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THE EX-POST EVALUATION STUDY

FOR

THE PROJECT FOR STRENGTHENING OF HEALTH CARE

IN THE SOUTHERN REGION

OF

JAMAICA

FINAL REPORT

DECEMBER 2005

JAPAN INTERNATIONAL COOPERATIONN AGENCY

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06-02

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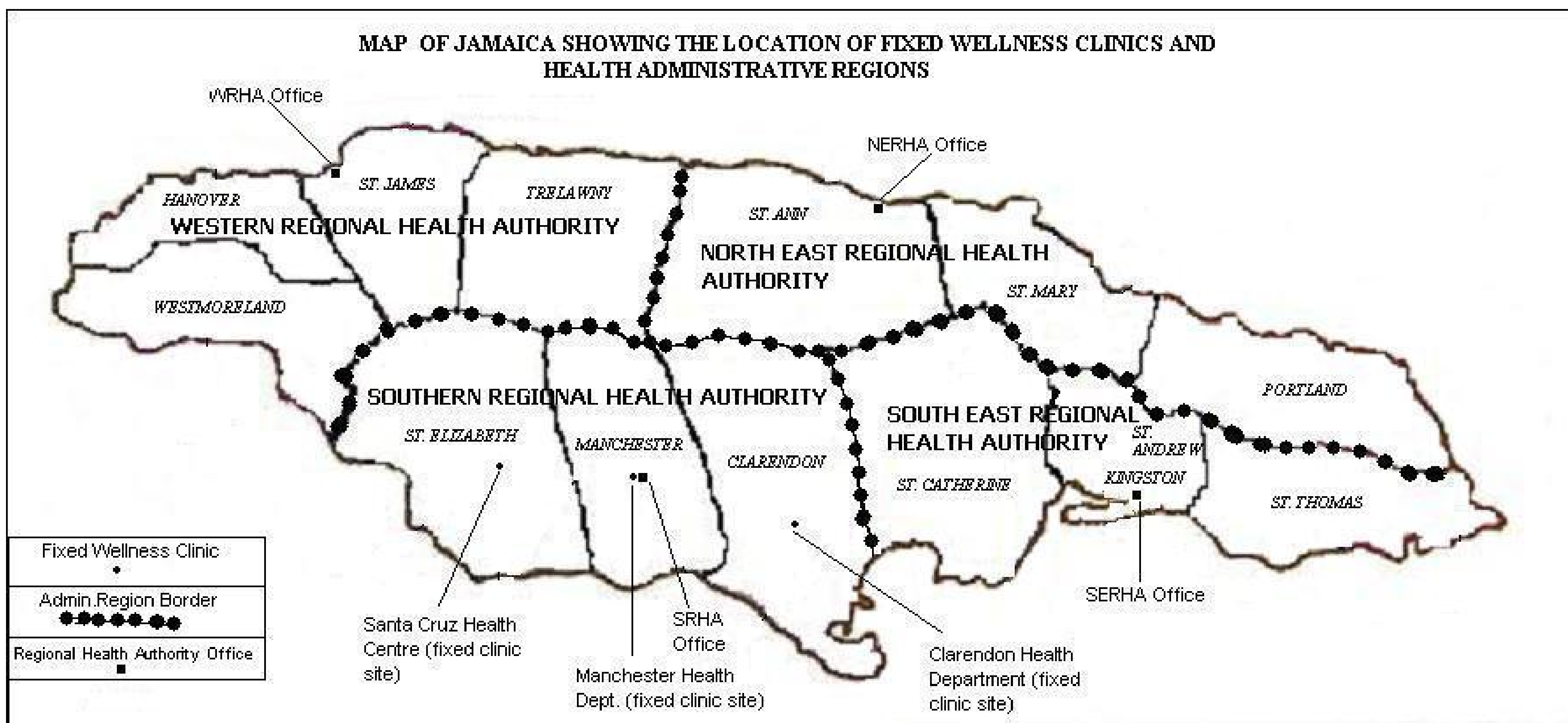

MAP OF JAMAICA SHOWING THE LOCATION OF FIXED WELLNESS CLINICS AND HEALTH ADMINISTRATIVE REGIONS
WRHA Office
NERHA Office
HANOVER
ST. JAMES
TRELAWNY
ST. ANN
WESTERN REGIONAL HEALTH AUTHORITY
NORTH EAST REGIONAL HEALTH AUTHORITY
ST. MARY
WESTMORELAND
SOUTHERN REGIONAL HEALTH AUTHORITY
SOUTH EAST REGIONAL HEALTH AUTHORITY
PORTLAND
ST. ELIZABETH
MANCHESTER
CLARENDON
ST. CATHERINE
ST. ANDREW
KINGSTON
ST. THOMAS
Fixed Wellness Clinic
Admin.Region Border
Regional Health Authority Office
Santa Cruz Health Centre (fixed clinic site)
SRHA Office
Manchester Health Dept. (fixed clinic site)
Clarendon Health Department (fixed clinic site)
SERHA Office

Abbreviations

BMI:	Body Mass Index
CHA:	Community Health Aid
CLD:	Chronic Lifestyle Disease
JACOSH:	Jamaica-Japan Cooperation on Strengthening Health Care
MC:	Mobile Clinic
MOH:	Ministry of Health
NERHA:	North East Regional Health Authority
NHF:	National Health Fund
PIOJ:	Planning Institute of Jamaica
SERHA:	South East Regional Health Authority
SRHA:	Southern Regional Health Authority
FC:	Fixed Clinic
WRHA:	Western Regional Health Authority

1. INTRODUCTION

1.1 Background

Health indicators of Jamaica are at relatively good levels. For example, the child mortality rate for males and females was 21 and 19 per 1,000 respectively, and the life expectancy at birth for males, females, and the total population was 71.0, 74.0, and 73.0 years respectively in 2003. However, chronic lifestyle diseases (CLD's), such as hypertension and diabetes, have been increasing along with negative lifestyle changes and the aging society. The difference in health care services between the urban areas where around 52% of its population is concentrated and other areas was the major issue in Jamaica.

Under these circumstances, the project was initiated in the southern region (three pilot parishes of Manchester, St. Elizabeth, and Clarendon) whose health care was substandard compared to other areas, in order to improve the health of the people in this region. The aim was to enhance the medical health care system with a specific focus on education in health care related to CLD's and the prevention of diseases.

1.2 Project Overview

To enhance the regional health systems in Jamaica, the project implemented activities for the health care workers through cooperative activities, such as the organization of disease prevention programs, health examination, counseling activities, textbooks on health care education, and health awareness in order to prevent CLD's.

Project Name: The Project for Strengthening of Health Care in the Southern Region of Jamaica
Target Group: People over the age of 16 year-old living in the southern region
Target Area: The southern region, i.e., Manchester, St. Elizabeth, and Clarendon
Project Duration: June 1, 1998 – May 31, 2003
Implementing Agency: Southern Regional Health Authority (SRHA), Ministry of Health (MOH)

(1) Overall Goal

The health status of the population of Jamaica is improved by strengthening the function of the regional health systems.

(2) Project Purpose

The health care system in the southern region is strengthened, focusing on the

prevention of chronic lifestyle diseases (CLD's).

(3) Outputs

1) The administrative/organizational capacity of the Southern Regional Health Authorities is improved.
2) The functions of parish health center facilities are improved.
3) Human resource skills are improved.
4) A CLD prevention model is developed and implemented in the pilot parish, Manchester.
5) The CLD prevention model is extended to St. Elizabeth and Clarendon.

1.3 Study Objectives

JICA has conducted ex-post evaluations of selected project-type technical cooperation projects, typically three years after their termination. On this occasion, JICA HQ's has decided to conduct an ex-post evaluation on "The Project for Strengthening of Health Care in the Southern Region of Jamaica", which was completed two and a half years ago.

There are two main objectives of the ex-post evaluation: i) to draw lessons learned and make recommendations to improve future JICA planning and implementation capacity for similar types of technical cooperation projects mainly through evaluating the impact and the sustainability of the selected projects; and ii) to meet accountability requirements to the Japanese tax payers by publishing the results of the evaluation.

1.4 Evaluation Team and the Study Period

The members of the ex-post evaluation team are as follows.

Role	Name	Organization
Project Evaluation	Takaaki HIRAKAWA	INTEM Consulting, Inc.
Research Assistant	Justin K. Morgan	Free-lance consultant

Note: During the above period, the Study Team conducted two ex-post evaluation studies.

The Study started on October 11th, 2005 and ended on December 28th, 2005. The work schedule is summarized in the Table 1.1 below.

Table 1.1: Implementation Schedule of the Ex-post Evaluation Study

	2005		
	October	November	December
Project Evaluation	A (16 days) / B	B (34 days)	B / C (20 days)
Research Assistant	D (3 days)	D / E (21 days) / F	F (11 days)

Project Evaluation (Japanese Consultant)

A: Preparation Stage in Japan (October 11th to 28th, 2005)

- Prepare the TOR for the local consultant
- Prepare evaluation questions
- Develop evaluation grid
- Prepare questionnaires based on the evaluation grid, etc.

B: Field Study in Jamaica (October 29th to December 1st, 2005)

- Conduct interviews and meetings
- Compile all data and information from interviews, questionnaire surveys, etc.
- Analyze the outcomes aggregated through the evaluation study
- Prepare the draft report of the study

C: Summing-up Stage in Japan (December 2nd to 27th, 2005)

- Prepare and submit the Final Report and the Evaluation Summary Sheet

Research Assistant (Local Consultant)

D: Preparation Stage (October 31st to November 2nd, 2005)

- Attend a kick-off meeting
- Study the evaluation plan
- Prepare for fieldwork

E: Implementing Stage (November 3rd to November 23rd, 2005)

- Collect and compile data
- Conduct interviews and meetings
- Prepare the minutes of the interviews and meetings
- Conduct questionnaire surveys and process data
- Act as a field coordinator and facilitate fieldwork

F: Summing-up Stage (November 24th to December 9th, 2005)

- Prepare the Work Report
- Conduct supplemental study
- Assist in writing and translating the Final Report on the ex-post evaluation study prepared by the Japanese consultant

2. Evaluation Study Method

2.1 Methodology

Logical framework (Logframe)[1] is utilized by the evaluators in order to design the methodology for the evaluation study and to develop evaluation questions. As shown in Figure 2.1, the narrative summary of the Logframe is utilized for preparing the evaluation questions, based on the five evaluation criteria, i.e., Relevance, Effectiveness, Efficiency, Impact, and Sustainability. After setting up the evaluation questions, the methodology of the evaluation study is designed according to the format of the evaluation grid consisting of "data needed", "data sources", and "data collection methods" shown in Figure 2.2.

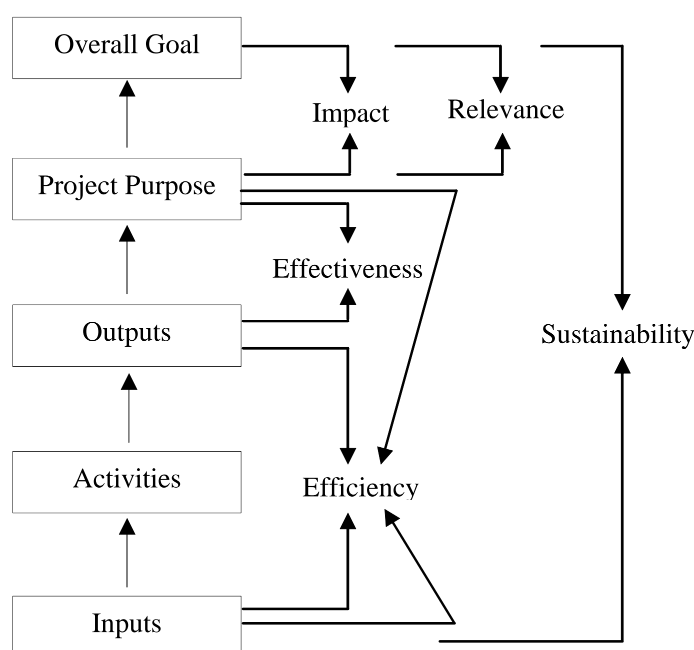

Figure 2.1 The Relationship between the Five Evaluation Criteria and the Logframe

In the ex-post evaluation, the impact and the sustainability of the project are the main aspects that are scrutinized. Five evaluation criteria are explained as shown below.

(1) Relevance:

A criterion for considering the validity and necessity of a project regarding whether the expected effects of a project (or project purpose and overall goal) meet the needs of target beneficiaries; whether a project intervention is appropriate as a solution for

[1] In the revised JICA Project Evaluation Guideline (2004), JICA refers to the PDM as "Logframe."

problems concerned; whether the contents of a project is consistent with policies; whether project strategies and approaches are relevant, and whether a project is justified to be implemented with public funds of ODA.

(2) Effectiveness:
A criterion for considering whether the implementation of a project has benefited (or will benefit) the intended beneficiaries or the target society.

(3) Efficiency:
A criterion for considering how economic resources/inputs are converted to results. The main focus is on the relationship between project cost and effects.

(4) Impact:
A criterion for considering the effects of the project with an eye on the longer term effects, including direct or indirect, positive or negative, intended or unintended.

(5) Sustainability:
A criterion for considering whether produced effects continue after the termination of the assistance.

Criteria	Evaluation Questions		Data needed	Data source	Data collection methods
	Main questions	Sub questions			
Relevance	Specify what is to be investigated.	Break down the main questions into detailed sub questions.	Specify what type of data and information is to be collected.	Specify from where the data and information is to be collected.	Identify how the data and information are to be collected.
Effectiveness					
Efficiency					
Impact					
Sustainability					

Figure 2.2 The Evaluation Grid Format

2.2 Evaluation Design

(1) Evaluation Questions

Evaluation questions are prepared along with the impact and sustainability as mentioned below.

(a) Impact

Achievement of the Overall Goal

- Are wellness activities[2] for the community people continuously carried out in other regions?
- Is the health status of the population of Jamaica improved?
- Are there any changes of the community people in terms of awareness, behavior, and lifestyle?

Inhibiting and promoting factors

- Are there any factors inhibiting or promoting the achievement of the Overall Goal, i.e., "The health status of the population of Jamaica is improved"?

Important Assumptions

- Is the "prevention" assigned greater priority than the "treatment"?

Positive or negative Impacts

- What is the relationship between "Blue Cross", medical insurance company, and this project?
- Is collaboration among the Heart Foundation of Jamaica and the Diabetes Association of Jamaica continuously taken by C/P?
- Are the PR activities carried out through television, radio, newspapers, etc. for the purpose of extension activities in Jamaica?
- Are there any influences in terms of the social, cultural, and environmental aspects?

(b) Sustainability

Inhibiting and promoting factors

- What are the factors inhibiting and promoting sustainability?

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[2] Wellness activities are the activities for the improvement of health. Specifically, the activities are to promote health examinations at Fixed and Mobile Clinics and to extend health education.

Policy and institutional aspects

- Does the SRHA have a policy to continue the preventive activities against CLD's?
- Does the MOH have a policy for replicating this model in other regions of Jamaica?

Administrative and financial aspects

- Does the steering committee, which monitors and evaluates preventive activities against CLD's, continue *the* activities after the termination of the project?
- Are fees for health examinations collected by the fixed and mobile clinics efficiently utilized for the preventive activities against CLD's? Also, do the clients consider the fees expensive?
- What is the tendency of budgetary status?

Technical aspects

- Are the trained SRHA staff and CHA's capable enough to promote the preventive activities against CLD's?
- Has the maintenance system for medical equipment already been established, including arrangements to have maintenance staff in place?

(2) Data Sources and Collection Methods

The data sources and data collection methods are specified as shown in the evaluation grid.

(a) Patients over 16 years old (Beneficiary)

They are the target group of this project. In order to reduce the number of the patients suffering from CLD's, health services including health examination and education must be developed.

- Data collection methods: Questionnaire survey

(b) Southern Regional Health Authority (SRHA: Implementing body)

The Southern Regional Health Authority is responsible for delivering primary, secondary, and tertiary health care to the southern region. This region embraces St. Elizabeth, Manchester, and Clarendon covering 94 health centers and five hospitals.

The SRHA is directly responsible for managing the three fixed clinics and three mobile clinics that were established in the southern region during the project period. The activities of the clinic are monitored by the steering committee called JACOSH (see below in detail). The SRHA regional technical director chairs this steering committee.

Under the direction of the SRHA, the preventive activities against CLD's in the target area are proceeding through the initiative of the SRHA in order to change the behaviors of the people in the community by means of health examinations and health education for improving the health status in the southern region.

・ Data collection methods: Interview, questionnaires, and literature survey

(c) Steering Committee – JACOSH: The Jamaica-Japan Cooperation on Strengthening Health Care (Management body)

The activities of the fixed and mobile clinics are monitored by JACOSH. Basically, JACOSH monitors and evaluates the preventive activities against CLD's. The JACOSH members include the Regional Director and Regional Technical Director of the SRHA, Parish Managers, Health Education Officers, and health care workers from the three parishes. They meet every two months.

JACOSH also reports on activities related to the National Healthy Lifestyles program, which not only addresses CLD's but also reproductive health and violence.

・ Data collection methods: Interview and literature survey

(d) Fixed and Mobile Clinics (Implementing body)

There is a fixed wellness clinic that operates 1-2 times per week in each of the three parishes in the southern region. These clinics are located at the Manchester Health Center, in Manchester, the Clarendon Health Center, in Clarendon, and the Santa Cruz Health Center, in St. Elizabeth. Each parish also has a mobile clinic that makes trips to communities in the parish 1-2 times per week. The fixed clinic team usually consists of a doctor, a midwife nurse, a public health nurse, a nutritionist, a community health aide, a records clerk, a cashier, etc.

・ Data collection method: Interview and questionnaire survey

(e) Ingleside Wellness and Recreation Centre (Supporting body)

The Ingleside Wellness and Recreation Centre (IWRC) is a health and fitness club in the southern region that began operations after the start of the JICA/SRHA

project.

The IWRC was started by the Ingleside Citizen's Association in September 2002. Its members and visitors are able to use the facilities, for example, the BMI and blood pressure machine, exercise equipment, tennis courts, swimming pool, badminton courts, etc. At times, the mobile clinic visits the club to offer health examinations. The mission of the IWRC is as follows: "The Wellness Center will provide its members with avenues, such as counseling services, motivational seminars, the availability of appropriate literature, etc., for achieving and enhancing their mental, social, and spiritual well-being, while also catering to their physical well-being."

・ Data collection method: Interview and literature survey

(f) The Heart Foundation of Jamaica (Negatively affected body)

The Heart Foundation of Jamaica is an independent, registered non-profit, non-governmental organization that was established by the Lions Club of Kingston in 1971. The main aim of the Heart Foundation is to minimize the incidence of death from heart disease in Jamaica by:

- Prevention through education;
- Early detection through screening programs; and
- Rehabilitation through education about healthy lifestyles.

Services offered to the general public by the Heart Foundation include ECG tests, blood sugar tests, hemoglobin tests, blood cholesterol tests, blood pressure checks, weight checks, nutritional counseling, home visiting service, and a hypertension clinic. The Heart Foundation has one clinic in Kingston and two mobile cardiac screening units, which do health screenings for communities and company personnel island-wide. Last year, the Heart Foundation offered services to over 65,000 persons.

・ Data collection method: Interview

(g) The Diabetes Association of Jamaica (Supporting body)

The Lions Clubs of Kingston and St. Andrew founded the Diabetes Association of Jamaica in 1976. It is a private voluntary non-profit organization, and the Association does not receive any funding support from the government. The organization has the responsibility to develop and implement a nationwide plan for diabetic treatment, education, and training. The Association offers medical checks,

surgical assessments, chiropody, diet counseling, education clinics, exercise classes, and eye and renal services through outreach activities.

There are six branches island-wide that offer services and distribute diabetes products and drugs, on behalf of the Association. The head office is in Kingston and the other branches are in Morant Bay, Port Maria, Port Antonio, Falmouth, and St. Elizabeth.

・ Data collection method: Interview

(h) University of West Indies (Supporting body)

The University of the West Indies may be able to help in measuring the impact of the JICA/SRHA project through research activities.

The University of the West Indies assisted the project in research activities. A Professor in the Department of Health and Psychiatry at the University gave lectures at the Third Country Training sessions held by the SRHA and JICA.

・ Data collection method: Interview

(i) Blue Cross of Jamaica (Supporting body)

Blue Cross of Jamaica is the largest health insurer in the island. In addition to providing health insurance, Blue Cross has been involved in promoting wellness activities and carrying out preventive screening activities for CLD's and cancer. They do health screenings in the private sector, at schools, in communities, and among internal staff. For example, Blue Cross had screened 3,125 students island-wide at 75 schools in 2005.

・ Data collection method: Interview

(j) Caribbean Food and Nutrition Institute (CFNI: Supporting body)

The CFNI holds lectures on food nutrition across the country, which affects the lifestyles of the Jamaican population in a certain way.

The CFNI is a specialized center of the Pan American Health Organization (PAHO), which represents the World Health Organization in the Region of the Americas. The CFNI was founded in 1967 and has its goal for the improvement of the food and nutrition situation in its member countries.

・ Data collection method: Interview

(k) Ministry of Health (Implementing body)

The Ministry of Health (MOH) is responsible for ensuring the provision of an

adequate, effective, and efficient health service for the population of Jamaica. The mission of the Ministry is to "promote physical, mental, social and spiritual well-being and enhance the quality of life of the Jamaican people by empowering individuals and communities and ensuring access to adequate health care through the provision of cost-effective, promotional, preventive, curative and rehabilitative services."

Over the past three years, health services of primary health and secondary and tertiary care have been merged, and the management and delivery of these services have been de-centralized to four statutory regional Health Authorities covering the island.

The division in the MOH related to this project is the Division of Health Promotion and Protection. This division has prepared the "National Strategic Plan for the Promotion of Healthy Lifestyles in Jamaica 2004-2008." This plan seeks to promote "healthy lifestyles" in the population so as to reduce the risk of developing heart disease, diabetes, hypertension, obesity, cervical cancer, and HIV/AIDS, also to reduce the incidence of injury and violence.

- Data collection methods: Interview, questionnaire, and literature survey

(l) The Western Regional Health Authority (WRHA: Implementing body)

The WRHA is responsible for providing health services to the western region of the island.

The Western Regional Health Authority covers the parishes of Trelawny, St. James, Hanover, and Westmoreland with 82 health centers and four hospitals under its jurisdiction.

One wellness program that started in Hanover in 2004 is the "A Healthy Lifestyle and You" program. It is a wellness program that aims at providing exercise facilities, health checks, and health education to staff and patients. Another program proposed is a five-year project entitled "A Wellness Model to Chronic Non-Communicable Diseases: Prevention and Control." This proposal was sent by the WRHA to the National Health Fund (NHF) to request financial support. This program aims at training health care workers on wellness activities. The health care workers would then promote wellness activities and healthy lifestyle habits at health centers in the Western Region. The proposal also proposes health screenings.

- Data collection methods: Interview and literature survey

(m) The South East Regional Health Authority (SERHA: Implementing body)

The SERHA is responsible for providing health services to the South East region of the island.

The South East Regional Health Authority is responsible for the parishes of Kingston, St. Andrew, St. Thomas, and St. Catherine. The region is comprised of 90 health centers and nine hospitals.

- Data collection methods: Interview

(n) The North East Regional Health Authority (NERHA: Implementing body)

The NERHA is responsible for providing health services to the North East region of the island.

The North East Regional Health Authority serves the parishes of Portland, St. Mary, and St. Ann. There are 82 health centers and four hospitals.

- Data collection methods: Interview

3. Results

A questionnaire survey was done by the Study Team from November 3rd to 18th, 2005 involving 140 patients from the fixed and mobile clinics put in place by JICA and the SRHA in Clarendon, Manchester, and St. Elizabeth. The results of the questionnaire simply provided a feel of the influence of the SRHA wellness model, based on the patient population surveyed. It is recognized that other initiatives and awareness sources, such as the National Healthy Lifestyles Strategy, the mass media, etc., could also have an impact on the patients' behavior and awareness levels. Thus, the following responses by the patients might be affected by not only this project but also the initiatives and the mass media mentioned above.

3.1 Impact of the Project

Although two and a half years have elapsed since the end of the project, this is still an insufficient period of time to expect the achievement of the overall goal. Because the CLD prevention model (hereinafter referred to as "SRHA wellness model") has not yet been replicated in other regions, it is not possible to measure the indicators at this stage. Also, because adopting the same model used by the project requires medical equipment and facilities for fixed and mobile clinics, it will be difficult to replicate the SRHA wellness model in other regions and take a longer period of time to extend the concept of the model to the other regions. However, it is possible to identify ongoing activities which other regions have been carrying out in order to achieve the overall goal. Accordingly, the Study Team had interviews with other regional health authorities in order to obtain information to assess the influence of the project carried out in the southern region on the other regions of the health sector[1].

3.1.1 Achievement of the Overall Goal

(a) Wellness Activities in Jamaica

The indicator of the overall goal is described as the "number of sustainable wellness activities[2] in the regions." If "promotion of health examinations" which is one of components of wellness activities is expressed in a numerical value, it seems that the "number of patients who visit health centers, including fixed and mobile clinics, for having health examinations" is appropriate. Because the system in which the patients are only able to have health examinations has not been established other than in the

[1] There are four administrative regions on the health sector, i.e., Southern Region, North Eastern Region, South Eastern Region, and Western Region.

[2] Wellness activities are the activities for the improvement of health. Specifically, the activities are to promote health examinations at fixed and mobile clinics and to extend health education.

southern region (target area), the “number of patients” in two target parishes is shown in the below Table 1. The total number of patients decreased in Manchester in 2004 and increased in St. Elizabeth for three years. It is considered that health centers in Manchester were directly affected by the termination of the project since the SRHA is in Manchester.

In Manchester, more patients visit the fixed clinic in Mandeville to have health examinations compared to the mobile clinic. It implies that patients living in urban areas are interested in their health conditions. In this regard, a couple of reasons may be considered. In the first place, the SRHA is, geographically, in Mandeville, Manchester, so support for the project was intensively put in place. As a result, the people in Mandeville were also positively affected by the project through health promotion activities. Secondly, as the people in Mandeville might be richer than the people in Santa Cruz where there is the fixed clinic for St. Elizabeth, the people in Mandeville would be able to visit the fixed clinics more frequently.

In St. Elizabeth, on the other hand, patients are more willing to do health examinations if the mobile clinic travels to their communities. For example, the fixed clinic in Santa Cruz has fewer patients compared to the mobile clinic as people are less willing to travel long distances for a health examination. As a result, the fixed clinic tries to follow up with patients by preparing reminder letters to be sent out, but encounters difficulties in delivering the letters to the patients because they might live in districts with difficult terrain.

Table 1: The number of health examinations and of the patients/revisit patients at the clinics

		Number of health examinations				No. of patients / revisit patients of health examinations (*)							
		2002	2003	2004	Total	2002		2003		2004		Total	
Manchester	Fixed Clinic	90	87	91	268	1,271 / 114	1,385	1,392 / 353	1,745	1,165 / 246	1,411	3,828 / 713	4,541
	Mobile Clinic	36	36	27	99	693 / 57	750	677 / 57	734	425 / 105	530	1,795 / 219	2,014
	Sub-total	126	123	118	367	1,964 / 171	2,135	2,069 / 410	2,479	1,590 / 351	1,941	5,623 / 932	6,555
St. Elizabeth	Fixed Clinic	39	44	45	128	392 / 0	392	384 / 43	427	457 / 94	551	1,233 / 137	1,370
	Mobile Clinic	40	62	61	163	595 / 33	628	1,232 / 129	1,361	1,204 / 149	1,353	3,031 / 311	3,342
	Sub-total	79	106	106	291	987 / 33	1,020	1,616 / 172	1,788	1,661 / 243	1,904	4,264 / 448	4,712

Note (*): The top figure is the number of all the patients and the bottom figure is the number of the revisit patients among them.

Source: Southern Regional Health Authority and St. Elizabeth Health Center

The wellness activities for persons in the community, including “promotion of health examinations” for the patients with or without diseases and “extension of health education,” have actively been implemented in other regions. However, it cannot be

concluded that this project alone impacts the wellness activities in other regions because of the existence of other national programs, such as National Strategic Plan for the Promotion of Healthy Lifestyles in Jamaica (2004-2008), being carried out at the same time. Further, in order to replicate the same model used by the SRHA in other regions, it may be more appropriate for using the concepts and principles of the model in other regions since it is necessary to prepare medical equipment and facilities utilized by this project. However, the SRHA does not document the process, experiences, and outcomes of the project so as to apply the SRHA wellness model to other regional health authorities, so it is necessary for the SRHA to prepare the manual for them.

As a follow-up of this project, the Third Country Training Program has been launched for five-year period. This Program might be a significant medium for extending the concepts and principles of this project because participants in the Program were representatives from not only other Caribbean countries but also three other regions in Jamaica. Moreover, parts of this project are shared with other regional health authorities through the quarterly National Review meetings, etc.

Specific indicators of the overall goal were not clarified at the start of the project or during the project. It is difficult to measure the attainment of the overall goals of the project without setting up these indicators. Appropriate indicators are necessary for grasping the contents of the overall goal and monitoring the project activities.

(b) The Health Status of the Population in Jamaica

In order to achieve the improvement of the health status of the population in Jamaica as a whole, it is necessary to strengthen the function of the regional health system. Thus, a system in which there is collaboration between JACOSH (steering committee of the SRHA) and the CD Unit (Chronic Diseases Unit) under the Health Promotion and Protection Division of the MOH, should have been established at the end of the project so as to ensure a linkage between the southern region and other regions. The CD Unit, which operates at a national level, could play the important role of linking the four regional health authorities together, as this would be more difficult to operate on the SRHA by itself.

In addition, capacity development for health promotion officers and nutritionists in the other three regions should have been considered through either the counterpart training in Japan or the training in Mandeville, in order to extend the concepts of wellness activities in the southern region to other regions. This is because health promotion officers and nutritionists would be able to bridge the gap between the southern region and three other regions.

It is difficult to track the attainment of the overall goals of the project without the key indicators. These indicators should have been clarified at the start of the project, or at least, during the project. In this regard, the change in the BMI level in persons could be an indicator that would contribute to the recognition of the attainment of the overall goal. If the proportion of persons with high BMI levels has fallen over the years, then it might be an indication that the health status of the patients has improved.

Although there is a data sheet showing the number of curative visits for CLD's by patients in four regions as shown in Annex 6, it is very difficult to interpret the figures in the data sheet to determine the improvement of the health status of the patients at this stage. For example, the number of curative visits by patients might be increasing in several places of Annex 6 because the opportunities for health examinations have been enhanced through the health promotion activities, PR activities, etc. Also, it will take a much longer period to reflect the current efforts in the figures in the data sheet. In the long-term perspective, the figures will be affected by the wellness activities carried out by the counterparts of the project, but the results cannot be seen at this time through the data sheet as in the format shown in the Annex 6.

(c) Changes of the Community people

According to the questionnaire survey directed to the 140 patients in three parishes by the Study Team, it can be recognized that the patients have changed their nutrition intake. As shown in Figure 1 below, around 70% of 136 respondents answered that they had changed their diet compared to about 30% of them who answered that they had not.

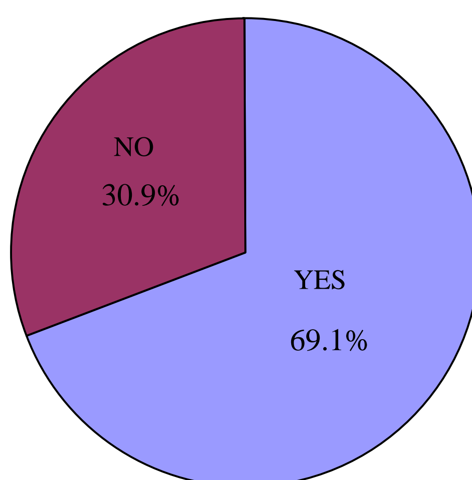

Figure 1. The changes of patients' diet: "Have you changed your nutrition intake?"

In addition, 103 respondents replied, some with multiple answers, that they were concerned with the following items, in Figure 2 below, regarding their diet. From the results, almost one half of the respondents are concerned with nutritional value, sugar, and fat contents.

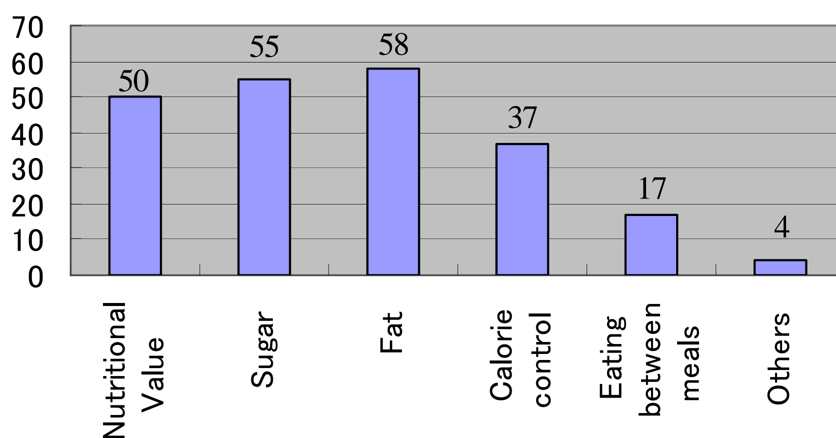

Figure 2. The areas that patients are concerned with regarding their diet: "What are you concerned with when monitoring your diet?"

Also, as shown in Figure 3 below, 42.2 % of 90 respondents, i.e., 38 respondents, replied that they had only started exercising after they had received health examinations or health education. Most of them have increased the number of times they exercise each week.

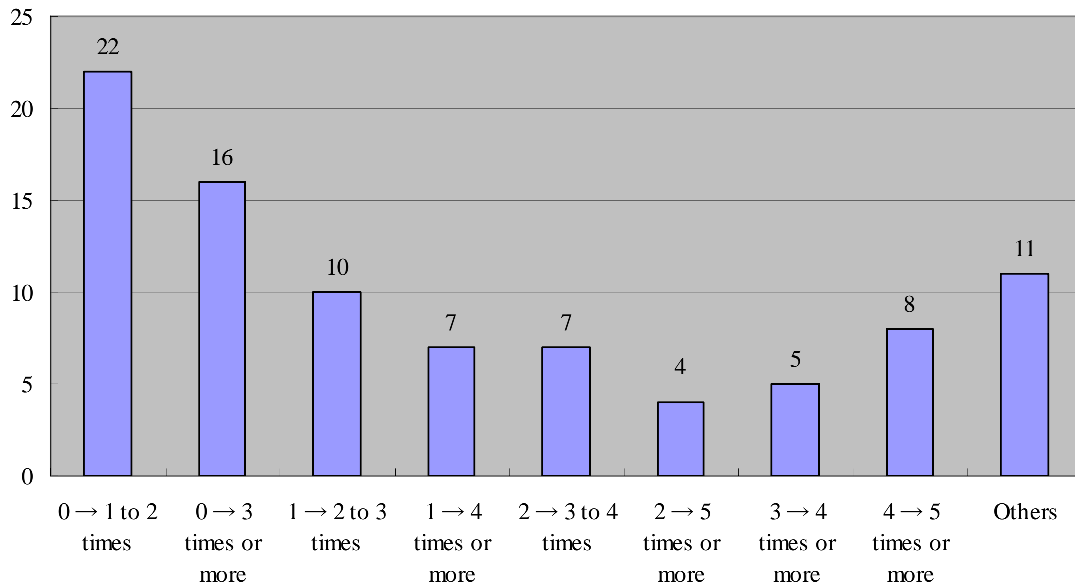

Figure 3. Changes in the frequency of exercise by the patients:
"Have you changed how often you exercise each week?"

Based on the responses of 104 persons in the region, 86.5% responded that they have changed their behaviors or lifestyles in terms of exercise, diet, smoking, drinking, etc., after receiving health education and counseling. Therefore, it might be concluded that health promotion activities in the southern region have been proceeding favorably.

3.1.2 Important Assumptions

In the important assumption from the project purpose to the overall goal, it is described that the SRHA and the MOH focus on preventive care rather than the curative care. Through the interview survey by the Study Team, many interviewees responded that screening for prevention should take precedence over curative treatment for CLD's. In the southern region, fixed and mobile clinics mainly conduct health screenings, so the activities at the clinics largely contribute to the preventive care for CLD's.

3.1.3 Positive or negative impacts

(a) The relationship with Blue Cross Health Insurance Company

There has been no collaboration between the SRHA and Blue Cross during or after the project. However, Blue Cross promotes wellness activities and preventive behaviors for corporate employees, students, community members, etc. Also, Blue Cross has just acquired a new wellness bus for community screening because the

company has realized that people in remote communities cannot access health clinics.

Blue Cross has a tradition of promoting improved health status for the Jamaican population. It has been the policy of the organization to support health care activities in the island.

As an insurance company, they promote preventive wellness activities and health examinations since they believe that this will result in fewer patients being diagnosed with CLD's in the long run. Consequently, Blue Cross would need to expend less money to pay for the treatment of CLD's. They stressed that "prevention is always better than cure."

(b) Collaboration with the Diabetes Association of Jamaica

In the early days of the project, SRHA invited the Diabetes Association to training sessions held for CHA's in the southern region and organized by SRHA. Since these sessions, the Diabetes Association and the SRHA have not directly collaborated with each other in relation to this project other than through the Third Country Training Program. Thus, follow-up sessions are needed in order to ensure that the education will have more enduring effects.

The Diabetes Association has a branch[3] in Southfield of St. Elizabeth, and has been promoting the same messages regarding CLD's that the SRHA wellness model has been promoting. Thus, there is an opportunity to collaborate with health care workers in St. Elizabeth.

(c) Collaboration with the Heart Foundation of Jamaica

There has been no collaboration between the Heart Foundation and the SRHA during or after the project apart from the Third Country Training Program.

The Heart Foundation of Jamaica has a clinic in Kingston that offers ECG, blood sugar, hemoglobin, blood cholesterol, blood pressure tests, weight checks, nutritional counseling, pharmaceutical services, home visiting services, a hypertension clinic, etc. They have 2 mobile units that can travel island-wide and offer screenings from existing health centers to supermarkets.

During the implementation of the project, the SRHA and JICA could have been more sensitive to the fact that the Heart foundation and other organizations already offered similar services regarding CLD's in the areas that the project was targeting. The lack of communication between the SRHA and the Heart Foundation of Jamaica led to

[3] The Diabetes Association has one head office in Kingston and five branches in Morant Bay, Port Maria, Port Antonio, Falmouth, and St. Elizabeth.

competition over the offering of the service rather than collaboration. The result is that the Heart Foundation lost contact with the south region and is no longer able to maintain the relationship it had with many patients in the region who had used their services before. Since the start of the project, the Foundation had difficulties gaining access to health centers in May Pen, Mandeville, and Black River where they used to have annual screenings. As a result, the Heart Foundation stopped doing annual screenings at the health centers in the southern region. When the Foundation went to these health centers to do screenings, health care workers and parish managers told the Foundation that its services were not needed in the southern region because health examinations had already been carried out by the project. The Foundation approached the regional technical director of the SRHA and the director of the Health Promotion and Protection Division of the MOH, in order to inform them of the difficulties the Heart Foundation had in accessing the health centers in the southern region. Although the higher positions of the SRHA and MOH cooperated with the Foundation, parish managers and health care workers in the southern region continued to reject the Foundation's visits because communication between the SRHA and other parishes might not have been satisfactory. There has clearly been some misunderstanding and lack of communication between the SRHA and the Heart Foundation of Jamaica, so it is necessary to reopen communication lines between them.

(d) The influence of PR activities

According to the questionnaire survey in three parishes, 94.9% of 137 respondents answered that they had ever heard about CLD's through the TV, radio, newspapers, church, community meetings, friends and relatives, and so forth. Of those respondents, 92.0% of 125 patients selected either "strongly agree" or "agree" with their interests in having health examinations as shown in the Figure 4 (A). Moreover, 97.4% of 116 patients responded that they selected either "strongly agree" or "agree" with their interest in learning more about CLD's through health education in the Figure 4 (B). Therefore, the PR activities encourage the patients to have health examinations and learn more about CLD's through health education.

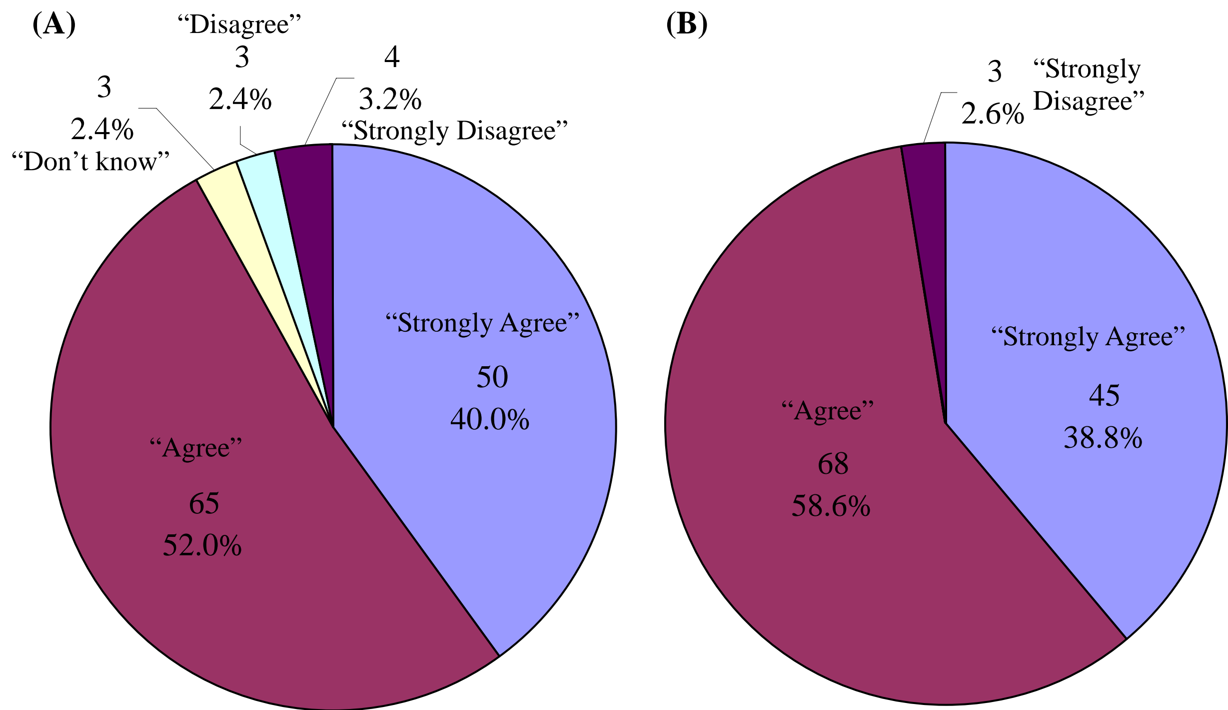

Figure4. Interest in (A) health examinations and (B) health education influenced by the PR activities

(e) Cross-cutting issues

- In Mandeville, there is a private club named the "Ingleside Wellness and Recreation Centre (IWARC)[4]", where people can exercise and obtain counseling, and measure several health indicators, such as BMI and blood pressure. The Wellness Center was started by the Ingleside Citizen's Association in September 2002, and its members and visitors are able to use the facilities, for example, the BMI and blood pressure machine, exercise equipment, tennis courts, swimming pool, badminton courts, etc. At times, the mobile clinic visits the club to offer health examinations. Although the Wellness Center promotes wellness activities and has good facilities, it might not be utilized by the persons who attend the fixed and mobile clinics because many of them cannot afford to pay the membership fees.
- Patients may visit fixed or mobile clinics only for ECG tests because it is cheaper for those who suffer from heart diseases to have the health examinations at the

[4] The policy of the Wellness Center on health and wellness is inspired by the World Health Organization's approach to health and wellness. The Wellness Center will provide its members with avenues, such as counseling services, motivational seminars, the availability of appropriate literature, etc., for achieving and enhancing their mental, social, and spiritual well-being, while also catering to their physical well-being.

fixed or mobile clinics rather than to have the ECG tests at the private medical institutions.

- Weather affects the implementation of health examinations in many cases. Attendance at the fixed and mobile clinics sometimes depends on the weather.
- Early screening helps inform patients on preventive actions they should take and the status of their health. If the fixed and mobile clinics had not existed, the patients would not have been able to recognize their health status as early as is now the case.
- More females than males are inclined to go for health examinations or screenings. According to the questionnaire survey to patients having health examinations in three parishes of the southern region, 77.5% of respondents were females and 22.5% of respondents were males as shown in Figure 5 below. Also, the number of females having curative care for CLD's is much larger than the number of males as shown in Annex 6. That would be why more females are interested in visiting fixed or mobile clinics for health examinations.

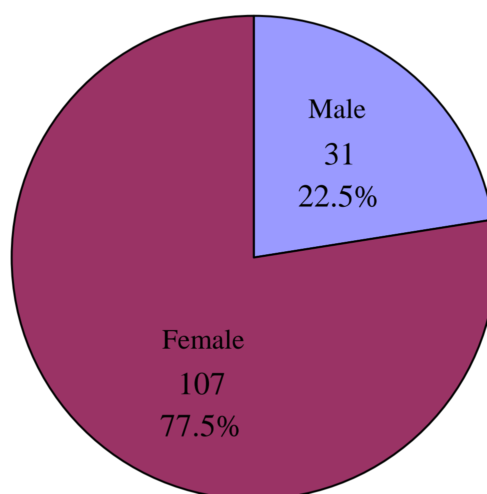

Figure 5. The ratio of males and females having the health examinations

(f) Impact on the western region

Through interview survey with other regions conducted by the Study Team, the discussion with the West Regional Health Authority (WRHA) proved more helpful and valuable for the aim in this Study than other regions, so this section focuses on what is going to take place in the WRHA.

The SRHA wellness model has influenced a new proposal for "A Wellness Model to Chronic Non-Communicable Diseases: Prevention and Control", which was

prepared and sent by the WRHA to the National Health Fund[5] (NHF), in order to request the financial support. The proposal was spearheaded by the WRHA participant in the Third Country Training Program. The aims of the proposed project are as follows:

① To train health care workers in order to get them to buy into the idea of promoting wellness activities at the health centers in the western region;
② To carry out several wellness and preventive health activities at existing health centers;
③ To educate patients on wellness and preventive lifestyle measures against CLD's at the health centers; and
④ To have healthcare workers go to communities and schools for health screenings and health education (not only the elderly but also persons between 19 and 39 yrs) regarding wellness and CLD's.

The orientation of this proposal is quite similar to those of this project because it is considered that the participant is strongly influenced by the Third Country Training Program.

3.2 Sustainability of the Project

3.2.1 Policy aspects

In order to address the problems of CLD's, the MOH has put in place a national strategic plan titled "The National Strategic Plan for the Promotion of Healthy Lifestyles in Jamaica 2004-2008". The Plan is spearheaded by the Division of Health Promotion and Protection in the MOH and is being developed and implemented in collaboration with other agencies of government, the private sector, NGO's, and other international organizations, including PAHO/WHO, UNICEF, and USAID. The aim of the Plan is to promote "healthy lifestyles" in the population, so as to reduce the risk of developing heart disease, diabetes, hypertension, obesity, cervical cancer, and HIV/AIDS as well as to reduce the incidence of violence and injuries.

In terms of the CLD's, therefore, this Plan would be a thrust for continuing the wellness activities to prevent CLD's not only in the southern region but also in the whole island.

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[5] One instrument that was put in place in 2003 to assist individuals and institutions with health care is the National Health Fund (NHF). The NHF has in place a Health Promotion and Protection Fund that provides financial assistance for projects that support primary health care, with an emphasis on health promotion and illness prevention.

Furthermore, the SRHA has the Strategic Development Plan 2002-2007, which outlines strategies partially to address CLD's. The strategies in relation to diabetes, hypertension, and heart diseases are as follows:

- To provide adequate supply of medication;
- To increase patient education and counseling; and
- To strengthen primary and secondary prevention activities, for example, wellness programs.

The SRHA has focused on the prevention activities so as to promote wellness activities against CLD's through heath education and counseling for the patients. This Plan, therefore, will support the wellness activities conducted by the SRHA.

3.2.2 Administrative and financial aspects

(a) Steering Committee – JACOSH (Jamaica-Japan Cooperation on Strengthening Health Care)

Basically, JACOSH monitors and evaluates the preventive activities against CLD's, so the activities at the fixed and mobile clinics are monitored by JACOSH. Furthermore, it manages not only the follow-up activities of this project but also activities related to the National Healthy Lifestyles program which not only addresses CLD's but also reproductive health as well as injury and violence.

The JACOSH members include the Regional Director and Regional Technical Director of the SRHA, Parish Managers, Health Education Officers, and health care workers from the three parishes, and they meet every two months.

The challenges for JACOSH will, hereafter, be to renew and maintain the database regularly through the database analysts and the administrative staff in order to track wellness activities. In addition, a proper reporting format may be necessary for capturing the activities being done in the JACOSH meetings.

(b) Fees collected by the wellness activities in the southern region

The fees collected by the clinics are put directly into the general accounts of the financial division at the SRHA and then disbursed to the health centers according to their needs because the MOH has recommended that specific accounts should not be kept for particular purposes. According to the Regional Technical Director of the SRHA, the clinics might obtain more funds from the SRHA than the fees they hand over to the SRHA financial division from the patient fees. This is because the patient fees collected at fixed and mobile clinics are lower than the market prices. Further, the main financial

requests from the fixed and mobile clinics are for equipment and maintenance, which cost a lot. In terms of the cost-effectiveness of the SRHA wellness model, therefore, it might be difficult for other regions to replicate the model because of budgetary constraints. Thus, since the wellness activities for preventing CLD's are expensive, it would be necessary for the SRHA to secure funds for the wellness activities from the NHF which emphasizes health promotion and illness prevention, etc.

In terms of how patients perceive the fees for health examinations, 73.3% of 135 respondents replied that the fees for the health examinations are "appropriate" according to the questionnaire survey shown in Figure 6. Thus, it can be observed that the fees for the health examinations are quite relevant for the patients, but not for the health care providers.

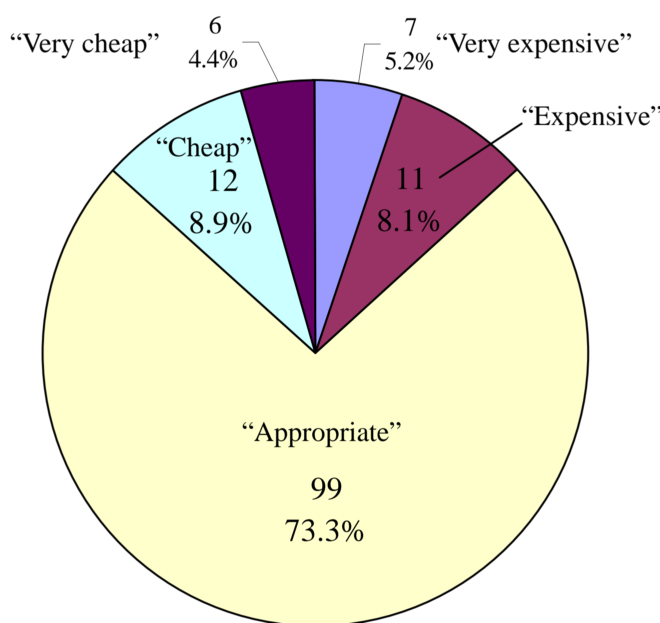

Figure 6. Feelings of the patients about the fees for the health examinations: "How do you feel about the fees for the health examinations?"

(c) The tendency of the budgetary status

At the national level, the MOH tries to balance the budget as shown in the Table 2 below. On the other hand, the SRHA has not been able to keep a balanced budget, i.e., actual expenditure exceeds the planned budget. Thus, the SRHA should secure funds for the wellness activities from funding agencies, such as the NHF, by sending in proposals for financial supports. The advent of the NHF has made it more feasible to maintain the wellness activities for preventing CLD's. The NHF raises funds from an excise tax on tobacco and alcohol products, the National Insurance Scheme (the

government pension scheme), and a specific charge on the Government of Jamaica Consolidated Fund. The funds raised go towards health initiatives and health services in the country. The NHF supports project-oriented proposals, so organizations seeking the assistance must submit a project proposal to the NHF outlining the project objectives, cost, duration, and expected outcomes. In this way, the NHF makes it possible for the regional health authorities to request for funds spent on CLD's. Importantly, the NHF also supports the National Healthy Lifestyles program.

Table 2: The budgetary sheet of the MOH / SRHA from FY 2000 to 2004 Unit: $J ('000)

	Items	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005
SRHA	**Recurrent budget**	964,369	945,393	1,427,736	1,124,960	2,020,989
	Operation	97,946	189,079	187,000	105,350	89,190
	Personnel	866,423	756,314	1,240,736	1,019,610	1,931,799
	Actual expenditure	1,066,104	957,504	1,437,980	1,255,813	2,020,989
MOH	**Recurrent budget**	8,972,802	7,725,293	10,746,400	10,631,050	14,592,755
	Operation	1,788,768	2,698,575	2,149,280	2,131,128	1,658,094
	Personnel	7,155,068	5,026,718	8,597,120	8,335,424	12,924,862
	Actual expenditure	8,972,802	7,722,235	10,736,352	10,466,552	14,582,956

Souce: The Ministry of Health The fiscal year is from April1 -March 31.

3.2.3 Technical aspects

(a) Capability of personnel in the southern region

According to the questionnaire survey to the 140 patients in three parishes by the Study Team, 96.2% of 130 respondents answered that the health care workers and community health aids (CHA's) were either "very capable" or "capable" enough to promote the preventive activities against CLD's as shown in Figure 7 below. Thus, it can be said that the health care workers and CHA's are highly rated by the patients who have health examinations in the southern region.

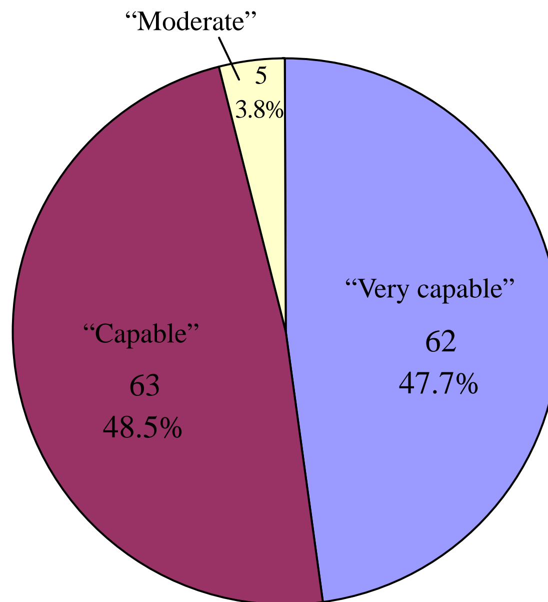

Figure 7. The capability of the health care workers and CHA evaluated by the patients: "Are the health care workers and CHA capable enough to promote the preventive activities against CLD's?"

Furthermore, patients can be educated to take preventive measures toward preserving their health if they receive continuous education by the health education officers. Thus, if the health education officers are good motivators, then it is more effective for patients to promote preventive behaviors in the long-term. In order to maintain the teaching skills and ensure up-to-date knowledge for health education officers, it is necessary for them to have continuous training sessions.

Emphatically, health care workers in the southern region have greatly benefited from observing the wellness clinic models in Japan. This kind of experience has motivated health care workers in the southern region to press for more wellness activities.

(b) Maintenance of the equipment

There is a centralized work order maintenance system in which health centers from across the southern region submit forms and describe the state of their equipment to the SRHA. When the health centers make requests for equipment repairs, a local technician assesses the problem and then the necessary parts are procured and installed by the SRHA. Currently, maintenance staff seek spare parts for the biomedical equipment, especially Tanita from Japan, at a lower cost in the US because they are very

expensive. However, a number of common spare parts and consumables can be procured from Jamaica Hospital Supplies. Please see the Annex 7 for the maintenance of main equipment.

There are only two technicians for biomedical equipment in the southern region who must take care of 85 health centers, 5 hospitals, and a community hospital. They carry out both preventive and corrective checks. Preventive checks are conducted on equipment on a quarterly basis.

The equipment manuals are not kept beside the equipment and machines, but are accessible for the users at the fixed clinics. If health staff do not understand the manuals, they can consult the two technicians. Also, all the nurses are trained to use the medical equipment and machines, such as the ECG machine, at their health centers, and new nurses are instructed by a senior nurse through on-the-job training. If nurses are not able to make contact with the two technicians, they can contact the Parish Administrator to assist them in making the contact. The manuals are also available in the form of CD's.

3.3 Analysis of Factors of Impact and Sustainability

3.3.1 Factors promoting Sustainability

(a) Preference of patients

A lot of people still prefer private clinics that charge more money for screenings to public health centers because they perceive the public health centers as second class. In the north east region, however, it might be changing as more patients, who usually go to the private clinics for screenings, have started going to the public clinics. This could be because there is now more confidence in the system of the public health centers and more doctors are now stationed at the type 3 public health centers.

(b) Assistance from the support groups

The fixed and mobile clinics are promoted in various ways. There is an alliance with the bauxite mining company, Alpart, which partially subsidizes health examinations in specific communities. The PR representative of Alpart also distributes flyers for the clinic and sometimes puts information about the clinic in the company newsletter. Also, the clinic sometimes receives sponsorships from specific church groups and social groups.

(c) Third Country Training Program

Although the purpose of the Third Country Training Program is to provide the participants from selected CARICOM member countries with an opportunity to improve their knowledge and techniques in the field of the prevention of CLD's, representatives from three regions in Jamaica have also attended this Program. The participants of the Program visit the model sites in the southern region, in order to absorb the knowledge and techniques on wellness activities at the fixed and mobile clinics. Because the health care workers in the SRHA are observed by the participants from other Caribbean countries and other regions in Jamaica, it is expected that they might continuously make efforts for brushing up their knowledge and techniques in order to act as role models for preventing CLD's in the CARICOM regions. From the perspective of the sustainability, therefore, they should have incentives and motivations so as to continuously impart their knowledge and techniques to the participants in the Program.

In addition, as the WRHA participant attended the Third Country Training Program, the WRHA tries to apply the SRHA wellness model to the western region by preparing the proposal and sending it to the NHF. Thus, it is expected that other regional health authorities have sustained their efforts continuously.

(d) Policy aspect

"The National Strategic Plan for the Promotion of Healthy Lifestyles in Jamaica 2004-2008" by the MOH promotes "healthy lifestyles" in the population of Jamaica, so as to reduce the risk of developing heart disease, diabetes, hypertension, obesity, etc. In the policy aspects, therefore, the environment in which the project activities related to CLD's have continuously been promoted is established.

(e) Administrative aspect

JACOSH manages regular meetings every two months and the follow-up activities of this project even after the termination of the project. Thus, JACOSH performs the role for promoting the activities continuously through the monitoring activities, etc.

3.3.2 Factors inhibiting Impact

(a) Indicators of the overall goal

Indicators of the overall goal were not set up appropriately. Although the indicator of the overall goal described as the "number of sustainable wellness activities

in the regions" is established, it is difficult to determine whether or not the overall goal has been achieved. Without setting up the specific indicators, counterparts are not able to confirm the attainment of the overall goal.

(b) Replication of the SRHA wellness model

One of obstacles is the question of who, in the other regions, would have the responsibility for replicating the SRHA wellness model. The most appropriate personnel are the technical directors in other three regions with the assistance of JACOSH and the CD Unit as mentioned earlier. The other three regions have started to look at the model through the Third Country Training Program which is supposed to continue for five years after the termination of the project as follow-up activities. The Jamaican participants in the Program are also able to obtain knowledge and skills for employing them in their regions, so it can be expected that a positive impact will result in the future. The Program and the National Reviews[6] held quarterly, therefore, are important mediums to spread the model developed in the southern region to other regions.

(c) Fast food advertisements

While health education for health-seeking behaviors might influence many young people and adults, they are coming in touch with visual messages daily through television advertising and being enticed by North American fast food advertisements. The aim of the health promotion activities is to promote healthy lifestyles including "diet", so the aim is contrary to the contents of the fast food advertisements. Therefore, the messages sent by the fast food advertisements are one of factors inhibiting the attainment of the overall goal.

Furthermore, the written media, such as the newspapers, has been utilized for promoting wellness activities much more than the electronic media, such as television. However, there is a significant portion of the population in Jamaica who cannot comprehend the contents of the newspapers, i.e., they are not functionally literate.

(d) Healthy foods

From the perspective of diet, two factors inhibiting the achievement of the overall goal were noted in the interview survey. First, most of the population are not aware of the importance of nutrition labels on food items. This lack of awareness has

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[6] The Regional Directors, Regional Technical Directors, and the Finance Directors from the four regional health authorities attend the quarterly National Review meetings. Additionally, the MOH division heads and the chief medical officers also participate in the meetings. Two meetings are held at a national venue in the year, and the other two meetings are hosted by the regional health authorities.

been due to low literacy levels. The main focus of patients is not the quality of food eaten but the quantity, in terms of healthful eating.

Secondly, in poor areas of towns and cities, it is very difficult for the people to buy healthy foods, such as fruits and vegetables, because they are more expensive than high fat foods which are cheaper to buy. The availability of the healthy foods has become lower due to droughts and hurricanes. As a result, they eat less of expensive and healthy carbohydrates, such as yams and bananas, and consumed more affordable carbohydrates, such as flour. Thus, they should be encouraged to carry out backyard gardening at their homes as a measure taken towards maintaining their health status. In the south east region, for example, the SERHA works with the Rural Agricultural Development Agency, in order to educate people in St. Thomas and St. Catherine how to start and maintain a backyard garden for healthful and low-cost eating options for themselves.

Consequently, the poor people buy and eat more high fat foods than low fat foods due to low literacy levels and economic reasons. On the other hand, however, many local food companies have started marketing their foods with labels that highlight the nutritional value of their products. Also, some companies now offer low fat or low-in-salt food products.

3.3.3 Factors inhibiting Sustainability

(a) Data collection and analysis in the southern region

It was difficult for the Study Team to collect data in the southern region. In St. Elizabeth, for example, a statistician has not been deployed for the purpose of the data analysis. However, a community nurse manually collected the information to complete a data sheet without computerized data. Additionally, the community nurse in St. Elizabeth could provide the data sheet for the Team earlier than statisticians in Manchester. Also, the data sheet was not provided for the Team from Clarendon. It might provide an indication of what is going on after the termination of the project in terms of data collection and analysis on CLD's in the southern region. Thus, unless skilful statisticians are deployed for data analysis, project activities, such as "data collection of CLD's" and "consolidation of health statistics", cannot be carried out continuously.

(b) Financial aspect

Because the fixed and mobile clinics can obtain more funds from the SRHA than the fees they hand over to the SRHA financial division from the patient fees, it

might be difficult for other regions to replicate the SRHA wellness model in terms of the cost-effectiveness of the model. Therefore, the wellness activities are expensive and the budget is limited in other regional health authorities, so that it is considered that the sustainability of the project is low in the financial aspect.

(c) Health care workers

The reality is that the Manchester health center can only replace health care workers but cannot add new health care workers, unless it makes special requests to the Ministry of Finance. This is because the MOU[7] creates certain restrictions with regards to hiring new staff.

(d) Seasonality of visits

There are specific times of the year when the number of patients at the clinics is low. It usually occurs during holidays and at the beginning of the school term because parents need their limited funds to take care of the school textbooks, tuitions, uniforms, etc. for their children.

3.4 Conclusions

Without setting up the specific indicators of the overall goal, it is difficult to measure the attainment of the overall goal. Hence, it is desirable to establish the appropriate indicators so as to grasp the contents of the overall goal and to monitor the wellness activities.

Further, in order to replicate the same model used by the SRHA in other regions, it may be more appropriate for using the concepts and principles of the model in other regions unless other regional health authorities are able to prepare medical equipment and facilities utilized by this project. Therefore, it is necessary for the SRHA to prepare the manual for the purpose of the application of the model to other regional health authorities. Furthermore, the concepts and principles of this project are partially shared with other regional health authorities through the Third Country Training Program and the quarterly National Review meetings. Overall, it is considered that the impact of the project is low at this stage, but it is expected that the overall goal has been achieved earlier by the efforts of the counterparts.

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[7] "The Memorandum of Understanding for the Public Sector", between the Government of Jamaica and the Jamaica Confederation of Trade Unions, includes general policies on wage and employment restrictions for public sector workers, for the period April 1, 2004 to March 31, 2006.

From the perspective of the project sustainability, there are advantages and disadvantages as mentioned below. In the policy aspects, the environment in which wellness activities have continuously been promoted is established by “The National Strategic Plan for the Promotion of Healthy Lifestyles in Jamaica 2004-2008”. Also, JACOSH manages regular meetings every two months and the wellness activities after the termination of the project. Moreover, as the WRHA participant attended the Third Country Training Program, other regional health authorities try to apply the SRHA wellness model to their regions. These advantages contribute to continuous implementation of wellness activities.

On the other hand, data collection and analysis on CLD’s were not conducted with appropriate database in the southern region, and this fact indicates that the sustainability of the project activities is low. In terms of the cost-effectiveness of the model, the fixed and mobile clinics can obtain more funds from the SRHA than the fees they hand over to the SRHA financial division from the patient fees, so that the sustainability is low in the financial aspect, too. Altogether, it seems that the sustainability of the project is not high so far, but it would be possible to enhance the sustainability of the project by strengthening the collaboration with the NHF, etc.

4. Recommendations and Lessons Learned

4.1 Recommendations

To SRHA and MOH:

- As mentioned in the Impact of the project, there is the question of who will be responsible for replicating the SRHA wellness model in the other regions. The most appropriate personnel are the technical directors in the other three regions with the assistance of the CD Unit. Thus, the mechanism in collaboration with the JACOSH and the CD Unit should be established for the achievement of the overall goal as a management body to encourage cooperation among the technical directors in four regions of Jamaica.
- From the perspective of sustainability, community involvement in wellness activities is indispensable. Accordingly, the sensitization of the community people should be continuously carried out by the health education officers. If the health education officers are able to get communities on board, some wellness activities will be sustained and enhanced by communities which take part ownership of the project without specific assistance from the donor countries. Also, in order to keep the teaching skills and knowledge of the health education officers up-to-date, it is important to have them involved in regular training sessions.
- The SRHA and the MOH scrutinize the types of health indicators to measure the achievement of the overall goal of the project. For instance, the change in the BMI (Body Mass Index) level of the patients could be an appropriate indicator in order to recognize the attainment of the overall goal and to monitor wellness activities. If the proportion of persons with high BMI levels has fallen over the years, then it might be an indication that the health status of the patients has improved.
- Because the fixed and mobile clinics can obtain more funds from the SRHA than the fees they hand over to the SRHA financial division from the patient fees, it is severe to continue wellness activities under this condition in terms of budgetary aspect. Therefore, it is recommended that the SRHA enthusiastically prepare the proposal and submit it to the NHF which contributes to the prevention of CLD's, in order to secure funds for the wellness activities.
- It could not be determined whether or not collected data were sufficiently analyzed and utilized for the southern region, *per se*, and for the other three regions, too. It is very crucial to use the results of the data analyzed by the statisticians in each parish because the results should be fed back into the development of regional plans in the southern region. To this end, exclusive statisticians should be deployed in the three parishes and collaborate within the

newly established working group, consisting of the statisticians from three parishes.

- The SRHA should prepare a manual containing the concepts and principles of the SRHA wellness model including the method of data analysis, administrative techniques, etc., in order to share pieces of the model with other regional authorities.
- In respect of the Heart Foundation, there has been a miscommunication between the Heart Foundation and the project-related personnel in the southern region, i.e., the parish managers and health care workers, with regard to health screenings by the Heart Foundation in the southern region. However, this might be just one example. There could be other NGOs affected negatively by the project. Therefore, it is recommended that the SRHA communicate not only with the Heart Foundation but also with parish managers and health care workers within its jurisdiction because the objectives of the Foundation and the SRHA are similar from the perspective of the health status improvement in Jamaica. If the issues arise solely from a lack of communication, then there is an opportunity for future collaboration. Therefore, it is the responsibility of SRHA to seek to clear up any misunderstanding which exists.

4.2 Lessons Learned

- It will be extremely difficult to track the attainment of the overall goal of the project unless the indicators are precisely set up. Thus, the key indicators should be clarified before or during the cooperation period. At the same time, the means of verifications must be examined thoroughly in terms of cost, the credibility of data sources, and ease/difficulty of obtaining data. Otherwise, counterparts (and the project if during the project implementation) cannot collect the specific data required for the logframe. The Ministry concerned should confirm key indicators in the ex-ante or mid-term evaluation study through extensive involvement.
- In order to attain the overall goal, it is necessary for the project to have a clear vision of how the project purpose can lead to the overall goal under the instruction of the JICA project team. Before the termination of the project, therefore, the mechanism through which counterparts are able to follow the procedures for extending the project model to other areas should be established. Specifically, if the project aims to develop the model from the target area to the national level, in the overall goal, then the personnel working in other areas must be trained during

the cooperation period. In this project, for example, because the health status of the population in Jamaica is to be improved by extending the SRHA wellness model to other regions as set out in the overall goal, it is necessary to train the health care workers in other regions, such as health education officers and nutritionists, through the training course in Japan or in the southern region during the project implementation.

- In order to extend the concepts and principles of the project model from the target area to other areas, the process, experiences, and outcomes of the project should be documented so as to assist in replicating them at the relevant institutions in the other areas.
- As a lesson learned through the relationship between the SRHA and the Heart Foundation of Jamaica, an external workshop for the relevant organizations or groups should be held before the launch of a newly established project in order to share the vision and the concepts of the project with them. Also, the planned counterparts of the project, through an internal workshop, should also have the opportunity to discuss and analyze the stakeholders of the project through the stakeholders analysis of the PCM workshop, especially beneficiaries and negatively affected groups of the project, before launching the project. In the SRHA project, for instance, the following point should have been discussed through the workshop: "The new services provided by the project are not to replace existing services but to complement them, and how would it be able to be achieved in collaboration with other relevant groups?"

4.3 Follow-up Situation

As follow-up activities, the Third Country Training Program has been conducted once a year from Japanese fiscal year (JFY) 2003 to JFY 2007. The first and second year programs were hosted by the SRHA. On behalf of the SRHA, the MOH was to be responsible for the implementation of the Program in JFY 2005 in the third year program, but it was cancelled because of a lack of management by the MOH. At the present moment, the schedules of the fourth and final year programs are undecided.

END

Annex 1:

Schedule of the study

Annex 1: Schedule of the Ex-post Evaluation Study

Day	Date		Schedule		Place	Remarks
			AM	PM		
1	Oct. 29th	Sat	Departure from Tokyo			
2	Oct. 30th	Sun	Arrival in Kingston	Meeting with Local Consultant	Kingston	
3	Oct. 31st	Mon	Kick-off meeting in JICA	Visit to MOH and PIOJ	Kingston	HC
4	Nov. 1st	Tue	Visit to SRHA	Visit to Health Center in Black River	Mandeville/ Black River	HC
5	Nov. 2nd	Wed	Visit to Health Center in May Pen	Modification of questionnaires	May Pen/Kingston	HC
6	Nov. 3rd	Thu	Interview and questionnaire survey to C/P in SRHA and Mandeville Health Center		Mandeville	HC
7	Nov. 4th	Fri	Visit and questionnaire survey at JMTHS		Spanish Town	TVET
8	Nov. 5th	Sat	Summarizing findings		Kingston	
9	Nov. 6th	Sun	Summarizing findings		Kingston	
10	Nov. 7th	Mon	Visit and questionnaire survey to MOEYC	Distribute the questionnaires in Black River	Kingston/Black River	HC
11	Nov. 8th	Tue	Interview and questionnaire survey at St. Andrew THSs	Interview and questionnaire survey to MOH	Kingston	HC/TVET
12	Nov. 9th	Wed	Questionnaire survey to patients at Wellness Clinic in Clarendon	Join the JACOSH meeting in Mandeville	Clarendon/ Mandeville	HC
13	Nov. 10th	Thu	Interview and questionnaire survey at Frome THS	Interview and questionnaire survey at Holmwood THS	Frome/ Christiana	TVET
14	Nov. 11th	Fri	Compiling findings	Interview and questionnaire survey at JMTHS	Kingston / Spanish Town	TVET
15	Nov. 12th	Sat	Summarizing findings		Kingston	
16	Nov. 13th	Sun	Summarizing findings		Kingston	
17	Nov. 14th	Mon	Interview to Health Promotion and Protection Division of MOH	Questionnaire survey at St. Andrew THSs	Kingston	HC/TVET
18	Nov. 15th	Tue	Interview and questionnaire survey at Kingston THS	Interview and questionnaire survey at Marcus Garvey THS	Kingston/ St. Ann's Bay	TVET
19	Nov. 16th	Wed	Compiling findings	Visit and interview to Heart Trust/ Interview with the Technical Director of NERHA	Kingston	TVET/HC
20	Nov. 17th	Thu	Interview to the Diabetes Association of Jamaica / Interview to Blue Cross	Compiling findings	Kingston	HC
21	Nov. 18th	Fri	Visit and interview to WRHA	Questionnaire survey at Frome THS	Montego Bay/ Frome	HC/TVET
22	Nov. 19th	Sat	Summarizing findings		Kingston	
23	Nov. 20th	Sun	Summarizing findings		Kingston	
24	Nov. 21st	Mon	Interview and data collection at SRHA	Interview and data collection at JMTHS/	Mandeville/ Spanish Town/ Kingston	HC/TVET
25	Nov. 22nd	Tue	Meeting with Dr. Skyers of NERHA	Compiling findings	Kingston	HC
26	Nov. 23rd	Wed	Meeting with Dr. Sandra Chambars/ Interview to the Heart Foundation of Jamaica	Questionnaire collection at Kingston THS/ University of West Indies	Kingston	HC/TVET
27	Nov. 24th	Thu	Visit and interview to SERHA	Questionnaire collection at Marcus Garvey THS/ Visit and interview to NERHA	Kingston/ St. Ann's Bay/ Ocho Rios	HC/TVET
28	Nov. 25th	Fri	Final meeting at JMTHS	Final meeting with technical director of SRHA/ Questionnaire collection at Holmwood THS	Spanish Town/ May Pen/ Christiana	TVET/HC
29	Nov. 26th	Sat	Summarizing findings		Kingston	
30	Nov. 27th	Sun	Summarizing findings		Kingston	
31	Nov. 28th	Mon	Meeting with PIOJ, MOH, MOEYC		Kingston	TVET/HC
32	Nov. 29th	Tue	Internal meeting with local consultant in JICA	Departure from Kingston	Kingston	
33	Nov. 30th	Wed				
34	Dec. 1st	Thu		Arrival in Tokyo	Tokyo	

HC: The Project for Strengthening of Health Care in the Southern Region of Jamaica
JMTHS: Jose Marti Technical High School
MOEYC: Ministry of Education, Youth and Culture
MOH: Ministry of Health
PIOJ: Planning Institute of Jamaica
SRHA: Southern Region
THS: Technical High School

Annex 2:

List of interviewees

Annex 2: List of Interviewees

Name	Position
(1) Ministry of Health (MOH)	
Eva Lewis Fuller	Director, Cooperation in Health / Policy Analyst
Georgina Gordon-Strachan	Director, Epidemiology, Research & Data Analysis
Takese Foga	Education Officer, Health Promotion & Protection Division
Jeffery Latty	Education Officer, Health Promotion & Protection Division
(2) Planning Institute of Jamaica (PIOJ)	
Leila Palmer	Director, External Cooperation Management Division
Pauline Morrison	Manager, Bilateral Unit
Marsha Woolcock	Project Economist
(3) Southern Regional Health Authority (SRHA)	
Michael Phillip Coombs	Regional Technical Director, SRHA
H. Hamilton	Director, Management Information Systems, SRHA
David Blissett	Director, Operations and Maintenance Division, SRHA
H. Ismail	Regional Maintenance Manager, SRHA
Dennis Wilmot	Director, Regional Finance Department, SRHA
Joy Anderson	Administrative Assistant, SRHA
Yvonne Pitter	Parish Manager, Manchester
Beverley Wright Wilson	Medical Officer, Manchester Health Department
Dalcie Stephenson	Community Health Nurse, Manchester Health Department
Adrian Stephenson	Clerical Officer, Manchester Health Department
Heather Wood Mullings	Health Educator, Manchester Health Department
Telma Davis	Nurse Practitioner, St. Elizabeth Health Department
Valerie Wright	Community Nurse, St. Elizabeth Health Center
D. Grandison	Health Educator, St. Elizabeth Health Department
Michael Bent	Parish Manager, Clarendon
L. Dawes	Medical Officer, Clarendon Health Department
S. Copeland	Medical Officer, Clarendon Health Department
C. Pearson	Health Educator, Clarendon Health Department
A. Mclean	Clerical Officer, Clarendon Health Department
M. Lawrence	Community Health Nurse, Clarendon Health Department
(4) Western Regional Health Authority (WRHA)	
Sheila Campbell-Forrester	Regional Director and Public Health Specialist
Michael Kington	Regional Program Development Officer
Isolyn Bell-Rose	Regional Health Promotions Officer
(5) South East Regional Health Authority (SERHA)	
Michelle Harris	Regional Technical Director
Dawn Walters	Regional Health Promotion Officer
Sandra Chambers	Medical Officer of Health
Adrian Boothe	Regional Program Development Officer
(6) North East Regional Health Authority (NERHA)	
Michelle Roofe	Regional Technical Director
Nicola Skyers	Regional Program Development Officer
Dr. Wheatle	Medical Officer of Health
(7) Heart Foundation of Jamaica	
Knox Hagley	Chairman, The Heart Foundation of Jamaica
Deborah A. Chen	General Manager, The Heart Foundation of Jamaica
(8) Diabetes Association of Jamaica	
Lerlene Less	Administrator
Owen Bernard	Member
(9) Blue Cross of Jamiaica	
Errol Morrison	President and CEO
Colin Tomlinson	Supervisor, Provider and Wellness Services
Carol Bryan	Supervisor and Nurse
Aldith Grant	Assistant Manager, Provider and Wellness Services
Repursha Smith	Manager, Public Sector
(10) University of the West Indies	
Dr. Maria Jackson	Professor, Department of Community Health & Psychiatry
(11) Ingleside Wellness & Recreation Centre	
Ms. Robinson	Club Stewardess
(12) Grace Kennedy Limited	
Mazie Miller	Manager, Grace Foods & Services
(13) Caribbean Food and Nutrition Institute	
Pauline Samuda	Nutrition Educator

Annex 3:

Evaluation grid

Annex 3: Evaluation Grid

	Evaluation Questions		Data Needed	Data Sources	Data Collection Methods
	Main Questions	**Sub-questions**			
Impact	Has the Overall Goal already been achieved?	Are wellness activities[1] for the community people continuously carried out in other regions?	① **The contents of wellness activities** ② **The number of health examinations[2] and the number of patients and re-patients**	① SRHA ② SRHA, MOH	① Interview ② Questionnaire
		Is the health status of the population of Jamaica improved?	① **The number of CLD's in 4 regions** ② **Opinions of stakeholders**	① MOH ② SRHA, MOH	① Questionnaire ② Interview
		Are there any changes of the community people in terms of awareness, behavior, and lifestyle?	① **The change of nutrition intake (from the perspectives of nutritional value, sugar, fat, calorie control, eating between meals, etc.)** ② **The change of exercise (frequency per week)**	① Patients ② Patients	① Questionnaire ② Questionnaire
	What are the factors inhibiting and promoting the achievement of the Overall Goal?	Are there any factors inhibiting and promoting the achievement of the Overall Goal, i.e., "The health status of the population of Jamaica is improved"?	**Opinions of stakeholders**	① SRHA, MOH ② The Heart Foundation of Jamaica, the Diabetes Association of Jamaica, University of West Indies	① Questionnaire ② Interview
	Are there any influences of the Important Assumptions from the Project Purpose to the Overall Goal?	Is the "prevention" assigned greater priority than the "treatment"?	**Opinions of stakeholders**	SRHA, MOH	Interview
	Are there either positive or negative Impacts other than the Overall Goal?	What is the relationship between "Blue Cross", medical insurance company, and this project?	**Opinions of stakeholders**	Blue Cross	Interview
		Is collaboration among the Heart Foundation of Jamaica and the Diabetes Association of Jamaica continuously taken by C/P?	**Opinions of stakeholders**	The Heart Foundation of Jamaica, the Diabetes Association of Jamaica, University of West Indies	Interview
		Are the PR activities carried out through the TV, radio, newspapers, etc. for the purpose of extension activities in Jamaica?	**Opinions of stakeholders**	Patients	Questionnaire
		Are there any influences in terms of the social, cultural, and environmental aspects?	**Opinions of stakeholders**	SRHA, MOH	Questionnaire
Sustainability	What are the factors inhibiting and promoting sustainability?		**Opinions of stakeholders**	SRHA, MOH	Questionnaire
	Are the policy and institutional aspects well-prepared?	Does the SRHA have the policy to continue the preventive activities for CLDs?	**The relationship between "Regional Health Plan" by the SRHA and the preventive activities for CLDs**	Regional Health Plan 2003-2007	Literature Survey
		Does the MOH have the policy for replicating this model in other regions of Jamaica?	**The relationship between "Five-year Health Development Plan" by the MOH and the preventive activities for CLDs**	Five-year Health Development Plan	Literature Survey
	Are the administrative and financial aspects conducted favorably?	Does the Steering Committee which monitors and evaluates preventive activities for CLDs continue *the* activities after the termination of the project?	**Contents of activities by the Steering Committee and the members of the Committee**	Members of the Steering Committee	Interview

[1] Wellness activities are the activities for the improvement of health. Specifically, the activities are to promote health examinations at Fixed and Mobile Clinics and to extend health education.
[2] As the contents of health examination, the following items are raised: blood pressure; blood-sugar level; electrocardiogram; cholesterol; BMI; urinalysis (sugar, albumin); etc.

		Are fees for health examinations collected by the Fixed and Mobile Clinics efficiently utilized for the preventive activities for CLDs? Also, do the patients feel the fees expensive?	① **The use of the fees and the tendency in the fees collected in each year** ② **Opinions of the patients regarding the fees**	① SRHA ② Patients	① Interview ② Questionnaire
		What is the tendency of budgetary status?	**Tendency and present status of the budget**	Budgetary sheet of MOH and SRHA	Questionnaire
	Are the transferred technologies continuously utilized?	Are the trained SRHA staff and CHA's capable enough to promote the preventive activities for CLDs?	**Opinions of stakeholders**	① Patients ② SRHA	① Questionnaire ② Interview
		Has the maintenance system for medical equipment already been established, including arrangements to have maintenance staff in place?	**Operational status of medical equipment**	① Checklist of the equipment in SRHA ② Maintenance staff of SRHA	① Questionnaire ② Interview

Annex 4:

Evaluation questions and its results

Annex 4: Evaluation Questions and the Results

<table>
<tr><th rowspan="2"></th><th colspan="2">Evaluation Questions</th><th rowspan="2">Results</th></tr>
<tr><th>Main Questions</th><th>Sub-questions</th></tr>
<tr><td rowspan="4">Impact</td><td rowspan="3">Has the Overall Goal already been achieved?</td><td>Are wellness activities[1] for the community people continuously carried out in other regions?</td><td>• The wellness activities for persons in the community, including “promotion of health examinations” for the patients with or without diseases and “extension of health education,” have actively been implemented in other regions. However, it cannot be concluded that this project alone impacts the wellness activities in other regions because of the existence of other national programs, such as National Strategic Plan for the Promotion of Healthy Lifestyles in Jamaica (2004-2008), being carried out at the same time.
• The Third Country Training Program has been launched for five-year period. This Program might be a significant medium for extending the concepts and principles of this project because participants in the Program were representatives from not only other Caribbean countries but also three other regions in Jamaica. Moreover, parts of this project are shared with other regional health authorities through the quarterly National Review meetings, etc.
• The total number of patients decreased in Manchester in 2004 and increased in St. Elizabeth for three years. It is considered that health centers in Manchester were directly affected by the termination of the project since the SRHA is in Manchester. Also, more patients visit the fixed clinic to have health examinations in Manchester, compared to the mobile clinic. In St. Elizabeth, on the other hand, patients are more willing to do health examinations if the mobile clinic travels to their communities as shown in the below Table 1.

Table 1: The number of health examinations and of the patients/revisit patients at the clinics
<table>
<tr><th colspan="2" rowspan="2"></th><th colspan="4">Number of health examinations</th><th colspan="8">No. of patients / revisit patients of health examinations (*)</th></tr>
<tr><th>2002</th><th>2003</th><th>2004</th><th>Total</th><th colspan="2">2002</th><th colspan="2">2003</th><th colspan="2">2004</th><th colspan="2">Total</th></tr>
<tr><td rowspan="3">Manchester</td><td>Fixed Clinic</td><td>90</td><td>87</td><td>91</td><td>268</td><td>1,271 / 114</td><td>1,385</td><td>1,392 / 353</td><td>1,745</td><td>1,165 / 246</td><td>1,411</td><td>3,828 / 713</td><td>4,541</td></tr>
<tr><td>Mobile Clinic</td><td>36</td><td>36</td><td>27</td><td>99</td><td>693 / 57</td><td>750</td><td>677 / 57</td><td>734</td><td>425 / 105</td><td>530</td><td>1,795 / 219</td><td>2,014</td></tr>
<tr><td>Sub-total</td><td>126</td><td>123</td><td>118</td><td>367</td><td>1,964 / 171</td><td>2,135</td><td>2,069 / 410</td><td>2,479</td><td>1,590 / 351</td><td>1,941</td><td>5,623 / 932</td><td>6,555</td></tr>
<tr><td rowspan="3">St. Elizabeth</td><td>Fixed Clinic</td><td>39</td><td>44</td><td>45</td><td>128</td><td>392 / 0</td><td>392</td><td>384 / 43</td><td>427</td><td>457 / 94</td><td>551</td><td>1,233 / 137</td><td>1,370</td></tr>
<tr><td>Mobile Clinic</td><td>40</td><td>62</td><td>61</td><td>163</td><td>595 / 33</td><td>628</td><td>1,232 / 129</td><td>1,361</td><td>1,204 / 149</td><td>1,353</td><td>3,031 / 311</td><td>3,342</td></tr>
<tr><td>Sub-total</td><td>79</td><td>106</td><td>106</td><td>291</td><td>987 / 33</td><td>1,020</td><td>1,616 / 172</td><td>1,788</td><td>1,661 / 243</td><td>1,904</td><td>4,264 / 448</td><td>4,712</td></tr>
</table>
Note (*): The top figure is the number of all the patients and the bottom figure is the number of the revisit patients among them.
Source: Southern Regional Health Authority and St. Elizabeth Health Center</td></tr>
<tr><td>Is the health status of the population of Jamaica improved?</td><td>• Please see the Annex 6 for the number of CLD’s in 4 regions.
• It is difficult to track the attainment of the overall goals of the project without the key indicators. These indicators should have been clarified at the start of the project, or at least, during the project. In this regard, the change in the BMI level in persons could be an indicator that would contribute to the recognition of the attainment of the overall goal.</td></tr>
<tr><td>Are there any changes of the community people in terms of awareness, behavior, and lifestyle?</td><td>• According to the questionnaire survey directed to the 140 patients in three parishes by the Study Team, it can be recognized that the patients have changed their nutrition intake. Around 70% of 136 respondents answered that they had changed their diet compared to about 30% of them who answered that they had not.
• 42.2 % of 90 respondents, i.e., 38 respondents, replied that they had only started exercising after they had received health examinations or health education. Most of them have increased the number of times they exercise each week.</td></tr>
<tr><td>What are the factors inhibiting and promoting the achievement of the Overall Goal?</td><td>Are there any factors inhibiting and promoting the achievement of the Overall Goal, i.e., “The health status of the population of Jamaica is improved”?</td><td>• One of obstacles is the question of who, in the other regions, would have the responsibility for replicating the SRHA wellness model. The most appropriate personnel are the technical directors in other three regions with the assistance of JACOSH and the CD Unit (Chronic Diseases Unit) under the Health Promotion and Protection Division of the MOH.
• While health education for health-seeking behaviors might influence many young people and adults, they are coming in touch with visual messages daily through television advertising and being enticed by North American fast food advertisements. The aim of the health promotion activities is to promote healthy lifestyles including “diet”, so the aim is contrary to the contents of the fast food advertisements. Therefore, the messages sent by the fast food advertisements are one of factors inhibiting the attainment of the overall goal.
• From the perspective of diet, two factors inhibiting the achievement of the overall goal were noted in the interview survey. First, most of the population are not aware of the importance of nutrition labels on food items. This lack of awareness has been due to low literacy levels. The main focus of patients is not the quality of food eaten but the quantity, in terms of healthful eating. Secondly, in poor areas of towns and cities, it is very difficult for the people to buy healthy foods, such as fruits and vegetables, because they are more expensive than high fat foods which are cheaper to buy. The availability of the healthy foods has become lower due to droughts and hurricanes. As a result, they eat less of expensive and healthy carbohydrates, such as yams and bananas, and consumed more affordable carbohydrates, such as flour.</td></tr>
</table>

[1] Wellness activities are the activities for the improvement of health. Specifically, the activities are to promote health examinations at Fixed and Mobile Clinics and to extend health education.

	Are there any influences of the Important Assumptions from the Project Purpose to the Overall Goal?	Is the "prevention" assigned greater priority than the "treatment"?	• In the important assumption from the project purpose to the overall goal, it is described that the SRHA and the MOH focus on preventive care rather than the curative care. Through the interview survey by the Study Team, many interviewees responded that screening for prevention should take precedence over curative treatment for CLD's. In the southern region, fixed and mobile clinics mainly conduct health screenings, so the activities at the clinics largely contribute to the preventive care for CLD's.
	Are there either positive or negative Impacts other than the Overall Goal?	What is the relationship between "Blue Cross", medical insurance company, and this project?	• There has been no collaboration between the SRHA and Blue Cross during or after the project. However, Blue Cross promotes wellness activities and preventive behaviors for corporate employees, students, community members, etc. Also, Blue Cross has just acquired a new wellness bus for community screening because the company has realized that people in remote communities cannot access health clinics. As an insurance company, they promote preventive wellness activities and health examinations since they believe that this will result in fewer patients being diagnosed with CLD's in the long run. Consequently, Blue Cross would need to expend less money to pay for the treatment of CLD's. They stressed that "prevention is always better than cure."
		Is collaboration among the Heart Foundation of Jamaica and the Diabetes Association of Jamaica continuously taken by C/P?	• In terms of communication with relevant organizations of this project, the vision and the concepts of the project were not shared in order to collaborate with each other. This is because the Heart foundation and other organizations already offered similar services regarding CLD's in the areas that the project was targeting. The lack of communication between the SRHA and the Heart Foundation of Jamaica especially led to competition over the offering of the service rather than collaboration. As a result, the Heart Foundation stopped doing annual screenings at the health centers in the southern region. • In the early days of the project, SRHA invited the Diabetes Association to training sessions held for CHA's in the southern region and organized by SRHA. Since these sessions, the Diabetes Association and the SRHA have not directly collaborated with each other in relation to this project other than through the Third Country Training Program. Thus, follow-up sessions are needed in order to ensure that the education will have more enduring effects.
		Are the PR activities carried out through the TV, radio, newspapers, etc. for the purpose of extension activities in Jamaica?	• According to the questionnaire survey in three parishes, 94.9% of 137 respondents answered that they had ever heard about CLD's through the TV, radio, newspapers, church, community meetings, friends and relatives, and so forth. Of those respondents, 92.0% of 125 patients selected either "strongly agree" or "agree" with their interests in having health examinations. Moreover, 97.4% of 116 patients responded that they selected either "strongly agree" or "agree" with their interest in learning more about CLD's through health education. Therefore, the PR activities encourage the patients to have health examinations and learn more about CLD's through health education.
		Are there any influences in terms of the social, cultural, and environmental aspects?	• Weather affects the implementation of health examinations in many cases. Attendance at the fixed and mobile clinics sometimes depends on the weather. • More females than males are inclined to go for health examinations or screenings. According to the questionnaire survey to patients having health examinations in three parishes of the southern region, for example, 77.5% of respondents were females and 22.5% of respondents were males.
Sustainability	What are the factors inhibiting and promoting sustainability?		• Although the purpose of the Third Country Training Program is to provide the participants from selected CARICOM member countries with an opportunity to improve their knowledge and techniques in the field of the prevention of CLD's, representatives from three regions in Jamaica have also attended this Program. The participants of the Program visit the model sites in the southern region, in order to absorb the knowledge and techniques on wellness activities at the fixed and mobile clinics. Because the health care workers in the SRHA are observed by the participants from other Caribbean countries and other regions in Jamaica, it is expected that they might continuously make efforts for brushing up their knowledge and techniques in order to act as role models for preventing CLD's in the CARICOM regions. • JACOSH manages regular meetings every two months and the follow-up activities of this project even after the termination of the project. Thus, JACOSH performs the role for promoting the activities continuously through the monitoring activities, etc. • Because the fixed and mobile clinics can obtain more funds from the SRHA than the fees they hand over to the SRHA financial division from the patient fees, it might be difficult for other regions to replicate the SRHA wellness model in terms of the cost-effectiveness of the model.
	Are the policy and institutional aspects well-prepared?	Does the SRHA have the policy to continue the preventive activities for CLDs?	• The SRHA has the Strategic Development Plan 2002-2007, which outlines strategies partially to address CLD's. The SRHA has focused on the prevention activities so as to promote wellness activities against CLD's through heath education and counseling for the patients.
		Does the MOH have the policy for replicating this model in other regions of Jamaica?	• In order to address the problems of CLD's, the MOH has put in place a national strategic plan titled "The National Strategic Plan for the Promotion of Healthy Lifestyles in Jamaica 2004-2008". The Plan is spearheaded by the Division of Health Promotion and Protection in the MOH and is being developed and implemented in collaboration with other agencies of government, the private sector, NGO's, and other international organizations, including PAHO/WHO, UNICEF, and USAID. The aim of the Plan is to promote "healthy lifestyles" in the population, so as to reduce the risk of developing heart disease, diabetes, hypertension, obesity, cervical cancer, and HIV/AIDS as well as to reduce the incidence of violence and injuries.

<table>
<tr>
<td rowspan="5"></td>
<td rowspan="3">Are the administrative and financial aspects conducted favorably?</td>
<td>Does the Steering Committee which monitors and evaluates preventive activities for CLDs continue the activities after the termination of the project?</td>
<td>

- JACOSH monitors and evaluates the preventive activities against CLD's, so the activities at the fixed and mobile clinics are monitored by JACOSH. Furthermore, it manages not only the follow-up activities of this project but also activities related to the National Healthy Lifestyles program which not only addresses CLD's but also reproductive health as well as injury and violence.
- The JACOSH members include the Regional Director and Regional Technical Director of the SRHA, Parish Managers, Health Education Officers, and health care workers from the three parishes, and they meet every two months.

</td>
</tr>
<tr>
<td>Are fees for health examinations collected by the Fixed and Mobile Clinics efficiently utilized for the preventive activities for CLDs?
Also, do the patients feel the fees expensive?</td>
<td>

- The fees collected by the clinics are put directly into the general accounts of the financial division at the SRHA and then disbursed to the health centers according to their needs because the MOH has recommended that specific accounts should not be kept for particular purposes. According to the Regional Technical Director of the SRHA, the clinics might obtain more funds from the SRHA than the fees they hand over to the SRHA financial division from the patient fees. This is because the patient fees collected at fixed and mobile clinics are lower than the market prices. Further, the main financial requests from the fixed and mobile clinics are for equipment and maintenance, which cost a lot. In terms of the cost-effectiveness of the SRHA wellness model, therefore, it might be difficult for other regions to replicate the model because of budgetary constraints.
- In terms of how patients perceive the fees for health examinations, 73.3% of 135 respondents replied that the fees for the health examinations are "appropriate" according to the questionnaire survey.

</td>
</tr>
<tr>
<td>What is the tendency of budgetary status?</td>
<td>

- At the national level, the MOH tries to balance the budget as shown in the Table 2 below. On the other hand, the SRHA has not been able to keep a balanced budget, i.e., actual expenditure exceeds the planned budget. Thus, the SRHA should secure funds for the wellness activities from funding agencies, such as the NHF[2], by sending in proposals for financial supports. The advent of the NHF has made it more feasible to maintain the wellness activities for preventing CLD's.

Table 2: The budgetary sheet of the MOH / SRHA from FY 2000 to 2004 Unit: $J ('000)

<table>
<tr><th></th><th>Items</th><th>2000-2001</th><th>2001-2002</th><th>2002-2003</th><th>2003-2004</th><th>2004-2005</th></tr>
<tr><td rowspan="4">SRHA</td><td>Recurrent budget</td><td>964,369</td><td>945,393</td><td>1,427,736</td><td>1,124,960</td><td>2,020,989</td></tr>
<tr><td>Operation</td><td>97,946</td><td>189,079</td><td>187,000</td><td>105,350</td><td>89,190</td></tr>
<tr><td>Personnel</td><td>866,423</td><td>756,314</td><td>1,240,736</td><td>1,019,610</td><td>1,931,799</td></tr>
<tr><td>Actual expenditure</td><td>1,066,104</td><td>957,504</td><td>1,437,980</td><td>1,255,813</td><td>2,020,989</td></tr>
<tr><td rowspan="4">MOH</td><td>Recurrent budget</td><td>8,972,802</td><td>7,725,293</td><td>10,746,400</td><td>10,631,050</td><td>14,592,755</td></tr>
<tr><td>Operation</td><td>1,788,768</td><td>2,698,575</td><td>2,149,280</td><td>2,131,128</td><td>1,658,094</td></tr>
<tr><td>Personnel</td><td>7,155,068</td><td>5,026,718</td><td>8,597,120</td><td>8,335,424</td><td>12,924,862</td></tr>
<tr><td>Actual expenditure</td><td>8,972,802</td><td>7,722,235</td><td>10,736,352</td><td>10,466,552</td><td>14,582,956</td></tr>
</table>

Souce: The Ministry of Health The fiscal year is from April1 -March 31.

</td>
</tr>
<tr>
<td rowspan="2">Are the transferred technologies continuously utilized?</td>
<td>Are the trained SRHA staff and CHA's capable enough to promote the preventive activities for CLDs?</td>
<td>

- According to the questionnaire survey to the 140 patients in three parishes by the Study Team, 96.2% of 130 respondents answered that the health care workers and community health aids (CHA's) were either "very capable" or "capable" enough to promote the preventive activities against CLD's.

</td>
</tr>
<tr>
<td>Has the maintenance system for medical equipment already been established, including arrangements to have maintenance staff in place?</td>
<td>

- There are only two technicians for biomedical equipment in the southern region who must take care of 85 health centers, 5 hospitals, and a community hospital. They carry out both preventive and corrective checks. Preventive checks are conducted on equipment on a quarterly basis.
- Please see the Annex 7 for the maintenance of main equipment.

</td>
</tr>
</table>

[2] One instrument that was put in place in 2003 to assist individuals and institutions with health care is the National Health Fund (NHF). The NHF has in place a Health Promotion and Protection Fund that provides financial assistance for projects that support primary health care, with an emphasis on health promotion and illness prevention.

Annex 5:

Questionnaires to SRHA and patients

Questionnaire to SRHA

The Ex-post Evaluation Team (hereinafter referred to as the Team) entrusted by the Japan International Cooperation Agency (hereinafter referred to as JICA) will conduct ex-post evaluation under the cooperation with the Jamaican authorities concerned on the progression and achievement of the Japanese Technical Cooperation Project regarding the Project for Strengthening of Health Care in the Southern Region (hereinafter referred to as the Project).

During its stay in Jamaica, the Team will exchange views and have a series of discussions about the ex-post evaluation of the Project with Jamaican authorities concerned as well as stakeholders of the Project including Jamaican counterparts. Would you please allow me to ask you several questions in terms of the progression and achievement of the Project from your point of view? Your kind cooperation in answering the following questions would be highly appreciated.

Note)

① The underlines after each question, such as 2-5, are used by the Study Team only.

② Please write your answers in ***block letters***.

Q1. Please fulfill the frequency and the number of clients/re-clients of the health examinations[1] at the Wellness and Mobile Clinics in the table shown in Annex 1. **1-2**

Q2. Please put the frequency, the number of participants, and the average number of participants in each course of health education in the format shown in Annex 2. **1-3**

Q3. Please provide the number of the population of the chronic lifestyle diseases, such as diabetes, hypertension, heart diseases, etc., in each parish as shown in Annex 3. **2-1**

Q4. Are there any factors inhibiting and promoting the achievement of the Overall Goal, i.e., "The health status of the population of Jamaica is improved"? **6**

Inhibiting factors:

Promoting factors:

Q5. Do you think that the PR activities are sufficiently conducted through the TV, radio, newspapers, etc. so as to disseminate the preventive activities against chronic lifestyle diseases in Jamaica? **11**

(1) Yes ☐ (2) No ☐

Please describe the reason(s) why you have answered "Yes" or "No."

[1] As the contents of health examination, the following items are raised: blood pressure; blood-sugar level; electrocardiogram; cholesterol; BMI; urinalysis (sugar, albumin); etc.

Please state any measures for the improvement of the PR activities.

Q6. Are there any influences caused by the project to the social, cultural, and environmental aspects? **12**

Q7. What are the factors inhibiting and promoting the preventive activities against chronic lifestyle diseases, such as health examinations and health education to the population of Jamaica, from the perspective of sustainability? **13**

Q8. Please fulfill the number of health workers at the Wellness and Mobile Clinics of each parish in the format shown in Annex 4. **16**

Q9. Please put the number of health staff at the SRHA and the health centers of each parish in the table shown in Annex 5. **17**

Q10. Do you think that the trained SRHA staff and CHA are capable enough to promote the preventive activities against chronic lifestyle diseases? **18**

(1) Very capable ☐ (2) Capable ☐ (3) Moderate ☐
(4) Poor ☐ (5) Very poor ☐

Please describe the reason(s) why you have ticked as shown above.

Q11. Please fulfill the frequency, the number of participants, and the average number of participants in the orientation sessions and the training courses for freshers in the table of Annex 6. **19**

Q12. Are fees for health examinations collected by the Wellness and Mobile Clinics efficiently utilized for the preventive activities against chronic lifestyle diseases? **21-1**

(1) Yes ☐ (2) No ☐

Please describe the reason(s) why you have answered "Yes" or "No."

In addition, would you please put the fees collected by the Wellness and Mobile Clinics year by year in the table of Annex 7?

Q13. Would you please provide the present status of the budget of the MOH / SRHA from 2000 to 2004 in the format as shown in Annex 8? **22**

Q14. Please list all the main equipment procured by the project and indicate the current condition and usage of the equipment in the format of Annex 9. **23-1**

Q15. Would you please complete the table shown in Annex 10 regarding the free check of the health examinations with the frequency, the number of clients, and the average number of clients at the Wellness and Mobile Clinics in 3 parishes? **24**

Q16. Please put the frequency, the number of participants, and the average number of participants of the mid-level trainee's training courses for health care workers including CHA in the format shown in Annex 11. **25**

Overall Remarks (if you have any additional comments):

Note) If you would like to focus on the specific question(s), please write down more details.

Thank you very much for your understanding and cooperation.

Contact person for particular about the answers: ____

Division/position: ____

Tel/Fax or Email: ____

Questionnaire to Patients

The Ex-post Evaluation Team (hereinafter referred to as the Team) entrusted by the Japan International Cooperation Agency (hereinafter referred to as JICA) will conduct ex-post evaluation under the cooperation with the Jamaican authorities concerned on the progression and achievement of the Japanese Technical Cooperation Project regarding the Project for Strengthening of Health Care in the Southern Region (hereinafter referred to as the Project).

During its stay in Jamaica, the Team will exchange views and have a series of discussions about the ex-post evaluation of the Project with Jamaican authorities concerned as well as stakeholders of the Project including Jamaican counterparts. Would you please allow me to ask you several questions that will assist us in evaluating the progression and achievement of the Project? Your kind cooperation in answering the following questions would be greatly appreciated.

Note)

① The underlines after each question, such as 2-5, are used by the Study Team only.

② Please write your answers in ***block letters***.

Q1. How many times have you had a health examination at Wellness or Mobile Clinics? **0-1**

(1) 0 times ☐ (2) 1 time ☐ (3) 2 times ☐
(4) 3 times ☐ (5) 4 times ☐ (6) 5 times or more ☐

Q2. Where do you have your health examinations? **0-2**

(1) Wellness Clinic ☐ (2) Mobile Clinic ☐ Clinic Name ____________

Q3. Age **0-3**

(1) 16-24 year-old ☐ (2) 25-34 year-old ☐ (3) 35-44 year-old ☐
(4) 45-54 year-old ☐ (2) 55-64 year-old ☐ (3) 65 year-old or more ☐

Q4. Sex **0-4**

(1) Male ☐ (2) Female ☐

Q5. Which parish do you live in? **0-5**

(1) Manchester ☐ (2) St. Elizabeth ☐ (3) Clarendon ☐
(3) Other ☐

Q6. What was the diagnosis made by the doctor at your health examination? **0-6**

(1) Normal ☐ (2) Hypertension ☐ (3) Diabetes ☐
(4) Heart Disease ☐ (5) Anemia ☐ (6) Overweight ☐
(7) High cholesterol ☐ (8) Others ☐

Q7. Please answer the following questions regarding the effects of nutrition intake and exercise on your health? **2-2 & 2-3**

(a) Have you changed your nutrition intake (diet)?

(1) Yes ☐ (2) No ☐

(b) If "Yes", what are you concerned with when monitoring your diet? (Possible for multiple answers)

(1) Nutritional value ☐ (2) Sugar ☐ (3) Fat ☐
(4) Calorie control ☐ (5) Eating between meals ☐ (6) Others ☐ (   )

(c) Have you changed how often you exercise each week? Please select the pattern you have changed before and after health examinations or health education as shown below.

Before → After

(1) 0 → 1 to 2 times ☐
(2) 0 → 3 times or more ☐
(3) 1 → 2 to 3 times ☐
(4) 1 → 4 times or more ☐
(5) 2 → 3 to 4 times ☐
(6) 2 → 5 times or more ☐
(7) 3 → 4 times or more ☐
(8) 4 → 5 times or more ☐
(9) Other ☐

Q8. (a) Have you received any health education on chronic lifestyle diseases? **4-1**

(1) Yes ☐ (2) No ☐

(b) If "Yes", do you think that health education is substantial?

(1) Very substantial ☐ (2) Substantial ☐ (3) Moderate ☐
(4) Poor ☐ (5) Very poor ☐

(c) Please give the reason(s) why you have answered as shown above.

Q9. (a) Have you ever received any counseling on chronic lifestyle diseases? **4-2**

(1) Yes ☐ (2) No ☐

(b) If "Yes", do you think that the counseling is substantial?

(1) Very substantial ☐ (2) Substantial ☐ (3) Moderate ☐
(4) Poor ☐ (5) Very poor ☐

(c) Please give the reason(s) why you have answered as shown above.

Q10. (a) Through the health education and the counseling, did you change your behavior or lifestyle in terms exercise, diet, smoking, drinking, etc.? **4-3**

(1) Yes ☐ (2) No ☐

(b) If "Yes", what did you change, and how are you proceeding now? (Possible for multiple answers)

(1) Exercise ☐ (How?:)
(2) Diet ☐ (How?:)
(3) Smoking ☐ (How?:)
(4) Drinking ☐ (How?:)
(5) Others ☐ (How?:)

Q11. (a) Have you ever heard about chronic lifestyle diseases through the TV, radio, newspaper, church, community meetings, friends and relatives or any other sources? **11**

(1) Yes ☐ (2) No ☐

(b) If "Yes", did this encourage you to have a health examination?

(1) Strongly agree ☐ (2) Agree ☐ (3) Don't know ☐
(4) Disagree☐ (5) Strongly disagree ☐

(c) Again if "Yes", did this encourage you to learn more about chronic lifestyle diseases through health education?

(1) Strongly agree ☐ (2) Agree ☐ (3) Don't know ☐
(4) Disagree☐ (5) Strongly disagree ☐

Q12. Do you think that the health workers and CHA are capable enough to promote the preventive activities against chronic lifestyle diseases? **18**

(1) Very capable ☐ (2) Capable ☐ (3) Moderate ☐
(4) Poor ☐ (5) Very poor ☐

Please describe the reason(s) why you have ticked as shown above.

Q13. How do you feel about the fees for the health examinations? **21-2**

(1) Very expensive ☐ (2) Expensive ☐ (3)Appropriate ☐
(4) Cheap ☐ (5) Very cheap ☐

Please describe the reason(s) why you have ticked as shown above.

Thank you very much for your understanding and cooperation.

Annex 6:

Number of curative visits by the patients

in four regions

Annex 6: The number of curative visits by the patients in four regions (2001 - 2005)

Regions	Types	2001			2002			2003			2004			2005 (as of June)		
		Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Southern Region	Diabetes	895	3,439	4,334	987	3,337	4,324	1,231	3,905	5,136	1,249	3,660	4,909	580	1,898	2,478
	Hypertension	4,514	17,607	22,121	4,239	17,334	21,573	5,684	20,847	26,531	5,810	21,636	27,446	3,058	11,457	14,515
	Diabetes / Hypertension	1,432	7,912	9,344	1,363	8,611	9,974	1,930	11,706	13,636	2,133	11,412	13,545	1,031	5,591	6,622
South East Region	Diabetes	3,911	12,542	16,453	3,749	13,005	16,754	3,515	12,051	15,566	3,518	11,896	15,414	1,764	5,769	7,533
	Hypertension	8,939	35,335	44,274	8,585	34,263	42,848	8,751	35,854	44,605	9,033	36,064	45,097	4,659	19,300	23,959
	Diabetes / Hypertension	3,511	15,271	18,782	3,766	16,681	20,447	4,144	19,303	23,447	4,697	21,578	26,275	2,540	11,131	13,671
North East Region	Diabetes	984	3,264	4,248	997	3,274	4,271	1,094	3,532	4,626	1,202	3,441	4,643	560	1,786	2,346
	Hypertension	3,208	11,505	14,713	3,626	12,430	16,056	4,261	15,068	19,329	4,783	15,723	20,506	2,710	8,359	11,069
	Diabetes / Hypertension	1,611	6,903	8,514	1,740	7,762	9,502	2,125	8,991	11,116	2,324	9,925	12,249	1,239	5,317	6,556
Western Region	Diabetes	1,697	5,205	6,902	1,256	4,620	5,876	1,254	4,048	5,302	882	3,059	3,941	466	1,343	1,809
	Hypertension	5,818	19,773	25,591	5,261	18,175	23,436	5,335	18,479	23,814	4,882	17,141	22,023	2,496	8,688	11,184
	Diabetes / Hypertension	2,481	10,126	12,607	2,135	9,842	11,977	2,287	10,109	12,396	2,090	9,458	11,548	1,091	4,768	5,859

Source: The Monthly Clinic Summary Report from 2000 to 2005 (as of June, 2005), Ministry of Health

Annex 7:

Operation and maintenance of the main equipment

Annex 7: Operation and Maintenance of the main equipment

No.	Name of Equipment	Q'ty	Brand	Model	Year	Place to keep	Condition	Usage	Problems	Remarks
1	Visual presenter	1	ELMO	EV-401AF	00	Conference room Manchester H.D.	A	C		
2	Television	1	PANASONIC	CT-20G3W1	99	Wellness centre clinic Manchester H.D.	A	A		
3	VHS Video tape recorder	1	PANASONIC	PV-9450	99	Wellness centre clinic Manchester H.D.	A	B		
4	Height & weight scale with body composition analyzer	1	TANITA	TBF-215	99	Public Health Inspection room Manchester H.D.	A	B		
5	Height & weight scale with body composition analyzer	1	TANITA	TBF-215	99	Public Health Inspection room Manchester H.D.	C	D		
6	Height & weight scale with body composition analyzer	1	TANITA	TBF-215	99	Public Health Inspection room Manchester H.D.	C	D		
7	Height & weight scale with body composition analyzer	1	TANITA	TBF-215	99	Public Health Inspection room Manchester H.D.	A	B		
8	Height & weight scale with body composition analyzer	1	TANITA	TBF-215	99	Mobile clinic bus Manchester H.D.	A	B		
9	Height & weight scale with body composition analyzer	1	TANITA	TBF-215	99	Ingleside recreation centre	A	B		
10	Height & weight scale with body composition analyzer	1	TANITA	TBF-215	99	Cross Key Health Centre	-	-		Cannot locate
11	Height & weight scale with body composition analyzer	1	TANITA	TBF-215	99	St. Elizabeth H.D. Inspection Room	C	D		
12	Height & weight scale with body composition analyzer	1	TANITA	TBF-215	99	Santa Cruz HC	A	B		
13	Height & weight scale with body composition analyzer	1	TANITA	TBF-215	99	Clarendon HD, Wellness	C	D		
14	Height & weight scale with body composition analyzer	1	TANITA	TBF-215	99	Clarendon HD, Wellness	A	B		
15	Height & weight scale with body composition analyzer	1	TANITA	TBF-215	99	Clarendon HD, Wellness	A	B		
16	Centrifuge	1	KUBOTA	5100	99	Laboratory Manchester H.D.	A	A		
17	Electrocardiograph	1	FUKUDA DENSHI	FX-4010	01	Examination room Manchester H.D.	A	B		
18	Electrocardiograph	1	FUKUDA DENSHI	FX-4010	01	Examination room Manchester H.D.	A	B		
19	Electrocardiograph	1	FUKUDA DENSHI	FX-4010	00	St. Elizabeth H.D Mobile clinic bus	A	B		
20	Electrocardiograph	1	FUKUDA DENSHI	FX-4010	00	St. Elizabeth H.D. Examiantion room	C	D		
21	Electrocardiograph	1	FUKUDA DENSHI	FX-4010	00	Black River Hospital Emergency room	A	B		
22	Electrocardiograph	1	FUKUDA DENSHI	FX-4010	00	Black River Hospital X-ray examiantion room	A	B		
23	Electrocardiograph	1	FUKUDA DENSHI	FX-4010	00	Santa Cruz HC	A	B		
24	Electrocardiograph	1	FUKUDA DENSHI	FX-4010	00	Clarendon HD, Wellness	A	B		
25	Electrocardiograph	1	FUKUDA DENSHI	FX-4010	00	Clarendon HD, Wellness	A	B		
26	Electrocardiograph	1	FUKUDA DENSHI	FX-4010	00	Clarendon HD, Wellness	A	B		
27	Electrocardiograph	1	FUKUDA DENSHI	FX-4010	00	May pen HC, ECG Diagnostic	A	B		
28	Electrocardiograph	1	FUKUDA DENSHI	FX-4010	00	May pen HD, Emergency	A	B		
29	Electrocardiograph	1	FUKUDA DENSHI	FX-4010	00	Manchester Internal medicine	A	B		
30	Electrocardiograph	1	NIHONKODEN	ECG-9130K	01	Clarendon Wellness centre clinic	-	-		Cannot locate
31	Electrocardiograph	1	FUKUDA DENSHI	FCP-3201	01	Clarendon H.D Examination room	A	B		
32	Automatic Blood Pressure Monitor	1	COLIN	BP-203RV2B	99	Clarendon Health Center.	A	B		
33	Automatic Blood Pressure Monitor	1	COLIN	BP-203RV2B	99	Clarendon H.D. Public Health Inspection room	A	A		
34	Automatic Blood Pressure Monitor	1	COLIN	BP-203RV2B	99	Clarendon H.D. Mobile clinic bus	A	B		
35	Automatic Blood Pressure Monitor	1	COLIN	BP-203RV2B	99	Clarendon H.D. clinic	C	D		
36	Automatic Blood Pressure Monitor	1	COLIN	BP-203RV2B	99	Clarendon H.D.	-	-		Cannot locate
37	Automatic Blood Pressure Monitor	1	COLIN	BP-203RV2B	99	Clarendon H.DPublic Health Inspection room	-	-		Cannot locate
38	Automatic Blood Pressure Monitor	1	COLIN	BP-203RV2B	99	Clarendon H.D.	-	-		Cannot locate
39	Automatic Blood Pressure Monitor	1	COLIN	BP-203RV2B	99	Ingleside recreation centre	A	B		
40	Automatic Blood Pressure Monitor	1	COLIN	BP-203RV2B	99	St.Elizabeth H.D. Mobile clinic bus	A	B		

No.	Name of Equipment	Q'ty	Brand	Model	Year	Place to keep	Condition	Usage	Problems	Remarks
41	Automatic Blood Pressure Monitor	1	COLIN	BP-203RV2B	99	St Elizabeth H.D. Mobile clinic bus	A	B		
42	Automatic Blood Pressure Monitor	1	COLIN	BP-203RV2B	99	Santa Cruz HC	A	B		
43	Automatic Blood Pressure Monitor	1	COLIN	BP-203RV2B	99	Clarendon HD, Wellness	A	B		
44	Automatic Blood Pressure Monitor	1	COLIN	BP-203RV2B	99	Clarendon HD, Wellness	A	B		
45	Automatic Blood Pressure Monitor	1	COLIN	BP-203RV2B	99	May pen HP, Chlesterol testing	A	B		
46	Spectrohptometer	1	HITACHI	U-1500	99	May Pen Hospital Laboratory	B	D		
47	Random acess chemistry system	1	ELAN	ATAC 8000	02	May Pen Hospital Laboratory	A	A		
48	Automatic Coagulation analyzert	1	I.L.	ACL	02	May Pen Hospital Laboratory	D	D		
49	Blood cell counter	1	COULTER	AC.T	00	Black River Hospital. Clinical Laboratory	B	A		
50	Photocopy machine	1	CANON	NP-6035F	00	Administration office	A	A		
51	Photocopy machine	1	CANON	NP-6035F	00	Black River Hospital Administration office	C	D		
52	Photocopy machine	1	CANON	NP-6035F	00	Clarendon HD, Personal	A	A		
53	Bycicle Ergometer	1	GAKKEN	CE-1600N	00	Black River Hospital Examination room	A	B		
54	Bycicle Ergometer	1	GAKKEN	CE-1600N	00	Mandeville hospitalStorage room	A	C		
55	Bycicle Ergometer	1	GAKKEN	CE-1600N	00	May Pen Hospital	-	-		Cannot locate
56	Ultrasound diagnostic equipment	1	ALOKA	SSD-1100	02	Black River Hospital Obstetric Gyneco.	A	A		
57	Ultrasound diagnostic equipment	1	ALOKA	SSD-1100	02	Black River Hospital. X-ray examiantion room	A	A		
58	Electric generator	1	HONDA	EM2500	99	St. Elizabeth H.D. Mobile clinic bus	C	C		
59	Bus	1	Mitsubishi	Rosa	01	St. Elizabeth H.D. Mobile clinic bus	A	A		
60	Bus	1	Mitsubishi	Rosa	99	Manchester Health Department	A	A		
61	Bus	1	Mitsubishi	Rosa	01	Clarendon Health Department.	A	A		
62	Motor Car	1	Mitsubishi	Pajero	00	SRHA Regional Office	A	A		
63	Motor Car	1	Mitsubishi	Pajero	99	Manchester Health Department	A	A		
64	Motor Car	1	Suzuki	Car	98	Mandeville Regional Hospital.	A	A		
65	Camcorder	1	Sony	Digital HandyCam DCR-	-	SRHA Regional Office	D	-	View Finder does not work	
66	Camcorder	1	Sony	HandyCam DCR-TRV62	-	SRHA Regional Office	B	D		Most of the controls are in Japanese, which makes it difficult to use
67	Desktop Computer	1	Compaq	Deskpro	-	St. Elizabeth Health Dept	B	A		This computer works okay, but it cannot accommodate current O/S & hardware upgrades
68	Desktop Computer		Compaq	Deskpro	-	SRHA Regional Office	B	A		This computer works okay, but it cannot accommodate current O/S & hardware upgrades
69	Desktop Computer	2	Compaq	Deskpro	-	Manchester Health Dept.	D	-	Out of use	
70	Digital Camera	1	Olympus	Camedia C-2000 Z	-	SRHA Regional Office	D	-	Out of use	
71	Digital Video/VHS Recorder	1	Sony	DR7	-	SRHA Regional Office	B	D		Most of the controls are in Japanese
72	DVD Player	1	Panasonic	DVD-A300	-	SRHA Regional Office	B	D	Unable to recognize and play newer DVDs	
73	Laptop Computer	1	Toshiba	Dynabook	-	SRHA Regional Office	C	D		
74	Laptop Computer	1	Sony	Vaio	-	SRHA Regional Office	C	D	Sometimes it does not start up	
75	Laptop Computer	1	Compaq	Armada M700	-	Manchester Health Dept.	B	A		Old and outdated cannot be upgraded.
76	Laptop Computer	2	Compaq	Armada M700	-	Manchester Health Dept.	D	-	Out of use	Motherboards have crashed
77	Laptop Computer	1	DELL	Latitude D600	-	Manchester Health Dept.	A	A		

No.	Name of Equipment	Q'ty	Brand	Model	Year	Place to keep	Condition	Usage	Problems	Remarks
78	Laptop Computer	1	Sony	Vaio	-	SRHA Regional Office	B	A		
79	LCD Projector	2	BENQ		-	SRHA Regional Office	D	-	Out of use	
80	Printer	1	HP	Deskjet 840C	-	SRHA Regional Office	D	-	Out of use	
81	Printer	1	HP	Deskjet	-	Manchester Health Dept.	D	-	Out of use	
82	Printer	1	Samsung	ML 7000	-	Manchester Health Dept.	B	A		
83	Printer	1	HP	Deskjet 656C	-	SRHA Regional Office	D	-	Out of use	

Category of Condition (Annual average)
A: Excellent
B: Fair
C: Poor
D: Unable to use

Category of Usage (Annual average)
A: Every week
B: Every other week
C: Every month
D: Less than every month

Source: Operation and Maintenance Division, South Regional Health Authority