frequent communication on hospital infection control by telephone or in writing at the working level. The partnership among FAH-GMC & GIRD and

GZCDC has been much more strengthened than before the launch of the project.

(2) Achievement of the Project Purposes

- 1) Project Purpose 1: FAH-GMC & GIRD, as model facilities, disseminate their experiences regarding hospital infection management (including prevention of serious infectious diseases) to major medical institutions in Guangzhou.

As noted above, the hospital infection management system of FAH-GMC & GIRD is well-functioned by establishing ICTs. As a result, FAH-GMC & GIRD's experiences regarding hospital infection management have been accumulated and a model for hospital infection management has been developed. Also, FAH-GMC & GIRD have given a variety of guidance and assistance to other medical institutions and were designated as an editing institution of the "Guangzhou City Hospital Infection Management News" published by the Guangzhou Medical Association. FAH-GMC & GIRD have been highly appreciated as a hospital aiming to become the model facility for hospital infection management. Therefore it can be said that the Project Purpose 1 has been almost achieved at the time of the terminal evaluation.

- 2) Project Purpose 2: GZCDC plays a sufficient role in providing technical instruction regarding hospital infection control (including prevention of serious infectious diseases).

GZCDC has conducted investigation on intestine and respiratory infectious diseases and the situation of hospital infection control. GZCDC also wrote the "Hospital Infection Control Techniques", which is a textbook for medical institutions. Therefore it can be said that the Project Purpose 2 has been almost achieved at the time of the terminal evaluation.

3-2 Summary of Evaluation Results

(1) Relevance

Amid mounting public concerns about infectious diseases such as SARS and avian flu as well as the safety and quality of medical services, the Chinese Government continues to strengthen its prevention against and control of infectious diseases and nosocomial infections by developing various related policies, and has also expressed its support for hospital infection control responding to the "Global Patient Safety Challenge" initiated by the World Health Organization (WHO). Thus the overall goal and the project purposes are in line with the policies of the Chinese Government and the beneficiaries' needs. On the other hand, being a cross-border issue, the Japanese Government regards infectious diseases control as one of the important issues in aid policies toward China. Therefore it can be said that the relevance of the project was high. Besides, the project became more relevant because its design was revised on the basis of the newly established "Regulation on Hospital Infection Control" during the project period, in order to strengthen the technique and capacity which are more consistent with the Chinese infection control policy.

(2) Effectiveness

Considering that the experience and model of the hospital infection management at the FAH-GMC & GIRD has been disseminated and the technical instruction on hospital infection control by GZCDC has been adequately provided as noted above, there is a high possibility to achieve the project purposes by the end of the project.

Almost all of the project outputs contributed to the achievement of the project purposes as a result of effectively reducing the problems of FAH-GMC & GIRD and GZCDC. As to the project purpose of FAH-GMC & GIRD, some concrete advices for hospital infection control were suggested as a result of output 1 (strengthening the hospital infection management system) and FAH-GMC & GIRD have been highly appreciated as a hospital aiming to become the model facility for hospital infection management as a result of output 5 (actively disseminating information on hospital infection in various ways). As to GZCDC, it can be said that the project outputs led to the achievement of the project purpose because the project outputs were modified during the mid-term evaluation based on the role of the CDCs determined by the “Regulation on Hospital Infection Control” newly established by the Ministry of Health and focused on developing the capacity which GZCDC needs to strengthen for the hospital infection control. Therefore it can be said that the effectiveness of the project is sufficiently high.

(3) Efficiency

There were partial problems during the initial stage of the project. However, overall, almost all of the project inputs and activities were carried out adequately and efficiently as planned and thus large outputs were produced. Followed up by the Japanese experts to analyze technical problems and needs and to give technical guidance, the fruits of the trainings on hospital infection control and pathogen detection in Japan have been utilized after returning to China. Therefore it can be said that each activity has complemented one another and contributed to producing the project’s outputs. Particularly after the middle stage of the project, the efficiency was highly improved since the project appropriately optimized the range of the technical transfer in line with the problems and needs of FAH-GMC & GIRD and GZCDC and concentrated the inputs.

(4) Impact

The possibility of achieving the project’s overall goal is relatively high because the collaboration and partnership of FAH-GMC & GIRD and GZCDC as well as the relationship among hospitals in Guangzhou have been reinforced and GZCDC’s surveillance capacity has also been strengthened. There is a positive impact that the project contributed to strengthening the relationship and partnership between the medical institutions in Japan and China, respectively. Negative impacts caused by the implementation of the project are not found by the terminal evaluation.

(5) Sustainability

The project has strengthened the needed capacity on the basis of policies developed by the Chinese Ministry of Health. On the one hand, FAH-GMC & GIRD developed human resources to lead measures against nosocomial infections and made the hospital infection management system function appropriately. On the other hand, GZCDC established the Hospital Infection Control Division with distinct duties and responsibilities, which unifies roles to control nosocomial infections. Financial sustainability of all these institutions is still maintained. Therefore the sustainability of the project is expected to be high in political, organizational, technical and financial aspects.

3-3 Contributing Factors

(1) Project Planning

The involvement by numerous Japanese supporting organizations contributed in broadening and deepening the project cooperation. As a result, considering a wide range of choices, the project could explore measures against hospital infections that are more appropriate to the actual situations in China. Besides, the hospital infection control was effectively improved since the project involved not only hospitals but also CDCs at the local level and encouraged cooperation between them, though it is aiming at infection control in hospitals. Therefore it can be said that the project design involving various organizations enhanced the effectiveness.

(2) Implementation Process

The Chinese Government places emphasis on the infectious diseases control. Also, FAH-GMC & GIRD and GZCDC leaders are emphasizing hospital infection control and strengthened their hospital infection management systems in each organization. These factors promoted achievement of the project purposes.

Besides, the capacity strengthened by the Project Cycle Management (PCM) Training to take problem-solving approaches contributed effectively to improving hospital infection management at the FAH-GMC & GIRD.

3-4 Obstacles

(1) Project Planning

During the initial stage of the project, the technique preferentially needed by GZCDC was obscure and had not been transferred efficiently because the Chinese Government had the hospital infection control policy under consideration and respective responsibilities and roles of hospitals, CDCs and public health administrations were uncertain. However this factor had less impact on the achievement of the project purposes since the project design was revised during the mid-term evaluation after the “Regulation on Hospital Infection Control” was newly enforced.

(2) Implementation Process

Although there are numerous supporting organizations in Japan, JICA China Office took charge of the project, which was one of the obstacles to slow down the activities at the beginning of the project. Thereafter communication was improved, and thus this obstacle had less impact on the achievement of the project purposes in terms of results because JICA improved the internal mechanism for coordination centering around JICA China Office, with the related divisions such as the JICA headquarters and domestic centers (JICA Hyogo and JICA Kyushu) and reinforced the long-term expert team to coordinate carefully views between Japan and China.

Though FAH-GMC & GIRD improved their examination techniques, there still remained problems that a hospital infection management laboratory did not go into full-scale operation and that the capacity to analyze and announce laboratory data was not fully developed. The improvement in these regards will likely contribute to further strengthening the hospital infection management and achieving the project purposes to a higher level.

3-5 Conclusion

As described above, there is a sufficiently high probability of achieving the project purposes. It is recommended to take appropriate actions as described below in the section “Recommendations” in order to promote higher achievement of the project purposes or to utilize the project results effectively after termination.

As to the project evaluation, the relevance, effectiveness and sustainability were highly evaluated and there is a possibility of positive impact including the overall goal. Though there were partial problems during the initial stage of the project, they were improved after the middle stage of the project and thus the project has been high in efficiency on the whole.

3-6 Recommendations

(1) Further Improve the Hospital Infection Management at the FAH-GMC & GIRD

Although FAH-GMC & GIRD’s hospital infection management system was significantly strengthened, it is recommended as follows in order to make the system more functional: 1) to fully operate the hospital infection management laboratory as soon as possible; 2) to improve the information system regarding nosocomial infections; 3) to provide organizational support to maintain and enhance the hospital infection management system that currently becomes functional so as to promote measures against hospital infections as a team medical care; and 4) to consider improving conditions so as to carry out the standard preventive measures and the specific preventive measures for each infection route.

(2) Improve GZCDC’s Information System for Hospital Infection Control

In order to fulfill GZCDC’s function more effectively to control hospital infections it is recommended: 1) to maintain and improve examination accuracy for infectious diseases prevention; 2) to strengthen the mechanism to routinely collect and share information and data; and 3) to strengthen the system to analyze these information and data and to support infection prevention.

(3) Cooperation between FAH-GMC & GIRD and GZCDC

Regarding the cooperation between FAH-GMC & GIRD and GZCDC, it is recommended to create a model of the cooperation mechanism and assess its effectiveness for reference to other areas, considering the mechanism that encourages hospitals and CDCs to mutually transmit the related information and opinions.

(4) Utilize the Experiences of Hospital Infection Control Obtained from the Project

In order to utilize more widely and effectively the experiences of the hospital infection control obtained from the project it is recommended: 1) to sum up the model of the hospital infection control introduced by the project and to disseminate it extensively by presentations at various seminars and by submissions of papers; and 2) to assess the effectiveness of the systems and measures for hospital infection management and control introduced by the project so as to propose them to the Ministry of Health and the CCDC at the national level as one of the ideal models of hospital infection control.

(5) Strengthen the Relationship between Japan and China

It is desirable to maintain and strengthen the partnership and collaborative relationship for technology and information exchange established or strengthened through the project after the project termination.

3-7 Lessons Learned

(1) Partnership Established by the Cooperation among Various Institutions

To involve numerous institutions and organizations contributed to widening the scope of technical cooperation of the project and to proposing measures that are more appropriate to the actual situations in developing countries and their needs. Besides, the cooperation between hospitals and CDCs generated a synergistic effect, which is expected to make greater achievements in the project.

(2) Establishment of a Coordination Framework among the Related Institutions

On the other hand, involving numerous institutions carries a risk of communication gap in general. As far as the project is concerned, the long-term expert team carefully coordinated views between Japanese and Chinese sides. Also, within JICA, the close cooperation centering around JICA China Office taking charge of the project, with the various related divisions such as the JICA headquarters and domestic centers (JICA Hyogo and JICA Kyushu) contributed to improving the coordination mechanisms.

(3) Usefulness of Human Networks

Human networks as well as institutional networks worked highly effectively for the collaboration of various institutions/organizations described above.

(4) Practical Application of Result of Training in Japan

The result of the training in Japan was applied effectively within the project because of the following factors: 1) to develop core personnel playing a leading role; 2) to coordinate sufficiently and to narrow down the range of issues in advance; 3) to foster the sense and awareness of trainees; 4) to have methodological training in problem analysis and planning; and 5) to make an action plan to clarify the needed activities after returning to China.