Ministry of Health
The Republic of Moldova

BASIC DESIGN STUDY REPORT
ON
THE PROJECT
FOR
IMPROVEMENT OF MEDICAL EQUIPMENT
FOR
MOTHER AND CHILD REPUBLICAN HOSPITAL
IN
THE REPUBLIC OF MOLDOVA

March, 1999

JAPAN INTERNATIONAL COOPERATION AGENCY
INTERNATIONAL TECHNO CENTER CO., LTD

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PREFACE

In response to a request from the Government of Republic of Moldova, the Government of Japan decided to conduct a basic design study on the Project for Improvement of Medical Equipment for Mother and Child Republican Hospital and entrusted the study to the Japan International Cooperation Agency (JICA).

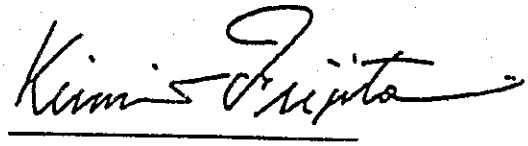
JICA sent to Moldova a study team from September 6 to October 15, 1998.

The team held discussions with the officials concerned of the Government of Republic of Moldova, and conducted a field study at the study area. After the team returned to Japan, further studies were made. Then, a mission was sent to Moldova in order to discuss a draft basic design, and as this result, the present report was finalized.

I hope that this report will contribute to the promotion of the project and to the enhancement of friendly relations between our two countries.

I wish to express my sincere appreciation to the officials concerned of the Government of Republic of Moldova for their close cooperation extended to the teams.

March, 1999



Kimio Fujita
President
Japan International Cooperation Agency

March, 1999

Letter of Transmittal

We are pleased to submit to you the basic design study report on the Project for Improvement of Medical Equipment for Mother and Child Republican Hospital in the Republic of Moldova.

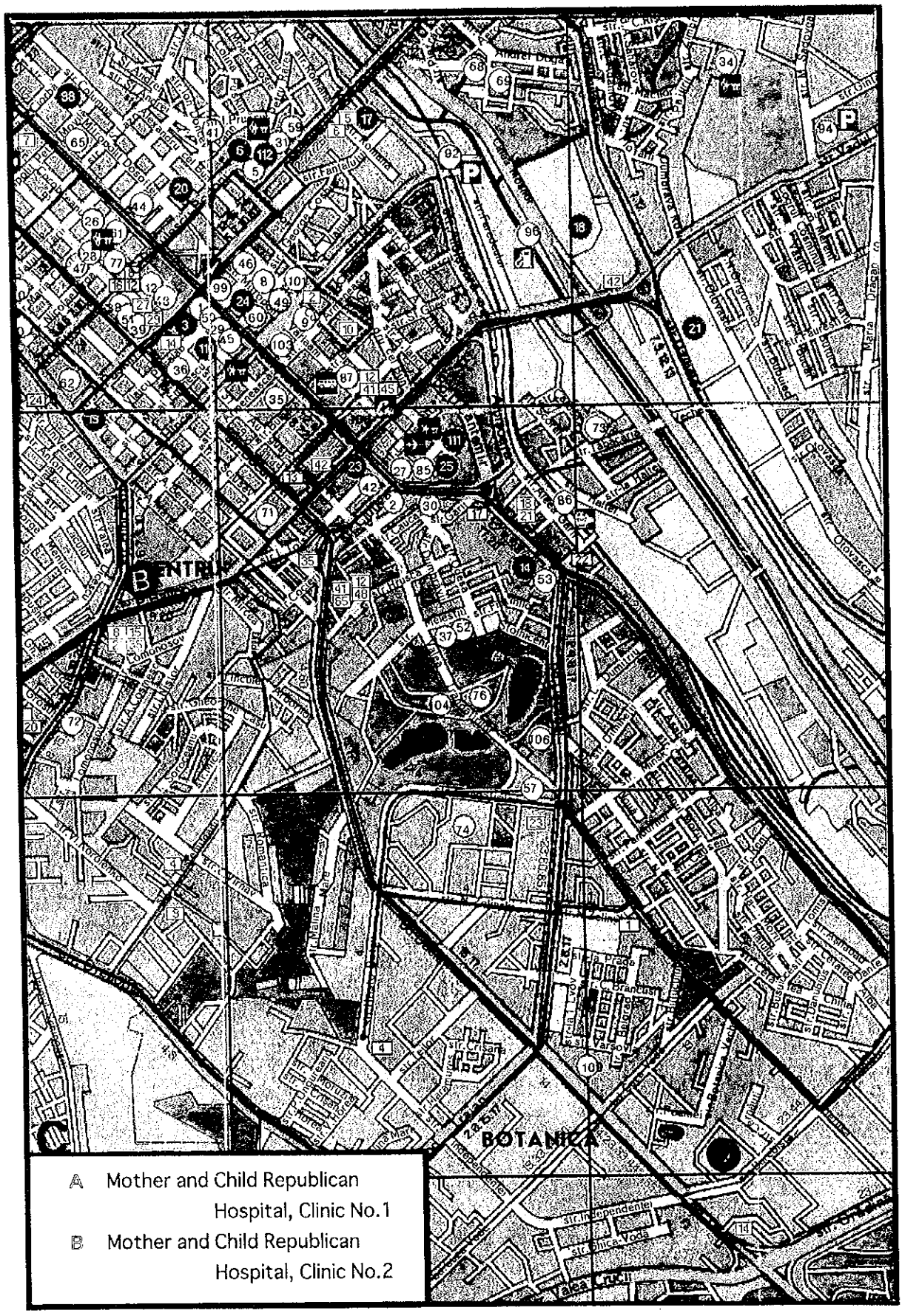
This study was conducted by International Techno Center Co., Ltd., under a contract to JICA, during the period from August 31, 1998 to March 31, 1999. In conducting the study, we have examined the feasibility and rationale of the project with due consideration to the present situation of the Republic of Moldova and formulated the most appropriate basic design for the project under Japan's grant aid scheme.

Finally, we hope that this report will contribute to further promotion of the project.

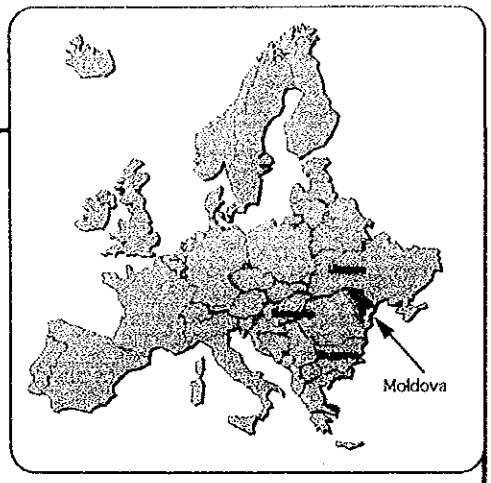
Very truly yours,

Hiromi SUWA
Project Manager,
Basic design study team on the Project for Improvement of Medical Equipment for Mother and Child Republican Hospital
International Techno Center Co., Ltd.

CHISINAU CITY MAP



Republic of Moldova



Ukraine

Rumania

Ukraine

Black Sea

Briceni
Mohyliv-Podil's'kyy
Soroca
Riscani
Floresti
Balti
Ribnita
Falesti
Orhei
Calarasi
Dubasari
Yrigoriopol
Ungheni
Kishinev
Lapusna
Tiraspol
Hincesti
Bender
Causeni
Leova
Cimislia
Basarabca
Comrat
Ciadir-Lunga
Cahul
Vulcanesti

Border
Railroad
Main Road
Capital
City

0 25 50 Kilometers
0 25 50 Miles

Abbreviations

A/P	Authorization to Pay
B/A	Banking Arrangement
E/N	Exchange of Notes
GP	General Practitioner
ICU	Intensive Care Unit
PHC	Primary Health Care
CIS	Commonwealth Independent States
NIS	New Independent States
DAC	Development Assistance Committee
GDP	Gross Domestic Product
EFF	Extended Fund Facility
NMP	Net Material Product
IMF	International Monetary Fund
UNICEF	United Nations Children's Fund
WHO	World Health Organization
MMR	Maternal Mortality Rate
IMR	Infant Mortality Rate
NMR	Neonatal Mortality Rate
PMR	Perinatal Mortality Rate

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2. Survey Schedule
3. List of Party Concerned in the Recipient Country
4. Minutes of Discussion
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Chapter 1 Background of the Request

Chapter 1 Background of the Project

1-1 Background of the Project

Moldava, which borders on the Ukraine to the east and Rumania to the west, has a total territory of 33,700 square kilometers, which makes it a country about one-eleventh of the size of Japan, or a little less than the Japanese island of Kyushu. The Prut River, running from the north to the south, marks its border with Rumania, and the Dnestr River runs in the same direction not far inside its eastern border. The central part of the country, consisting of hilly land with an elevation around 300 m, is a zone of fertile black earth, and steppe land constitutes the southern part of the country. Its total population stood at 4,457,000 in 1997.

After the Second World War Moldova was a member republic of the Soviet Union, but it declared independence in August 1991 after that union fell apart and become a member of the Commonwealth of Independent States (CIS) in December of that year.

The main industries of Moldova, together accounting for approximately 60% of its GNP, are agriculture and the food products industry. Its main trade partners are former fellow members of the Soviet Union, Russia alone accounting for about 60% of its exports and 40% of its imports, but its economic situation has deteriorated because of the economic troubles of former fellow members of the Soviet Union, repeated floods, droughts and other natural calamities, the movement for independence on the part of the Russian minority since independence (the dispute along the Dnestr) and other reasons, its per-capita GDP declining from US$ 1,120 in 1991 to US $480 in 1996.

In spite of such a difficult economic situation Moldova has consistently maintained its democratization line since independence, actively promoting structural and other reforms aiming at establishment of a market economy in cooperation with the IMF and international financial organizations.

The situation is difficult in the field of health and medical care, too, the annual budget being only about US $100 million in 1996 for a total population of about 4 million and most of that going for lighting and heating and personnel expenses, which has resulted in a situation in which it is impossible to adequately meet the demand for medical care services because of the extremely poor condition of the worn out medical equipment since almost no new purchases have been made for replacement thereof. The main problems that the country is facing in the field of health and medical care because of deterioration of the economic situation and social instability, which are listed below, have

to be urgently addressed.

1. Declining rate of growth in population
   In 1991 it was 6.0 per 1,000, but by 1997 it decreased to zero.

2. High crude infant mortality rate and crude maternal mortality rate in comparison with neighboring countries
   Those mortality rates have not declined (19.0 per 1,000 and 53.2 per 100,000, respectively in 1990 and 20.2 per 1,000 and 48.3 per 100,000 in 1997) and are now higher than those for neighboring countries, the figures for the Ukraine, for instance, being 18 per 1,000 and 30 per 100,000, respectively, in 1997.

3. Deterioration of the state of health of the young
   The state of health of the young is deteriorating, morbidity of 1-year-olds rising by 14% a year and the number of cases of poor physical development among those under 15 years of age rising from 0.8% in 1992 to 1.4% in 1997.

4. Deterioration of the state of health of pregnant women and women after delivery
   The state of health of pregnant women and women after delivery is deteriorating, the number of cases of anemia increasing from 29.3 per 100 in 1992 to 45.2 per 100 in 1997.

That has resulted from changes in economic policy such as curtailment of public expenditures for social services, reduction of welfare benefits and elimination of consumer subsidies, which have had a big adverse impact on the socially weak, particularly women and children. The government of Moldova is putting a lot of effort into improving basic social services, health and medical care and education as responsibilities of the state, with emphasis on measures for curbing deterioration of the health and medical care situation and helping those who are most adversely susceptible to the effects of social change.

Besides working for rationalization of the hypertrophied medical care system inherited from Soviet days, the Ministry of Health is carrying forward many different reforms in accordance with the Plan for Reform in the Health and Medical Care Field (1997-2003), the three main points of which are reform of procurement of funds, organizational reform and improvement of services. As a part of that it is working to strengthen the medical care system in the field of mother and child health by formulating

and implementing a program for improvement of perinatal medical care services, integrating and strengthening the functions of mother and child health centers and pediatric hospitals and establishing a referral system with such a hospital at the apex. It is also working for improvement of medical care services, particularly strengthening of primary health care (PHC) in primary medical care, as well as implementing organization, reeducation, etc. of general practitioners, who play an important role in improvement of primary medical care. Because of its awareness of the fact that functioning of the different levels of medical care services in the referral system is a premise for the effectiveness of measures for strengthening of PHC, it realizes the importance of mother and child hospitals as final acceptance and tertiary medical care facilities, but medical care activities are being hampered by obsolescence and insufficient quantity of equipment for financial reasons.

1-2 Outline of the Request

1) Reasons for the Request

In Moldova's health and medical care system the mother and child hospital receives patients representing difficult cases sent to it from the whole country as its top reference mother and child health and medical care facility. It also plays an important role as an internship facility for the country's school of medicine as well as a place for clinical education, including ensuring of the technical level of those engaged in medical care. However, dilapidation of the medical care equipment and insufficient quantities thereof are impeding its medical care activities, and therefore this request is being made with a view to recovering its original functions.

2) Executing agency

The implementing entity in this project is the Mother and Child Hospital, which has two facilities: Clinic No. 1 (formerly the Mother and Child Health Center) and Clinic No. 2 (formerly the Pediatric Hospital).

3) Target Departments

Clinic No.1 (Formerly the Mother and Child Health Center)

1, Gynecology and obstetrics

Delivery Room,	Maternal ICU
Express Laboratory,	Premature Baby ICU,
Laboratory	Maternity Operation Theater,
Pathological Newborn	

2, Pediatrics

Pediatric ICU	Surgical ICU
Operation Theater	Laboratory

3, Examination

Biochemistry	Physiological Examination
Bacteriology	Genetic
Pathology	

4, Other

Radiology	CSSD
Policlinic	

Clinic No.2 (Formerly the Pediatric Hospital)

1, Examination

Functional Diagnostic	Laboratory

2, Pediatrics

ENT	Ophthalmology
Operation Theater	

3, Other

Radiology	Wards

4) Contents of the request

Total number of required item is 533 (Clinic No.1 / 315, clinic No.2 / 218). Main equipment of request is follows.

Clinic No.1	Clinic No.2
Ultrasound Scanner	Ultrasound Scanner
Fiberscope Gastrointestinal	Fiberscope Gastrointestinal
Blood Gas Analyzer	Blood Cell Counter
Blood Cell Counter	Water Distiller
Spectrophotometer	Operating Microscope
Microscope	Operating Table
ECG	Surgical Instrument Set
Patient Monitor	Ventilator
Ventilator	Film Processor
Delivery Monitor	Glucose Meter
Infant Care unit	Spectrophotometer
Infant Incubator	Centrifuge
O2 Monitor	Audiometer
Pulse Oximeter	pH meter
Microtome Freezing	Syringe Pump
Operating Table	Chart Projector
Electrosurgical Unit	Sterilizing Drum
Cryo-surgical System	Oxygen Tent
Spirometer	Film Illuminator
Operating Light	Slit Lump
Audiometer	Hot Air Sterilization

Chapter 2 Contents of the Project

Chapter 2 Contents of the Project

2-1 Objectives of the Project

This project is being requested of Japan as a part of the "Perinatal Medical Care Services Improvement Program, 1997-2002," formulated on the basis of the country's upper-hierarchy "Health and Medical Care Reform Plan" (1997-2002).

The aim of this project qualitative and quantitative improvement of medical care services and raising of the level of perinatal medical care and pediatric medical care through procurement, as a measure for strengthening the hardware aspect, of medical equipment for renewal and supplementation of the medical equipment of the facility in question, which receives difficult cases sent from the entire country as its top mother and child health reference hospital as well as introduction of some new equipment.

Basic Policies of the Program

1. Strengthening perinatal medical care services
2. Strengthening pediatric medical care services

Objectives of the Project

1. Improved diagnostic and treatment activities at the tertiary medical care level for perinatal and pediatrics.

Anticipated Results

1. Refurbishing environment of diagnostic services
2. Improving tertiary medical care services
3. Improving quality of diagnostic services
4. Improving facility administrative abilities

2-2 Basic Concept of the Project

Ministry of Health in Moldova has formulated a program for improvements in the field of health and medical care in 1997-2003 and is carrying forward plans for making improvements which put emphasis on PHC and mother and child health. This project is for improvement of the base for strengthening of perinatal services and pediatric medical care services as basic policy through plans for better provision of medical equipment for tertiary medical care facilities as the final receiving entities of secondary medical care services as indicated in Table 2-1

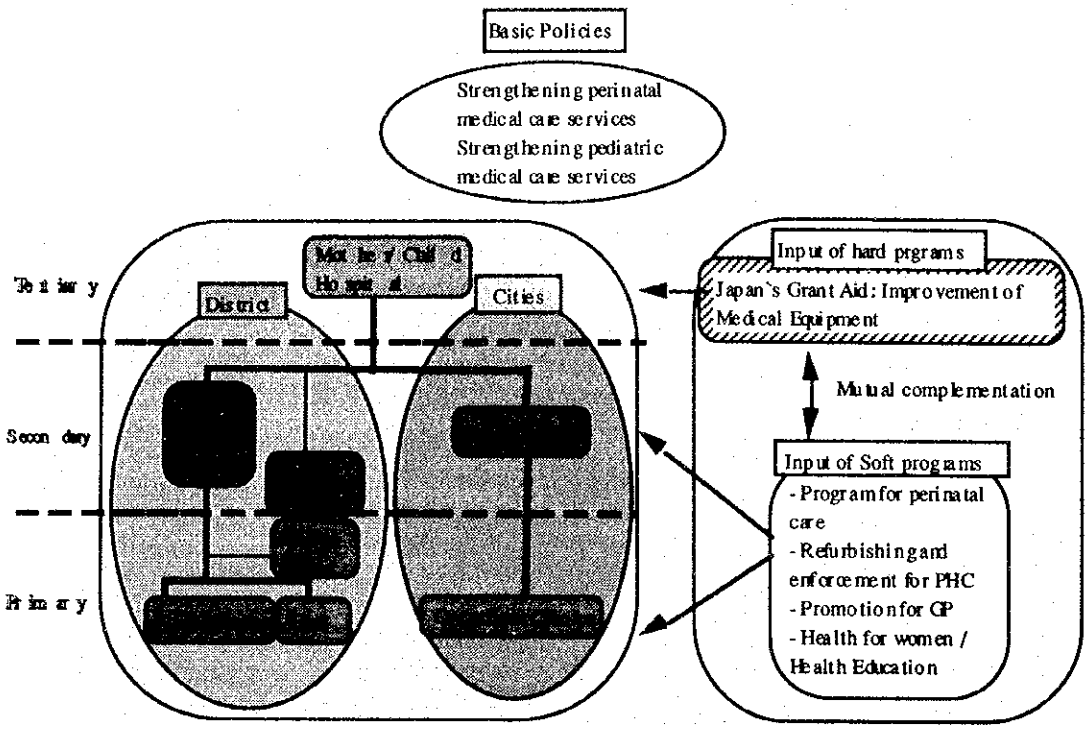


Table 2-1 Concept of Program

2-3 Basic Design

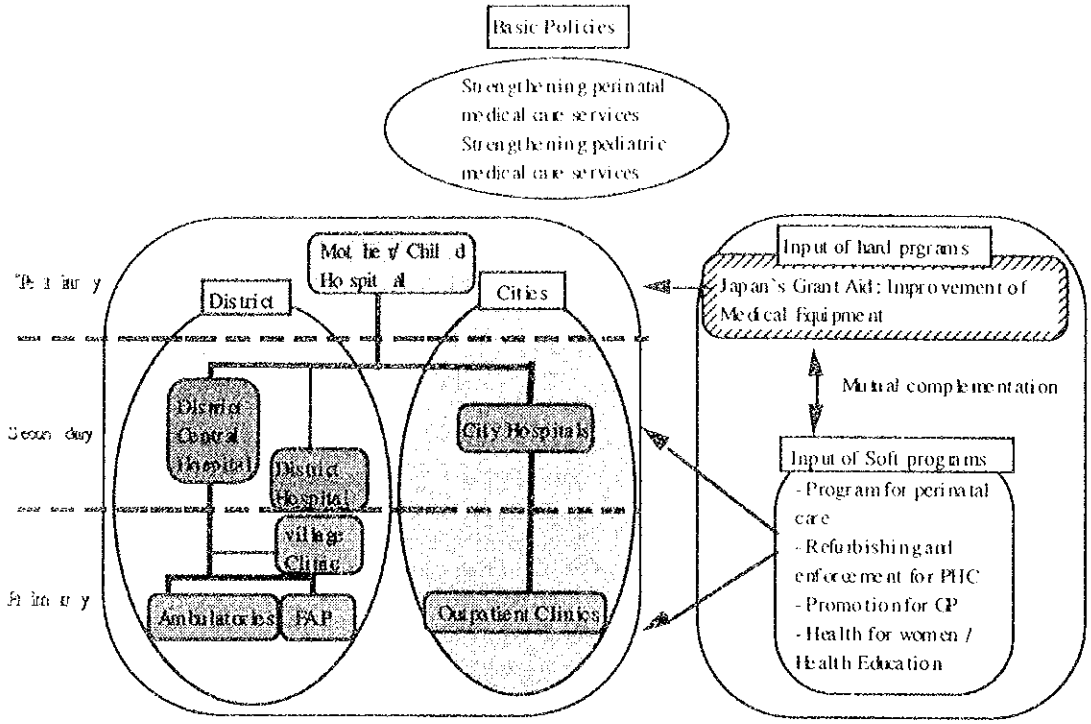
2-3-1 Design Concept

(1) Policy concerning grade and specifications of the equipment to be procured

① The facility in question is the top referral facility for mother and child medical care and has both a diagnostic and treatment function and a clinical education function, but the equipment planning will be carried out particularly with the aim of enhancing the diagnostic and treatment function.

② Regarding the degree of deterioration and state of use of the existing equipment, there has been hardly any purchase of equipment since independence, and therefore a considerable number of years have passed since it was introduced. What is more, some of the equipment is suspect as to its reliability as equipment used in actual medical treatment. Therefore the policy is to replace it if it has deteriorated and is not operating properly to the extent that its original intended diagnostic and treatment activities function has seriously declined.

③ The concept of equipment plans should been formulated within the limitation of being able to cope on the basis of the present technical footing (in terms of physicians and technical personnel), but consideration is also given to introduction



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③ The concept of equipment plans should been formulated within the limitation of being able to cope on the basis of the present technical footing (in terms of physicians and technical personnel), but consideration is also given to introduction

of some new equipment in view of the fact that the hospital in question is the maternity, pediatric and newborn referral hospital.

④ As for the grade and other similar aspects of individual equipment, the equipment is to be selected taking into account the grade and similar aspects of the existing equipment, the need for full use of it to be made with the present personnel and technical level, the technical level of the hospital maintenance and control department and the manufacturers and their agencies, the purchase routes of consumables, etc.

(2) Local representatives

In Moldova, because there is no market, there are very few dealers handling the materials estimated to be involved in this planning. Furthermore, because organizational functioning is extremely weak, Moldova cannot avoid relying on neighboring Rumania and Ukraine. Some manufacturers in former Soviet Union member nations still operate under a policy of being supported by dealers in Moscow, making it necessary to take dealers in Russia into consideration.

Especially, Rumania has an active market, with numerous dealers which are functioning at an adequate level. Given the above considerations, materials and supplies are being planned which are available from dealers with the ability to provide maintenance control services, consumable items, and reagents in sufficient quantities.

(3) Procurement from third countries

There are no manufacturers of medical equipment such as electronic apparatus in Moldova. Most of the medical equipment used in the country was manufactured in the former Soviet Union or eastern European countries, but in recent years use has started to be made of western European equipment through aid and otherwise. In neighboring Ukraine and Rumania as well demand is shifting from low-reliability former Soviet Union and eastern European equipment to high-reliability western European equipment. That being the case, as a rule Japanese products will be procured in this project, but procurement from third-country (western European) manufacturers with a service system in Moldova and/or neighboring countries will also be considered regarding equipment requiring maintenance services and supply of consumables and reagents.

(4) Work schedule

Moldova is an inland country, and must use Constanta Port in neighboring

Rumania, or Odessa Port in Ukraine, to unload goods transported by sea. Moldova has good relations with both countries, but taking into consideration the rapidity of customs processing and the level of public pease and order, it was decided to use Constanta Port in Rumania, which offers comparatively fewer problems. Furthermore, due attention must be given to process control considering the fact that the equipment will have to go through customs in other countries as well as to the need to minimize interruption of hospital work and other adverse effects in view of the fact that this project involves bringing the equipment into existing facilities and installing it there.

2-3-2 Basic Design

Overall Plan

Target Facilities

The hospital for which assistance is required in this project is one resulting from integration of a mother and child health center and a pediatric hospital in May 1998. Since, however, the official designation, organizational chart, operating department personnel allocation, etc. of the new hospital are not clear, we have temporarily called it the Mother and Child Republican Hospital and designated the mother and child health center part as Clinic No. 1 and the pediatric hospital part as Clinic No. 2.

The hospital director was the director of the former mother and child health center, and the director of the former pediatric hospital has been appointed deputy director. Integration has taken place as a matter of form, but in reality it has still to be accomplished since the two parts are still being operated independently of each other as in the past.

Furthermore, in view of the fact that the two parts are geographically separated by a distance of about 10 kilometers and that they differ from each other in terms of diagnostic and treatment departments and content of diagnosis and treatment, we have made sure that there is no overlapping of departments after integration in considering what equipment should be provided on the basis of the require.

Requested Departments
Clinic No.1
1, Gynecology and obstetrics

Delivery Room,	Maternal ICU
Express Laboratory,	Premature Baby ICU,
Laboratory	Maternity Operation Theater,

Pathological Newborn

2, Pediatrics

Pediatric ICU	Surgical ICU
Operation Theater	Laboratory

3, Examination

Physiological Examination	Biochemistry
Bacteriology	Genetic
Pathology	

4, Other

Radiology	CSSD
Policlinic	

Clinic No.2

1, Examination

Functional Diagnostic	Laboratory

2, Pediatrics

ENT	Ophthalmology
Operation Theater	

3, Other

Radiology	Wards

Equipment Selection Criteria

Selection of the equipment has been made on the basis of the following criteria.

Range of Equipment

Equipment required for diagnostic and treatment activities at the Mother and Child Republican Hospital

- Items with noticeable consumption/deterioration rates, which require replacing, and which have been deemed appropriate
- Items which need to be replenished because of demand in diagnostic and treatment activities, and which have been deemed appropriate
- Items indispensable in diagnostic and treatment activities, and which need to be newly introduced and have been deemed appropriate

Grade specifications

1) Equipment which are indispensable and fundamental to diagnostic and treatment activities
2) Equipment which can be accommodated in established methods and technologies
3) Equipment with specifications appropriate to demand in terms of numbers of patients, numbers of tests, etc. in diagnostic and treatment activities
4) Equipment with specifications/configurations which enable maintenance control expenses to be kept to a minimum
5) Equipment for which maintenance control expenses can be borne adequately by Moldova

Basis for specifying quantities

1) As a guide, equipment for which more than ten years have elapsed since the equipment were introduced, which require replacing, in quantities appropriate for diagnostic and treatment activities
2) Existing equipment for which quantities are inadequate in terms of medical treatment demand
3) Coordination of quantities with other related equipment

(2) Equipment Plan

Clinic No. 1

(1) Delivery rooms

Analysis of current status

Regardless of the fact that numerous births of pathological newborns are being handled, materials and equipment such as delivery monitoring devices and equipment in Infant Care Units has broken down or is inadequate, or the delivery tables, suction units, newborn incubators and other devices necessary as basic materials for treatment show noticeable signs of deterioration. In addition, because there are no ultrasound scanners, it is difficult to ascertain and monitor fetal conditions.

Contents of planning

1) Equipment to be replaced or replenished

Infant Care Unit, weighing scale, laryngoscope set, infant resuscitation bag, delivery table, suction unit, vaginal specula, wheelchair, etc.
Planning includes replenishment of laryngoscopes and infant resuscitation bags as basic treatment equipment. Three delivery rooms were targeted by the study, so plans were tailored to include one Infant Care Unit and one set of weighing scales per delivery room. Also, five delivery tables are currently on hand, three of which are confirmed to show signs of aging or deterioration, so it was decided to replace those tables.

2) Newly introduced equipment

Ultrasound scanner, vacuum extractor, Doppler fetal detector, emergency cart
Because the technology of ultrasound scanners is established as diagnostic tools, and because these are useful in ascertaining and monitoring fetal conditions, plans include provision of one scanner.

(2) Pathological newborns

Analysis of current status

The objective here is intensive monitoring of pathological newborns following birth. Infant incubators, adult ventilators, Infant Care Units, Infusion pumps and other materials are currently available, but nearly all of the neonatal monitors, infant incubators, and other instruments show signs of aging or deterioration. Moreover, there is a shortage of instruments necessary for measuring bilirubin levels in critical-care newborns,

resuscitation of newborns, and other medical procedures.

Contents of planning

1) Equipment to be replaced or replenished

Infant incubator, syringe pump, bedside monitor, ultrasound scanner
Currently, there are six or eight infant incubators in four rooms (one to two incubators per room). Given the current operating condition of these instruments, it was decided to include four pulse oximeters, which measure oxygen saturation levels, and because specifications for neonatal monitors are being set up so that these instruments will be placed on monitor stands which can easily be moved from bed to bed, it was decided to limit the planned quantity to two. It was decided to upgrade three syringe pumps based on their existing operation status, and to add one more.

2) Newly introduced equipment

Heated humidifier, ultrasonic nebulizer
These are instruments which will be introduced as new equipment in the department, but because they are easy to use and maintenance and servicing control expenses are low, these are basic items which are frequently used in general medical treatment, and have been included in the planning for that reason.

(3) Maternity ICU

Analysis of current status

Mainly, intensive care and monitoring of mothers are carried out here after they have given birth. After supplies such as adult ventilators, bedside monitors and pulse oximeters have broken down, they remain unusable for long periods of time, and currently, the room is not functioning as an intensive care unit.

Contents of planning

1) Equipment to be replaced or replenished

Adult ventilator, laryngoscope set, bedside monitor, pulse oximeter

(4) Emergency examination rooms

Analysis of current status

Planning is focusing on two emergency examination rooms, located in the obstetrics diagnostics facilities and pediatric diagnostics facilities. Many of the instruments and other equipment in these rooms is showing signs of deterioration or

becoming obsolete, and hinders basic examination processing.

Contents of planning

1) Equipment to be replaced or replenished

Centrifuge, binocular microscope, hemoglobin meter, etc.

2) Newly introduced equipment

Bilirubin analyzer
These are being newly introduced in the department, but because they are easy to use, and maintenance and servicing control costs are low, they are basic items of equipment which are frequently used in general examinations as well, and have been included in the planning.

(5) Maternity operation theaters

Analysis of current status

Around 1,000 operations, consisting mainly of obstetrics and reproductive organ surgeries, are carried out annually, but instruments such as operating tables, suction units, anesthesia apparatuses, electrosurgical unit, and surgical operation sets are deteriorating and aging, making it impossible to provide the appropriate surgical procedures. In addition, around 500 operations involving laparoscopic procedures, such as the tying of fallopian tubes, are carried out annually. Because these are currently being handled using one set of surgical instruments, there is a long list of patients waiting for surgeries and other procedures.

Contents of planning

1) Equipment to be replaced or replenished

laryngoscope set, operating table, suction unit, anesthesia apparatus, electrosurgical unit, stretcher, bedside monitor, operating instrument set, small surgical instrument set, laparoscope
Laparoscope is currently used mainly in procedures such as tying off fallopian tubes, and because surgical methods have been established for these procedures, these instruments were included in the planning because they are currently showing signs of aging or deterioration.

(6) Premature baby ICU

Analysis of current status

The premature baby ICU is outfitted with essential instruments and equipment such as infant incubators, Infant Care Units, laser treatment units, adult ventilators, Infusion pumps, and other instruments, but other than incubators which have been upgraded through humanitarian aid projects, much of the equipment is aging and deteriorating, and breaks down frequently. In addition to infants born at the hospital, newborns are also accepted from other institutions, and instruments and equipment which can be used for intensive care and for monitoring in emergencies is a necessary category. According to 1997 statistics, 20 newborns are dying.

Contents of planning

1) Equipment to be replaced or replenished

Infant incubator, Infant Care Unit, weighing scale, laryngoscope set, infant resuscitation bag, bedside monitor, syringe pump, sphygmomanometer

2) Newly introduced equipment

Ultrasound scanner, heated humidifier, pulse oximeter

(7) Pediatric ICU

Analysis of current status

Currently existing equipment, including simple treatment rooms, is showing noticeable signs of aging and deterioration, making it impossible to provide sufficient intensive care and monitoring.

Contents of planning

1) Equipment to be replaced or replenished

Laryngoscope set, adult ventilator, syringe pump, weighing scale, sphygmomanometer

2) Newly introduced equipment

Heated humidifier, pulse oximeter
Planning includes three pulse oximeters, to supplement existing equipment.

(8) Physiological examination rooms

Analysis of current status

Because of aging and deterioration of current equipment, the number of examinations and diagnoses being conducted is dropping from year to year. For most instruments, 15 years have elapsed since the instruments were first installed, and it has

become difficult to procure repair parts and related consumable items.

Contents of planning

1) Equipment to be replaced or replenished

Spirometer, electrocardiograph, ultrasound scanner, gastrointestinal fiberscopes (for upper and lower intestinal examinations), rigid rectoscope, bronchoscope, cystoscope, endoscope storage cabinet

2) Newly introduced equipment

Evoked potential measuring system, endoscope washer, endoscopic TV system
Endoscopic TV system, in addition to being used for diagnostic purposes, is used as teaching materials, and one system has been included in the planning.

(9) Operating theaters for pediatrics

Analysis of current status

There are five operating theaters making up the central operating division, but the operating tables, operating light, electrosurgical units, suction units, anesthesia apparatus, and other main instruments are aging and/or obsolete, and interfere with the ability to carry out surgery safely. In addition, most instruments in the operating instrument sets are old and deteriorating, and interfere with the ability to provide safe surgical procedures.

Contents of planning

1) Equipment to be replaced or replenished

Operating table, operating light, electrosurgical unit, suction unit, anesthesia apparatus, bedside monitor, surgical instrument set

(10) Surgical ICU

Analysis of current status

Because existing equipment is showing signs of aging and deterioration, it is inevitable to some extent that monitoring of patients is left to haphazard monitoring by physicians, and ongoing monitoring is problematic.

Content of planning

1) Equipment to be replaced or replenished

Bedside monitor, laryngoscope, syringe pump, infant incubator
Because neonatal monitors (one central monitor and three bedside monitors) have been installed on credit extended by Germany, planning is limited to replace of two monitors.

2) Newly introduced equipment

Pulse oximeter
These will be supplemented for bedside monitor.

(11) Laboratories

(Laboratories, biochemistry laboratories, bacteriology laboratories, genetics division, pathology division)

Analysis of current state

In general, equipment exists, but most of it is older and in deteriorated condition. This can be said generally for all laboratories and divisions. Requests have been made for aging and deteriorated equipment to be replaced and for automated testing instruments to be introduced.

Contents of planning

Laboratories

1) Equipment to be replaced or replenished

Hemoglobin meter, centrifuge (hematocrit), binocular microscope, water bath

Biochemistry laboratories

1) Equipment to be replaced or replenished

Spectrophotometer, table top centrifuge, pH meter, analytical balance, refrigerator, binocular microscope, water bath

2) Newly introduced equipment

Centrifuge (hematocrit), pipette washer

Bacteriology laboratories

In terms of organizational structure, these laboratories come under the jurisdiction of the microbiology division. Many of the materials and instruments targeted by this plan were given a B or C priority ranking, but based on later studies, it became clear that the equipment was aged and deteriorating

1) Equipment to be replaced or replenished

Refrigerator, fluorescence microscope, binocular microscope, water distiller, hot air

sterilizer
Subsequent to issuing of the minutes, it was decided that water distillers are a medium used in testing of gram stains, urine, blood, stool, and other elements, and were included in the planning once the necessity and appropriateness of being included were determined.

2) Newly introduced equipment

pH meter

Genetics division

1) Equipment to be replaced or replenished

Inverted microscope, binocular microscope, freezer (-85$_o$C), CO2 incubator, ultrasound scanner, micro-pipette set
No notations were made in the minutes concerning ultrasound scanner, but based on later studies involving the usage status of existing equipment and the state of aging or deterioration, and in view of the fact that hereditary abnormalities are numerous at the Mother and Child Republican Hospital in Moldova, it was decided to include the upgrade of one unit in the planning, after confirming the appropriateness of such planning.

Pathology division

1) Equipment to be replaced or replenished

Autopsy instrument set, freezing microtome, binocular microscope

(12) Radiology

Analysis of current status

Between 150 and 200 X-ray films are being processed per day. Because the number of films processed is increasing, and because of other factors, it is necessary to consider improving the environment in which those engaged in radiology are working.

Contents of planning

1) Equipment to be replaced or replenished

Film processors
Materials and equipment relating to radiology are provided through credit extended by Germany, and the need is to consider a transition to automatic developing equipment. Given the current number of films being processed, and taking into account the anticipated increase in the number of films, new equipment was installed on a trial basis,

and confirmation was obtained that developing fluid can be procured from dealers of the manufacturers, with little difference between the price of developing fluid and fixative used in the current manual methods and those used for automatic developing, and that a system is in place for retrieving developing fluid. Through these means, the appropriateness of the equipment was ascertained, and one unit has been included in the planning.

(13) CSSD

Analysis of current state

There are three high-pressure steam sterilizers which were installed at the time that the hospital was established (1981). One of these eventually broke down, and because parts could not be procured, has remained unrepaired. The other two break down frequently, interfering with the work. Electricity costs are expected to rise because of advancing aging of the equipment and because the models have become obsolete.

Contents of planning

1) Equipment to be replaced or replenished

High-pressure steam sterilizer
Plans include upgrading of two units. This quantity was confirmed as appropriate, based on the current volume of processing.

(14) Policlinic

Analysis of current state

Most of the current instruments were introduced 10 to 15 years ago. For some of the equipment, even if it could be repaired, parts can no longer be procured, and the equipment does not contribute sufficiently to testing and diagnosis. Many policlinic patients come from faraway places, and in some cases are forced to return home without undergoing examinations or diagnosis. The state of the equipment is posing an obstacle in providing satisfactory treatment and service to policlinic patients.

Contents of planning

1)Equipment to be replaced or replenished

Electrocardiograph, electroencephalograph, ultrasound scanner, audiometer, spirometer, ophthalmoscope, trial lens set, colposcope
There was a request for colposcopes for use in the delivery rooms, but based on studies done subsequent to the minutes, it was decided that replacing of existing equipment

currently being used in gynecological examinations in the policlinic department would be appropriate.

Clinic No. 2

(1) Laboratories

Analysis of current state

Like Clinic No. 1, aging and deterioration of existing materials and equipment is resulting in a gradual decline in the number of tests being processed each year. Most of the equipment was installed approximately 15 years ago, making it problematic to obtain replacement parts.

Contents of planning

1) Equipment to be replaced or replenished/

Spectrophotometer, pH meter, centrifuge (hematocrit), table top centrifuge, incubator, autoclave, water bath, hemoglobin meter, blood cell counter, automatic dispenser, micro-pipette set, hot air sterilizer, water distiller, analytical balance

3) Newly introduced equipment

Pipette washer, hemoglobin meter

(2) Physiological examination rooms

Analysis of current state

Aging and deterioration of existing materials and equipment is causing a gradual decline in the number of tests and diagnoses from year to year.

Contents of planning

1) Equipment to be replaced or replenished

3-channel electrocardiograph, portable electrocardiograph, ultrasound scanner, fiberscopes (gastrointestinal), instrument cabinet

(3) ENT and Ophthalmology

Analysis of current state

This is the only institution in Moldova which is equipped for pediatric ophthalmology and ENT care. However, because these fields involve special diagnostic procedures, and because of improvements being made in general mother and child diagnostic services, low priority rankings have been assigned to these areas. Much of the

equipment is aging and deteriorating, but the hospital does possess most of the basic necessary equipment. Materials and equipment targeted for improvement planning in both divisions were limited to surgical instrument sets and other supplies for which maintenance control costs are low, or materials which are deemed completely unnecessary.

Contents of planning

ENT

1) Equipment to be replaced or replenished

Suction unit, diagnostic set, tonsillectomy set, tracheotomy instrument set, esophageal speculum for children, bronchoscope, Bruening bronchoscope and esophagoscopy forceps, operating microscope

Ophthalmology

1) Equipment to be replaced or replenished

Slit lamp microscope, trial lens set, hand-held mirror, skiascopy set (vision and astigmatism testing), synoptiscope (used in diagnosis of strabismus, testing of the visual functions of both eyes, and training), operating microscope, ophthalmology treatment set, stretcher, ophthalmoscope, chart projector

2) Newly introduced equipment

Magnetic equipment

(5) Operating theaters

Analysis of current status

In all equipment ranging from the primary equipment used in the five operating theaters to operating instrument sets, there is noticeable aging and deterioration, and the state of the equipment is beginning to interfere with the safety of surgical procedures.

Contents of planning

1) Equipment to be replaced or replenished

Operating instrument set, tracheotomy instrument set, operating table, electrosurgical unit, operating light (portable), suction unit, autoclave, instrument cabinet, laryngoscope, stretcher

(6) Radiology

Analysis of current status

There is a shortage of items such as protective gloves for x-ray technicians, protective aprons, and film cassettes, and the state of the equipment is posing problems in imaging operations.

Contents of planning

1) Equipment to be replaced or replenished

Protective apron, film cassette, film processor, x-ray film illuminator, etc.

(7) Wards

Analysis of current status

There is a shortage of basic equipment necessary for medical services, and there is noticeable aging and deterioration of much of the equipment.

Contents of planning

1) Equipment to be replaced or replenished

Treatment table, lumbar puncture instrument set, examining couch, medicine cabinet, instrument cabinet, syringe pump,

The details of such content of the project are indicated in Table 2, "Process of Consideration of the Equipment and List of the Equipment Included in the Project," prepared on the basis of 2.3.1, " Design concept."

The final result has been inclusion in the project of a total of 252 items of equipment (144 for Clinic No. 1 and 108 for Clinic No. 2) versus the 533 items requested.

A*: Equipment which will be included in the Grant Aid

1. Replacement of the equipment which is used in daily therapeutic and diagnostic activities but aged and in poor condition.
2. Supplement of the equipment whose necessity can be justified by the expansion of the therapeutic and diagnostic activities.
3. Equipment of which needs and appropriateness concerning therapeutic and diagnostic activities (the number of patients, the number of the specimen) are fully confirmed.
4. Equipment of which operation and maintenance cost is affordable by the Moldavian side.
5. Equipment which can be dealt with easier and established technologies.
6. Equipment which is to be effectively applied to many patients.
7. Equipment of which cost performance is high.
8. Equipment of which medical usefulness has already established.

B*: which will be excluded in the Grant Aid

1. Equipment of which maintenance is troublesome technically and financially.
2. Consumables.
3. Equipment of which spare parts and consumables is difficult to purchase in Moldova.
4. Equipment of which number is over a minimum of necessity (duplicates and/or inefficiency).
5. Equipment which requests a big renovation of infrastructure such as water, electricity and drainage.
6. Equipment of which effectiveness is limited.
7. Equipment of which cost performance is low.
8. Equipment of which exists easily alternative one.
9. Equipment which uses materials which may cause environmental problem, such as Freon pollution, sewage, exposition to radioactive and waste disposal.
10. Equipment for scientific research.
11. Equipment which is overlapped with other department/section.

AA: Replacement BB: Supplement CC: New

Basic Design Study					Examination Process						Final	Contents			Final List		
Item No.		Name of Equipment	Q'ty	Priority	A*			B*			Q'ty	AA	BB	CC	Item No.		Name of Equipment
LR		Delivery Room															Delivery Room
LR	1	Cardio Tocograph	2	A	1						2	2			DR	1	Cardio Tocograph
LR	2	Infant Care Unit	5	A	1						3	2	1		DR	2	Infant Care Unit
LR	3	Weighing Scale, Baby	5	A	1						3	2	1		DR	3	Weighing Scale, Baby
LR	4	Ultrasound Scanner	1	B	2	3	4				1			1	DR	4	Ultrasound Scanner
LR	5	Laryngoscope Set for Infant and Adult	2	A	2	3	5				2		2		DR	5	Laryngoscope Set for Infant and Adult
LR	6	Infant Resusciation Bag	4	A	2	3	5				4		4		DR	6	Infant Resusciation Bag
LR	7	Delivery Table	5	B	1						3	3			DR	7	Delivery Table
LR	8	Vacuum Extractor	2	A	2	3	4				2			2	DR	8	Vacuum Extractor
LR	9	Suction Unit	2	B	1						3	3			DR	9	Suction Unit
LR	10	Portable Doppler Fetal Detector	2	A	2	3	4				2			2	DR	10	Doppler Fetal Detector
LR	11	Colposcope	1	B				11									
LR	12	Vaginal Speculum, Cusco	20	A	1						20	20			DR	11	Vaginal Speculum, Cusco
LR	13	Head Washing Unit	-	C													
LR	14	Wheel Chair	5	B	1	2	3				2	1	1		DR	12	Wheel Chair
LR	15	Emergency Cart	1	B	2	3					1			1	DR	13	Emergency Cart
LR	16	Bedpan Washer	-	C													
LR	17	Immuno Fluorescence Analyzer	-	C													
RA		Pathological Newborn															Pathological Newborn
RA	1	Infant Incubator	2	A	1						2	2			PN	1	Infant Incubator
RA	2	Infant Transport Incubator	-	C													
RA	3	Infant Care Unit	2	B				4									
RA	4	Phototherapy Unit	3	B				1	4								
RA	5	Bilirubin Meter, Transcutanous	1	B				1									
RA	6	Heated Humidifier	2	A	2	3	4				2			2	PN	2	Heated Humidifier

A*: Equipment which will be included in the Grant Aid

1. Replacement of the equipment which is used in daily therapeutic and diagnostic activities but aged and in poor condition.
2. Supplement of the equipment whose necessity can be justified by the expansion of the therapeutic and diagnostic activities.
3. Equipment of which needs and appropriateness concerning therapeutic and diagnostic activities (the number of patients, the number of the specimen) are fully confirmed.
4. Equipment of which operation and maintenance cost is affordable by the Moldavian side.
5. Equipment which can be dealt with easier and established technologies.
6. Equipment which is to be effectively applied to many patients.
7. Equipment of which cost performance is high.
8. Equipment of which medical usefulness has already established.

B*: which will be excluded in the Grant Aid

1. Equipment of which maintenance is troublesome technically and financially.
2. Consumables.
3. Equipment of which spare parts and consumables is difficult to purchase in Moldova.
4. Equipment of which number is over a minimum of necessity (duplicates and/or inefficiency).
5. Equipment which requests a big renovation of infrastructure such as water, electricity and drainage.
6. Equipment of which effectiveness is limited.
7. Equipment of which cost performance is low.
8. Equipment of which exists easily alternative one.
9. Equipment which uses materials which may cause environmental problem, such as Freon pollution, sewage, exposition to radioactive and waste disposal.
10. Equipment for scientific research.
11. Equipment which is overlapped with other department/section.

AA: Replacement BB: Supplement CC: New

Basic Design Study					Examination Process						Final	Contents			Final List		
Item No.		Name of Equipment	Q'ty	Priority	A*			B*			Q'ty	AA	BB	CC	Item No.		Name of Equipment
LR		Delivery Room															Delivery Room
LR	1	Cardio Tocograph	2	A	1						2	2			DR	1	Cardio Tocograph
LR	2	Infant Care Unit	5	A	1						3	2	1		DR	2	Infant Care Unit
LR	3	Weighing Scale, Baby	5	A	1						3	2	1		DR	3	Weighing Scale, Baby
LR	4	Ultrasound Scanner	1	B	2	3	4				1			1	DR	4	Ultrasound Scanner
LR	5	Laryngoscope Set for Infant and Adult	2	A	2	3	5				2		2		DR	5	Laryngoscope Set for Infant and Adult
LR	6	Infant Resusciation Bag	4	A	2	3	5				4		4		DR	6	Infant Resusciation Bag
LR	7	Delivery Table	5	B	1						3	3			DR	7	Delivery Table
LR	8	Vacuum Extractor	2	A	2	3	4				2			2	DR	8	Vacuum Extractor
LR	9	Suction Unit	2	B	1						3	3			DR	9	Suction Unit
LR	10	Portable Doppler Fetal Detector	2	A	2	3	4				2			2	DR	10	Doppler Fetal Detector
LR	11	Colposcope	1	B				11									
LR	12	Vaginal Speculum, Cusco	20	A	1						20	20			DR	11	Vaginal Speculum, Cusco
LR	13	Head Washing Unit	-	C													
LR	14	Wheel Chair	5	B	1	2	3				2	1	1		DR	12	Wheel Chair
LR	15	Emergency Cart	1	B	2	3					1			1	DR	13	Emergency Cart
LR	16	Bedpan Washer	-	C													
LR	17	Immuno Fluorescence Analyzer	-	C													
RA		Pathological Newborn															Pathological Newborn
RA	1	Infant Incubator	2	A	1						2	2			PN	1	Infant Incubator
RA	2	Infant Transport Incubator	-	C													
RA	3	Infant Care Unit	2	B				4									
RA	4	Phototherapy Unit	3	B				1	4								
RA	5	Bilirubin Meter, Transcutanous	1	B				1									
RA	6	Heated Humidifier	2	A	2	3	4				2			2	PN	2	Heated Humidifier

Basic Design Study					Examination Process						Final	Contents			Final List		
Item No.		Name of Equipment	Q'ty	Priority	A*			B*			Q'ty	AA	BB	CC	Item No.		Name of Equipment
RA	7	Weighing Scale, Baby	4	A	1	2					4	2	2		PN	3	Weighing Scale, Baby
RA	8	Laryngoscope Set for Infant	1	A	2	3	4				1		1		PN	4	Laryngoscope Set for Inant
RA	9	Resuscitator for Neonate and Infant	-	C													
RA	10	Infant Resuscitation Bag	2	B	1	3					2	2			PN	5	Infant Resusciation Bag
RA	11	Oxygen Monitor	2	B	2	3	4				2			2	PN	6	Oxygen Monitor
RA	12	Head Box	2	A				4									
RA	13	Infant Bassinet Stand with Mattress	10	B	1			4									
RA	14	Syringe Pump	6	A	1	2	3				4	3	1		PN	7	Syringe Pump
RA	15	Infusion Pump	-	C													
RA	16	Ventilator, Infant	2	B				1	4								
RA	17	Monitor, Neonatal	6	A	1	3					2	2			PN	8	Monitor, Neonatal
RA	18	Ultrasonic Nebulizer	2	A	2	3	4				2			2	PN	9	Ultrasonic Nebulizer
RA	19	Ultrasound Scanner, Portable	1	A	1	3					1	1			PN	10	Ultrasound Scanner, Portable
RA	20	Pulse oximeter	3	A	2	3	4				4		4		PN	11	Pulse Oximeter
RA	21	Monitor, Transcutanous	-	C													
RA	22	Infant Incubator, Critical Care Set	1	A				11									
P		Maternal ICU															Maternal ICU
P	1	Ventilator, Adult	1	B	1						1	1			MI	1	Ventilator, Adult
P	2	Laryngoscope Set for Adult	1	B	1						1	1			MI	2	Laryngoscope Set for Adult
P	3	Monitor, Bedside	2	A	1						2	2			MI	3	Monitor, Bedside
P	4	Defibrillator	-	C													
P	5	Infusion Pump	-	C													
P	6	Pulse Oximeter	2	A	1	2	3				2	1	1		MI	4	Pulse Oximeter
EL		Express Laboratory															Express Laboratory
EL	1	Centrifuge, Hematocrit	1	A	1						2	2			EL	1	Centrifuge, Hematocrit
EL	2	Blood Gas Analyzer	1	A	1	3		1	3		1				EL	2	Blood Gas Analyzer
EL	3	Electrolyte Analyzer	-	C													
EL	4	Microscope, Binocular	1	A	1						4	4			EL	3	Microscope, Binocular
EL	5	Hemometer	1	A	2						2		2		EL	4	Hemometer
EL	6	Blood Cell Counter	1	B				1									
EL	7	Coagulometer	1	B				1									
EL	8	Glucose Analyzer	1	B				1									
EL	9	Bilirubin Analyzer	1	B	2	3	4				2			2	EL	5	Bilirubin Analyzer
EL	10	Mobile X-ray Unit	1	B				1	4								
MO		Maternity Operation Theater															Maternity Operation Theater
MO	1	Operating Table	3	B	1						3	3			MO	1	Operating Table
MO	2	Suction Unit	3	B	1						3	3			MO	2	Suction Unit
MO	3	Anesthesia Apparatus with Ventilator	-	C													
MO	4	Anesthesia Apparatus	2	A	1						1	1			MO	3	Anesthesia Apparatus
MO	5	Endotracheal Set	2	B													
MO	6	Electrosurgical Unit	2	A	1						3	2	1		MO	4	Electrosurgical Unit

Basic Design Study					Examination Process						Final	Contents			Final List		
Item No.		Name of Equipment	Q'ty	Priority	A*			B*			Q'ty	AA	BB	CC	Item No.		Name of Equipment
RA	7	Weighing Scale, Baby	4	A	1	2					4	2	2		PN	3	Weighing Scale, Baby
RA	8	Laryngoscope Set for Infant	1	A	2	3	4				1		1		PN	4	Laryngoscope Set for Inant
RA	9	Resuscitator for Neonate and Infant	-	C													
RA	10	Infant Resuscitation Bag	2	B	1	3					2	2			PN	5	Infant Resusciation Bag
RA	11	Oxygen Monitor	2	B	2	3	4				2			2	PN	6	Oxygen Monitor
RA	12	Head Box	2	A				4									
RA	13	Infant Bassinet Stand with Mattress	10	B	1			4									
RA	14	Syringe Pump	6	A	1	2	3				4	3	1		PN	7	Syringe Pump
RA	15	Infusion Pump	-	C													
RA	16	Ventilator, Infant	2	B				1	4								
RA	17	Monitor, Neonatal	6	A	1	3					2	2			PN	8	Monitor, Neonatal
RA	18	Ultrasonic Nebulizer	2	A	2	3	4				2			2	PN	9	Ultrasonic Nebulizer
RA	19	Ultrasound Scanner, Portable	1	A	1	3					1	1			PN	10	Ultrasound Scanner, Portable
RA	20	Pulse oximeter	3	A	2	3	4				4		4		PN	11	Pulse Oximeter
RA	21	Monitor, Transcutanous	-	C													
RA	22	Infant Incubator, Critical Care Set	1	A				11									
P		Maternal ICU															Maternal ICU
P	1	Ventilator, Adult	1	B	1						1	1			MI	1	Ventilator, Adult
P	2	Laryngoscope Set for Adult	1	B	1						1	1			MI	2	Laryngoscope Set for Adult
P	3	Monitor, Bedside	2	A	1						2	2			MI	3	Monitor, Bedside
P	4	Defibrillator	-	C													
P	5	Infusion Pump	-	C													
P	6	Pulse Oximeter	2	A	1	2	3				2	1	1		MI	4	Pulse Oximeter
EL		Express Laboratory															Express Laboratory
EL	1	Centrifuge, Hematocrit	1	A	1						2	2			EL	1	Centrifuge, Hematocrit
EL	2	Blood Gas Analyzer	1	A	1	3		1	3		1				EL	2	Blood Gas Analyzer
EL	3	Electrolyte Analyzer	-	C													
EL	4	Microscope, Binocular	1	A	1						4	4			EL	3	Microscope, Binocular
EL	5	Hemometer	1	A	2						2		2		EL	4	Hemometer
EL	6	Blood Cell Counter	1	B				1									
EL	7	Coagulometer	1	B				1									
EL	8	Glucose Analyzer	1	B				1									
EL	9	Bilirubin Analyzer	1	B	2	3	4				2			2	EL	5	Bilirubin Analyzer
EL	10	Mobile X-ray Unit	1	B				1	4								
MO		Maternity Operation Theater															Maternity Operation Theater
MO	1	Operating Table	3	B	1						3	3			MO	1	Operating Table
MO	2	Suction Unit	3	B	1						3	3			MO	2	Suction Unit
MO	3	Anesthesia Apparatus with Ventilator	-	C													
MO	4	Anesthesia Apparatus	2	A	1						1	1			MO	3	Anesthesia Apparatus
MO	5	Endotracheal Set	2	B													
MO	6	Electrosurgical Unit	2	A	1						3	2	1		MO	4	Electrosurgical Unit

Basic Design Study					Examnation Process						Final	Contents			Final List		
Item No.		Name of Equipment	Q'ty	Priority	A*			B*			Q'ty	AA	BB	CC	Item No.		Name of Equipment
MO	7	Stretcher	2	B	2	3					2		2		MO	5	Stretcher
MO	8	Anesthetic Table	2	B				4									
MO	9	Instrument Cabinet	-	C													
MO	10	Instrement Stand	-	C													
MO	11	Monitor, Bedside	1	A	1						1	1			MO	6	Monitor, Bedside
MO	12	Defibrillator	-	C													
MO	13	Refrigerator, Blood Bank	-	C													
MO	14	Operating Instrument Set for OB. and GY.	2	A	1						3	3			MO	7	Operating Instrument Set for OB. and GY.
MO	15	Small Operating Instrument Set	1	A	1						3	3			MO	8	Small Operating Instrument Set
MO	16	Laparoscope with TV and VTR	1	B	1						1	1			MO	9	Laparoscope with TV and VTR
G		Gynecology															Gynecology
G	1	Cryosurgery System for Gynecology	-	C													
G	2	Kymographic Hydrotubator	-	C													
G	3	Gynecological Examining Unit	-	C													
PR		Premature Baby ICU (with Express Laboratory)															Premature Baby ICU
PR	1	Infant Incubator	3	A	1						3	3			PB	1	Infant Incubator
PR	2	Infant Transport Incubator	-	C													
PR	3	Infant Care Unit	2	B	1						2	2			PB	2	Infant Care Unit
PR	4	Phototherapy Unit	2	B				1	3								
PR	5	Weighing Scale, Baby	3	A	1						2	2			PB	3	Weighing Scale, Baby
PR	6	Laryngoscope Set for Infant	1	A	2	3					1		1		PB	4	Laryngoscope Set for Infant
PR	7	Infant Resuscitation Bag	1	B	2	3					1		1		PB	5	Infant Resusciation Bag
PR	8	Oxygen Monitor	1	B	2	3	4				1			1	PB	6	Oxygen Monitor
PR	9	Head Box	-	C													
PR	10	Monitor, Neonatal	6	A	2	3	4				2		2		PB	7	Monitor, Neonatal
PR	11	Ultrasound Scanner, Portable	1	B	2	3	4				1			1	PB	8	Ultrasound Scanner, Portable
PR	12	Ultrasonic Nebulizer	4	A	2	3					2			2	PB	9	Ultrasonic Nebulizer
PR	13	Ventilator, Infant	2	B				1	4								
PR	14	Syringe Pump	5	A	1						5	5			PB	10	Syringe Pump
PR	15	Infant Bassinet Stand with Mattress	10	B				4									
PR	16	Blood Gas Analyzer	1	A				1									
PR	17	Hemoglobinmeter	1	B				1									
PR	18	Glucose Analyzer	1	B				1									
PR	19	Bilirubin Analyzer	1	B				1									
PR	20	Centrifuge, Hematocrit	1	B				4									
PR	21	Mobile X-ray Unit	1	B				4									
PR	22	Pulse Oximeter	3	A	2	3					3			3	PB	11	Pulse Oximeter
PR	23	Sphygmomanometer, Electric for Neonate	2	A				4			2	1	1		PB	12	Sphygmomanometer, Electric for Neonate
PR	24	Monitor, Transcutan	-	C													
PR	25	Infant Incubator, Critical Care	-	C													
PH		Pediatric ICU															Pediatric ICU

Basic Design Study					Examnation Process						Final	Contents			Final List		
Item No.		Name of Equipment	Q'ty	Priority	A*			B*			Q'ty	AA	BB	CC	Item No.		Name of Equipment
MO	7	Stretcher	2	B	2	3					2		2		MO	5	Stretcher
MO	8	Anesthetic Table	2	B				4									
MO	9	Instrument Cabinet	-	C													
MO	10	Instrement Stand	-	C													
MO	11	Monitor, Bedside	1	A	1						1	1			MO	6	Monitor, Bedside
MO	12	Defibrillator	-	C													
MO	13	Refrigerator, Blood Bank	-	C													
MO	14	Operating Instrument Set for OB. and GY.	2	A	1						3	3			MO	7	Operating Instrument Set for OB. and GY.
MO	15	Small Operating Instrument Set	1	A	1						3	3			MO	8	Small Operating Instrument Set
MO	16	Laparoscope with TV and VTR	1	B	1						1	1			MO	9	Laparoscope with TV and VTR
G		Gynecology															Gynecology
G	1	Cryosurgery System for Gynecology	-	C													
G	2	Kymographic Hydrotubator	-	C													
G	3	Gynecological Examining Unit	-	C													
PR		Premature Baby ICU (with Express Laboratory)															Premature Baby ICU
PR	1	Infant Incubator	3	A	1						3	3			PB	1	Infant Incubator
PR	2	Infant Transport Incubator	-	C													
PR	3	Infant Care Unit	2	B	1						2	2			PB	2	Infant Care Unit
PR	4	Phototherapy Unit	2	B				1	3								
PR	5	Weighing Scale, Baby	3	A	1						2	2			PB	3	Weighing Scale, Baby
PR	6	Laryngoscope Set for Infant	1	A	2	3					1		1		PB	4	Laryngoscope Set for Infant
PR	7	Infant Resuscitation Bag	1	B	2	3					1		1		PB	5	Infant Resusciation Bag
PR	8	Oxygen Monitor	1	B	2	3	4				1			1	PB	6	Oxygen Monitor
PR	9	Head Box	-	C													
PR	10	Monitor, Neonatal	6	A	2	3	4				2		2		PB	7	Monitor, Neonatal
PR	11	Ultrasound Scanner, Portable	1	B	2	3	4				1			1	PB	8	Ultrasound Scanner, Portable
PR	12	Ultrasonic Nebulizer	4	A	2	3					2			2	PB	9	Ultrasonic Nebulizer
PR	13	Ventilator, Infant	2	B				1	4								
PR	14	Syringe Pump	5	A	1						5	5			PB	10	Syringe Pump
PR	15	Infant Bassinet Stand with Mattress	10	B				4									
PR	16	Blood Gas Analyzer	1	A				1									
PR	17	Hemoglobinmeter	1	B				1									
PR	18	Glucose Analyzer	1	B				1									
PR	19	Bilirubin Analyzer	1	B				1									
PR	20	Centrifuge, Hematocrit	1	B				4									
PR	21	Mobile X-ray Unit	1	B				4									
PR	22	Pulse Oximeter	3	A	2	3					3			3	PB	11	Pulse Oximeter
PR	23	Sphygmomanometer, Electric for Neonate	2	A				4			2	1	1		PB	12	Sphygmomanometer, Electric for Neonate
PR	24	Monitor, Transcutan	-	C													
PR	25	Infant Incubator, Critical Care	-	C													
PH		Pediatric ICU															Pediatric ICU

Basic Design Study					Examnation Process						Final	Contents			Final List		
Item No.		Name of Equipment	Q'ty	Priority	A*			B*			Q'ty	AA	BB	CC	Item No.		Name of Equipment
PH	1	Monitor, Bedside	-	C													
PH	2	Laryngoscope Set for Infant and Adult	2	A	2	3					2		2		PI	1	Laryngoscope Set for Infant and Adult
PH	3	Infant Resuscitation Set	-	C													
PH	4	Ventilator, Pediatric	2	B	1						1	1			PI	2	Ventilator, Pediatric
PH	5	Syringe Pump	5	A	1	2					3	3	2		PI	3	Syringe Pump
PH	6	Infusion Pump	-	C													
PH	7	Ultrasonic Nebulizer	4	A	2	3	4				2			2	PI	4	Ultrasonic Nebulizer
PH	8	Weighing Scale, Pediatric, Digital	-	C													
PH	9	Weighing Scale, Pediatric	1	B	1						1	1			PI	5	Weighing Scale, Pediatric
PH	10	Resuscitator for Neonate and Infant	-	C													
PH	11	Oxygen Tent	-	C													
PH	12	Mobile X-ray Unit	-	C													
PH	13	Sphygmomanometer, Electric for Pediatric	-	C													
PH	14	Sphygmomanometer, Electric for Neonate & Pediatric	1	A	1						2	1	1		PI	6	Sphygmomanometer, Electric for Neonate & Pediatric
PH	15	Lumber Puncture Instrument Set	-	C													
PH	16	Pulse Oximeter	3	A	2	3					3			3	PI	7	Pulse Oximeter
PH	17	Blood Gas Analyzer	1	B				1									
PE		Physiological Examination															Physiological Examination
PE	1	Spirometer, Auto	1	B	1						1	1			PE	1	Spirometer, Auto
PE	2	Electrocardiograph, 6 channel	1	A	1						1	1			PE	2	Electrocardiograph, 6 channel
PE	3	Electrocardiograph Analyzer	1	B				4									
PE	4	Stress Test System	1	B				4									
PE	5	Evoked Potential Measuring System	1	A	2	3	4				1			1	PE	3	Evoked Potential Measuring System
PE	6	Electroencephalograph, 24-ch	-	C													
PE	7	Ultrasound Scanner, Multipurpose	1	A	1						1	1			PE	4	Ultrasound Scanner, Multipurpose
PE	8	Fiberscope, Gastrointestinal with Light Source for Child	1	B	1						1	1			PE	5	Fiberscope, Gastrointestinal with Light Source for Child
PE	9	Fiberscope, Gastrointestinal with Light Source for Adult	1	A	1						1	1			PE	6	Fiberscope, Gastrointestinal with Light Source for Adult
PE	10	Fiberscope, Colono with Light Source	1	A	1						1	1			PE	7	Fiberscope, Colono with Light Source for Adult
PE	11	Rectoscope with Light Source, Rigid Type	1	B	1						1	1			PE	8	Rectoscope with Light Source, Rigid Type, Rigid Type
PE	12	Bronchoscope with Light Source, Rigid Type	1	A	1						1	1			PE	9	Bronchoscope with Light Source, Rigid Type
PE	13	Endoscope Table	2	B				4									
PE	14	Endoscope Cabinet	2	A	1						2	2			PE	10	Endoscope Cabinet
PE	15	Endoscope Suction Unit	2	A				4									
PE	16	Lecturescope	-	C													
PE	17	Fiberscope Cleaning Machine	1	A	2	3					1			1	PE	11	Fiberscope Cleaning Machine
PE	18	Cyto-Urethroscope, Infant	1	B	1						1	1			PE	12	Cysto-Urethroscope, Infant
PE	19	Fiberscope, Gastrointestinal with Light Source	-	C													
PE	20	Fiberscope, Gastrointestinal with Light Source	-	C													
PE	21	Endoscope TV System	1	B	2	3	4				1			1	PE	13	Endoscope TV System
PE	22	Endoscopic Carriage	1	B				4									
PE	23	Endoscopic Film Projector	-	C													

Basic Design Study					Examnation Process						Final	Contents			Final List		
Item No.		Name of Equipment	Q'ty	Priority	A*			B*			Q'ty	AA	BB	CC	Item No.		Name of Equipment
PH	1	Monitor, Bedside	-	C													
PH	2	Laryngoscope Set for Infant and Adult	2	A	2	3					2		2		PI	1	Laryngoscope Set for Infant and Adult
PH	3	Infant Resuscitation Set	-	C													
PH	4	Ventilator, Pediatric	2	B	1						1	1			PI	2	Ventilator, Pediatric
PH	5	Syringe Pump	5	A	1	2					5	3	2		PI	3	Syringe Pump
PH	6	Infusion Pump	-	C													
PH	7	Ultrasonic Nebulizer	4	A	2	3	4				2			2	PI	4	Ultrasonic Nebulizer
PH	8	Weighing Scale, Pediatric, Digital	-	C													
PH	9	Weighing Scale, Pediatric	1	B	1						1	1			PI	5	Weighing Scale, Pediatric
PH	10	Resuscitator for Neonate and Infant	-	C													
PH	11	Oxygen Tent	-	C													
PH	12	Mobile X-ray Unit	-	C													
PH	13	Sphygmomanometer, Electric for Pediatric	-	C													
PH	14	Sphygmomanometer, Electric for Neonate & Pediatric	1	A	1						2	1	1		PI	6	Sphygmomanometer, Electric for Neonate & Pediatric
PH	15	Lumber Puncture Instrument Set	-	C													
PH	16	Pulse Oximeter	3	A	2	3					3			3	PI	7	Pulse Oximeter
PH	17	Blood Gas Analyzer	1	B				1									
PE		Physiological Examination															Physiological Examination
PE	1	Spirometer, Auto	1	B	1						1	1			PE	1	Spirometer, Auto
PE	2	Electrocardiograph, 6 channel	1	A	1						1	1			PE	2	Electrocardiograph, 6 channel
PE	3	Electrocardiograph Analyzer	1	B				4									
PE	4	Stress Test System	1	B				4									
PE	5	Evoked Potential Measuring System	1	A	2	3	4				1			1	PE	3	Evoked Potential Measuring System
PE	6	Electroencephalograph, 24-ch	-	C													
PE	7	Ultrasound Scanner, Multipurpose	1	A	1						1	1			PE	4	Ultrasound Scanner, Multipurpose
PE	8	Fiberscope, Gastrointestinal with Light Source for Child	1	B	1						1	1			PE	5	Fiberscope, Gastrointestinal with Light Source for Child
PE	9	Fiberscope, Gastrointestinal with Light Source for Adult	1	A	1						1	1			PE	6	Fiberscope, Gastrointestinal with Light Source for Adult
PE	10	Fiberscope, Colono with Light Source	1	A	1						1	1			PE	7	Fiberscope, Colono with Light Source for Adult
PE	11	Rectoscope with Light Source, Rigid Type	1	B	1						1	1			PE	8	Rectoscope with Light Source, Rigid Type, Rigid Type
PE	12	Bronchoscope with Light Source, Rigid Type	1	A	1						1	1			PE	9	Bronchoscope with Light Source, Rigid Type
PE	13	Endoscope Table	2	B				4									
PE	14	Endoscope Cabinet	2	A	1						2	2			PE	10	Endoscope Cabinet
PE	15	Endoscope Suction Unit	2	A				4									
PE	16	Lecturescope	-	C													
PE	17	Fiberscope Cleaning Machine	1	A	2	3					1			1	PE	11	Fiberscope Cleaning Machine
PE	18	Cyto-Urethroscope, Infant	1	B	1						1	1			PE	12	Cysto-Urethroscope, Infant
PE	19	Fiberscope, Gastrointestinal with Light Source	-	C													
PE	20	Fiberscope, Gastrointestinal with Light Source	-	C													
PE	21	Endoscope TV System	1	B	2	3	4				1			1	PE	13	Endoscope TV System
PE	22	Endoscopic Carriage	1	B				4									
PE	23	Endoscopic Film Projector	-	C													

Basic Design Study					Examnation Process						Final	Contents			Final List		
Item No.		Name of Equipment	Q'ty	Priority	A*			B*			Q'ty	AA	BB	CC	Item No.		Name of Equipment
PE	24	Electro Surgical Unit	-	C													
PE	25	Suction Pump, Portable	-	C													
PE	26	Fiberscope Cleaning Machine	-	C													
PE	27	Light Source, Halogen	-	C													
PE	28	Photocamera	-	C													
PE	29	Adapter for Fiberscope	-	C													
PE	30	Appliances for data recording on the photos	-	C													
PE	31	8mm Camera	-	C													
OT		Operation Theater															Operation Theater
OT	1	Operating Table	4	A	1						4	4			OT	1	Operating Table
OT	2	Operating Table for Neurosurgery	1	A	1						1	1			OT	2	Operating Table for Neurosurgery
OT	3	Operating Light	5	B	1						5	5			OT	3	Operating Light
OT	4	Suction Unit	5	A	1						5	5			OT	4	Suction Unit
OT	5	Monitor, Bedside	2	A	1						2	2			OT	5	Monitor, Bedside
OT	6	Anesthesia Apparatus	2	A	1						4	4			OT	6	Anesthesia Apparatus
OT	7	Refrigerator, Blood Bank	-	C													
OT	8	Ventilator, Infant	-	C													
OT	9	Operating Microscope	1	B				4									
OT	10	Surgical Instrument Set for Infant	1	A	1						2	2			OT	7	Surgical Instrument Set for Infant
OT	11	Nephrectomy Instrument Set	1	A	1						2	2			OT	8	Nephrectomy Instrument Set
OT	12	Neurosurgery Instrument Set	1	A	1						2	2			OT	9	Neurosurgery Instrument Set
OT	13	Bone Fracture Set	-	C							2	2			OT	10	Bone Fracture Set
OT	14	Anterior Spinal Instrument Set	-	C													
OT	15	Laminectomy Operating Set	-	C													
OT	16	Electric Dermatome	-	C													
OT	17	Cysto-Urethroscope	1	A	1						1	1			OT	11	Cysto-Urethroscope
OT	18	Visual Urethrotome	-	C													
OT	19	Resectoscope	-	C													
OT	20	Light Source Unit	-	C													
OT	21	Laparosocpe	1	A				1	4								
OT	22	Neurosurgery Navigation System	-	C													
OT	23	Electrosurgical Unit	3	A	1						3	3			OT	12	Electrosurgical Unit
OT	24	Sterilizer	5	B													
					2	3					5		3		OT	13	Lumber Puncture Instrument Set
					2	3					3		3		OT	14	Biopsy Needle
SR		Surgical ICU															Surgical ICU
SR	1	Monitor, Bedside	6	A	1						2	2			SI	1	Monitor, Bedside
SR	2	Laryngoscope Set for Infant and Adult	2	A	2	3					2		2		SI	2	Laryngoscope Set for Infant and Adult
SR	3	Infant Resuscitation Bag	-	C													
SR	4	Ventilator, Infant	2	B	1						[illegible]	1			SI	3	Ventilator, Infant
SR	5	Syringe Pump	4	A	1	2	3				4	2	2		SI	4	Syringe Pump

Basic Design Study					Examination Process				Final	Contents			Final List		
Item No.		Name of Equipment	Q'ty	Priority	A*		B*		Q'ty	AA	BB	CC	Item No.		Name of Equipment
PE	24	Electro Surgical Unit	-	C											
PE	25	Suction Pump, Portable	-	C											
PE	26	Fiberscope Cleaning Machine	-	C											
PE	27	Light Source, Halogen	-	C											
PE	28	Photocamera	-	C											
PE	29	Adapter for Fiberscope	-	C											
PE	30	Appliances for data recording on the photos	-	C											
PE	31	8mm Camera	-	C											
OT		Operation Theater													Operation Theater
OT	1	Operating Table	4	A	1				4	4			OT	1	Operating Table
OT	2	Operating Table for Neurosurgery	1	A	1				1	1			OT	2	Operating Table for Neurosurgery
OT	3	Operating Light	5	B	1				5	5			OT	3	Operating Light
OT	4	Suction Unit	5	A	1				5	5			OT	4	Suction Unit
OT	5	Monitor, Bedside	2	A	1				2	2			OT	5	Monitor, Bedside
OT	6	Anesthesia Apparatus	2	A	1				4	4			OT	6	Anesthesia Apparatus
OT	7	Refrigerator, Blood Bank	-	C											
OT	8	Ventilator, Infant	-	C											
OT	9	Operating Microscope	1	B			4								
OT	10	Surgical Instrument Set for Infant	1	A	1				2	2			OT	7	Surgical Instrument Set for Infant
OT	11	Nephrectomy Instrument Set	1	A	1				2	2			OT	8	Nephrectomy Instrument Set
OT	12	Neurosurgery Instrument Set	1	A	1				2	2			OT	9	Neurosurgery Instrument Set
OT	13	Bone Fracture Set	-	C					2	2			OT	10	Bone Fracture Set
OT	14	Anterior Spinal Instrument Set	-	C											
OT	15	Laminectomy Operating Set	-	C											
OT	16	Electric Dermatome	-	C											
OT	17	Cysto-Urethroscope	1	A	1				1	1			OT	11	Cysto-Urethroscope
OT	18	Visual Urethrotome	-	C											
OT	19	Resectoscope	-	C											
OT	20	Light Source Unit	-	C											
OT	21	Laparoscope	1	A			1	4							
OT	22	Neurosurgery Navigation System	-	C											
OT	23	Electrosurgical Unit	3	A	1				3	3			OT	12	Electrosurgical Unit
OT	24	Sterilizer	5	B											
					2	3			3		3		OT	13	Lumber Puncture Instrument Set
					2	3			3		3		OT	14	Biopsy Needle
SR		Surgical ICU													Surgical ICU
SR	1	Monitor, Bedside	6	A	1				2	2			SI	1	Monitor, Bedside
SR	2	Laryngoscope Set for Infant and Adult	2	A	2	3			2		2		SI	2	Laryngoscope Set for Infant and Adult
SR	3	Infant Resuscitation Bag	-	C											
SR	4	Ventilator, Infant	2	B	1				1	1			SI	3	Ventilator, Infant
SR	5	Syringe Pump	4	A	1	2	3		4	2	2		SI	4	Syringe Pump

Basic Design Study					Examination Process						Final	Contents			Final List		
Item No.		Name of Equipment	Q'ty	Priority	A*			B*			Q'ty	AA	BB	CC	Item No.		Name of Equipment
SR	6	Infusion Pump	-	C													
SR	7	Resuscitator for Neonate and Adult	-	C													
SR	8	Mobile X-ray Unit	1	B				4									
SR	9	Pulse Oximeter	3	A	2	3	4				3			3	SI	5	Pulse Oximeter
SR	10	Infant Incubator	1	A	1						1	1			SI	6	Infant Incubator
L		Laboratory															Laboratory
L	1	Urine Analyzer	1	B				4									
L	2	Water Bath	2	A	1						2	2			LA	1	Water Bath
L	3	Refrigerator	2	B				4									
L	4	Hemoglobinmeter	1	A	2	3	4				1	1			LA	2	Hemoglobinmeter
L	5	Refractmeter	-	C													
L	6	Blood Cell Counter	1	B	2	3	4				1	1			LA	3	Blood Cell Counter
L	7	Coagulometer	1	B				1	3								
L	8	Glucose Analyzer	1	B				1	3								
L	9	Blood Gas Analyzer	1	A				1	3								
L	10	Micropipette Set, Digital	2	B	2	3					2		2		LA	4	Micropipette Set, Digital
L	11	Centrifuge, Hematocrit	1	A	1						1	1			LA	5	Centrifuge, Hematocrit
L	12	Microscope, Binocular	5	A	1						7	7			LA	6	Microscope, Binocular
BL		Biochemistry															Biochemistry
BL	1	Spectrophotometer	1	B	1						1	1			BC	1	Spectrophotometer
BL	2	Centrifuge, High Speed	1	B													
BL	3	Centrifuge, Table Top	2	A	1						2	2			BC	2	Centrifuge, Table Top
BL	4	Centrifuge, Hematocrit	1	A	2	3	4				1			1	BC	3	Centrifuge, Hematocrit
BL	5	pH Meter	2	A	1						1	1			BC	4	pH Meter
BL	6	Electrolyte Analyzer	1	A	1						1	1			BC	5	Electrolyte Analyzer
BL	7	Glucose Analyzer	1	B				1	3								
BL	8	Bilirubin Analyzer	1	B				1	3								
BL	9	Coagulometer	1	B				1	3								
BL	10	Compact Osmometer	1	B				4									
BL	11	Analytical Balance	2	B	1						1	1			BC	6	Analytical Balance
BL	12	Refrigerator	2	A	1	2					2	1	1		BC	7	Refrigerator
BL	13	Biochemistry Analyzer	1	B				1	3								
BL	14	Automatic Diluter Dispenser	-	C													
BL	15	Microscope, Universal Research	1	B	1						1	1			BC	8	Microscope, Binocular
BL	16	Water Bath	2	A	1						2	2			BC	9	Water Bath
BL	17	Autoclave	2	B				4									
BL	18	Sterilizer, Vertical	-	C													
BL	19	Blood Diluting Pippette	-	C													
BL	20	Pipette Washer	2	A	2	3					2			2	BC	10	Pipette Washer
BL	21	Hemometer	-	C													
BL	22	Nefelometer, IgA, IgM, IgG, IgE	1	B				1	3								

Basic Design Study					Examination Process						Final	Contents			Final List		
Item No.		Name of Equipment	Q'ty	Priority	A*			B*			Q'ty	AA	BB	CC	Item No.		Name of Equipment
SR	6	Infusion Pump	-	C							-						
SR	7	Resuscitator for Neonate and Adult	-	C							-						
SR	8	Mobile X-ray Unit	1	B				4			-						
SR	9	Pulse Oximeter	3	A	2	3	4				3			3	SI	5	Pulse Oximeter
SR	10	Infant Incubator	1	A	1						1	1			SI	6	Infant Incubator
L		Laboratory															Laboratory
L	1	Urine Analyzer	1	B				4			-						
L	2	Water Bath	2	A	1						2	2			LA	1	Water Bath
L	3	Refrigerator	2	B				4			-						
L	4	Hemoglobinmeter	1	A	2	3	4				1	1			LA	2	Hemoglobinmeter
L	5	Refractmeter	-	C							-						
L	6	Blood Cell Counter	1	B	2	3	4				1	1			LA	3	Blood Cell Counter
L	7	Coagulometer	1	B				1	3		-						
L	8	Glucose Analyzer	1	B				1	3		-						
L	9	Blood Gas Analyzer	1	A				1	3		-						
L	10	Micropipette Set, Digital	2	B	2	3					2		2		LA	4	Micropipette Set, Digital
L	11	Centrifuge, Hematocrit	1	A	1						1	1			LA	5	Centrifuge, Hematocrit
L	12	Microscope, Binocular	5	A	1						7	7			LA	6	Microscope, Binocular
BL		Biochemistry															Biochemistry
BL	1	Spectrophotometer	1	B	1						1	1			BC	1	Spectrophotometer
BL	2	Centrifuge, High Speed	1	B							-						
BL	3	Centrifuge, Table Top	2	A	1						2	2			BC	2	Centrifuge, Table Top
BL	4	Centrifuge, Hematocrit	1	A	2	3	4				1			1	BC	3	Centrifuge, Hematocrit
BL	5	pH Meter	2	A	1						1	1			BC	4	pH Meter
BL	6	Electrolyte Analyzer	1	A	1						1	1			BC	5	Electrolyte Analyzer
BL	7	Glucose Analyzer	1	B				1	3		-						
BL	8	Bilirubin Analyzer	1	B				1	3		-						
BL	9	Coagulometer	1	B				1	3		-						
BL	10	Compact Osmometer	1	B				4			-						
BL	11	Analytical Balance	2	B	1						1	1			BC	6	Analytical Balance
BL	12	Refrigerator	2	A	1	2					2	1	1		BC	7	Refrigerator
BL	13	Biochemistry Analyzer	1	B				1	3		-						
BL	14	Automatic Diluter Dispenser	-	C							-						
BL	15	Microscope, Universal Research	1	B	1						1	1			BC	8	Microscope, Binocular
BL	16	Water Bath	2	A	1						2	2			BC	9	Water Bath
BL	17	Autoclave	2	B				4			-						
BL	18	Sterilizer, Vertical	-	C							-						
BL	19	Blood Diluting Pippette	-	C							-						
BL	20	Pipette Washer	2	A	2	3					2			2	BC	10	Pipette Washer
BL	21	Hemometer	-	C							-						
BL	22	Nefelometer, IgA, IgM, IgG, IgE	1	B				1	3		-						

Basic Design Study					Examination Process						Final	Contents			Final List		
Item No.		Name of Equipment	Q'ty	Priority	A*			B*			Q'ty	AA	BB	CC	Item No.		Name of Equipment
BA		Bacteriology															Bacteriology
BA	1	Freezer, -45℃	-	C	1						1	1			BA	1	Refregerator
BA	2	pH Meter	-	C	2	3	4				1			1	BA	2	pH Meter
BA	3	Hot Air Sterilizer	-	C	1						1	1			BA	3	Hot Air Sterilizer
BA	4	Microscope, Fluorescence	1	B	1						1	1			BA	4	Microscope, Fluorescence
BA	5	Microscope, Binocular	-	C	1						2	2			BA	5	Microscope, Binocular
BA	6	Anaerbie System	-	C													
											1	1			BA	6	Water Distiller
GE		Genetic															Genetic
GE	1	Incubator, CO2	2	A	2	3					1		1		GE	1	Incubator, CO2
GE	2	Microscope, Precision Inverted	1	B	1						1	1			GE	2	Microscope, Inverted
GE	3	Microscope, Versatile Inverted	1	B	1						1	1			GE	3	Microscope with photo attachment
GE	4	Electrophoresis Apparatus	-	C													
GE	5	Densitometer	-	C													
GE	6	Freezer, -85℃	1	B	1						1	1			GE	4	Freezer, -85℃
GE	7	Digital Micro Pipette Set	2	A	2	3					2		2		GE	5	Micropipette Set, Digital
GE	8	Hot Air Sterilizer	-	C													
GE	9	Chromosome analyzer	1	B													
					1						1	1			GE	6	Ultrasound Scanner
PA		Pathology															Pathology
PA	1	Autopsy Instrument Set	1	A	1						2	2			PA	1	Autopsy Instrument Set
PA	2	Microtome, Freezing	1	B	1						1	1			PA	2	Microtome, Freezing
PA	3	Paraffin Block Humidifier	1	B				4	8								
PA	4	Microscope, Universal Research	-	C													
PA	5	Microscope, Binocular	1	A	1						2	2			PA	3	Microscope, Binocular
PA	6	Tissue Processor	-	C													
PA	7	Microtome, Slege	-	C													
PA	8	Microtome, Rotary	-	C													
PA	9	Microtome Knife Sharpener	-	C													
XR		Radiology															Radiology
XR	1	Automatic Film Processor	1	A	1						1	1			RA	1	Film Processor, Automatic
CS		CSSD															Linen Sterilizing Room
CS	1	High Pressure Steam Sterilization	3	A	1						2	2			LS	1	High Pressure Steam Sterilization
CS	2	Autoclave, Table Top	-	C													
CS	3	Hot Air Sterilizer	-	C													
CS	4	Instrument Sterilizer	-	C													
CS	5	Ultrasonic Cleaner	1	B				11									
CS	6	Dressing Drum	-	C													
IP		Policlinic															Policlinic
IP	1	Electrocardiograph, 6 channel	1	A	1						1	1			PL	1	Electrocardiograph, 6 channel
IP	2	Electrocardiograph Analyzer	1	B				4									

Basic Design Study					Examination Process					Final	Contents			Final List		
Item No.		Name of Equipment	Q'ty	Priority	A*			B*		Q'ty	AA	BB	CC	Item No.		Name of Equipment
BA		Bacteriology														Bacteriology
BA	1	Freezer, -45℃	-	C	1					1	1			BA	1	Refregerator
BA	2	pH Meter	-	C	2	3	4			1			1	BA	2	pH Meter
BA	3	Hot Air Sterilizer	-	C	1					1	1			BA	3	Hot Air Sterilizer
BA	4	Microscope, Fluorescence	1	B	1					1	1			BA	4	Microscope, Fluorescence
BA	5	Microscope, Binocular	-	C	1					2	2			BA	5	Microscope, Binocular
BA	6	Anaerbie System	-	C												
										1	1			BA	6	Water Distiller
GE		Genetic														Genetic
GE	1	Incubator, CO2	2	A	2	3				1		1		GE	1	Incubator, CO2
GE	2	Microscope, Precision Inverted	1	B	1					1	1			GE	2	Microscope, Inverted
GE	3	Microscope, Versatile Inverted	1	B	1					1	1			GE	3	Microscope with photo attachment
GE	4	Electrophoresis Apparatus	-	C												
GE	5	Densitometer	-	C												
GE	6	Freezer, -85℃	1	B	1					1	1			GE	4	Freezer, -85℃
GE	7	Digital Micro Pipette Set	2	A	2	3				2		2		GE	5	Micropipette Set, Digital
GE	8	Hot Air Sterilizer	-	C												
GE	9	Chromosome analyzer	1	B												
					1					1	1			GE	6	Ultrasound Scanner
PA		Pathology														Pathology
PA	1	Autopsy Instrument Set	1	A	1					2	2			PA	1	Autopsy Instrument Set
PA	2	Microtome, Freezing	1	B	1					1	1			PA	2	Microtome, Freezing
PA	3	Paraffin Block Humidifier	1	B				4	8							
PA	4	Microscope, Universal Research	-	C												
PA	5	Microscope, Binocular	1	A	1					2	2			PA	3	Microscope, Binocular
PA	6	Tissue Processor	-	C												
PA	7	Microtome, Siege	-	C												
PA	8	Microtome, Rotary	-	C												
PA	9	Microtome Knife Sharpener	-	C												
XR		Radiology														Radiology
XR	1	Automatic Film Processor	1	A	1					1	1			RA	1	Film Processor, Automatic
CS		CSSD														Linen Sterilizing Room
CS	1	High Pressure Steam Sterilization	3	A	1					2	2			LS	1	High Pressure Steam Sterilization
CS	2	Autoclave, Table Top	-	C												
CS	3	Hot Air Sterilizer	-	C												
CS	4	Instrument Sterilizer	-	C												
CS	5	Ultrasonic Cleaner	1	B				11								
CS	6	Dressing Drum	-	C												
IP		Policlinic														Policlinic
IP	1	Electrocardiograph, 6 channel	1	A	1					1	1			PL	1	Electrocardiograph, 6 channel
IP	2	Electrocardiograph Analyzer	1	B				4								

Basic Design Study					Examnation Process						Final	Contents			Final List		
Item No.		Name of Equipment	Q'ty	Priority	A*			B*			Q'ty	AA	BB	CC	Item No.		Name of Equipment
IP	3	Electroencephalograph	1	A	1						1	1			PL	2	Electroencephalograph
IP	4	Ultrasound Scanner, Multi Purpose	1	A	1						1	1			PL	3	Ultrasound Scanner
IP	5	Fiberscope, Gastrointestinal with Light Source	1	A				4									
IP	6	Audiometer	1	A	1						1	1			PL	4	Audiometer
IP	7	Spirometer	1	A	1						1	1			PL	5	Spirometer, Auto
IP	8	Ophthalmoscope	1	B	1						2	2			PL	6	Ophthalmoscope
IP	9	Computer Tomography	-	C													
IP	10	Blood Cell Counter	1	B				4									
IP	11	Cystoscope	1	B				4									
IP	12	Fiberscope, Colono with Light Source	1	A				4									
IP	13	Endoscope Table	1	B				4									
IP	14	Endoscope Cabinet	1	A				4									
IP	15	Fiberscope Cleaning Machine	1	A				4									
IP	16	Full Automatic Full Masking Audiometer	-	C													
IP	17	Trial Lens Set	-	C	1	3	4				2	2			PL	7	Trial Lens Set
IP	18	Lensmeter	-	C													
IP	19	Pupillo Distance Meter	-	C													
IP	20	Indirect Ophthalmoscope with Halogen Lamp	-	C													
IP	21	Ultrasonic Cleaner	-	C													
IP	22	Manual Desinfector	-	C													
IP	23	Camera	-	C													
IP	24	Adapter	-	C													
					1						1	1			PL	8	Colposcope
AD		Additional Equipment															
AD	1	Instrument Table	15	B				4									
AD	2	Dressing Table	-	C													
AD	3	Chart File Cart, Round Type	-	C													
AD	4	Medication Cart	-	C													
AD	5	Linen Trolley	-	C													
AD	6	Chart File Cart	-	C													
AD	7	Stretcher	-	C													
AD	8	Stool	-	C													
AD	9	Aspirator	5	B				4									
AD	10	Aspirator	-	C													
AD	11	Delivery Bed	-	C													
AD	12	Examination Table	-	C													
AD	13	Baby Cot	-	C													
AD	14	Minor Operating Table	-	C													
AD	15	Overbed Table	-	C													
AD	16	Operating Light, Large	-	C													
AD	17	Operating Light, Small	-	C													

Basic Design Study					Examination Process			Final	Contents			Final List		
Item No.		Name of Equipment	Qty	Priority	A*	B*		Qty	AA	BB	CC	Item No.		Name of Equipment
IP	3	Electroencephalograph	1	A	1			1	1			PL	2	Electroencephalograph
IP	4	Ultrasound Scanner, Multi Purpose	1	A	1			1	1			PL	3	Ultrasound Scanner
IP	5	Fiberscope, Gastrointestinal with Light Source	1	A		4								
IP	6	Audiometer	1	A	1			1	1			PL	4	Audiometer
IP	7	Spirometer	1	A	1			1	1			PL	5	Spirometer, Auto
IP	8	Ophthalmoscope	1	B	1			2	2			PL	6	Ophthalmoscope
IP	9	Computer Tomography	-	C										
IP	10	Blood Cell Counter	1	B		4								
IP	11	Cystoscope	1	B		4								
IP	12	Fiberscope, Colono with Light Source	1	A		4								
IP	13	Endoscope Table	1	B		4								
IP	14	Endoscope Cabinet	1	A		4								
IP	15	Fiberscope Cleaning Machine	1	A		4								
IP	16	Full Automatic Full Masking Audiometer	-	C										
IP	17	Trial Lens Set	-	C	1	3	4	2	2			PL	7	Trial Lens Set
IP	18	Lensmeter	-	C										
IP	19	Pupillo Distance Meter	-	C										
IP	20	Indirect Ophthalmoscope with Halogen Lamp	-	C										
IP	21	Ultrasonic Cleaner	-	C										
IP	22	Manual Desinfector	-	C										
IP	23	Camera	-	C										
IP	24	Adapter	-	C										
					1			1	1			PL	8	Colposcope
AD		Additional Equipment												
AD	1	Instrument Table	15	B		4								
AD	2	Dressing Table	-	C										
AD	3	Chart File Cart, Round Type	-	C										
AD	4	Medication Cart	-	C										
AD	5	Linen Trolley	-	C										
AD	6	Chart File Cart	-	C										
AD	7	Stretcher	-	C										
AD	8	Stool	-	C										
AD	9	Aspirator	5	B		4								
AD	10	Aspirator	-	C										
AD	11	Delivery Bed	-	C										
AD	12	Examination Table	-	C										
AD	13	Baby Cot	-	C										
AD	14	Minor Operating Table	-	C										
AD	15	Overbed Table	-	C										
AD	16	Operating Light, Large	-	C										
AD	17	Operating Light, Small	-	C										

Basic Design Study				Examination Process			Final	Contents			Final List	
Item No.		Name of Equipment	Q'ty	Priority	A*	B*	Q'ty	AA	BB	CC	Item No.	Name of Equipment
AD	18	Instrument Cabinet	-	C								
AD	19	Laryngoscope with Fiber Illumination	-	C								
AD	20	Lumber Anaesthesia Needle	-	C								
AD	21	Lumber Puncture Instrument Set	5	A		11						
AD	22	Biopsy Needle	3	A		11						
AD	23	Bone Marrow Set	3	A		11						
AD	24	X-ray Film Illuminator	-	C								
AD	25	Instrument Tray Stand, Mayo	-	C								
AD	26	Dressing Drum Stand	-	C								
AD	27	Instrument Carriage	-	C								
AD	28	Instrument Sterilizing Tray	-	C								
AD	29	Dressing Drum	-	C								
AD	30	Catheter Tray	-	C								
AD	31	Sphygmanometer	-	C								
AD	32	Clinical Thermometer	-	C								

Basic Design Study				Examination Process			Final	Contents			Final List	
Item No.		Name of Equipment	Qty	Priority	A*	B*	Qty	AA	BB	CC	Item No.	Name of Equipment
AD	18	Instrument Cabinet	-	C								
AD	19	Laryngoscope with Fiber Illumination	-	C								
AD	20	Lumber Anaesthesia Needle	-	C								
AD	21	Lumber Puncture Instrument Set	5	A		11						
AD	22	Biopsy Needle	3	A		11						
AD	23	Bone Marrow Set	3	A		11						
AD	24	X-ray Film Illuminator	-	C								
AD	25	Instrument Tray Stand, Mayo	-	C								
AD	26	Dressing Drum Stand	-	C								
AD	27	Instrument Carriage	-	C								
AD	28	Instrument Sterilizing Tray	-	C								
AD	29	Dressing Drum	-	C								
AD	30	Catheter Tray	-	C								
AD	31	Sphygmanometer	-	C								
AD	32	Clinical Thermometer	-	C								