

CHAPTER SIX

6.0 Endoscopy Unit:

The Endoscopy Unit is a high technology diagnostic system complementary to surgical and medical treatment. It is highly cost effective both to the patient and the hospital. It eliminates altogether the inconvenience of the traditional diagnosis process and is very effective in its usage for any age group from children to the most aged. The unit was provided at the request of SJGH entirely by JICA in terms of the Technical Cooperation Program. The unit is under the supervision of three Consultants. It commenced operations in October 1987 and continues to provide service to SJGH patients and to referrals from other Hospitals.

6.1 Physical Facilities available:

Since commencement, a room meant for hospital stores has been converted to house this unit. It is adequate to accommodate the available equipment and for two doctors to administer the endoscopy examinations simultaneously. It has an improvised cubicle for consultation and to maintain records of the unit. All items available have been supplied by Olympus Electronic Company except the "Slide Viewer" which is a Sagiura model SL Neo Vision 202, complete with

1. Film Carrier for 35 mm Mount
11. Film Carrier for 35 mm Strip

The main scopes received are as follows :

- 04 Fibre Optics
- 02 Gastric Intestinal
- 01 Colonoscope
- 01 Duodenoscope
- 01 Sigmoid Fibrescope
- 01 Broncho Fiberscope

The list of items supplied by JICA with their import prices are given in Annex 6.1 .

6.2 Use of Equipment:

The equipment has assisted the conduct of endoscopy examination as follows :

	1987	1988	1989
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Upper Endoscopy	393	748	2195
Colonoscopies	31	27	225
ERCPS	17	42	158
Sclerotherapy	64	64	65

The equipment cannot be used without training and three Surgeons Drs K Yoheswaran N S Jayasinghe and S A W Gunawardena have been specially trained in Japan for a period of six months. The training is considered adequate and the personnel trained are also considered adequate for the present. The equipment is used daily. Endsocopic sessions are held every morning and on three afternoons a week. An emergency endoscopic service is also provided.

The equipment is still in good condition and there have not been any major breakdowns. No replacements are required although in Japan after two and half years the used equipment is put by and new items introduced.

Minor repairs have been done every six months and the equipment has been annually serviced by the Agent in Singapore on their visits to Sri Lanka as special skills are required for servicing the equipment. The work in the unit has not been held up due to lack of spares as a number of services are possible from each unit. There was a single occasion when a scope had to be sent to Japan for a certain interruption which had been corrected by introducing a new spare part.

Among the four types of services the most easiest is the examination of the upper GI. Sclerotherapy requires absolute concentration and only Dr Jayasinghe undertakes this examination. This is the main reason for the low output in this programme. In 1989 however, more examinations have been done than the previous two years combined. On some days nearly six Sclerotherapy examinations are done.

ERCP examination is considered a tiring process by the nurses.

6.3 Staff:

Staff of the unit consists of three Consultants under whose direct supervision the endoscopic services are administered: Another Doctor who has not been trained in Japan uses the more flexible bronchoscope. Training is considered sine qua non in the use of these equipment as even the most distinguished Surgeon in the General Hospital cannot administer the injection of varices as expertly as done in the Endoscopy Unit.

The non medical staff consist of 2 nurses and two orderlies, a male and a female. One of the nurses, Mrs Jayasuriya Perera who has served the unit, from its inception is intelligently using her previous experience as a nursing sister in the proper upkeep of the much valued equipment. Additionally she maintains the inventory of the unit and statistics. Our Consultants were pleased with the care taken to cleanse and disinfect the used equipment with CIDEX after every use. CIDEX is a very strong disinfectant which kills all micro organisms.

The work of the unit for the non medical staff is normally extended beyond 5 p.m. as the equipment needs regular cleaning of channels, washing, disinfecting, drying and storing.

Some days there are fifteen patients though the average for the month is around two hundred. The Orderlies are very devoted to their work. The conscientiousness of the staff is abundantly reflected in the proper upkeep of the equipment during the last 2 1/2 years.

The fact that the work schedule of the unit is so rigorous with demands for emergency services, the most devoted staff only could be attracted and sustained. The unit has to be manned by experienced nursing staff and their morale should be maintained with deserving perks.

The senior nurse Mrs Jayasuriya Perera has nicely fitted into the procedural system of the unit, without any formal training in the handling of the equipment. This is perhaps due to her experience, ability to follow instructions of the doctors and the habit of regular reading of instruction manuals. The supporting nursing staff has to work together with the doctor with rapt attention to follow doctors directions while examinations are done, injections given or when biopsies are taken.

The staff has provided training in the use of endoscopes and maintenance of the equipment to young Doctors in the hospital and also nurses from the Jaffna Hospital. The expertise acquired is confined to basic examinations that have been brought out in the four main fields.

A training program for nursing officers from the Jaffna Hospital was held for three weeks in December 1989. The program is presented to illustrate the collective effort and the potential for the future in Annex 6.3

6.4. Performance:

The unit is considered a complete facility for endoscopic examinations. However, except for upper GI Endoscopy other examinations are few. Our Consultants have been informed that the ERCP examinations are administered by a single doctor and it takes a long time. There is no waiting list for endoscopic sessions. Fewer examinations are therefore a reflection of poor referrals. It has been recorded that under the Grant Aid program ten other hospitals had been supplied with endoscopic sets and this could be a reason for fewer referrals for examination at SJGH though these units are not as well developed. All the fibre optics are very versatile and could undertake biopsies and removal of polyps.

The development of these facilities has elevated the unit to a position of a training center and as noted above gradually, the demand for training programmes are increasing.

6.5 Endoscopy - Future Plans:

The management is of the view that the Endoscopy services should be developed as a speciality of the hospital. It is therefore keen in acquiring equipment which could provide more specialized examinations. Choleidoscope, is an item in the order list, and on acquiring the equipment a wider range of examinations are possible.

The future development of the Endoscopy is related to the facilities available for further surgical treatment.

In the specialized area of Urology, recruitment of an Urologist only could set the pace for activating an Urology program assisted by Urological Endoscopy. Theatre facilities for Urological operations have already been provided under Grant aid and are used by the surgeons.

Management is therefore correct in their thinking that future development in surgical treatment should encompass, renal transplant surgery, consolidated with fully equipped Tissue Typing, a Donor bank etc.

The staff of the Endoscopy is awaiting this much desired diversification for the examination of the Kidney Stones etc. This requires the provision of various urological endoscopes and training of personnel in mechanical aspects of various urological endoscopes.

CHAPTER SEVEN

7.0 Laboratory:

7.1 Introduction

The Laboratory has four main sections. They are :

- a) Histo - Pathology
- b) Hematology
- c) Micro-Biology
- d) Biochemistry

The equipment used in the four sections of the laboratory have been obtained under the Grant Aid scheme.

The department is now fully equipped to undertake a large number of examinations, except H I A A - Seriation Syndrome, VMA. Few other tests are also not possible. as for example examinations related to various types of fevers which are epidemics and afflictions due to poison intake. Some of these tests were not undertaken due to the lack of reagents although the equipment was available.

7.2 Physical Facilities Available:

A detailed list of the equipment available in the unit is given in Annex 7.2

7.3 Utilization of Equipment:

- (a) Biochemistry :
Hitachi Model 775 - A - Flame Photometer - 3 units.

These equipment are used for Flame Photometry by the Internal Standard method for NA (t) K (t) Li tests and was provided under the Grant Aid program. The equipment is used moderately at the rate of about 30 - 40 specimens per day and is serviced daily. There has never been a breakdown except for annual replacement. The equipment is in satisfactory condition.

One of the units is used to analyze 15 - 20 specimens in the night. Operational instructions have guided the use of the equipment.

- (b) Horiba M-8L Series (Scale)
Horiba F-8 Series (Digital Display) PH Digital Meter

These equipment are used to measure the PH of Reagents and buffer preparations. They are not over utilized as two sets are available for day and night work. However prior to the arrival of the second set the available unit had to be over-utilized. This may be perhaps the reason for the damage of the electrode and subsequent replacement of a complete new set. At present the equipment is in satisfactory condition.

(c) Densitron 20 M (Jokoo)
Denistron 20 ' (Jokoo) Densitometer

These two equipment are complementary and are designed to be used in the latest micro-computer technology to measure isoenzymes and serum protein fractions. The tabulation on special investigations indicate the output achieved for the year which is not an optimum level. The equipment is capable of measuring hundred samples at a time and is working in satisfactory condition. The PC board of the densitron 20 M was the only part that as been replaced during the last five years. As regards replacements, except printed circuits other replacements are possible locally.

Demonstrations given by JICA Experts have enabled the present operators to use the equipment with care. In house training has created expertise in the use of the equipment.

(d) Electrophoresis Unit

This equipment granted under the Grant Aid program is used for serum and other body fluid electrophoresis. The equipment is capable of realizing 20 samples/strip and 20 samples per plate. It is not intensively used. No breakdown has been reported except the replacement of necessary parts. The equipment is serviced monthly and replacement of spares locally is possible.

(e) Emmano Electrophoresis Unit:

This equipment is also used for immunological studies and Isoenzyme studies and plays a complementary role to the Electrophoresis unit. It has the same capacity as the other units and is alternatively used without straining to capacity.

No breakdowns have been reported and is serviced every month.

Both equipment are easily maintained with locally available spares and presently are in satisfactory condition. The training given by the JICA experts has been useful in the development of expertise in handling the equipment.

(f) Chromotography System:

- 1) Thin Layer Chromotography Model HE - 20
- 2) TLC Spray Chamber Model - SR - 600

The equipment analyses the amino acid and sugars of body fluid by thin layer chromotography techniques.

The equipment has the capacity to analyze two plates at a time for amino acid. The equipment is underutilized.

Some chemical and chromotography plates has been bought in Sri Lanka and there has been no reported breakdowns. The equipment is in good condition though only day to day cleaning had been done.

The training provided by the JICA experts are adequate for the initial stages and the staff is looking forward to receiving a better understanding for further involved studies.

(g) Chloridometer C 50 AP

The equipment assists in the measurement of chloride ions by using the coulometric principle. Serum and body fluids are analyzed by using this principle when requests are received from the Consultants. The equipment has a rated capacity of 50 samples per calibration. But this optimum is never achieved as the requests for such analysis is limited. The equipment is maintained daily and if necessary repairs could be done within a day. No breakdowns have been reported and the equipment is in perfect condition.

(h) Urine Analyzer :
Mini Aution Analyzer
Model MA - 4210

The equipment is a semi automatic urine analyzer for nitrite, PH Glucose, protein occult blood, Ketone body, bilirubin, urobhe by reflectance and photometry with a rated capacity of 120 tests per hour.

The equipment is under utilized as these tests are done only for special cases. The Reagents, strips that are used are comparatively expensive compared to other methods. The medical Consultants actually decides on the use of this method. There have been no breakdowns, and equipment has been serviced regularly and presently functions in a satisfactory condition.

There is really no emergency created in the event of a breakdown as the manual method could be immediately invoked.

Basic training has been provided by the sales staff of the vendor

(i) Automatic Glucose Analyzer
Glucose Auto & Start Model GA - 1120

This enables the analysis of Glucose by the Glucose oxidase method (GOD) principle for serum and other body tissues. The equipment has a capacity of testing 120 samples daily and is over utilized. There is a heavy load of requests but no breakdown has been reported. The equipment is serviced monthly and small repairs were done within one or two days. It is in satisfactory condition.

There is no dearth in talent in using the equipment as the JICA experts have trained the staff.

(j) Auto Sipper
Hitachi 4 1070

This enables the measurement of transmittance and absorbance of a solution by automatic sipping with a rated capacity of testing fifty samples at a time. There is a heavy demand for Spectrophotometric readings amounting to nearly 350 samples studies per day. Back up services is provided by the Hitachi Model (100-10) spectrophotometer. There has been no breakdown and very simple maintenance required. The equipment is in satisfactory condition. Personnel had been trained by JICA experts to use the equipment.

Microbiology

(k) Microelisa Systems Elisa Machine

The equipment is used in the detection of Ag/At in human serum. It has a rated capacity of 100 tests per day, but is utilized at the rate of 10 tests per week. Non availability and high cost of reagents have reduced its capacity utilization. There is no arrangement to service the equipment and there have been no formal training. Users were self taught by following the operation manual. The equipment broke down in 1987 and functioned when the Felter 492 was made available in March 1989. The Recorder was also repaired by M/s Echida in June 1989. The equipment is serviceable. A new machine has been made available by JICA but has still not been commissioned.

(l) Autoclaving System

This is entirely a sterilization system used to sterilize media such as contaminated glassware material using moist heat. The equipment is sufficient for present day needs. It is used once a day which is considered the optimum level.

There is no regular servicing required and no breakdowns reported.

The new tactfully obtained under the Technical Cooperation program is also in use giving satisfactory performance. There has been no formal training and users have been self taught.

(m) Anaerobic Incubating System:

This system is not yet commissioned because of the non availability of Hydrogen gas. A cylinder is on order.

(n) Fluroescopy Microscope System:

This equipment is also not yet commissioned and a list of reagents is being prepared.

Histology

(o) Automatic Tissue Processor:

The equipment is used to prepare tissues for histology - dehydration, clearing and wax impregnation and is easily handled as no special skills are required. The equipment has a rated capacity of 50 sections per day but is only used at 50 percent capacity.

There was only one reported breakdown and it was put into working order within two days. The equipment is serviced once a year and is in good condition. Spares are readily available.

(p) Cyto Centrifuge:

This equipment is used to prepare smears for cytologic examinations and did not require special skills to operate. It has a rated capacity of undertaking twelve slides at a time but is used at the rate of 2 - 4 slides at a time. There has been no reported breakdown and monthly maintenance is done. There is always an ordinary centrifuge for emergency.

(q) Cryostat:

The equipment is used to prepare frozen histology sections as only occasional frozen sections are done the equipment is under utilized. It requires skill for use and also for maintenance. With the routine histology training available the equipment is used and maintained daily. No breakdowns have been reported and it is in good condition. It is serviced every six months.

(r) Microtome - Rotary & Sledge Types:

The equipment is used to cut sections for pathological examinations. It requires special skills for use and these skills were acquired through routine training. It has a rated capacity of nearly 50 sections per day but sometimes this is exceeded depending on the number of specimens.

Though cleaning and oiling is done daily and it is serviced every six months one or two breakdowns per year had been experienced. Repairs were carried out within a day. The use of the equipment had not been held back due to lack of spares though they were difficult to obtain. The equipment is working satisfactorily however replacement of the sledge types is required.

7.4 Performance:

A list of the tests done can be obtained from Annex 7.4 which details the number of tests done in each category for 1989.

The following tests which are not performed in any other institution in Sri Lanka is carried out at the SJGH.

BIOCHEMISTRY :

1. Iso-enzymes
2. Heptoglobin Levels
3. D-Xylose
4. Immunologically levels
5. Antiripsin levels
6. Cryoglobulin

HEAMATOLOGY :

1. Glycerol Lysis test
2. Sucrose Lysis test
3. F D P
4. L A P Score
5. Scanning photometry for abnormal Hb
6. Blood for Sulpha abd Netho Hb.

TESTS FOR SPECIALIZED TECHNIQUES :

- | | |
|------------------------|-------------------------------|
| 1. Serum Iron | 1. Haemoglobin electropiresis |
| 2. T I B C | 2. K C C T |
| 3. A N F | 3. Fibrinogen |
| 4. L D H | 4. Sudan Black |
| 5. G T | 5. P A S |
| 6. T 3 | 6. A L P Stain |
| 7. T 4 | 7. Factor viii assay |
| 8. T S H | |
| 9. Alpha Feto protenin | |
| 10. Amino Acid levels | |

7.5 Staff:

The staff of the Laboratory and their remuneration rates are given in the Chapter on Administration. When the laboratory commenced trained personnel were not available and those who had the expertise to conduct at least a single test were recruited. Most of the staff now have now been trained on the job and certain others with experience have been recruited.

The four divisions including the Blood Bank are under a well experienced research oriented Pathologist who guides the staff effectively. The staff is able to maintain the equipment used by them.

7.6 Training:

Two medical technologists have been trained in Japan. They had acquired fundamental knowledge in Biochemistry and Hematology, preparation of Reagents, maintenance of equipment and Quality Control.

It is essential that this program be extended due to the wide number of tests the unit is called upon to perform. As the MRI in Colombo also send their samples to be tested and the Doctors at SJGH are research oriented, the technologists are gaining more experience.

7.7 Performance of the Staff:

The performance of the staff is satisfactory. Some patients have complained that tests are delayed. When the Pathologist was confronted with this, he explained it was due to the non-availability of Reagents.

The Auto Analyzer is the ideal mechanism to monitor quality standards but it is not much used. However, the unit cross check with Doctors the accuracy of tests by obtaining their views.

The availability of the glucose analyzer etc. considerably ease the work load of the unit. Further the biopsies done at the Endoscopy Units precludes histology tests by the unit.

7.8 Future Plans:

The Unit has to develop almost as fast as the other services in surgery and medical treatment planned.

If kidney transplants are to be done, the tests should be very accurate and staff should be found from this unit to provide the regular examinations and monitoring of these patients.

The Chief Pathologist Dr Alwis is interested in conducting primary research and he has selected two main areas:

1. Leukemia
2. Bone Marrow transplant.

The latter is possible within the existing facilities whilst the former requires sophisticated equipment and Reagents to differentiate properties in blood cells, the root causes for certain types of leukemia.

Management has accepted the Pathologist's proposal to commence a specimen collecting centre at Nugegoda and the commencement of a full physical examination for a fee of Rs 500/-. The Laboratory Unit is a catalyst in the program of the hospital and assistance should be provided to achieve maximum benefit to SJGH.

CHAPTER EIGHT

8.0 Training Activities:

8.1 It was the intention of the founders of the hospital that there should be a centre for training, a place where medical professionals could acquire advanced knowledge in their areas of specialization. The hospital has thus been named as "General Hospital of Sri Jayewardenepura and Post-Graduate Training Centre".

The Management is also aware that suitable training programmes should be arranged to meet the general requirements of the hospital along with the provision of services to advanced students.

The management was initially compelled to begin its own programme of training nurses as the number of trained nurses expected to be transferred from the government institution did not materialise.

The initial batch of 75 nurses who underwent a 3 year course conducted in English have already passed out and have been absorbed into the permanent cadre. The second batch of 40 nurses are in training and will pass out in 1993. The programme has been specially designed to meet the requirements of a fast expanding modern hospital with an emphasis on medical equipment. This programme is financed by the Ministry of Teaching Hospitals.

Consequent to an agreement with JICA on technical co-operation in 1986, arrangements have been made for the training of medical personnel including Doctors, Nurses, Para-Medical Staff in Japan both in Kieo University Hospital and Olympus Engineering Co which supplied Endoscopy Equipment. Our investigations have revealed that those who were benefitted by the training provided in Japan have contributed immensely to improve the quality of services offered by the Hospital. It is extremely valuable that further training should be arranged for young Doctors and other medical staff who would continue with the work in the modern hospital.

The management has encouraged visits of Japanese experts to train and advice local personnel and repair equipment. This interaction must be continued.

The SJGH has in its inventory considerable number of medical, electronic equipment and for the maintenance of these, training of personnel of the hospital's own engineering section is imperative. This would facilitate expeditious repair of minor defects. A programme has to be designed taking into account the life span of the item and complementary items available.

The Laboratory (Pathology) Department staff also require training as the pathological services are continuously being diversified. A forward programme should be designed to train necessary personnel in these areas.

Training should cover not only professional work but upkeep of equipment. In this direction Radiographers are being trained. They follow a course conducted by the Government for Health Department personnel and not by the SJGH.

The Orderlies are an important category that deserve training as they are taken without formal training. The management has arranged training for them while in service.

The majority of the senior nurses are looking for training abroad. They have confided in the team of Consultants that the management should obtain for them at least some scholarships normally granted for senior nurses under various aid schemes. The management has not considered this issue as of vital importance.

A well integrated training programme for the entire hospital is required. It has to take into account the special expertise that is required today and what the hospital will require in the future. The Consultants have observed that a good training policy is a vital ingredient in hospital management. The pulse of the personnel should be felt regularly and training programmes should be structured not only to train required personnel but also to provide career development opportunities to those working for the hospital.

The SJGH has been established as an institution for post graduate medical education and also to provide facilities for future doctors to serve their internship period. The SJGH has no control on the number of post graduate students as this depends entirely on the Postgraduate Institute of Medical Education. At present there are few postgraduate students.

The number of interns however depends on the space available and during the past few years the interns were few due to the closure of Universities.

CHAPTER NINE

9.0 Administration:

9.1 Organization Chart:

According to the draft Organization Chart given as Annex 2.3 the Chairman of the Board who is a permanent employee of the hospital sits at the top of the apex. Below him at the next level is the Director of the Hospital. The Secretary reports to the Board direct only as the Secretary of the Board, and he, as the Chief Administrator of the hospital reports to the Director on all other matters. The Deputy Director who is responsible for the operations of the para-medical staff, the Chief Accountant, the General Manager, the Head of Electro Medical Engineering Department and the 22 Consultants are among others who report to the Director.

The Matron who is responsible for the nursing administration also reports to him. The Director who has to co-ordinate the activities of 27 key officers gets involved in attending to minor details of the hospital too. Although he appears to be overburdened theoretically, the independence of operations he has given to the Consultants has left him relatively free to supervise the other lay personnel.

9.2 Management:

The Sri Jayewardenepura General Hospital (SJGH) is managed and administered by a Board in terms of the SJGH Board Act No 54 of 1983. The policies formulated by the Board are executed by the following Key Officers.

(a) Chairman:

According to the Manual of Procedure the Chairman of the Board of Directors is vested with the following powers.

The Chairman will function as Chairman of the Hospital Board and jointly with the Board be responsible through the Minister to the Government for the proper administration of the Sri Jayewardenepura Hospital and for the proper discharge of the powers conferred by Act No 54 of 1983.

He will convene meetings of the Board whenever necessary and as required by the law, ascertain the views of members and formulate policy.

He will, subject to the directions of the Minister implement the policies laid down by the Board towards achieving the objectives and specific goals of the Hospital.

He will keep the Board apprised of important matters concerning the affairs of the Hospital from time to time.

He will exercise the powers of the Board at his own discretion in emergencies pending the approval of the Board.

He will assign duties to the Director of the Hospital, the Deputy Director, the Secretary of the Hospital, the Internal Auditor and other officials and supervises and appraises their work.

He will exercise powers of appointment, disciplinary control and other financial authority as delegated to him by the Board.

It was noted that although he has these powers he does not in fact exercise them.. He is primarily concerned with formulating policies and their implementation.

(b) The Director

The functions of the Director of the Hospital are also detailed in the Manual of Procedure and is given below.

The Director is responsible to the Chairman for the duties and functions assigned to him. Broadly his functions relate to Medical Administration.

Planning, Organizing, Coordination and Supervision of activities and programmes of work relating to medical and technical aspects of the Institution.

This will include : consideration of requests for and forecasting needs for medical and technical manpower, medical equipment and supplies, and buildings.

Assignment of duties and arranging for leave of the staff under him, approval of increments, their disciplinary control under powers delegated by the Board.

Supervision of the work of subordinate staff, conducting periodical performance reviews/appraisals through individual and group meetings.

Taking adequate steps to ensure quality of medical and nursing care and para medical services.

Ensuring an adequate supply of drugs and other medical and surgical consumables.

Maintenance and upkeep of medical equipment and appliances.

Sanitation, cleanliness of the institution.

Investigate into complaints and petitions received from patients and members of the public.

Maintenance of an up-to-date management information system.

Assisting the Chairman when called upon to do so and acting for him in his absence.

Any other duties assigned by the Board/Management.
(He will be assisted by a Deputy Director)

As the Chief Executive of SJGH he has taken over most of the functions assigned to the Chairman as given above. He wields an effective control over the activities of the hospital.

(c) Deputy Director:

His functions as detailed in the Manual of Procedure are as follows :

He will be responsible to the Director of the Hospital and assist him in all activities in general.

Specifically his duties are :

Planning, Organizing, Coordination and Supervision of Para-Medical services

Transport Services

Janitorial Services and House Keeping.

Any other duties assigned by the Chairman. (He will act for the Director in his absence.

He performs all these functions and in addition assists the Director with his day to day work.

(d) The Secretary:

The functions of the Secretary of the Hospital detailed below are found in the Manual of Procedure.

"The Hospital Secretary is responsible to the Chairman for the duties and functions assigned to him. Broadly his functions relate to Non-Medical Administration: Planning, Organizing, Coordinating and Supervision of activities and programmes of work.

Specifically : Personnel Management in relation to non-medical staff.

Directing and assigning duties to the subordinate staff, granting/recommending leave, recommending increments and disciplinary control of subordinate staff, maintainng Personal Files of all staff and other statistical information on personnel

Provision of amenities such as water, power and facilities for communication, welfare.

Dietary Services .

Upkeep and security of the assets of the institution and the premises and assigning responsibility for them to the respective members of the staff.

Conducting performance reviews of the staff under him.

Liaise with the Director in the Coordination of the medical and non-medical programmes of work.

Public Relations and Publicity.

Serve as Secretary of the Board and Committee of Management."

The Act specifies that the Secretary of the Hospital or the Chief Administration Officer with the Medical Director among others will form the Committee of Management to administer the day to day affairs of the Hospital. At SJGH the Secretary to the Board and the Hospital Secretary/the Chief Administration Officer is one person wearing two hats with varying degrees of responsibility. The practice at SJGH has been to consider him only as the 3rd among senior administrative staff, immediately following the Deputy Director with a monthly emolument only ranging 3rd highest in the hierarchy. The Organization Chart drawn by the Sri Lanka Institute of Development Administration (SLIDA) do not bring out the position of the Secretary clearly.

Administrative Powers of the Secretary covers a very wide area. The Administration section, which is his immediate working tool, maintains all personnel files of the 1070 employees at SJGH. There is no separate Personnel Manager. The Secretary has a complement of fifty nine clerks to attend to accounts and book-keeping, maintain personnel files and other administrative matters.

He wields a lot of influence in the Hospital and ably assist the Deputy Director with his task.

Secretary's attention is drawn to almost all matters in the hospital covering the maintenance of the buildings to granting exemption for a poor patient from any charges. He however refers all these wide ranging matters to the Committee of Management consisting among others of the following :

- 1) The Director of the Hospital
- 2) Three persons among Consultancy staff
- 3) Chief Matron
- 4) Chief Accountant

The Committee of Management meets once in every month and by consultation, discussion and consensus arrives at decisions on day to day administrative matters. The Chairman of the Board has the inalienable right to attend the meetings of the Committee of Management and the Director of the Hospital is the Chairman of the Committee of Management according to the SJGH Board Act No 54 of 1983.

The Chief Administrative officer of the Hospital and other members of the Committee of Management have equal opportunity and power to make suggestions and no power to direct the Committee. This Committee which includes representatives of the entire spectrum of the hospital is a viable method of management. The majority of the staff look towards the Secretary as the main source and are unaware that decisions are taken by the Committee of Management and not by one single individual. To avoid any individual grievances when letters are addressed to the Secretary it is suggested that any matter covering administration should be addressed to the Committee of Management and not direct to the Secretary by the Staff.

It has been observed that the Secretary has been overburdened with work. To alleviate this problem the Management has decided to recruit an Assistant to the Administrative Officer. We consider this a good move.

(e) Accountant:

His functions as detailed in the Manual of Procedure are:

The Accountant as the Chief Financial Officer of SJGH is responsible for the financial policy.

His duties listed below are taken from the Manual of Procedure:

The Accountant shall be responsible to the Director of the Hospital for the duties and functions assigned to him. More specifically his duties are :

Co-ordination of the work connected with the preparation of the Annual Budget, Corporate Plan and Annual Accounts; Financial Planning, Financial Control and Accounting;

Collection of revenue and accounting for expenditure maintaining an adequate stock of non medical supplies. All work connected with tenders for supplies and services.

Furnishing management information to the Director and Chairman periodically. Direction and supervision of the work of his subordinate staff, assigning duties, granting leave, recommending increments.

Conducting performance reviews of the staff under him.

(He will be assisted by the Assistant Accountant and Supplies Officer.)

Any other duties assigned by the Board/Chairman.

9.3 Conditions of service & Working regulations:

A detailed classification of the staff of SJGH and their salaries are given as Annex 9.3.

The Manual of procedure lays down clearly the conditions of service and procedure for staff coming under the control of the Board and Committee of Management. It is expected that every staff member be familiar with the conditions of service embodied in the manual. It emphasises the necessity to be guided by the SJGH Act No 54 of 1983. The Finance Act No 38 of 1971 and the Internal Circular Instructions issued by the Board/Committee of Management. Where the instructions, procedures, rules or regulations are silent on any matter officers have been requested to follow Government practices which are spelt out in the Establishment Codes, Financial Regulation, Treasury and Public Administration circulars or instructions issued by the Ministry of Women's Affairs and Teaching Hospitals.

The Manual of Procedure is exhaustive reading material and our investigations revealed that some staff members are even unaware of its existence.

This document is more a guideline to management and when necessary these procedures are invoked. The rules and regulations emanating from the Committee of Management is more binding on the employees.

For a large close knit organisation regularly incurring an annual expenditure of nearly Rs 100 million regulations are necessary and the staff gives their utmost compliance to these.

Most of the staff have also confided with our Consultants that they would have never got the opportunity to enjoy the comfort of working in a modern hospital if not for the Japanese munificence. Most of the senior nursing staff are retired nurses from government hospitals who have been enticed by the higher salary scales offered by SJGH. The scales they enjoy are 50% more than the salary received in their last place of employment. This higher salary they enjoy actually complements their pensions and they are generally a contented lot regarding remuneration. There are certain individual differences particularly among those who aspire for promotions. There are a few who opted to become nurses from position of Sisters due to the advantage they obtained in working closer to their homes. Some are of the opinion that since they were pioneers in certain units they should receive some form of training abroad. In retrospect they entertain the view that they missed these opportunities and they would prefer at least a few among them be offered opportunities to avail of Scholarships given to Government nurses.

9.4 Job satisfaction:

Working in an ultra modern hospital has given complete job satisfaction to all employees of SJGH. For Orderlies the lowest category in the workforce, and least trained, the opportunity secured is appreciated. Additionally unlike in Government Hospitals, their commencing salary is equal to or above the salary of the most senior in the labour category that is the Attendants. Their meals are subsidised and health facilities extended to their close dependants. There are individual differences among orderlies according to differences in educational standard. The most educated among them could secure elevation to positions of clerks and others could rise from position of Helpers to Cooks which is on a higher salary grade. Most of the Orderlies are untrained and they are learning a profession whilst working. Some Orderlies who were interviewed have confided in us that they would prefer some accommodation being made available to them particularly to the married staff due to the high rental and boarding fees charged by unscrupulous residents in the neighbourhood.

Senior Nurses are a hardened category having worked over twenty years in Government Hospitals and they look forward for more intensive use of their experience. These views were expressed by those working in wards with less bed occupancy and those allocated to unopened wards.

The nurses expressed the view that the Welfare Officer had not discussed any of their welfare problems with them.

The Medical professionals are a contented lot. They are of the view that facilities given by JICA should be extended for continued research and development in their particular disciplines. Availability of spares, proper maintenance of equipment entrusted to them and replacement of equipment after effective life span appear to be worrying them. Most of the medical professionals did not agree with the increased charges levied by SJGH since 1st January 1990. They felt that this would reduce the number of patients that would need their special help.

All staff work with enthusiasm and the high morale is a compliment to management. The severe cost cutting and the need to continue the status quo, appear to worry everyone. A sound personnel policy is therefore a panacea for their worries.

9.5 Computer:

The computer purchased by the hospital from funds given under Grant Aid is an IBM PCAT system. There are 2 terminals which are linked together by a network system. The computer has a 512 kb Random memory with 20Mb Hard Disk. One terminal is used in the Accounts Department but is accessed by different users for their particular requirements. This terminal at present is used mainly for the Pay Roll. For this purpose software has been obtained locally from East West Computer Ltd.

With a staff of 1200 the computer takes 2 full days to get the pay sheet prepared at the end of each month. This is a very comprehensive pay roll. The Master file contains the following information.

Employee Number - Category/Grade, Name, Address, ID Card No. Date of Birth, Civil Status, Sex, Designation, EPF No. Date of joining, Basic salary, cost of living allowance and other allowances payable.

On a different menu there are separate files for each employee as well which records all these details on an annual basis. At the end of the year this record is printed out and the records removed from the file to save space on the computer.

The mode of payment too is recorded as a separate file as well as the EPF payable. Widows and Orphans fund contributions are also separately maintained. All this requires updating each month and this takes 20 hours of computer time per month.

The ordering of the diet is also performed on the Computer. This is run on a programme that was developed locally. The master file is called a Recipe master file. This contains information of the different kinds of menus required for each day based on the number of patients in the hospital each day and the kind of diet prescribed for the patient such as diabetic diet, Children's diet and other special diets required. The staff lunch requirements too are programmed. The cost of each item on the diet is also programmed on the item master file.

Tenders are called for the supply of vegetables and other requirements once in 6 months and the price fixed. This price is fed into the computer and the cost of each diet is calculated. Different meals for each 7 day cycle is prepared. The diet recorder program requires a minimum of 2 hours each day for input with the printouts taking not much more time.

A program has been developed for the General Ledger but is still not in use. This is expected to commence from the first of January 1990. A program has also been purchased for inventory control. This program has separate menus for the following.

- Drugs and surgical Items
- General Inventory of fixed assets
- Laboratory Chemicals
- X Ray requirements

There are 4 PCs which were purchased locally in the medical records section. But these are not functioning as yet as they were purchased recently and the old records of the patients are being loaded to the computer.

The other terminal of the Computer is located near the Doctors rooms and it is linked to the main terminal by a net work system. The lack of sufficient memory power at times prevents both terminals being used simultaneously.

The use of this computer is mainly for keeping records of the Endoscopy Unit. All patients and tests carried out in this unit are recorded in the computer using Database III. The inventory of the library is also maintained in the Computer as well as a list of the Doctors and Specialists with their addresses and telephone numbers. Minutes of the Clinical Society are also maintained in the computer together with a few Research Projects. At other times the doctors who wish to familiarise themselves with the use of the Computer are free to do so. They have 3 software packages such as Lotus 123, D Base and Wordstar.

To be able to utilize the computers available more efficiently a mini system may be installed.;

9.6 Maintenance :

(a) Maintenance of Equipment:

It is in the Electro Medical Engineering Department that all hospital equipment - electrical, electronic or mechanical are serviced and maintained. Minor repairs are also carried out in this department.

Mr H P Dias who has retired from the Electro Medical Department of the Colombo General Hospital is in charge of this department. He has with him four technologists and four orderlies who help him in his work.

The department has been functioning satisfactorily and maintenance has been carried out without interruption. A log book is been maintained recording different types of services performed on all the equipment. With the equipment now being used for the last five years there have been more calls on them to effect minor repairs and maintenance which has increased the work load of the department. With the available resources they are unable to cope up with the demand. Many of the routine servicing of equipment have had to be postponed due to this. Whenever a piece of equipment is brought into the department for repairs after the repair is done the servicing of it is also completed.

None of the staff have had any formal training in repair of these highly sophisticated equipment that is being used in the hospital.

When questioned about the equipment in the department which have not been repaired for a considerable time. Mr Dias stated that for this equipment he does not have the machines specifications or the internal diagram of the machine. Most of these machines have been bought in Sri Lanka and the agents have deliberately not given them this information. In particular the Elisa Machine is in the Path Lab and the Ultra Sound Scanner from the Radiology Department were both not repaired for these reasons.

Spares for the equipment are bought annually and Mr Dias feels that adequate stocks of spares are held by him to do routine repairs. Details of all repairs done of each machine is logged and this enables him to keep stock of necessary spares all the time. He has on his own modified some of the equipment to suit local conditions and these have been successfully utilized in the different departments.

There is hardly any equipment available in this section to assist the Engineers in their work. They have only very basic equipment such as a Multimeter and an Oscilloscope. To effectively repair machines at least two pieces of equipment are required such as Patten generator (a Test Motor) and a Logic Probe. It is observed that Mr Dias is past the normal retiring age at present in Sri Lanka and it is necessary that a replacement for him be trained. The staff actively engaged in work and needs more special training to enable them to effectively maintain the equipment that is available.

(b) Maintenance of Building:

The building complex is now nearly six years old. Our Team of Consultants have observed that only routine minor repairs have been done by SJGH. However the ceiling of the theatres had to be repaired.

Overall the building and the premises have been maintained in good condition. This is as a result of an outside agency being employed for maintenance and upkeep of premises. Further SJGH has employed 2 Carpenters, 2 Masons, 2 Painters, 01 Plumber, 01 Foreman to attend to minor maintenance work.

The Management informed the Consultants that the building requires a new coat of paint which would cost nearly Rs 10 Million.

It is suggested that a programme of preventive maintenance be planned and implemented to prevent the deterioration of the building.

9.7 Policies:

(a) Personnel Policies

The hospital commenced with the appointment of the Board and few key officers. Though the Board was appointed in February 1984, the first patient was admitted in December the same year. 1984 was therefore the pre-operational year and gradually employees were recruited. Our team of Consultants have been informed that the Government promised 600 Nurses but not a single Nurse was forthcoming at commencement. The management therefore had to advertise for nursing staff at salaries fifty percent more than what was paid to them in Government hospitals. This enabled the filling of vital positions of nursing staff from the new recruits who retired from government service prematurely and joined SJGH. Some were retired nurses.

It was also difficult to recruit laboratory personnel and steps were taken to recruit these personnel who were at least capable of performing a single test.

Similarly Radiographers were attracted.

The medical personnel were attracted by high salaries and SJGH now pays the highest salaries for medical consultants comparable to any government hospital.

Senior retired medical personnel were also employed. The Radiologist confided in us that he was in retirement when he received the appointment.

The management was determined to commence the hospital with a skeleton staff. The position was exacerbated as government hospitals were also understaffed. There had been no proper allocation of Nursing Staff among Government Hospitals and brain drain had affected the availability of Senior Medical Staff in Sri Lanka. Further as the Universities were intermittently closed there was a dearth of young medical officers. This position is revealed in the following table extracted from the Investment Program 1989 - 1993 prepared by the Department of National Planning.

MAN POWER POSITION 1989

Category	Training Capacity	Cadre	In position	Vacant	Actual Reqd	Deficit
Medical Officers	400	2352	2248	104	3283	1035
AMP/RMP	200	1277	1230	47	1553	323
Med Lab Tech	120	558	468*	90	1144	676
Pharmacists	146	574	467*	107	668	201
Physiotherapists	24	196	166*	30	301	135
Radiographers	35	245	193*	52	245	52
Staff Nurses	1200	8237	7843*	394	12550	4707
Midwives (MW)	600	1405				
Public Health MW		5048	4773*	1740	7267	2494
Public Health Nursing Sisters	50	269	154	115	289	135
Public Health Inspectors	80	1098	931	167	2020	1089

* As at 31st December 1987

As a result of all these factors the SJGH was burdened with a high salary bill from the very beginning.

Due to non availability of trained nurses, the management had to start its own training programmes. A Nursing School was started in an unopened ward and already 75 nurses have passed out after three years of training and further forty are being trained for graduation in 1993. There was a procedural problem of training the full complement of 75 as the management had to settle with their own selections for training.

The management had to train some of its Radiographers under the Government program as funds were not available for their separate training. All these are proof of conditions of the country and the management were unaware that the staff problem will be so acute.

With the technical cooperation agreement with JICA in 1986 the management was able to obtain training facilities for personnel using new equipment. Three Doctors received training in Endoscopy, two Nurses in Respiratory Systems, two Lab Technicians in the Pathological field. There were also Japanese experts who visited Sri Lanka to demonstrate the working of equipment and training of personnel. Hospital management also had the opportunity of getting familiarised with new developments.

The management is still straddled with the problem of staff in commissioning the balance 25 percent of beds.

As regards the lower category of employees, the management recruited untrained personnel as Orderlies and still more are to be recruited to the cadre.

To achieve the staff strength required to meet quality standards, it will definitely take some more time.

Specialist staff including an ENT Surgeon is difficult to find.

It follows from the above that the SJGH's policy had been to recruit staff at above market prices. To retain such personnel it has been following a policy of providing training. The success of this policy is evident from the low turnover of staff.

The policy of providing Quarters for Medical Officers and the unmarried Nurses, the provision of subsidized food for the staff are policies designed to attract and retain staff.

(b) Marketing Policies:

The Hospital until recently did not aggressively resort to marketing of its services. On 3rd December 1989 the management advertised the services of a complete medical check-up package for Rs 500/-. It has been observed that this rate is considered attractive and many are availing themselves of this service. Eight patients are examined per day.

The response to this service is a barometer for selective marketing of specialized services. The Pathologist services are now well developed and SJGH could compete with any organisation doing similar examinations in the country.

Specialized services which have reached efficient levels either from the point of view of diagnosis or treatment could be marketed.

General Surgical services and Paediatric Surgical Services available could be marketed effectively due to the high quality of facilities.

Maternity services is another potential marketable service with over 70% occupation of beds. Further due to the efficiency of NICU as the best referral centre for immature babies, mothers with complications prefer confinement at SJGH.

Also the Endoscopy Unit with its cost effectiveness for surgical and medical patients could easily be marketed.

Our team of Consultants therefore would agree with the Development Plan of the SJGH that existing units should be developed into multi disciplinary units to enable optimum realization of advantages built into SJGH for example better environment with modern facilities and of course comparatively lower rates.

It is suggested that selective marketing of services should be adopted as a policy.

In an organization which cannot undertake pricing of services on the basis of marginal cost due to progressive increase in total cost for each addition of an extra patient, marketing of all services in general cannot be successful. In the circumstances market segmentation as a policy is desirable.

(c) Financial Policies:

As a general rule a sound financial policy has to develop as a management tool.

The Board although is expected to formulate its own financial policy in fact is compelled to follow the directions given by the Government with regard to financial policy.

The imposition of charges for Hospital services depending on income levels which began in 1985 has been a policy formulated on a Government directive. The doubling of charges effective January 1990 was also a result of a Government Policy. Charging a fee has had a cushioning effect on SJGH finances. Income from this source has been increasing from 1985 - 1989. (See Annex 9.7 (c))

	1984	1985	1986	1987	1988	1989	1990
	-----	-----	-----	-----	-----	-----	-----
Grant - Rs M.	40	62	58.9	66.5	70.0	95.0	-
Hospital Income from Charges	-	2.3	6.2	7.9	10.0	13.6	31.0 (Estimated)
Hospital Fixed Deposits		65.4	63.2	56.2	56.3	na	
Interest Accruals on Fixed Deposits		1.0	3.1	3.0	3.5	0.79	

The fee levy at SJGH has come to stay whilst the future of other sources of income cannot be guaranteed. The Chief Accountant has successfully negotiated to obtain the annual Treasury Grant for recurrent expenditure to maintain the quality facilities at SJGH when the Government Policy in general has been to reduce the extension of recurrent expenditure to Hospitals per capita in real terms in the 1980s.

SJGH did not suffer much from these policies though expenses on consumable and basic amenities were affected. The wages of staff already in employment also was not affected but certain wards could not be opened.

The major part of capital expenditure for infrastructure has also come from Government capital grants. Presently the much wanted stores accommodation for general stores and drugs stores have been funded by the Government. SJGH has also been successful in negotiating capital grants for other infrastructure facilities.

SJGH however has no policy for replacement. For this, the management is hopeful of receiving further Government allocation or Japanese aid.

It began depreciating its fixed assets in 1985 and had to abandon it on the instruction of the Treasury.

The Chief Accountant had suggested to the Treasury on the importance of a replacement fund. We have been informed that the Treasury Officials had considered this measure as ultra vires.

CHAPTER TEN

10.0 Finance:

10.1 Capital Expenditure:

The hospital building operations commenced in November 1981 and the project including equipment was handed over to the Ministry of Health on 31st October 1983. The capital cost of the project as recorded in the first reported balance sheet of SJGH dated 31st December 1984 and subsequently corrected, amounted to Rs 860.1 million. According to the same source the Sri Lanka Government contribution including the cost of land amounting to Rs 43.4 Million was utilized for the construction of Bachelor Quarters and Nurses Quarters and the perimeter wall at the outset. (The breakdown of the capital expenditure is tabulated per year in the table 10.1 below.)

TABLE 10.1

CAPITAL EXPENDITURE 1984 - 1989 (Rs Million)

	1984	1985	1986	1987	1988	1989	1990
Grant Aid	860.1	-	-	-	-	60.0	-
JICA	-	-	-	9.3	5.0	14.5	-
Government	43.4	-	-	2.4	-	2.0	-
	903.5	-	-	11.7	5.0	76.5	-
Government grant for recurrent expenditure	40.0	62.0	58.9	66.5	70.0	95.0	-

Prepared by the Consultants from data supplied by the Accountant

In 1989 under Grant Aid a further Rs 60 Million was received which was utilized for obtaining the CT Scanner and Angiographic Table. Preparations are now being made to house these two items.

Consequent to the Technical Cooperation agreement signed with JICA in 1986, SJGH received equipment to the extent of Rs 9.3 million in 1987 and further Rs 19.5 Million in 1988 and 1989.

The hospital spends annually approximately Rs 4 million for capital items specially in replacement of small items including tools and equipment, etc.

The Government of Sri Lanka's contribution to capital has been as follows :

1984 Cost of land	Rs 14.7 Million
Perimeter Wall Quarters-) Bachelor Doctors & Nurses)	Rs 28.7 "
1987 Directors quarters, security room, gates, steel fences	Rs 2.4 "
1989 Building for CT Scanner Consultants Quarters and General Stores	Rs 2.0 "

Married quarters of 18 units costing Rs 11.0 Million being occupied has not been shown in accounts as the building has not yet been officially handed over by the Government to the hospital. Also a sum of Rs 3.0 million has already been allocated for the construction of Drug Stores under World Bank Aid.

10.2 Recurrent Expenditure:

Analysis of the Profit and Loss Accounts for the past five years reveal the sagacity to curtail deficits in net income (See Annex 10.2). With dramatic increases in expenditure from Rs 33.9 Million in 1985 to Rs 111.7 Million in 1989. In percentage terms the increase of expenditure has been 230 percent. This reveals an effective form of negotiation with the Treasury to obtain an yearly enhancement of the grant. Actually in 1985 & 1986 there would have been a surplus in net income if not for depreciation.

Expenditure relating to the care of patients has increased from Rs 16.9 million in 1985 to Rs 64.4 million in 1989 which is nearly 281 percent. This is substantially out of proportion to the number of patients seeking treatment. The increase in the number of patients between 1985 and 1989 has been marginal. The high cost per treatment is due to the built in cost of employees. The salary bill has been increasing over the years, as the wages at SJGH are at a premium level. The hospital management should be informed that with the high cost of expenditure on patient care there should be rapid turn-round of patients and ward occupancy ratio should reach optimum level at least in the wards which have been commissioned. There is no room for complacency.

It is an economic fact that maintenance cost should increase over the years during the life span of a new asset. This will be a major item that would worry the management as there is no provision in the accounts either in the form of depreciation since 1987 or as a replacement fund. In the event of the annual grant being reduced, some machines will have to be laid off without spares etc.

The SJGH commenced depreciation in 1985 and abandoned it as a policy in 1986 as the annual depreciation amount computed was more than the annual expenditure.

Depreciation cannot be done on a commercial basis.

It is however necessary to have a replacement fund to cushion the effects of high cost in buying spares or replacing new machines. It is not, ethically correct to continue to request for aid. The Japanese government conceivably cannot be committed to a continued aid programme though hospital authorities are hopeful.

10.3 Sources of Fund:

The SJGH has two main sources of funds. ie funds from the Government of Sri Lanka and the fees levied from the patients.

The income from fees has been increasing from Rs 2.3 Million in 1985 to Rs 13.5 Million in 1989. This is a record performance but in real terms the effect of increase is not very dramatic although the charges were revised upwards in 1987 and 1989.

The Management is of the view that income will increase with new charges introduced with effect from 01.01.90.

The following income earning sources have been identified.

- (a) To make the fee paying wards more attractive by giving more passes and long hours of stay for visitors.
- (b) Increasing the capacity of fee paying wards from the present 116 beds.
- (c) Diversify the hospital services by establishing a specimen collecting centre in Nugegoda for Pathological tests.
- (d) Increase the in take of patients for medical check-up.
- (e) Charges to be made on a cost plus basis for the use of the CT Scanner which is now being installed. The scanner has already arrived.
- (f) Undertake cardiac surgery under a joint programme with the Colombo Cardiology unit for a fee.
- (g) Provide an ambulance service for patients. One of the ambulances is fitted with a portable incubator.

Our team of consultants have been informed that the Government is very keen in maintaining SJGH in its present form. It is to set the pace for government hospitals and provide quality services not available at the General Hospital. The Government is bound to provide the annual grant but each unit of the hospital has to be self sustaining. If high wages are to be continued it is necessary that the Hospital be commercially oriented whilst maintaining quality.

The management needs guidance for handling the revenue generation aspects of a competitive service.

10.4 Cost Indicators:

There are only two indicators available on costing the services provided.

a) The cost per inpatient days. This is derived by the following formula.

Total recurrent expenditure minus Total expenditure on outpatients divided by inpatient days.

In patient days. It is estimated that the cost of inpatient days is Rs 420/-.

b) Total expenditure on outpatient visits. This is arrived by the following formula.

Adding the Salary of personnel in outpatients services to the Cost of drugs of OPD and dividing it by the number of outpatients.

The cost per out-patient visit is estimated to be Rs 60 - 70. If a patient visits two clinics per day he is charged twice.

The Consultants are of the view that more cost indicators should be developed to reflect the individual variation of each unit. The Accountant needs expertise in the allocation of costs to various cost centres. A list of cost centres developed by a recognized American Institution is available with him. In introducing this system no additional capital expenditure should be incurred as for example installing electricity meters in different units etc. There are many other items that need distribution uncategorised staff etc. water, communication.

Allocating cost to individual cost centres is handicapped by the unutilized capacity presently available. These difficulties however could be solved through proper planning.

Further an integrated accounting system is imperative to link Financial data with those of the Medical Record Office. This will link the inventory system and the billing system with the General Ledger.

Improvement in this direction needs careful understanding of the requirements before implementation. It is suggested that JICA extend assistance for this proposed Integrated System with automatic posting facilities from various sub-systems. Integrated Systems will give the best output.

10.5 Analysis of Expenditure:

Further to the analysis of the finances on the basis of the profit and loss accounts, our Consultants developed the following analysis purely in terms of expenditure or disbursement. Towards this end the capital and current expenditure have been divided into major categories.

(i) Capital expenditure - amount spent on the buildings, extensions, equipment and vehicles.

(ii) Current expenditure - amount spent on maintenance, wages and salaries, supplies and other expenditure.

The total capital expenditure under the main sub headings are:

	1984	1985	1986	1987	1988
Capital Expenditure Rs					
Building			975,668	1,163,159	338,830
Extensions	100,000	295,000	104,975		
Equipment	379,002	1,294,113	3,202,314	14,686,599	6,203,394
Automobiles	220,000	747,855	17,500		
Cost of Work in Progress					242,005
Total	695,002	2,336,968	4,300,459	15,686,599	6,784,229
Recurrent Expenditure Rs.					
Maintenance		3,500,117	7,000,594	9,306,884	10,118,593
Wages		19,397,656	27,584,309	29,632,696	44,485,199
Other expenditure	2,824,827	2,216,222	3,063,895	2,594,975	3,275,086
Supplies		8,873,839	22,673,037	25,937,011	36,361,364
Total	2,824,827	33,987,834	60,321,835	67,471,566	94,240,242

SJGH has spent a marginal amount on capital expenditure from its own resources. The most important capital expenditure has been equipment.

In 1988 approximately 24% of the total Wages Bill is paid to Doctors and Nurses. Total wages contributed about 47% of the recurrent expenditure while drugs and dressings amounted to 24% and water 8%.

	1987	1988
Salaries - Medical	4,528,150	7,483,427
Nursing	9,466,510	15,128,235
Others	15,638,036	21,873,537
Repairs & Maintenance	2,972,097	2,637,465
Electricity and water	6,334,787	7,481,128
Drugs Dressings	12,960,237	22,635,444
Provision	5,411,543	6,675,492
Central administration	2,519,304	3,044,676
other	7,640,902	7,280,838
Total	67,471,566	94,240,242

In view of the above the sound financial policies have to be developed.

CHAPTER ELEVEN

11.0 Opinion Surveys:

With a view to ascertaining the performance of SJGH it was decided to interview all those who come in contact with the Hospital. Doctors, Nurses, Orderlies, Patients both Indoor and Outdoor and Visitors to the Hospital were interviewed. The results of our findings are given below.

11.1 In Patients Survey:

A structured questionnaire that was developed for the survey is given as annexe 10.1. Trained nurses with experience in research were specially selected as investigators. The survey was conducted on a five day period. In each ward, every patient in the 10th bed beginning from bed No 05 was interviewed. If by chance there was no in patient on that particular bed, the patient in the next bed was selected. In certain wards almost 100% of the patients were interviewed on this basis.

In the case of ICU and Child patients it was the next of kin that was interviewed.

In the OPD four patients in each clinic were selected.

At the beginning of the survey the investigators noted the names and addresses of those spoken to. Subsequently as a bias was detected, it was decided not to take down this information. Although this resulted in a few patients being more forthright, the interviewers felt that this did not make a significant change in the responses.

The interviewers felt that the response received from patient was biased to the extent, that they would have feared repercussions in the treatment received if adverse comments were made. There were however certain respondents who were quite vocal in their adverse comments.

An attempt to obtain views of patients who had been discharged from the hospital went into difficulties as it was felt a discharged patient would not wish to communicate with a third party in a formal manner. However our attempts to contact these patients with the cooperation of the Director of the Hospital was not completed due to various constraints.

Total patients interviewed amounted to 96 of which 66 were In patients.

(a) Question 1.

In obtaining information of what made the patient seek treatment at SJGH 38% stated they came on their own whilst 36% stated that they were referred to SJGH by a specialist who was employed by the hospital. 13% or nine of the patients interviewed stated they were referred to SJGH by their family Doctor. Only 1 percent of the sample was referred to SJGH by an outside Specialist.

Referrels to SJGH from other hospitals was only a single patient.

(b) Question 2.

The question was meant to determine how they knew about the hospital. 59% or 39 of the patients interviewed had been informed about SJGH by their friends/relatives 13 percent were informed by the employees of the Hospital whilst 15% were informed by Specialist Consultants. The balance 10 were residents of the vicinity of the hospital which reflect the environmental condition.

(c) Question 3.

The first contact patients have with the Hospital is the Security Guard at the entrance. It was therefore decided to inquire about the security personnel at the gate. 62 Percent of respondents felt that the Security Guards did their job satisfactorily whilst 30% felt they were courteous and kind. 3 patients of the sample stated the security guards were rude, especially in the manner in which their bags were checked. Two of them were unaware of the security guards as they were brought in unconscious.

(d) Question 4.

This question sought answers to the type of assistance/information received by the patients at the admission counter. 75% of the respondents were satisfied with the information received whilst only 21% were not satisfied. This group would naturally contain a good proportion of patients who were tensed due to illness.

(e) Question 5.

The minor staff are among the most prominent hospital employees at admission and their attitudes make a first impression on patients. In order to ascertain patients response to this a question was included in the questionnaire. 53% stated the treatment received was good whilst 30% stated that the treatment received was exemplary.

Only 10% felt that the minor staff could be more courteous. As not a single respondent commented adversely, this reflects the quality of service rendered by the Orderlies.

(f) Question 6.

It was the Doctors of the Hospital who came in for unequivocal praise as 100% of the respondents stated that the Doctors were extremely kind and attempted to diagnose the ailment properly.

(g) Question 7.

The fee levied by any hospital is always assessed by patients. In order to elicit information regarding the charges levied by SJGH, respondents were inquired about them specially in view of the fact that the SJGH is a government hospital. 61% stated that the charges were reasonable whilst another 18% stated that the rates were cheaper than any other fee paying hospital of this type. Only 10% stated that the rates were excessive.

This category would obviously belong to the very low income group. The balance 10% stated they were unaware of the charges as they had been admitted to the hospital by relations.

(h) Question 8.

The procedure to see a specialist was inquired upon to determine this particular facility for which the hospital is popular. Only 10 percent stated the procedure was difficult whilst 62% stated the procedure is easy or reasonable. 18 respondents were unaware whether the procedure was easy or not.

(i) Question 9.

Another aspect of hospitalisation is the procedure involved in admission. 45% indicated that the existing procedure at SJGH was very easy whilst 39% stated that it is reasonable. Only 9 or 13% of the samples stated that it was difficult.

(j) Question 10.

The treatment received by patients from Doctors whilst in hospital is a benchmark for all treatment received. 86% of those interviewed stated that the treatment received was very good; whilst 9% stated that the treatment was good. None of the respondents made any adverse comments.

(k) Question 11.

Similar questions were asked to elicit information about nursing care. Here too there were no adverse comments though the percentage of those stating that the treatment was extremely good declined to 63%. 28% indicated that nursing care was good whilst 4 respondents stated that the care was not special.

(l) Question 12.

The treatment received by the patients from the Orderlies did not meet with such accolade. Only 40% observed courteous services from the orderlies whilst another 40% found them average. 12% found them below average and two patients or 3 percent of the sample indicated that they were rude.

(m) Question 13.

The technicians at the lab and other service units are the other category of hospital personnel who come in contact with patients. 63% of respondents found them exemplary whilst 10% indicated that their services were inadequate. 21% of the respondents had not encountered these personnel.

(n) Question 14.

Another benchmark of a hospital is the rules and regulations regarding visits. In spite of the stringent regulations of SJGH 60% of the respondents found that such regulations were strict but beneficial. Only 27% stated that the rules should be more flexible. 5 of the respondents stated it was too rigid.

(o) Question 15.

The food served in hospitals usually receive adverse comments. However 62% stated that the food served at SJGH was reasonable whilst another 30% found the food very tasty. Only two of the respondents stated it was bad.

(p) Question 16.

A good indication of the treatment received at a hospital is the willingness of the patients to return to the hospital. 92% of those interviewed stated that they would return if the need arose. 6% were not particular. It is noted that no one stated that they would not return.

(q) Question 17.

As a complement to the previous question, the respondents were asked whether they would recommend this hospital to others. 95% stated in the affirmative. As before none said that they would not recommend the Hospital to a third party.

(r) Question 18.

This question required the patients to indicate in the order of preference the features of the hospital that they liked most. It was the efficiency of the doctors that was appreciated most. Next in order of preference was the cleanliness of the hospital and environment. Third in preference was the general treatment received which included medications. The fourth in preference was the nursing care. This question did not elicit information on Orderlies. The least preferred feature was the regulations followed by the location of the hospital especially with regard to accessibility.

(s) Question 19.

In the question of what features that they disliked most the survey revealed that there were no reasons to dislike any feature.

There were comments about the lack of sufficient night duty staff in the wards and delays in obtaining results of pathological tests. Some patients even commented on the delays in obtaining drugs, that were not available in hospital. Most of them took pride in the hospital and recommended that similar hospitals be established in other provinces.

11.2 Out Patients Survey:

A questionnaire similar to the one that was used among the inpatients was used in the clinic to elicit the opinion of those attending clinics at SJGH. The sample population in this instance was 30 with about 4 persons being interviewed in each clinic.

(a) Question 1.

To the question what made them seek treatment at SJGH 60% said that they had come on their own whilst 23% had been referred by specialists who were in the employ of the hospital. Two of those interviewed said that they had been referred to SJGH from another hospital.

(b) Question 2.

50% of those interviewed stated that they knew that they could get treatment for their illness at SJGH from friends and relatives. The people of the vicinity constituted 23% of the sample. This underscores the fact that this Hospital also serves the people of the area. Of the rest 13% were made aware of the hospital by the employees of the hospital.

(c) Question 3.

The security guards at the entrance to the Hospital were considered to be doing their job satisfactorily by 83% of the sample whilst 13% went on to say that they were doing a very good job. Only one person made an adverse comment about them. He said that they should take more care when they examined the bags of the visitors.

(d) Question 4.

It was the opinion of 73% of those interviewed that the information received at the admission counter was adequate while only 23% said that it was inadequate.

(e) Question 5.

The orderlies at the clinic were considered to be doing a good job by 66% of those interviewed and 13% stated that they were providing an excellent service. Only 10% stated that they could have been treated better by these persons.

(f) Question 6.

The Doctors at the clinic did not get the same appreciation from the patients at the clinics. Of the sample selected at random about 20% were waiting to see the Doctor and thus could not give an opinion. Of those who had seen the Doctor before, they were all of the opinion that the Doctors were kind and did attempt to diagnose their illness. Only one person felt that the time taken by the Doctor to examine him was not sufficient.

(g) Question 7.

The charges made at the Hospital were considered to be reasonable by 66% of those interviewed whilst 27% felt that they were too high.

(h) Question 8.

To the question whether the procedure to be seen by a specialist was difficult or not 50% said that they were unable to comment as they had no experience in such matters. Only 10% stated that it was difficult whilst 13% found it easy and 26% felt that it was reasonable.

11.3 Visitors:

To elicit the views of visitors to the Hospital a few of them were picked at random and were intensely questioned. A majority of them were full of praise for the Hospital especially the doctors and the nursing staff. A number of them commented favourably on the cleanliness of the hospital. There were a few who complained about the strict enforcement of the number of visitors allowed per patient. The stringent regulation regarding what could be brought into the hospital in respect of food items and personal clothing came for criticism.

11.4 Nurses:

Several of the Nurses and Nursing Sisters interviewed remarked that they were extremely happy of the working conditions and the opportunity to work with high tech equipment. However some felt that the lack of promotional prospects is a drawback. There was even resentment among some that the management was not keen on looking at this aspect. The experienced Nurses felt that more Scholarships and Training Programmes should be made available to them too.

The newly passed out Nurses were a more contented group working in such a pleasant environment.

As regards constraints, they informed that though major capital items were received without any difficulty small items could not be obtained easily. The Accountant confronted with this problem said that they were not following the correct procedure to obtain these items. Some Nurses expressed their concern regarding the delays experienced in attending to minor repair of basic equipment that they use.

11.5 Opinion Survey of Doctors :

With the objectives of obtaining first hand information we interviewed the Medical Personnel as SJGH. Among them were the following Doctors.

Dr. Nalin Rodrigo	- Chairman
Dr. R.C. Rajapakse	- Director
Dr. N.F. Wickramasinghe	- Deputy Director
Dr. N S Jayasinghe	- Endoscopy - Surgeon
Dr. K Yogeswaran	- Consultant - Surgical
Dr. M.de Alwis	- Pathologist
Dr. K P de Silva	- Radiologist
Dr. Gamini Karunaratne	- Paediatric Surgeon
Dr. A.Sonnadara	- Consultant Paediatrician
Dr. P Wijeratne	- Consultant Obstetrician
Dr. H H R Samarasinghe	- Medical Consultant

In order to obtain the opinion of Senior Consultants a Questionnaire was handed over to them in advance. The questions were primarily based on the Development Plan 1988/92 Japanese Mission Report June 1988. Accounting, Data and Statistics of the Hospital and other documents made available to us at the commencement of the study.

Dr. Nalin Rodrigo, Chairman is of opinion that the income generation of the hospital should be diversified, and where necessary marketing and extending the facilities already available. This is primarily to broaden its revenue earning capacity by activating the latent potential of staff equipment. As a matter of policy SJGH is to be popularised to a position, intermediate between the Colombo General Hospital and the Nawaloka Private Hospital. He is very optimistic that the increase in charges effective January 1990 will not affect the admissions or clinical attendance. He disclosed that the main policy decisions affecting the hospital are taken by the think tank of the SJGH consisting of the Chairman, the Director and the Deputy Director .

Dr R C Rajapakse the Director of SJGH is of the view that his experience as a Medical Superintendent at other hospitals in Kandy, Kurunegala and Galle has influenced him on deciding on policy to keep the SJGH as a quality General Hospital avoiding the pitfalls of other Government Institutions whilst encouraging multi disciplinary activities. He is positive that during the last few years SJGH had actually taken under its wing caring for over 20,000 patients per year who would have normally thronged the Colombo General Hospital. It is beyond his control that staff requirement cannot be met for example the hospital presently employs 340 Nurses when 480 are required and 93 Medical Consultants when 105 are required. However, in order to lessen the burden on clinics he is planning to have an out door patients department outside the hospital premises so that through a process screening, the Consultants would be able to treat the most deserving cases. This would also provide the people of the vicinity with a more accessible OPD facility. He is of the view that they are attempting to keep to the original objectives of the hospital, though specialisation is encouraged.

He disclosed that the Electro Medical Engineering Unit is inadequately staffed. The Technicians in the Unit need training to keep the vital equipment in working order. The Technicians are further affected in the performance of their duties due to the nonavailability of testing equipment and even diagrams and instruction manuals. He plans to send a trainee to Japan who would maintain the CT Scanner on his return. The Physiotherapy Unit is not a vital part of the hospital but would continue to function with the basic facilities available. Due to the lack of staff they are unable to open the Orthopaedic, Dermatology and ENT Units. However a Cardiology Unit will be located at the the Orthopaedic Ward due to the expressed desire of the government. He would agree that the location of the hospital has affected its popularity. As regards research, no primary research is still undertaken and lack of experienced people has affected Fund raising activities.

Dr. N.F.Wickremasinghe - He disclosed that in addition to involvement in policy matters, the Para Medical staff and the hospitals drug policy are his main areas of responsibility. He assured that all necessary drugs are available in the Hospital. Drugs are obtained through the Specialised Government Agency, Central Medical Stores which ensures the quality of drugs. In selecting the drugs however, reference is made to the WHO Drug Formulary and drugs outside the list are obtained only when necessary. He informed us that as a policy they do not prescribe mixtures. This cuts down the cost to patients and also prevents any infection.

A policy of strict control in the proper use and maintainance of the drugs in stock has been formulated. The Chief Pharmacist who is the main link in the drug distribution scheme has the Central Dispensary and Surgical Stores under him. The Central Dispensary is responsible for distribution of drugs to the indoor dispensary and outdoor dispensary which come into direct contact with the users. The Surgical stores is responsible for the distribution of drugs directly to surgical wards.

Dr. Jayasinghe - He is of the view that the Endoscopy Unit has performed well in all types of Endoscopy examinations and now it is a very popular unit. Though the Choledochoscope is still not available it has not affected the performance of the unit.

Replacement of equipment is one of his worries as the equipment presently used is due for replacement in the next two years. Until then the Japanese Government through JICA should make available the spares and other assistance. The Unit should undertake the training of young efficient Doctors in Endoscopy examinations.

The local agents should expedite minor repairs to equipment. At present this is woefully lacking. The Endoscopy Examinations are cost effective compared with other diagnostic systems. ERCP which he does individually has resulted in 25-30 operations each year. In Sclerotherapy Examinations he has done the maximum with 110 examinations since the commencement of the unit whilst the other two doctors have done eleven examinations collectively.

The fact that biopsies could be done with the fibre optics available, the burden on Histology is reduced to a large extent and this is very cost effective.

As regards the proposed Haematemesis Centre, it is important that this centre be established as nearly three patients suffering from Cirrhosis are examined per week in the Medical Clinic. Cirrhosis is a common ailment that is medically treated here. However as the post operational support to those patients is insufficient there is a tendency for these patients to keep coming back for treatment. The Centre could be developed as a Regional Centre as all facilities are available here.

Dr. Yogeswaran - He praised the facilities of the Operating Theatres. The low infection rate is mainly due to the built in facilities giving pressurised ventilation in three stages without allowing any germs to enter. The infection rate of 1 percent is the best in the world as generally the average for western countries is 8 per cent. The theatres are capable of undertaking any kind of operation with their ultra modern facilities and lighting. Sri Lanka should give a fillip to transplant surgery as these commenced 20 years ago in other countries. We should make a beginning of Renal transplant as many cases are reported in Sri Lanka. But this must commence with Renal Dialysis system and the required machinery should be obtained. Young people need to be trained soon and therefore facilities should be made available.

Dr. Gamini Karunaratne - He expressed the view that facilities are available in the theatres for foetal surgery. Training of young people in these are necessary and a beginning should be made with the availability of modern Surgical Theatres and the neonatal care unit. He has done over 3000 operations on infants and he is aware that the development he has proposed is possible and practicable without much extra expense.

Dr. D.N. Wijeratne - He was quite insistent that the next stage of development in the Hospital was the establishment of the In Vitro fertilisation unit. His fertility clinics have been very successful and he has had a 23% successful rate. He has with him very capable Junior Doctors who given proper training will be in a position to develop the program. Research in the Department has been carried out on numerous aspects and number of papers have been presented in international seminars. These papers have been well received. He feels that the present technical aid has not been extended to his department as yet. Development in this field could complement the work done in the Gynaecology Department.

Dr H H R Samarasinghe - As the Medical Consultant in the Hospital he is of the opinion that technical cooperation has not been extended to his Department. With the detection of a number of patients suffering from kidney failures who very often seek treatment abroad a Renal Dialysis Machine should be installed. It would be possible to make some charge for the use of this machine, thereby increasing the income earning potential of the Hospital.

CHAPTER TWELVE

12.0 Observations and Recommendations:

12.1 The Development Plan 1988 - 1992 which deals with the future plans of the Hospital seems optimistic and surrealist at present. However they are only a natural development of the existing facilities and should be supported.

12.2 The existing buildings seem inadequate especially for ancilliary facilities such as storage of records and stocks. It is recommended that such facilities be constructed without disrupting the line and architecture of the present buildings.

12.3 It has been observed that certain facilities available in the hospital have not been utilized at all and some facilities underutilized due to various constraints. Immediate steps must be taken to utilize their facilities.

12.4 The NICU which was not in the original plan has now become the Cynosure not only of SJGH but also the whole of Sri Lanka. Its future expansion should be carefully planned to maintain the high quality of service it renders.

12.5 The lack of Doctors to man the NICU full-time has resulted in some facilities being under utilized. It is recommended that two additional Junior Doctors be recruited immediately to solve this deficiency in the unit which is well equipped.

12.6 Only two Nurses have been trained in Japan in the use of the equipment in NICU. More training programmes will eliminate the problems caused when the trained nurses are on leave.

12.7 The NICU has yet to have its own Sister in-Charge. Presently the Sister in the Paediatric Ward is entrusted with this responsibility. It is recommended that a Sister with adequate experience and training be appointed immediately.

12.8 It is observed that spare parts are not readily available for most of the equipment in the Hospital. It is necessary that these be made readily available through a system of technical cooperation at reasonable cost.

12.9 Some of the equipment require expensive and difficult-to-obtain reagents for conducting various tests. Arrangements must be made to have sufficient stocks of these consumables at hand to ensure an efficient laboratory.

12.10 An Orthopaedic Clinic has not been set up in the hospital for proper orthopaedic treatment. A fully fledged Orthopaedic Clinic is an urgent necessity. In view of the fact that a fully equipped Orthopaedic Theatre is already available.

12.11 It is recommended that X-ray facilities be popularised especially among the hospitals and other institutions requiring X-ray facilities in the vicinity.

12.12 The Physio Therapy Unit is one of the least developed units at SJGH. In view of the proposed expansion of the hospital this unit too must be up-graded to meet the requirements of a modern hospital.

12.13 Only three Suregons have had full training in the use of the Endoscopy equipment. Further personnel need to be trained to make optimum use of the facilities available.

12.14 The Endoscopes use certain consumable parts that are usually disposed after one examination. However at SJGH due to the cost of such consumables and the difficulty in obtaining them, the Unit uses them several times after careful cleaning. The risk involved in such a practise is high and close monitoring is required.

12.15 The equipment in the Endoscopy Unit is now over 2 1/2 years old. It is not known whether this equipment has reached its effective life span as we have been informed that in Japan this equipment is put by after two years of use. In the absence of any standards regarding the life span of a scope it is continued to be used. It is recommended that advice be sought on this matter.

12.16 The collection of blood for the Blood Bank needs attention specially in view of the planned development of the Hospital. Steps should be taken to develop a strategy to collect sufficient quantities of blood.

12.17 It was observed that the majority of the Professional staff are highly motivated persons doing yeoman service. At the intermediate level although they are equally highly motivated at present our Consultants noticed the existence of some disenchantment due to the lack of a definite career path and the lack of other perks such as scholarships or training programmes abroad. Effective personnel policies could alleviate this problem.

12.18 Management information does not percolate to the other levels as efficiently as it should. Even the existence of the Manual of Procedure is not known to many. A better flow of information would certainly help in eradicating misinformation. Management priority for dissemination of information to these levels is essential.

12.19 The computer facilities presently available require enhancement for effective use. It is recommended that an integrated system be developed covering all aspects of the hospital. Most of the soft ware for such automation is already available.

12.20 It is noted that the Government of Sri Lanka has been totally committed to this project, which is reflected in the yearly increase in the Grant for recurrent expenditure. Attempt must be made to diversify the sources of funds of the Hospital should the Government be compelled to reduce its contribution.

12.21 The Consultants foresee that the Hospital will be faced with severe liquidity problems in the near future. Especially in the areas of maintaining, servicing and replacing equipment and even maintaining the services provided at its present levels. Sound financial strategies need to be developed immediately to ensure the financial strength of the Hospital.

12.22 Certain procedures which affect patients of the Hospital have not been given due publicity. It is our view that unless they are made known at the proper time it will cause inconvenience to the patients seeking treatment and the patients will not be able to make optimum use of these services.

12.23. The inability to recruit trained personnel in all categories precludes the optimum use of its available resources. Sound Personnel Policies need to be developed to attract the required personnel.

12.24 SJGH has benefitted tremendously from training received by its personnel in Japan. However, it is noted that some of those who have received training have left; and some are planning to leave. Future training as far as possible should be extended to young personnel and the contracts of training should include a stipulated period of service at SJGH.

12.25 The Hospital has tremendous potential to provide facilities for academic activities and train Medical and Technical personnel at all levels. However it is observed that these facilities have not been fully utilized. Necessary plans have to be formulated to develop SJGH as a prime centre for medical education and training.

12.26 Our investigation reveal that one of the main attractions of SJGH for patients is its high standard of service. Every effort must be made to maintain this at the present level.

12.27 Commuting to and from the Hospital for employees, patients and visitors is difficult. SJGH should liaise with the relevant authorities to improve the situation as a matter of urgency.

12.28 It is observed that the public relations function does not appear to have received the attention of the top management. Therefore it is suggested that this function be delegated to a suitable Executive until the appointment of a Public Relations Officer.

12.29 There has been criticism from various sources regarding the justification of a hospital of this nature built and equipped at a very high cost and needs substantial funds to maintain. The cost effectiveness of this project itself has been criticized. However, it is the observation of the Consultants as well as a number of others interviewed that a hospital of this nature is justified. The hi-tech equipment and working environment not only provides a state of the art service to poor patients in Sri Lanka who would otherwise have been deprived of such treatment but also provides an excellent environment for those trained abroad to work with the latest techniques of which they have learnt during their training abroad. To some degree a brain drain in this category of persons is stalled.

12.30 The Management of the Hospital is hopeful that the Government of Japan will continue to assist SJGH maintain its present level of operations and also extend its support for the implementation of the Development Plan. We share their view.

CHAPTER THIRTEEN

13.0 Conclusion:

This study was carried out and completed within half the time provided for in the Consultancy Agreement despite certain constraints in obtaining information from outside sources. We record with appreciation the co-operation we received from the Management and Staff and the Officials of JICA in carrying out this study.

The Technical Cooperation Agreement between JICA and SJGH is a well thought out agreement and has the objective of improving health care facilities in Sri Lanka. JICA has executed the aid package to full desirable levels and the SHGH, the beneficiary, has fulfilled its obligations within the existing infrastructure facilities.

Our study reveals that the objectives of the Technical Cooperation Agreement and the Grant Aid Program have been achieved to very successful levels in spite of constraints experienced in the econo-political environment which was beyond the control of the Hospital.

TERMS OF REFERENCE

Identity Performance Criteria In respect of each field.

HOSPITAL ADMINISTRATION

- a) Utilisation of Computer - Payroll System
General Ledger
Diet Order system
Inventory
- b) Finance
- c) Staff Employment. Working environment
& working regulations
- d) Maintenance
- e) Public Relation
- f) Quality of service offered
- g) Communication system
- h) Satisfaction of staff about working
- i) Following an original principle of Hospital Admission including Grant project.

NEONATAL INTENSIVE CARE UNIT:

- a) Admission
- b) Total number of deaths
- c) Maintenance of Equipment
Building
- d) Utilisation of resources beds
equipments
- e) Manpower Personnel affairs
- f) Infection rate
- g) Counterpart Training Their stay after training
Performance
- h) Academic activities to Doctors and Nurses by
staff by experts
staff

- i) Finance By hospital self effort
- j) Expenditure By hospital
 By project
- k) Quality of services offered
- l) Despatched experts from Japan.

ENDOSCOPY UNIT:

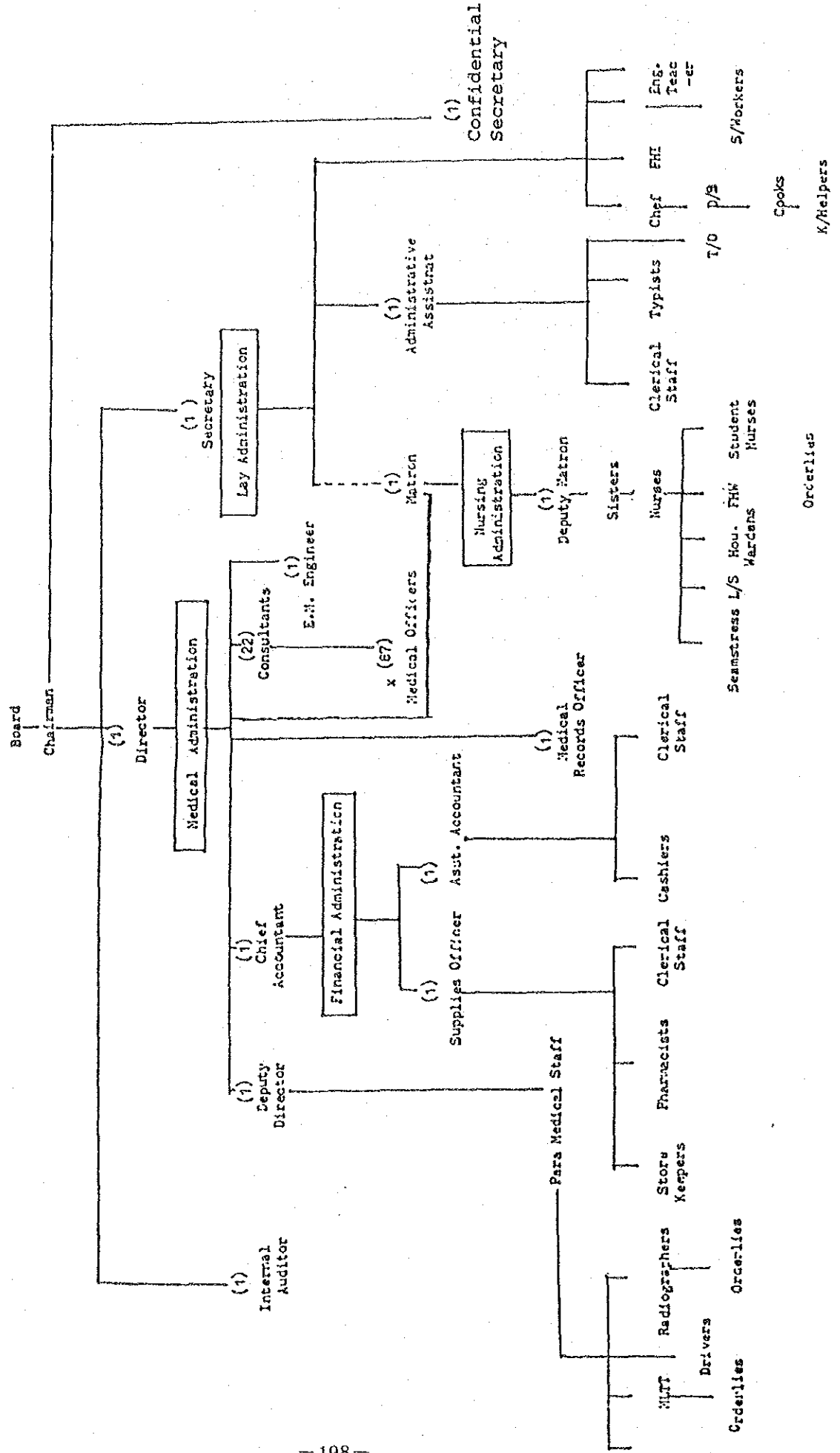
- a) Number of examinations (Attendance at clinics)
- b) Operations carried out (after endoscopic examination)
- c) Maintenance of Equipment
 Building
- d) Personnel Affairs
- e) Infection rate
- f) Counterpart training Their stay after training
 Performance
- g) Academic activities by staff
 by experts
- h) Finance
- i) Expenditure by hospital
 by Project
- j) Quality of services offered.

CLINICAL LABORATORY:

- a) Number of items
- b) Number of Tests/day
- c) External quality control by MRI
- d) Internal quality control
- e) Internal quality control
- f) Maintenance Equipment
 Building
- g) Counterpart Training Their stay after training
- h) Academic activities By staff
 By experts
- i) Finance
- j) Expenditure By hospital
 By project
- k) Quality of service offered
- l) Despatched experts from Japan

Approved Cadre

ORGANIZATION CHART OF THE SRI JAYAWARDENEPURA HOSPITAL



BED OCCUPANCY

	Beds complement	Beds commissioned
Ward No.,1 (Paediatrics)	15	15
Baby Beds	25	25
Neonatal Intensive care	18	18
Ward No.2 (Gyn & Obs)	62	62
Ward No.3 (class 1 Paying)	20	20
Ward No.4 (Class II Paying)	48	48
Ward No.5 (Class II Paying)	48	48
Ward No.6 (Medical)	62	62
Ward No.7 (Paed.Surgical)	41	41
(Day Care)	25	25
Ward No. 8 (Surgical)	62	62
Ward No.9 (Gyn and Obs)	62	62
Ward No.10	62	Used for N.T.S.
Ward No.11	62	Not in used
Ward No.12 (Medical)	62	62
Ward No. 14 (Surgical)	62	62
Ward No.15 (Surgical-Orthopaedic)	62	Not in use.
Ward No.16 (Eye)	62	Not in use
Ward No.17 (Medical)	62	62
Ward No.18 (Surgical)	62	62
I.C.U./C.C.U.	12	12
E.T.U.	04	04

Sri Jayawardenepura General Hospital- Number of Clinic Held

ANNEX 4.2

ATTENDANCE AT CLINICS

CLINICS	1986		1987		1988		1989	
	No. Of Clinics	Av. Per Clinic	No. Of Clinics	Av. Per Clinic	No. Of Clinics	Av. Per Clinic	No. Of Clinics	Av Per Clinic
Medical	322	97.4	287	141.1	284	148.6	267	145.6
Hypertension	51	38.8	50	53.7	46	46	43	44.1
Gastro Intestine	48	18.4	46	14.9	45	15.7	45	94.5
Pediatric	289	23.9	287	39.2	290	49	269	45.8
Paediatric Surgical	96	30	93	38.4	97	42.3	91	49
Gynaecology	290	56.1	285	75.4	289	86.8	270	89.7
Surgical	292	52	342	47.3	376	53.7	380	52
Eye (from Oct 89)							12	29
Psychiatry (from Oct 89)							9	10.6

Source: Medical Records Office Sri Jayawardenepura General Hospital

ANNEX 4.8

ATTENDANCE AT SURGICAL CLINICS FOR SELECTED MONTHS

Dr. K. Yogeswaran = 9.1.89		No. of patients reported to clinic
Thyroidectomy	01	
Hernia	04	
Varicose Veins	01	
Hydrocelectomy	01	
Haemorrhoidectomy	<u>01</u>	
	08	115
19.6.89		
Thyroidectomy	03	
Hernia	03	
Fistula Ano	<u>03</u>	
	09	47
18.12.89		
Hydrocelectomy	02	
Hernia	04	
Thyroidectomy	02	
Varicose Veins	<u>01</u>	
	09	83
Dr. S. A. W. Goonewardena		
12.1.89		
Thyroidectomy	03	
Hydrocelectomy	<u>01</u>	
	04	57
1.6.89		
Varicose Veins	01	
Hernia	04	
Hydrocelectomy	01	
Haemorrhoidectomy	<u>01</u>	
	07	56
14.12.89		
Thyroidectomy	01	
Haemorrhoidectomy	01	
Hernia	<u>01</u>	
	03	77
Dr. Premaratne		
28.1.89		
Thyroidectomy	02	
Hernia	02	
Varicose Veins	<u>01</u>	
	05	32
9.6.89		
Hernia	03	
Haemorrhoidectomy	<u>02</u>	
	05	54

BED OCCUPANCY TABLE
1986

ANNEX 4.9

SERVICE	WARD	BEDS	AV. LENGTH OF STAY	BED OCCUPANCY
Paediatric	1	40	5	36
PBU		18	4	21
Gyn & Obs	2	62	5	78
Class 1 Paying	3	20	7	26
Class 11 Paying	4	48	6	25
Class 11 Paying	5	48	0	
Medical	6	62	6	81
Paed. Surgical	7	41	6	29
Day care	7	25	1	1
Surgical	8	62	11	79
Gyn & Obs	9	62	8	71
Medical	12	62	8	83
Surgical	14	62		0
Surgical	15	62	27	45
Medical	17	62		0
Surgical	18	62	11	78
ICU/CCU	ICU/CCU	12	8	54

Source: Medical Records Office Sri Jayawardenepura General Hospital

BED OCCUPANCY TABLE
1987

SERVICE	WARD	BEDS	AV. LENGTH OF STAY	BED OCCUPANCY
Paediatric	1	40	5.4	49.9
	PBU	18	5.9	35.7
Gyn & Obs	2	62	4.8	77.4
Class I Paying	3	20	6.5	48.6
Class II Paying	4	48	6.3	73.1
Class II Paying	5	48	0	
Medical	6	62	5.8	75.6
Paed. Surgical	7	41	6.1	42.3
Day care	7	25	1	0
Surgical	8	62	12	78.9
Gyn & Obs	9	62	7	85.9
Medical	12	62	7.3	80.4
Surgical	14	62	12.1	35.3
Surgical	15	62	29.7	65
Medical	17	62		0
Surgical	18	62	11.1	70.8
ICU/CCU	ICU/CCU	12	10.1	53.1

Source: Medical Records Office Sri Jayawardenepura Hospi
September 1989

BED OCCUPANCY TABLE
1988

SERVICE	WARD	BEDS	AV. LENGTH OF STAY	BED OCCUPANCY
Paediatric	1	40	5.3	58.4
	PBU	18	7.2	52.6
Gyn & Obs	2	62	1.2	78.4
Class 1 Paying	3	20	7.6	67.9
Class 11 Paying	4	48	8.5	80.7
Class 11 Paying	5	48	0	0
Medical	6	62	5.8	77.3
Paed. Surgical	7	41	6.4	53.5
Day care	7	25	1	0
Surgical	8	62	13.6	90
Gyn & Obs	9	62	6.3	88.6
Medical	12	62	7.2	81.2
Surgical	14	62	12.3	70.9
Surgical	15	62	49.5	27.2
Medical	17	62		0
Surgical	18	62	11	71.5
ICU/CCU	ICU/CCU	12	10.1	58.4

Source: Medical Records Office Sri Jayawardenepura Hospital
September 1989

TABLE 1

Service	WARD	BEDS	AVG. LENGTH OF STAY	BED OCCUPANCY
Paediatric	10	40	5.7	57.5
	ICU	18	7.9	56.1
Gyn & Obs	2	62	4.9	82.5
Class I Paying	3	29	8.1	34.2
Class II Paying	4	42	7.7	38.5
Class III Paying	5	48	9.3	10.3
Medical	6	62	7.4	79
Paed. Surgical	7	41	6.7	56.1
Day care	7	23	2.4	0.3
Surgical	8	62	11.3	89.6
Gyn & Obs	9	62	6.1	80.9
Medical	12	62	7.5	76.7
Surgical	11	62	10.4	76
Surgical	15	62	44.7	7.7
Medical	17	62	8.3	38.9
Surgical	18	62	8.7	63.3
ICU/CCU	ICU/CCU	12	8.8	62.6
Day Care	7	5	2.4	0.1

Source: Medical Records Office Sri Jayawardenepura Hospital
September 1989

LIST OF EQUIPMENTS DONATED BY EIGH - JICA PROJECT IN NICU

Items	Model	FY. '86 FY. '87	FY. '88	Invoice Total	Current Total	Remarks
Incubator	Atom V-80MC	04	04	08	13	A
Infant Warmer	Atom V-3200N	02		02	01	B
Radiant Heat Shut off Hood and access door	Atom CM-5792	01		01	01	
Radiant Heat Shut Off	Atom CM-5790	02		02	02	
Photo therapy Unit	Atom PIT-120ST	04		04	04	C
Infant Weighing Scale	Atom CM-5788	03		03	02	D
Infalight	Atom CM-5805	01		01	01	
Syringe Infusion Pump	Atom 235	04	01	05	05	
Infusion Pump	Atom P-300	02	01	03	03	
Head Frame	Atom CF-557	02		02	04	E
Oxygen Head Box	AtomOX-900	02		02	02	
Oxygen Regulator	Atom OX-102J	02		02	02	
Oxygen Flow Meter for Piping System	Atom OX-148J	06		06	06	
Suction Unit for Piping System	Atom OP-830	06		06	06	
Suction Pump	Atom D-58	02		02	02	
Continuous Low Pressure Aspirator	Atom OP-840	01		01	01	
Outlet Stand for Piping System	Atom OP-850	01		01	01	
Laryngoscope & Fiber Optic Illumination	HEINE	01		01	00	
Infant CPAP System & Head Frame	Atom CF-550	02		02	02	
Automatic Electronic Blood Pressure Meter	Critikon 847XT	01	01 (M-1846)	02	02	
Cardio Temp	Atom V-10	02		02	02	
Neonatal Monitor	Sanei 2K16	03	02	05	05	
Pulse Oxymeter	Omeda Biox 3700	01	02 (M-3740)	03	03	
Littman Stethoscope	3M-2114	05		05	04	F
Ventilator	Baby bird-5900	02	02 (M-5902)	04	04	
Blood Gas Monitor	Sumitomo PO-200	01		01	01	
Bilirubin Meter	Sanko Junyaku	01		01	01	
Thermo Exchanger	Atom HC-250	01		01	00	G
Digital Infant Scale	Yamato MB-208	01		01	01	
Hematocrit Centrifuge	Kokusun H-25F2	01		01	01	
Glucose Analyzer	FDC-1000	Nil	01	01	01	
Electrolyte Analyzer	FDC-800	Nil	01	01	01	
Oxygen Monitor	Atom OX-30	Nil	01	01	01	
Oil Free Air Compressor	CentralUnit	Nil	01	01	01	

Remarks

Key for Remarks	Items	Explanation	Availability
A	Incubator	04 donated as Grant Aid	13
B	Infant Warmer	01 given to the Theatre	01
C	Phototherapy Unit	01 donated as Grant Aid is given to the Ward 1	04
D	Infant Weighing scale	01 given to the Blood Bank	02
E	Head Frame	02 Optional Accessories for CPAP System	04
F	Stethoscope	01 missing	04
G	Thermo Exchanger	01 given to the Theatre	00

Items Donated as Grant Aid

Items	Model	Total	Remarks
Oxygen Tent for Infant	Atom CD-101	03	01 in Ward 1
Infant Incubator	Atom V-80MC	04	
Phototherapy Unit	Atom PT-120ST	01	01 in Ward 1
Oxygen Analyzer	Atom OX-35	01	
Automo Resusitator for Infant	Atom	01	

Oxygen Analyzer
&

Extra equipments requested as "spare & demands" by the expert

Items		Total
Probe for Pulse Oxymeter Biox 3740	Omeda	02pcs
Humidifier for CPAP CF-550	Atom	01 pc
Ultra Violet Lamp for Incubator	Atom CM-5789	02 pcs
Transformer for above		02 pcs

Equipments brought by the expert on personal request

Items		Trade	Total
Stethoscope	Littman 2114	Muranaka	01
Stop Watch		Muranaka	01
Timer		Muranaka	01
Laryngoscope with handle	Miller @ 0	Nihonmedico	01
Resusic Bag		Aika	01
Petechiometer	Eulenburg's	Muranaka	02

Books

Title	Language	Total
Neonatal Intensive Care Manual	English	01
Neonatology in Obstetrical Practice	"	01
Patient Care in Paediatric Surgery	"	01
Primer of Infant	Japanese	01
Tend for Premature Baby	"	01

Consumable Articles brought by the expert on personal request

Items		Content	Total
Endotracheal Cathter	2.5	10 pcs /box	07 boxes
"	3.0	"	03 boxes
Suction Cathter	5F	"	10 boxes
Styletter	Tope	25 pcs/box	01 box
Urine Collector for premature baby	Atom	100 pcs/box	01 box
Cobon	3M	25 roll/box	01 box
Feeding Set with Volume Tube	Atom	10 set/box	01 box
Opargent		40 pcs/box	01 box
Varicare	Nogami	10 pcs/box	01 box
EOG Card	Hogi	200 pcs/box	01 box
Cell for CPA OX - 35	Atom		02 pcs

* The Expert Ms Toshiko Oshita

Consumable materials donated by SJGH - JICA Project in NICU

Item		Trade	Content	Total
Umbilical Cathter		Argyle	10 pcs/box	20 pcs
Infant Intravaneous Infusion Set		Atom	50 pcs/box	20 pcs
Scalp Vein Set	24G	Muranaka	1000 pcs/box	10 pcs
"	21G	"	"	10 pcs
Neonatal Scalp Vein Needle	27G	Atom	50 pcs/box	10 pcs
"	24G	"	"	10 pcs
Endotracheal Tube	2.5	Portex	10 pcs/box	02 pcs
"	3.0	"	"	02 pcs
"	3.5	"	"	02 pcs
"	4.0	"	"	02 pcs
Novamatrix Nasal Canula	L			20 pcs
"	S			20 pcs
Extension Tube	4F	Atom	10 pcs/box	20 pcs
Suction Tube	NS-60 10F	Atom	10 pcs/box	20 pcs
"	14F	"	"	20 pcs
"	18F	"	"	20 pcs
"	NS-61 5F	"	"	20 pcs
"	"	"	"	20 pcs
"	8F	"	"	20 pcs
"	10F	"	"	20 pcs
Oxygen Cell for Oxygen Meter		Atom		20 pcs

EQUIPMENT IN ENDOSCOPY UNIT SUPPLIED BY JICA

Description of Goods	Quantity	Unit price	Amount
Injector (disposable type) "Olympus" Model NM-15L, 6 pcs/set	30 pcs	Y 29,600	Y 888,000
Sliding Tube "Olympus" Model: ST-C3 for Fibrescope CF series	1 pc		Y 24,200
Fibrescope Locker "Olympus" Model : IS-900	1 pc		Y 319,000
Rectoscope "Olympus" Consist of :			
A3904 Rectoscope Tube	1		
A3996 Insulated Biopsy Forceps	1		
03971 Swab holder	1		
03960 Rectoscope Handle	1		
03958 Closing Window for diagnosis	1		
03959 Closing Window for Operating	1		
03961 Double Blower	1		
00103 Connecting Nipple	1		
A3062 Light Guide Cable	1		
MA275 Cleaning Brush	1		
OES Bronchofiberscope "Olympus" Model: BF type 10	1 pc		1,060,000
Lecturescope "Olympus" LS-10 OES	1 pc		492,000
ral Washer "Omron" Model ; ELEPIC HT-J12 with step down transformer	1 pc		13,200
Leakage Tester "Olympus" Model : MB155	1 pc		14,800
OM Xenon Adaptor "Olympus" Model: A10-M2 (OES)	2 pcs	Y 45,300	90,600
OES Gastro Intestinal Fibrescope "Olympus" Model G1F Type P-10	1 pc		1,210
OES Gastro Intestinal Fibrescope "Olympus" Model G1F Type XD 10	1 pc		143,000
Slide Viewer Film Carrier			
35 mm Mount	1		003,000
35 mm Stip	210		003,000

ENDOSCOPY UNIT (GASTRO ENTEROLOGY)

Model	Item	Quantity
KT-1 2207	Endoscopic Trolley	2 sets
CLV-10-220V-3	OES Xenon Light Source	25 sets
KV-2-220V	Endoscopic Suction Pump	2 sets
VES-10-220V-3	Electro Surgical Unit Standard	1 set
PSD-10-220V-3	Electro Surgical Unit	1 set
CF-PIOS OES	Sigmoid Fiberscope Standard set	1 set
SD-7P A(E)	Diathermic Snare for GIF-P10 (Crescent)	2 sets
SD-8P A(E)	" " GIF-P10 (Hexagonal)	2 sets
SD 5L A(E)	" " GIF-XQ10 (Crescent)	2 sets
SD 6LA (E)	" " DIF-XQ10 (Hexagonal)	2 sets
SD 7P A(E)	" " JF-1T10 (Crescent)	2 sets
SD 8P A(E)	" " (Crescent)	2 sets
SD 5V A(E)	" " (Hexagonal)	2 sets
SD 5L A(E)	" "CF-P105 (Crescent)	2 sets
SD 6L A(E)	" "CF-P105 (Hexagonal)	2 sets
SD 8A A(E)		
FB-21K,E	Biopsy Forceps (Ellipsoid - Fenestrated)	5 sets
FB-25K,E	" (Fenestrated)	5 sets
FB-19N,E	" (Fenestrated)	5 sets
FB-28U,E	" (")	5 sets
FB-23K,E	" (") 1/C Needle	5
PR-4Q,E	Cannula with Stylet (2 pcs/set)	12 sets
FG-16L,A(E)	Grasping Forcepsfor GIF-XQ10 (Basket Type)	1 set
FG-180,A(E)	Grasping Forceps (Basket Type)	1 set
6U,E	" (Alligator Jaws)	1
FD-1L, A(E)	Hot Biopsy Forceps for GIF-XR10	1
FD-1U, A(E)	" for CF-10L	1
FD-1L, A(E)	" for CF-P105	1
DC-5P, A(E)	Coagulation Electrode forGIF-P10	1
CD-3L, A(E)	" for GIF-XQ10	1
CD-5P, A(E)	" for JF-1T10	1
CD-1U, A(E)	"	1
CD-3U, A(E)	"	1
CD-3L, A(E)	" (CF-P105)	1
FG-6L E	Grasping Forceps for CF-P105	1
FG-6L,E	" " for XQ10	1
FG-16L, A(E)	" " CF-P105	1
CLV Lamp	Xenon Lamp	2 pcs
OM-IN 35 mm	Medical SLR Camera (Body only)	2 sets
A10-M20M	XenonAdapter (OES)	2 sets
MB-358	Biopsy Valve (Disposable)	30 sets(Pc)
Kodal Film	(Slide) 20 exposufes	80 pcs
KC-10	MOBL Disinfection Station	1 set
	Fiberscope Locker 15-900	1 set

2nd Week		PRACTICAL WORK	
1st Day	Handling of upper and lower GI fibre optic scopes and assisting the endoscopists	Dr N S Jayasinghe Nurse J Perera	08 patients
	Cleaning the channels, washing disinfecting, drying and storage of the scopes and accessories.		
2nd Day	Handling the Colono Fibre Optic scope and assisting the endoscopists	"	02 "
	Electro surgical unit and polypectomy procedure.		
3rd Day	Handling the upper GI and side view scope ERCP catheter, jejunal biopsy instruments washing, clearing, disinfecting drying and storage of the instruments.	"	11 "
4th Day	Handling the end view and side view scopes sclerotherapy needle, ERCP catheter and assisting the endoscopist for upper GI and ERCP procedure.	"	18 "
	Disinfection procedure.		
5th Day	Handling the fibre optic bronchoscope and assisting the endoscopist.	Dr B S Mendis Nurse J Perera	03 "
	Usage of leakage tester and oesophageal bougies.		
	Record keeping		
6th Day	Handling and maintenance of fibre optic scope, accessories	Dr N S Jayasinghe Nurse J Perera	16 "
	Record keeping.		
	Disinfection procedure		

TRAINING PROGRAMME FOR NURSING OFFICERS IN
ENDOSCOPIC UNIT FROM G H JAFFNA.

1st Batch : From 04.12.89 to 16.12.89 (3 weeks)

2nd Batch : From 11.12.89 to 23.12.89

FIRST WEEK	TOPIC	LECTURE/DEMONSTRATION BY		
1st Day	Introduction Endoscopy, Endoscopy Unit and Fibre Optic Scopes.	Dr N S Jayasinghe Nurse J Perera	10	patients
2nd Day	Endoscopy procedures Upper and Lower Gastro Intestinal examination	"	09	"
3rd Day	Preparation and after care of the patients for upper and lower GI examination, Sclerotherapy ERCP and Bronchoscopy	"	10	"
4th Day	Handling and maintenance of the fibre optic scopes 1. End view scope 2. Side view scope 3. Forceps raiser mechanism 4. Air/water clearing adapter 5. All channel irrigator 6. Light sources and venting cap	"	21	"
5th Day	Handling of sclerotherapy needle ERCP catheter, biopsy forcep Camera light source Collaring and disinfection procedure Preparation of disinfection solution	"	05	"
6th Day	Handling of bronchoscope Light source electro surgical unit Diathermic sources, grasping forceps Teaching aids and adapters	"	13	"
7th Day	Q F F			

LIST OF EQUIPMENT AVAILABLE IN THE LABORATORY

DEPARTMENT OF PATHOLOGY

HISTO PATHOLOGY

1. Automatic Tissue Processor
2. Automatic Microtome Knife Sharpener
3. Shaker (for tissue fixation)
4. Paraffin Oven
6. Slide Warmer
7. Slide Staining Set
8. Freezing Microtome Device
9. Large Sledge Microtome
10. Large Rotary Microtome
11. Incubator
12. Top loading balance
13. Ultra low temperature balance
14. Binocular microscope
15. Trinocular microscope with photomicro graphic attachment and camera
16. Electric refrigerator (6 cu ft)
17. Mounted magnifying glasses
18. Slide storage cabinet
19. Cyto centrifuge
20. Cryostat (top open model)
(freezing microtome)
24. Drying oven
25. Paraffin spreading apparatus
26. Stirrer
27. Specimen making instrument set

2. HAEMATOLOGY

1. Automatic microcell counter
3. Balance
4. Water bath
5. Shaking rack unit
6. Pipette shaker for 10 place
7. Microscope
8. General laboratory centrifuge
9. Incubator
11. Drying Oven
12. Magnetic stirrer
13. Differential leucocyte counter - 12 Key
14. Coagulometer
15. Electric refrigerator
16. Haematocrit centrifuge
19. Micro titer system

3. MICROBIOLOGY

- 2. Incubator
- 3 Electric refrigerator
- 4. Hot air sterilizer
- 5 General laboratory centrifuge
- 6 Counter balance
- 7 Water bath
- 8 Binocular microscope
- 9 Koch sterilizer
- 10 Autoclave
- 12 Gas Pack system
(Anaerobic cultivate system)

4. BIOCHEMISTRY

- 2 Direct reading balance
- 3 Ph Meter
- 4 Clinical refractometer
- 5 Vacuum pump
- 6 Electrophoresis equipment unit
- 7 Densitometer
- 8 UV spectrophotometer
- 10 Incubator
- 11 Chloride counter
- 12 Deep freezer (30 c)
- 13 Electric refrigerator (6 cu ft)
- 14 Water still
- 15 Van Slyk's gas analyzing apparatus
- 16 Drying oven
- 17 Water bath
- 18 Binocular microscope
- 19 Flame photometer
- 20 Centrifuge
- 21 Semi autoanalyzer system photometer

WASHING ROOM

- 1 Water still with storage tank and water softner
- 2 Automatic pipette washer
- 3 Hot air dryer
- 4 Brush washer
- 5 Erecta shelf
- 6 Utility care

6. AUTOPSY ROOM

- 1 Mortuary refrigerator for 18 bodies
- 2 Autopsy table
- 3 Boiling instrument sterilizer
- 4 Autopsy light
- 5 Morgue cart
- 6 Weighing Scale
- 7 Suction unit
- 8 Instrument cabinet
- 9 Instrument tray stand
- 10 Dissecting instrument set 1
- 11 Organ photographic system.

BB BLOOD BANK

1 BLEEDING ROOM

- 1 Bleeding bed with arm board
- 3 Sphygmomanometer stand type
- 4 Instrument boiling sterilizer
- 5 Littmann type stethoscope
- 6 Instrument cabinet
- 7 Refrigerator
- 8 Treatment carriage

STATISTICS REGARDING LABORATORY INVESTIGATIONS ANNEX 7.1
 Page 1

BIO-CHEMISTRY - SPECIAL INVESTIGATIONS

Name of Test	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Iron	18	20	27	22	20	16	12	7	18	17	19	
TIBC	14	17	21	20	20	16	10	7	18	17	16	
Uric Acid	22	18	14	12	8	16	24		11	16	20	
Creatinine	76	62	92	60	77	116	109	57	73	101	118	
Creatinine Clearance			3	2							6	
Iso-enzymes - Alk.Phos.						2						
Total Cholesterol	66	64	58	40	43	36	54	45	57	70	81	
HDL	48	49	43	28	27	28	45	36	50	51	62	
LDL	48	49	43	28	27	28	45	36	50	51	62	
Triglycerides	48	49	43	28	27	28	45	36	50	51	62	
Iso-enzymes - CPK						2						
Calcium	36	36	30	39	59	43	45	29	39	15	22	
ANF	43	43	42	29	42	28	22	9	21	41	29	
CPK	70	55	58	57	68	63	66	31	52	71	71	
LDH	10	25	22	18	21	7	16	15	11	16	22	
GT	5		1	3	2						3	
Iso-enzymes - LDH						3						
T 3	86	70	51	39	99	43	38		136	136	34	
T 4	86	50	51	39	99	43	38		136	136	34	
TSH	57	70	51	39	99	43	7		136	136	34	
Haptoglobin Levels						4	4	2	6	5	3	
feto Protein	14	10	8	16	16	18	9		15	20	25	
D xylose	2	1				1	1	1			2	
Immunoglobulin Levels	6	3	2			10	9	4	6	1	5	
anti-trypsin Levels								2	3	3	2	
Cryoglobulin						2	2	2				
Amino acid Levels						3						

STATISTICS FROM JANUARY 1989 - NOVEMBER 1989 - DEPARTMENT OF MICROBIOLOGY

Name of Test	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Morphological Examination												
Simple Stain	464	484	543	503	777	653	620	142	300	470	313	
Gram Stain	464	434	543	497	717	653	460	142	350	470	343	
Z N stain	81	63	97	125	130	135	75	13	13	30	62	
Direct Examination	239	247	369	279	325	443	350	142	732	978	365	
KOH mount		2		6		13	7		20	1		
Negative Stain	55	41	58	46	27	9	12		27	16	14	
Hanging drop	43	37	38	57	65	27	20	5	10	12	38	
Cultural Examination												
Throat swab	33	39	49	70	53	42	24	15	19	28	35	
Wound swab	67	40	58	40	125	59	20	17	15	19	41	
Cervical and vaginal swab	40	39	42	85	72	33	21	10	11	13	10	
Blood culture	108	90	113	122	80	78	60	34	90	90	101	
Clot culture	98	46	94	29	36	37	34	3	27	34	37	
Discharge and aspiration												
Ear, nose, and sinus swab	15	12	14	21	47	19	20	21	47	32	29	
Urine culture	386	367	459	327	226	293	273	143	231	350	344	
Stool culture	41	68	29	48	45	74	43	27	15	40	37	
Sputum culture	34	21	26	25	27	22	15	8	12	10	28	
CSF culture	36	24	19	9	17	27	24	9	9	23	18	
Fungal/TB culture	3	8	7	13	3	15	5		3	8	7	

STATISTICS FOR THE YEAR 1989 JANUARY - NOVEMBER DEPARTMENT OF MICROBIOLOGY

Name of test	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Miscellaneous tests	73	65	57	77	64	73	68	12	37	36	40	40
Widal test	7	7	10	15	9	488	347	81	200	310	499	499
Well - Felix	540	598	584	429	533	62	36	8	28	78	50	50
Brucella Agglutination	97	53	50	89	60	30	25	0	30	15	74	74
WURL	22	20	22	22	14	30	25	12	200	175	11	11
Rheumatoid factor	50	95	107	96	113	158	100	12	200	175	11	11
Anti Streptolysin "O" titre	50	53	61	37	32	47	25	104	150	100	50	50
Antibiotic sensitivity	50	60	60	60	60	8	12	1	75	55	52	52
Staphylo Coag: test	50	60	60	60	60	29	40	4	270	32	41	41
Bio Chemical Typing												
Serological Typing												

O P D LAB - 1989

Name of test	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	1989
ANC												
Urine Albumin	1429	1300	1429	1283	1783	1784	1540	960	1726	1790	2216	2216
Urine Sugar	1429	1434	1429	1523	1986	1987	1673	1040	1732	2010	2220	2220
Blood for Hb	397	275	394	318	214	215	196	148	341	470	398	398
WAROS :												
Albumin	1528	1300	1562	1776	1635	1636	1108	763	1583	2210	1478	1478
Sugar	469	204	203	136	611	612	621	176	536	620	738	738
Deposits	1466	1327	1116	1470	1569	1570	1102	706	1540	2110	1577	1577
Acetone	40	25	24	12	37	37	21	14	36	48	45	45
Bence Jones Protein	5	3	2	8	12	12	15	4	6	17	15	15
Bile	76	70	69	46	83	83	26	22	47	35	30	30
Urobilinogen	38	20	19	38	32	32	28	14	52	60	45	45
Haematology:												
WBC	416	335	434	447	334	335	303	224	472	580	345	345
DC	416	355	434	447	334	335	303	274	472	580	360	360
Hb	264	242	324	233	179	130	97	76	211	275	110	110
ESR	263	218	267	200	167	168	154	144	306	385	175	175
Blood picture	27	15	14	15	23	18	4	13	43	30	30	30
MP	34	29	28	21	47	47	34	11	29	27	35	35
mf (mf)					1	1	1					
PCV	3	1	1	6	3	3	5	2	8	10	10	10
Reducing Sugar	1		2	5	5	3	1	3	8	8	8	8
Stools for ACC	131	91	89	123	130	132	96	50	66	135	140	140
Occult Blood	23	23	22	38	31	31	21	10	18	3350	40	40

SPECIAL INVESTIGATIONS - 1982 INFANTICIDITY

Name of Test	JAN	FEB	MAR	APR	MAY	JUN	JULY	AUG	SEP	OCT	NOV	DEC
Glycerol Lysis Test	2										3	2
Sucrose Lysis Test					3	2	3	1	7			1
A O T	3					2	1					2
Osmotic Fragility Test					3	2	3	1	7		1	
Haemoglobin electrophoresis	3				3	2	3	1	7			2
Bladder washing for Hb												2
G-6 P D	2		3		2	1	2				2	
Clot Lysis Time												1
K C C T		8	4	4	15			8			4	
F D P	4		4	4	1		1		3		1	7
Thrombin Time		2			6	5	6				1	7
Fibrinogen					4				3		4	4
P I T			8	10		10	8		14			7
L A P Score	4											
Peroxidase												
Sudan Black			1		2	2					2	5
P A S		2	1	1	2	2					2	1
Bone Marrow	8	8	12	14	12	11	5	3	3	3	3	7
L E Cells	7	6	5	4	5	5	4	2	7	15	18	
F A T		5										
A L P Stain			1	1	1							
Factor VIII Assay												
C Reactive Protein												1
Urine Haemoglobin					1							
Monospot Test						10	2	6	3	9		
Iron Stain						1	3					
T U R Fluid for Hb						1		1				
Urine F O P												
M G G Stain										10		3
Scanning photometry for abnormal Hb												
Blood for sulphha and meth Hb												
Total	33	35	36	38	57	55	34	26	41	27	27	107

BLOOD BANK - 1989

Name of Test	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Blood Grouping												
Patients	260	572	898	688	1221	202	603	465	617	954	1048	
Donors	164	161	204	188	262	262	137	155	201	261	295	
Blood Compatibility	348	498	617	621	721	577	568	425	438	692	759	
Rh antibodies	25	9	17	18	20	8	14	20	10	27	32	
Coomb's test	22	19	15	29	25	22	18	20	76	40	30	
Haemolysin	3	1		1	3	2		4	1	1		
Donor VDRL	164	161										
Blood Compatibility Grouping						453						
FFP									11	22	45	
PRP & Platelet Concentrate									2	40	11	
Washed Packed Cells	8								291	261	10	
MP									201	261	10	
Plasma												

HAEMATATOLOGY

Name of test	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
WBC	1420	1300	1800	1900	1850	1263	1150	715	1200	1810	1800	1800
DC	1420	1300	1800	1900	1850	1263	1150	715	1200	1810	1800	1800
EGR	639	580	550	580	945	582	530	280	450	850	750	750
Bf & Cf	60	50	50	60	60	60	50	15	60	150	200	200
Platelet Count	325	290	300	310	70	300	270	320	150	400	500	500
Hb	1600	1600	1950	1950	600	1613	1576	820	1350	2000	2015	2015
MP					50	70	75	40	60	100	100	100
PCV & Red Cell Indices	150	100	50	60	100	35	40	60	50	150	500	500
Blood Picture	300	275	200	210	340	100	90	110	300	350	300	300
Prothrombin Time	250	250	150	160	260	125	130	100	150	200	250	250
Reticulocyte Count	62	65	50	60	30	15	10	30	50	60	60	60
MF						2		1				
Monospot	4	6	10	10	10							
LE Cells		8										
Special Tests		6										
PCV						50	45	110				
Osmotic fragility/Glycerol lysis	2					2	1					
ADT	3				3	2	3	1				
Hb Electrophoresis	3				3	2	3	1				
GGPD	2	3			2	1	2					
KCCT/FDP/Thrombin Time/Fibrinogen	4	10	8									

STAFF STRENGTH & SALARIES

	Sanctioned	Actual in position	Vacancies	Average Monthly Salary
Senior Administrative Staff				
Director	01	01	-	18,200
Deputy Director	01	01	-	18,200
Secretary	01	01	-	12,300
Accountant	01	01	-	10,800
Internal Auditor	01	01	-	7,200
Executive Staff/Staff Officers				
Administrative Asst.	01	-	01	3,075
Asst. Accountant	01	01	-	7,200
Supplies Officer	01	01	-	6,240
Medical Records Officer	01	01	-	4,575
Welfare Officer	01	01	-	3,740
Confidential Secy.	01	01	-	4,800
Medical Staff Consultants				
Physician	03	03	-	17,800]
Surgeon	03	03	-	17,800
Anaesthetist	04	04	-	17,800
Radiologist	03	02	01	17,800
ENT Surgeon	01	-	01	17,800
Orthopaedic Surgeon	01	-	01	17,800
Paediatrician	01	01	-	17,800
Obstetrician	02	02	-	17,800
Eye Surgeon (will join soon)	01	-	01	17,800
Paediatric Surgeon	01	01	-	17,800
Pathologist	01	01	-	17,800
Microbiologist	01	01	-	17,800
Resident Specialists				
Resident Physician	01	01	-	13,475
Resident Surgeon	01	01	-	13,475
Resident Paediatrician	01	-	01	13,475
Registrar in Pathology	01	01	01	13,475
P G I M Trainees (varies) *		17		-
Grade Medical Officers	46	37	09	8,480
Intern medical Officers (varies)	18	30 #	-	-
Bio Chemist	01	-	01	7,800
Phycist	01	-	01	-

Nursing Staff				
Matrons	02	02	-	6,000
Nursing Sisters	22	16	06	4,912
Tutor Sisters	05	03	02	4,912
Staff Nurses	400	348	52	4,575
Trainee Nurses	50	31	19	-
Family Health Workers	01	01	-	2,520
Para Medical Staff				
Pharmacists	12	12	-	-
Physiotherapists	04	03	01	3,100
Radiographers	14	09	05	4,000
Medical Lab.				
Technologists	60	38	22	3,135
ECG Recordists	03	03	-	4,430
Public Health				
Inspectors	02	02	-	4,960
Office Staff				
Stenographers	06	03	03	2,960
Book-keepers	02	02	-	2,960
Cashiers	03	03	-	2,960
Typists	07	02	05	2,385
Clerks	100	59	41	2,385
Technical Staff				
Electro Medical				
Technologists	06	04	02	4,000
Electrical Foreman	01	01	-	3,400
Building Foreman	01	01	-	3,480
Skilled Workers				
Carpentry)				
Building)				
Painting)	12	07	05	2,265
Plumbing)				
Electricians	08	05	03	2,282
Boilerman	03	02	01	2,410
Laundry Supervisors	01	01	-	2,560
Other Staff				
English Teachers	01	01	-	-
Store Keepers	03	03	-	-
Library Assistant	01	-	01	-
House Wardens	06	06	-	2,425
Telephone Operators	08	07	01	2,100
Chef	01	01	-	3,560
Diet Stewardess	06	04	02	2,375
Seamstress	05	05	-	2,375
Drivers	10	06	04	2,400
Cooks	20	11	09	2,310
Kitchen Helper	01	01	-	2,145
Minor Staff				
Orderlies	500	353	147	2,145

SUMMARY

	Sanctioned Cadre	Actual in Position	Vacancies
Senior Administrative Staff	05	05	-
Executive Staff	06	04	02
Medical Staff	93	105	17
Nursing Staff	480	401	79
Para-medical staff	95	67	28
Office Staff	118	69	49
Technical Staff	32	21	11
Other Staff	62	45	17
Minor Staff	500	353	147
Total	1,391	1,070	350

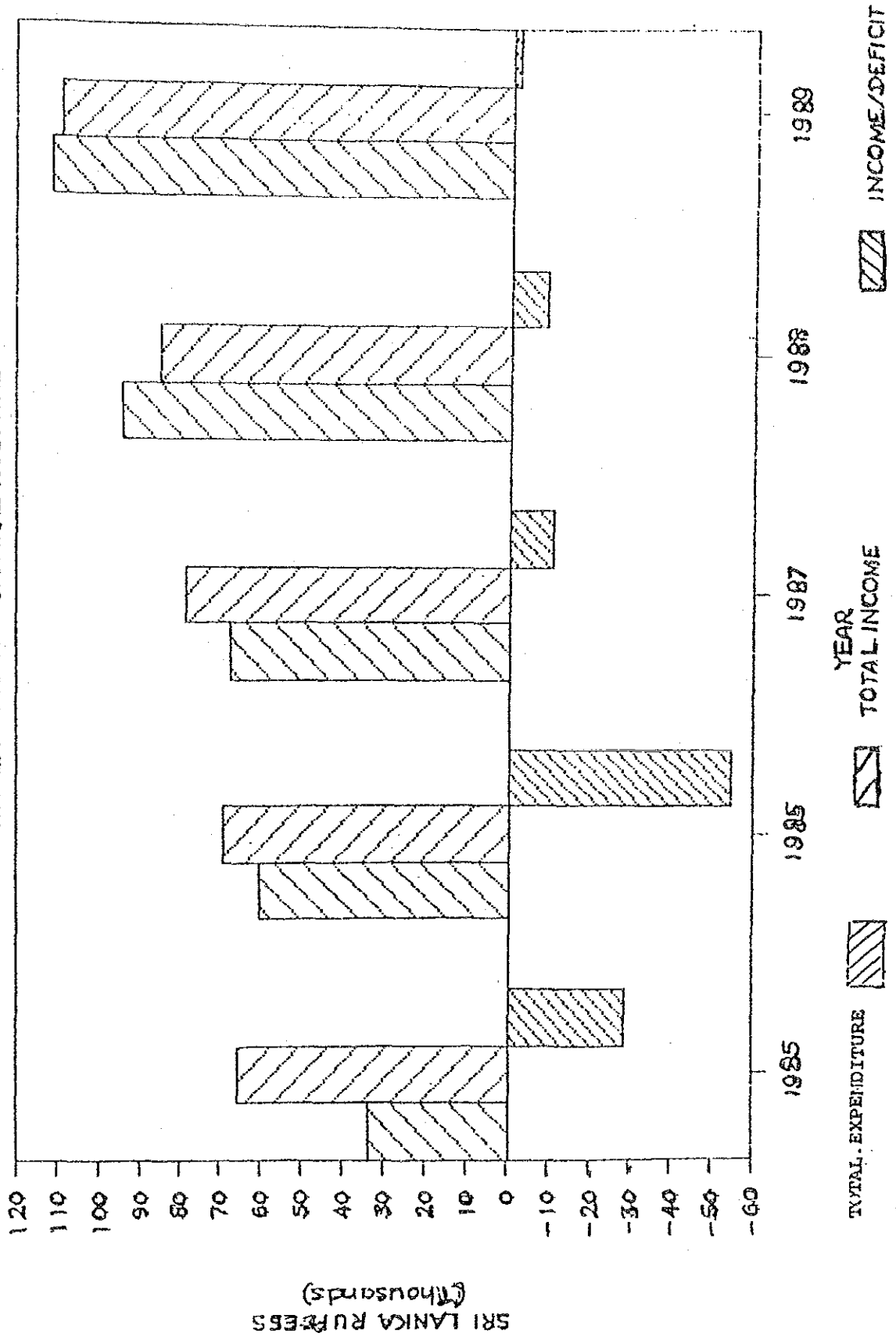
* Not in Cadre

12 in excess due to Final Year Medical Students

! Minimum number required will be appointed.

ANNUAL INCOME/EXPENDITURE

SRI JAYAWARDENEPURA GENERAL HOSPITAL



ANNEX 10.I (a)

SKI JAYEWARNENEPURA GENERAL HOSPITAL
ANALYSIS OF PROFIT & LOSS ACCOUNT RS(000)
AS AT 31ST DECEMBER

	1984	1985	1986	1987	1988	* 1989	**1990
INCOME							
Hospital Charges		2,368	6,283	7,921	10,029	13,624	31,000
EXPENDITURE							
Care of Patients		16,925	36,051	41,329	64,438		
Dietary		2,310	3,466	6,002	7,513		
Administration		11,035	10,685	6,584	8,181		
Maintenance		3,695	10,101	13,556	14,108		
Others		19	16			111,733	141,600
TOTAL		33,984	60,319	67,471	94,240	111,733	
GROSS INCOME		(31,616)	(54,036)	(59,550)	(84,211)	(98,109)	
Depreciation		(60,284)	(63,733)	0	0	0	
CASH INCOME		(91,900)	(117,769)	(59,550)	(84,211)	(98,109)	
OTHER INCOME		0					
Govt. Grant	40,000	62,000	58,900	66,500	70,000	95,000	110,000
Interest Income		1,039	3,182	3,003	3,357	790	
Other Income		346	903	1,112	1,780	0	
TOTAL OTHER INCOME	40,000	63,385	62,985	70,615	75,137	95,790	
NET INCOME	40,000	(28,515)	(54,784)	(11,065)	(9,074)	(2,319)	
Total Income	40,000	65,753	69,268	78,536	85,166	109,414	31,000

* Estimates

* Projections

ANNEX 10.I (b)

SRI JAYEWARDENEPURA GENERAL HOSPITAL
ANALYSIS OF BALANCE SHEET RS (000)
AS AT DECEMBER 31ST

Analysis of Balance Sheets					
	1985	1986	1987	1988	1989
FIXED ASSETS					
LAND & BUILDING	485,852	460,491	476,754	477,400	
PLANT & MACHINERY	322,977	307,637	322,524	328,220	
VEHICLES	923	747	747	747	
WORK IN PROGRESS		874	450	692	
TOTAL	809,752	769,749	800,275	807,059	
INVESTMENTS					
NET CURRENT ASSETS	69,308	73,904	79,941	65,454	
TOTAL NET ASSETS	879,060	843,653	880,216	872,513	
Govt Contribution	879,060	892,879	917,626	922,365	
Japanese Government	840,000	861,100	870,413	875,152	
Sri Lanka Government	89,000	31,779	47,213	47,213	
		(49,225)	(37,410)	(49,852)	
TOTAL LIABILITIES	879,060	843,654	880,216	872,513	
CURRENT ASSETS					
STOCKS	4,009	6,404	17,245	17,729	
DEBTORS	178	4,455	2,927	2,892	
FIXED DEPOSITS	65,454	63,288	56,291	56,377	
GOODS IN TRANSIT		258	158	196	
CASH IN BANK & HAND	7,303	2,234	5,419	0	
TOTAL CURRENT ASSETS	76,944	76,639	82,040	77,194	
CURRENT LIABILITIES					
CREDITORS	7,636	2,735	2,099	11,639	
BANK BORROWINGS				101	
TOTAL C/LIABILITIES	7,636	2,735	2,099	11,740	

QUESTIONNAIRE FOR PATIENTS

Name :..... Age :.....

Address:.....

Occupation:.....Duration of stay:.....

Ward:..... Illness :.....

1. What made you seek treatment at the Sri Jayewardenepura General Hospital ?

Referred to by Family Doctor

Referred to by Specialist who is not employed at the Hospital

Referred to by the Specialist who is employed in the Hospital

Was transferred from another hospital.

Came on my own

Any other (please specify).

2. How did you come to know that you can obtain treatment for your ailments at this hospital ?

Your family Doctor

Your Specialist

By friends/relations

From the newspapers

From employees of the hospital

3 On arriving at the hospital the security guards at the entrance were

Very courteous and kind

They were rude

They did their job satisfactorily

Others (please specify)

4. The information/assistance received by you at the admission counter was
- Sufficient
 - Not sufficient
5. At admission the treatment you received from the minor staff was
- Very good
 - Good
 - Could have been better
 - Very bad
6. The Doctor who examined you :
- Was very kind and attempted to diagnose my ailment
 - He did not have sufficient time to examine me
 - Indifferent
 - Could have been better
 - Not at all satisfactory
7. The charges made by the hospital for the treatment you received are :
- Too much
 - Much cheaper than any other hospital
 - Reasonable
8. The procedure to see a Specialist at the Hospital is
- Too much
 - Very easy
 - Reasonable
9. The procedure to be hospitalised is
- Very easy
 - Difficult
 - Reasonable

10. The treatment received by you from the Doctors when you are hospitalized is

Very good

Nothing special

Good

Very bad

11 The treatment received by you from the nursing staff is

Very good

Nothing special

Good

Bad

12 The treatment received by you from the orderlies in the ward is

Very good

Nothing Special

Good

Very bad

13. The treatment you received from the technicians at the labs and other service units are

Very Good

Nothing special

Good

Very bad

14. You found the rules regarding visits and other regulations of the hospital

Strict but usefull

Too rigid

Should be more flexible

Others (please specify)

15. The food served in the hospital is

Very tasty

Bad

Reasonable

16. If you were to be warded again
- Will you never come to this hospital
 - Will come again
 - Not particular
17. Will you recommend your friends/relations to take treatment from this hospital ?
- Yes
 - Never
 - Not particularly
18. What were the features of the hospital that you liked most in the Hospital ?
- Its location
 - Its regulations
 - Its cleanliness
 - Its treatment
 - Efficiency of the Doctors
 - Efficiency of the Nursing Staff
 - Others - please specify .
19. What were the features of the hospital that you did not like?
- Location
 - Regulations
 - The medicine used
 - Inefficient Doctors
 - Inefficient Nurses
 - Others please specify.
20. Any other comments

JICA