



Pre-feasibility Study

SETTING UP GENERAL MEDICAL AND SURGICAL HOSPITAL

November 2021

“The figures and financial projections are approximate due to fluctuations in exchange rates, energy costs, and fuel prices etc. Users are advised to focus on understanding essential elements such as production processes and capacities, space, machinery, human resources, and raw material etc. requirements. Project investment, operating costs, and revenues can change daily. For accurate financial calculations, utilize financial calculators on SMEDA’s website and consult financial experts to stay current with market conditions.”

Small and Medium Enterprises Development Authority
Ministry of Industries and Production
Government of Pakistan

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1. DISCLAIMER

This information memorandum is to introduce the subject matter and provide a general idea and information on the said matter. Although, the material included in this document is based on data/information gathered from various reliable sources; however, it is based upon certain assumptions, which may differ from case to case. The information has been provided on as is where is basis without any warranties or assertions as to the correctness or soundness thereof. Although, due care and diligence has been taken to compile this document, the contained information may vary due to any change in any of the concerned factors, and the actual results may differ substantially from the presented information. SMEDA, its employees or agents do not assume any liability for any financial or other loss resulting from this memorandum in consequence of undertaking this activity. The contained information does not preclude any further professional advice to be obtained by the user. The prospective user of this memorandum is encouraged to carry out additional diligence and gather any information which is necessary for making an informed decision, including taking professional advice from a qualified consultant/technical expert before taking any decision to act upon the information.

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2. EXECUTIVE SUMMARY

Hospital is an institution established for diagnosis and treatment of people suffering from different types of diseases. A hospital usually provides both medicine consultancy and surgical services to treat the sick people. The hospitals usually offer both outpatient and inpatient services to the people coming for treatment. Under the outpatient services, a person may consult the doctor available in the hospital to get his expert opinion on his health-related issues. Such patients are not admitted into the hospital for longer treatments. In contrast, under the inpatient services, the sick people are admitted into the hospital to provide them closer and/or sustained medical treatment or for performing any required surgical procedures to treat their ailments. The duration of stay of a patient in the hospital depends upon the nature and specific needs of a patient's disease and treatment.

A General medical and surgical hospital is established to provide healthcare services in a broad category of illness and/or injury cases. General Medicine is a speciality of medical profession which is involved in the prevention, diagnosis, and treatment of a wide range of diseases affecting different systems of the body. Doctors specializing in general or internal medicine are known as General Physicians. In addition to General Physicians, doctors specializing in different organs of human body also provide outpatient medical services in hospitals. General Surgery is a broad term which refers to carrying out routine surgical procedures to treat the issues identified in the internal parts of the body. General surgery usually does not cover vital organs like heart, liver, brain, lungs, etc. General surgeons usually cover diseases and injuries relating to the abdomen, chest, groin, digestive system and thyroid. In addition to the regular outpatient and inpatient services, a hospital also provides emergency services to handle cases which require an immediate and urgent medical attention and treatment.

The proposed General Medical and Surgical Hospital offers the regular outpatient, inpatient and 24 hours basic emergency services. The proposed hospital maintains beds in general ward and private rooms and emergency ward. It is also equipped with the diagnostic services to conduct basic blood tests, x-rays, ultrasound and ECG (Electrocardiogram).

This pre-feasibility document provides details for "Setting up General Medical and Surgical Hospital". The proposed project has an annual capacity of treating 14,400 patients in General Outpatient Department (OPD) and 28,800 patients in Specialist OPD, carrying out 2,160 surgeries and handling 12,960 emergency patients. The hospital has an occupancy capacity of 4,320 General Ward days, 1,440 ICU Ward day and 1,440 Private Room days. The capacity utilization in the first year of operations is assumed to be 60%, which translates into 8,640 and 17,280 general and specialist OPD patients respectively, 1,298 surgery patients, 7,776 emergency patients and 2,592 occupancy days for General Ward and 864 annual occupancy days each for ICU Ward and Private Rooms each. The maximum capacity utilization of the proposed project is assumed to be 90% which is achieved in the seventh year of operation.

The proposed project requires a total investment of PKR 47.71 million. This includes capital investment of PKR 43.7 million and working capital of PKR 4 million. This project is financed through 100% equity. The Net Present Value (NPV) of project is PKR 153.9 million with an Internal Rate of Return (IRR) of 53% and a Payback period of 2.56 years. Further, this project is expected to generate Gross Profit (GP) ratio ranging from of 36% to 45% and Net Profit (NP) ratio ranging from 5% to 17% during the projection period of ten years. The proposed project will achieve its estimated breakeven point at capacity of 41% (34,840 patients) with breakeven revenue of PKR 42.62 million.

The proposed project may also be established using leveraged financing. At 50% financing at a cost of KIBOR+3%, the proposed unit provides Net Present Value (NPV) of PKR 173.42 million, Internal Rate of Return (IRR) of 52% and Payback period of 2.65 years. Further, this project is expected to generate Net Profit (NP) ratio ranging from 4% to 17% during the projection period of ten years. The proposed project will achieve its estimated breakeven point at capacity of 41% (35,025 patients) with breakeven revenue of PKR 42.62 million.

The proposed project will provide employment opportunities to 90 people. High return on investment and steady growth of business is expected with the professionals having some prior experience and expertise in the related field of business. The legal business status of this project is proposed as a partnership concern.

3. INTRODUCTION TO SMEDA

The Small and Medium Enterprises Development Authority (SMEDA) was established in October 1998 with an objective to provide fresh impetus to the economy through development of Small and Medium Enterprises (SMEs).

With a mission "to assist in employment generation and value addition to the national income, through development of the SME sector, by helping increase the number, scale and competitiveness of SMEs", SMEDA has carried out 'sectoral research' to identify policy, access to finance, business development services, strategic initiatives and institutional collaboration and networking initiatives.

Preparation and dissemination of prefeasibility studies in key areas of investment has been a successful hallmark of SME facilitation by SMEDA.

Concurrent to the prefeasibility studies, a broad spectrum of business development services is also offered to the SMEs by SMEDA. These services include identification of experts and consultants and delivery of need-based capacity building programs of different types in addition to business guidance through help desk services.

National Business Development Program for SMEs (NBDP) is a project of SMEDA, funded through Public Sector Development Program of Government of Pakistan.

The NBDP envisages provision of handholding support / business development services to SMEs to promote business startup, improvement of efficiencies in existing

SME value chains to make them globally competitive and provide conducive business environment through evidence-based policy-assistance to the Government of Pakistan. The Project is objectively designed to support SMEDA's capacity of providing an effective handholding to SMEs. The proposed program aimed at facilitating around 314,000 SME beneficiaries over a period of five years.

4. PURPOSE OF THE DOCUMENT

The objective of the pre-feasibility study is primarily to facilitate potential entrepreneurs in project identification for investment. The project pre-feasibility may form the basis of an important investment decision and in order to serve this objective, the document/study covers various aspects of project concept development, start-up, and production, marketing, finance and business management.

The purpose of this document is to provide information to the potential investors about setting-up a "General Medical and Surgical Hospital". The document provides a general understanding of the business to facilitates potential investors in crucial and effective investment decisions.

The need to come up with pre-feasibility reports for undocumented or minimally documented sectors attains greater imminence as the research that precedes such reports reveal certain thumb rules; best practices developed by existing enterprises by trial and error, and certain industrial norms that become a guiding source regarding various aspects of business setup and its successful management.

Apart from carefully studying the whole document one must consider critical aspects provided later on, which form the basis of any investment decision.

5. BRIEF DESCRIPTION OF PROJECT & SERVICES

A general medical and surgical hospital provides a wide range of medical and surgical services to inpatient, outpatient and emergency patients. Under the outpatient services, a person may consult the doctor available in the hospital to get his expert opinion on his health-related issues. These patients are not admitted into the hospital for longer treatments. Whereas, inpatient hospital services means longer healthcare services provided to patients who have to be admitted into the hospital and are required to remain in that hospital for one or more days. Furthermore, the proposed hospital also provides 24-hour emergency services. A brief description of the offered services is as follows:

5.1 Services

The proposed hospital provides services six days a week for OPD, four days a week Operation Theater (OT) services for conducting surgeries and seven days a week for Emergency cases. OPD and OT operates for twelve hours a day with morning and evening shifts of six hours while the emergency is operational round the clock (24 hours) without any break during a year. The visiting surgeons are engaged for performing surgeries. The surgeons receive 60% of their service charges as their income and this amount is included one of the direct costs of the hospital. Furthermore, General ward and Private room facilities are also available if a patient needs to be admitted for longer treatments (inpatient services).

Emergency

An emergency room or emergency department is a medical treatment facility that specializes in providing medical services which are required on urgent basis (such as persons suffering accidents, strokes, etc.). Therefore such patients are treated without an appointment in the emergency department.

Outpatient Department (OPD)

In OPD, the patient can seek consultation with a general physician or a specialist doctor to discuss his health-related issues. It is the first interaction between the patient and the doctor. The proposed hospital provides two types of OPD services; general and specialized.

General OPD

General OPD healthcare services are provided by General Physicians. A General Physician is a doctor who deals with the diagnosis and treatment of general health problems or disorders ranging from cold, cough, fever, pain and nausea to chronic diseases such as jaundice, cholera, etc. Apart from diagnosing and treating health problems, the General Physicians also advise the patients about their diet, health plans and any required preventive measures. In certain complicated cases, the General Physician may refer the patient to a medical or surgical specialist. People can come to this OPD without any appointment and they are treated on first-come-first-served basis.

Specialist OPD

Specialist OPD provides the services of specialist doctors who have special expertise in any specific one body system/part or in specific area of medical knowledge. Specialist doctors are available in all fields of medicine. The following specialists will be visiting the proposed hospital:

Cardiologist is a doctor who specializes in treating diseases of the cardiovascular system, mainly the heart and blood vessels.

Neurophysician is a doctor who specializes in treating diseases of the nervous system. It includes the brain and spinal cord.

Orthopaedic Surgeon are doctors who specialize in the musculoskeletal system - the bones, joints, ligaments, tendons, and muscles that are so essential to movement and everyday life.

Gastroenterologist specializes in the branch of medicine that focuses on the digestive tract and the gallbladder, liver, bile ducts, and pancreas.

Ophthalmologists are the medical doctors who specialize in treating eye and vision problems.

Pulmonologist is a doctor who diagnoses and treats diseases of the respiratory system which includes the lungs and other organs that help a person breathe.

Paediatrics are the doctors who manage medical conditions affecting infants, children and young people.

Gynaecologist is a doctor who specializes in female reproductive health. They diagnose and treat issues related to the female reproductive tract. This includes the uterus, fallopian tubes, and ovaries and breasts.

Urologists are the doctors who diagnose and treat diseases of the urinary tract in both men and women. The urinary tract includes two kidneys, two ureters, a bladder, and a urethra. They also diagnose and treat anything involving the reproductive tract in men.

Nephrologists is a physician who specializes in the care and treatment of kidney diseases.

Dermatologist is a doctor who specializes in conditions involving the skin, hair, and nails.

ENT Specialist is an ear, nose, and throat doctor (ENT) who specializes in everything having to do with these body parts.

General Surgeon is a specialist who is trained to diagnose, treat, and manage patients with a broad spectrum of surgical conditions affecting almost any area of the body.

Endocrinologist is a doctor who specializes in the diagnosis and treatment of hormone-related diseases and conditions.

Psychiatrist specializes in mental health, including substance use disorders.

Physiotherapists help people affected by injury, illness or disability by movement and exercise, manual therapy, education and advice. They maintain health for people of all ages, helping patients to manage pain and prevent disease.

In the proposed hospital all the specialists are assumed to be the visiting doctors. Each specialist doctor is available for three hours for six days per week. Share of revenue for the hospital is 40% of the total revenue from patients checked by the specialist doctors, while the balance 60% is the remuneration of the respective doctor; and a direct cost for the hospital.

Diagnostic Tests

The proposed hospital also provides the following basic diagnostic testing services.

Complete Blood Count (CBC)

Complete Blood Count (CBC) is a group of tests used to evaluate the composition of the blood. The cell calculates the shares of different constituents of the blood (such as red blood cells (RBCs), white blood cells (WBCs), platelets (PLTs), etc.) with reference to the standard blood composition. CBC test provides information about the overall health of a person and indicates towards different kinds of diseases and conditions; associated with the changes in relative shares of different blood constituents.

ABO Typing Test (Blood Group)

Blood typing is a method to tell what type of blood a person has. Blood typing is often done so a person can safely donate blood or receive a blood transfusion. A person's blood type is based on whether or not certain proteins are present on red blood cells. These proteins are called antigens. The blood type (or blood group) depends on what types the parents passed down. Blood is often grouped according to the ABO blood typing system. The four major blood types are Type A, Type B, Type AB and Type O. This service is commonly required as a part of performing surgical treatments.

X-Ray

X-Ray is an image of organs, tissues and bones of the body. These images are produced with the help of radiations. An X-ray is normally conducted to examine an area where a patient is experiencing pain or discomfort.

Ultrasound

Ultrasound, also called sonography, is a medical test that uses high frequency sound waves to capture live images from inside a patient's body. Ultrasound test is performed when a patient is having pain, swelling, or other symptoms that require an internal view of organs i.e., kidney, liver, spleen, bladder, ovaries, uterus, pancreas, thyroid, blood vessels, etc.

Intensive Care Unit (ICU)

ICU is a special department of a hospital or healthcare facility that provides intensive treatment medicine and caters to patients with severe and life-threatening illnesses and injuries; the ones which require constant, close monitoring and immediate attention of the specialist doctors.

General Surgical Services

General Medical and Surgical unit is maintained for treatment of ailments which require the use of surgical procedures. It includes the following surgeries:

Appendectomy

It is the surgical removal of the appendix. It is a common emergency surgery that is performed to treat appendicitis, which is an inflammatory condition of the appendix. The appendix is a small, tube-shaped pouch attached to the large intestine.

Gallstone

A cholecystectomy is a surgical procedure to remove the gall bladder, a pear shaped organ just below the liver on the upper right side of the abdomen. The gall bladder collects and stores bile, a digestive fluid produced in the liver. A cholecystectomy is a common surgery, and it carries only a small risk of complications. In most cases, the patient can go home the same day or the day after the surgery.

Hernia

A hernia occurs when part of an internal organ or body part swells into an area where it should not. The most common hernias occur in the abdominal area. A small portion of the intestine, or a piece of fat, pushes through a weak area in the muscular wall of the abdomen. This causes an abnormal swelling under the skin of the abdomen, usually near the groin or navel. The hernia surgery or herniorrhaphy involves returning the displaced tissues to their proper position.

Hemorrhoids

Hemorrhoids surgery removes swollen blood vessels inside or around the anus and rectum. Doctors refer to these swollen vessels as hemorrhoids. There are different surgical options for treating hemorrhoids that cause a person discomfort.

Laparotomy

Laparotomy is a surgical incision (cut) into the abdominal cavity. This operation is performed to examine the abdominal organs and aid diagnosis of any problems, including abdominal pain.

Gastrectomy

A gastrectomy is often used to treat stomach disorders. A gastrectomy is a surgery in which part or all of the stomach is removed. A gastrectomy may be used to treat obesity, peptic ulcers, a perforation (hole) in the stomach, or some forms of cancer. When part of the stomach is removed, it is called a partial, or a subtotal, gastrectomy.

Removing the stomach does not take away the patient's ability to digest liquids and foods. However, several lifestyle changes are to be made after the procedure.

Bowel/Colon Resection

A bowel resection or enterectomy is a surgical procedure in which a part of an intestine is removed, from either the small intestine or large intestine. The goal of bowel resection is to take out the part of the colon or rectum where the problem is identified.

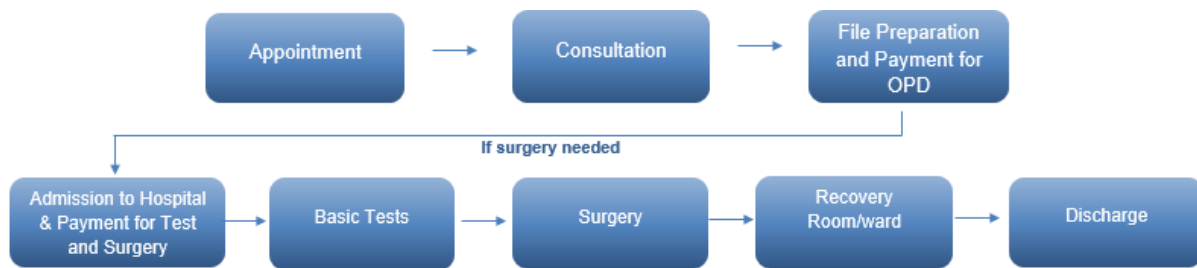
Thyroidectomy

Thyroidectomy is the surgical removal of all or part of the thyroid gland, a butterfly-shaped gland located at the base of the neck. It produces hormones that control every aspect of the metabolism, from heart rate to how quickly the calories are burnt. Thyroidectomy is used to treat thyroid disorders, such as cancer, noncancerous enlargement of the thyroid and overactive thyroid (hyperthyroidism).

Percutaneous Nephrolithotomy

Percutaneous nephrolithotomy (PCNL) is a procedure used to remove kidney stones from the body when they cannot pass out on their own. A scope is inserted through a small incision in body to remove the kidney stones. It is most suitable to remove stones of more than 2 cm in size.

5.2 PROCESS FLOW OF HOSPITAL FOR OPD AND SURGERY



Appointment

A customer may visit or call the reception of the hospital to inquire about doctor's schedule. The receptionist provide information about the hospital's schedule i.e time, consultancy fee, etc after that he/she may get an appointment to consult his/her relevant doctor.

Consultation

At this step, the doctor meets with the patient and obtains his medical history. Analyzing the condition of the patient, the doctor may prescribe medicines and may suggest a date for follow up examination. Doctor may also recommend any necessary diagnostic tests before prescribing medicines. If needed, the doctor may also advise the patient about food and supplements and any required physical activities.

File Preparation And Payment for OPD

Patient file is prepared which includes personal information. In case, the treatment involves surgical procedures, the patient is informed about that. For OPD service, only fee will be charged.

Admission to Hospital & Payment for Test and Surgery

In case the patient is willing to go for the surgery, he is admitted into the hospital. Consent forms are signed by the patient before the surgery. Tests and surgery charges /fee are paid in advance in the accounts department. Time and date of surgery is conveyed to the patient.

Basic Tests

Surgery is performed after conducting basic tests from pathology laboratory such as Complete Blood Count (CBC), ABO Typing Test, X-Ray, Ultra Sound, etc.

Surgery

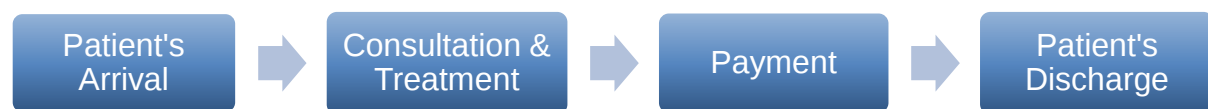
After analysing the test reports, the doctor conducts the respective surgery. The time period of performing different surgeries varies accordingly. In some severe cases, the surgery might take longer than normal time.

Recovery Room /Ward

After the surgery, patient is shifted to a recovery room where he is attended by doctors and nurses. Once the patient's condition stabilizes, he is shifted to general ward or private room.

Discharge

After the recovery of patients, their documentation is completed and discharge slips are prepared by the administration staff after payment of any dues remaining if any. The patients are discharged from the hospital.

5.3 PROCESS FLOW OF HOSPITAL FOR EMERGENCY**Patient's Arrival**

There is no need for appointment in the emergency department as the patients who come to emergency need urgent assistance and treatment.

Consultation and Treatment

The doctor checks the patient and obtains their medical history and the current problems of the patient. Analyzing his condition, the doctor prescribes immediate measures including medicines, injections, etc. The doctor may also recommend any necessary diagnostic tests before prescribing medicines.

Payment

After checkup, bill is generated by account staff and payment is made by customer.

Patient's Discharge

Patient's arriving in emergency required immediate treatment. Once the patient's condition becomes stable, he is discharged from emergency. In case patient's condition is not stable or required further treatment advice of specialist doctor may be sought and/or he may be admitted into the hospital.

5.4 Installed and Operational Capacities

The proposed hospital provides services six days a week for General OPD, Specialist OPD and Diagnostic Lab, four days a week for Operation Theatre (OT) and seven days a week for Emergency. General OPD and OT will operate twelve hours a day with morning and evening shifts of six hours while in Specialist OPD each specialist

doctor will be available for 3 hours during each working day. Emergency department will be operational 24 hours a day, round the year.

The proposed project has an annual capacity of treating 14,400 patients in General Outpatient Department (OPD) and 28,800 patients in Specialist OPD, carrying out 2,160 surgeries and handling 12,960 emergency patients. The hospital has an occupancy capacity of 4,320 general ward days, 1,440 ICU ward days and 1,440 private room days. However, during initial year of operation, the proposed hospital is expected to obtain 60% of its installed capacity. The operations of proposed business are assumed to increase at a rate of 5% annually, reaching 90% capacity utilization during 7th year of operations. Table 1, Table 3, Table 4, Table 5 and Table 6 show the installed and operational capacities of OPD, Surgeries, General Ward, Private room, ICU Ward and Emergency and Diagnostic Lab respectively.

Table 1: Installed and Operational Capacity for OPD

Services	Number of Doctors	Time /Patient (hrs)	Available Hours/Year	No of Patients at 100% Capacity	No. of Patients at 60 % Capacity Utilization
	<i>A</i>	<i>B</i>	$C=A*3600(\text{Annual Working Hours})$	$D=C/B$	$E=D*60\%$
General OPD	2	0.50	7,200	14,400	8,640

Table 2: Installed and Operational Capacity for OPD

Services	Number of Doctors	Time /Patient (hrs)	Available Hours/Year	No of Patients at 100% Capacity	No. of Patients at 60 % Capacity Utilization
	<i>A</i>	<i>B</i>	$C=A*900(\text{Annual Working Hours})$	$D=C/B$	$E=D*60\%$
Specialist OPD					
Cardiologist	1	0.50	900	1,800	1,080
Neurophysician	1	0.50	900	1,800	1,080
Orthopaedic Surgeon	1	0.50	900	1,800	1,080
Gastroenterologist	1	0.50	900	1,800	1,080
Ophthalmologist	1	0.50	900	1,800	1,080

Pulmonologist	1	0.50	900	1,800	1,080
Paediatrics	1	0.50	900	1,800	1,080
Gynaecologist	1	0.50	900	1,800	1,080
Urologist	1	0.50	900	1,800	1,080
Nephrologist	1	0.50	900	1,800	1,080
Dermatologist	1	0.50	900	1,800	1,080
ENT Specialist	1	0.50	900	1,800	1,080
General Surgeon	1	0.50	900	1,800	1,080
Endocrinologists	1	0.50	900	1,800	1,080
Psychiatrist	1	0.50	900	1,800	1,080
Physiotherapist	1	0.50	900	1,800	1,080
Total				28,800	17,280

Table 3: Installed and Operational Capacity for Surgeries

% of Patients who are recommended surgery from OPD				15%
Services	Annual Capacity	Ratios	No of Patients at 100% Capacity	No. of Patients at 60 % Capacity Utilization
Surgeries	$A=15\%*14,400$ (No. of OPD patients)	B	$C=A*B$	$D=C*60\%$
Appendectomy	2,160	10%	216	130
Gallstone		10%	216	130
Hernia		10%	216	130
Hemorrhoids		10%	216	130
Laparotomy		13%	281	169
Gastrectomy		12%	259	155
Bowel/Colon Resection		10%	216	130
Thyroidectomy		10%	216	130
Nephrectomy		15%	324	194
Total			2,160	1,298

Table 4: Installed and Operational Capacity for General Ward & Private Room

Services	Number of Beds	Annual Occupancy (Days) @100% Capacity	Annual Occupancy (Days) @60% Capacity Utilization
	<i>A</i>	$B=A*360$	$C=B*60\%$
General Ward	12	4,320	2,592
Private Room	4	1,440	864
ICU Ward	4	1,440	864
Total	20	7,200	4,320

Table 5: Installed and Operational Capacity for Emergency

Services	Number of Beds	Available Hours/Year	Average Time /Patient (hours)	No of Patients at 100% Capacity	No. of Patients at 60 % Capacity Utilization
	<i>A</i>	$B=A*8,640(\text{Annual Working Hours})$	<i>C</i>	$D=B/C$	$E=D*60\%$
Emergency	6	51,840	4	12,960	7,776

Table 6: Installed and Operational Capacity for Diagnostic Lab

Description	Total no. of OPD Patients	OPD Patients requiring Tests	Test Per Year Annual Capacity
Complete Blood Count (CBC)	28,800	7,200	7,200
ABO Typing Test (Blood Group)	28,800	7,200	7,200
X-Ray	28,800	2,880	2,880
Ultra Sound	28,800	2,880	2,880

6. CRITICAL FACTORS

Following factors should be taken into account while making the decision to invest in General Medical and Surgical Hospital:

- Engagement of reputed specialists
- Employment of trained and professional nurses and other staff
- Maintenance of high standards of patients' care
- Compliance with the standards of hygiene
- Usage of modern, reliable medical equipment along with proper sterilization
- Arrangement of skillful operators of the machines
- Courteous administrative staff for customer satisfaction
- Accurate maintenance of patients' records
- Regular feedback and follow up visits by the patients
- Uninterrupted supply of electricity power

7. GEOGRAPHICAL POTENTIAL FOR INVESTMENT

The patient rate is growing day by day and current health care facilities in the country are not enough to accomodate all patients which creates the need for new hospitals and clinics in every city/town of Pakistan. The proposed hospital would ideally be located near populated rural or urban areas to provide services to the local population.

The proposed hospital would ideally be located in large to medium cities like Karachi, Lahore, Peshawar, Islamabad, Multan, Quetta, Sialkot, Mardan, Gujranwala, Hyderabad, Gilgit, Muzaffabad, Sahiwal, Rawalpindi, Bahawalpur, Sukkur, Sahiwal, Gujrat, Skardu, Dera Ghazi Khan, Larkana, Khuzdar, Layyah, Nowshera, etc. Locating the proposed business in these cities would provide advantage of being close to larger population clusters to provide better treatment to the people. The disposable incomes of the people living in these cities are high which makes it affordable for them to use the healthcare facilities of such private hospitals.

8. POTENTIAL TARGET MARKET

Hospitals occupy an important place in the world's healthcare system, providing personal care for people suffering from different ailments. Hospitals benefit from the increasing demand for healthcare services in a growing customer base due to ageing population and less inclination towards a hygeinic lifestyle.

Pakistan is the fifth most populous country in the world, with 227.12 million people, having an annual population growth rate of 1.8%, which means addition of around 4 million people every year. This increase in population keeps generating additional

demand for health coverage. According to Economic Survey of Pakistan 2020-21,¹ in the year 2020, Pakistan's health infrastructure comprised of 1,282 hospitals, 5,472 BHUs,² 670 RHCs,³ 5,743 Dispensaries, 752 Maternity & Child Health Centres and 412 TB⁴ Centres. Total availability of beds in these health facilities was 133,707. Although public health expenditure has been increasing over the years but it still remains insufficient to ensure provision of quality healthcare to the entire population.

The number of doctors registered in Pakistan at present are about 110,000.⁵ It is estimated that around 25,000 Pakistani doctors are working abroad. Remaining 85,000 are working within Pakistan. Pakistan's population is about 220 million, which translates into a ratio of one doctor for 2588 persons. The doctor to population ratio, recommended for developing countries like Pakistan by World Health Organization (WHO) is 1 doctor for 1,000 persons.

The private sector plays a vital role in the delivery of healthcare services in Pakistan. A rising population pressure on the state's health institutions has made it essential that the private sector comes forward to bridge the rising demand-supply gap. With increasing disposable incomes and changing lifestyles, people prefer to go to private hospitals due to availability of state-of-the-art facilities, safe and quality healthcare services, flexible timings and a patient-centric approach.

In Pakistan, many different diseases exist only due to poor quality of food and hygiene and less inclination towards exercises and a healthy lifestyle. Few major cities of Pakistan are included in top most polluted cities of the world. Due to these factors, the number of patients in Pakistan are increasing day by day.

Health Insurance Card (Sehat Card) issued by government, allows underprivileged people to access private hospitals. It can be used for surgeries. This grants access to every person, rich or poor to private hospitals for better treatment.

9. PROJECT COST SUMMARY

A detailed financial model has been developed to analyze the commercial viability of the proposed business. Various costs and revenue related assumptions along with results of the analysis are outlined in this section.

The projected Income Statement, Cost of Goods Sold, Cash Flow Statement and Balance Sheet are attached as Annexure.

¹ https://www.finance.gov.pk/survey_2021.html

² A Basic Health Unit (BHU) serves up to 25,000 people with basic medical and surgical care, preventive services, maternal and child healthcare services.

³ A Rural Health Center (RHC), with an additional facility of 10-20 inpatient beds, dental and ambulance services, serves a catchment population of up to 100,000 people

⁴ Tuberculosis Centres

⁵ <https://ayubmed.edu.pk/JAMC/PAST/161/AJKhan.htm#:~:text=The%20doctor%20population%20ratio%20recommended,to%20fulfill%20our%20own%20needs.>

9.1. Project Economics

All the figures in this financial model have been calculated after carefully taking into account the relevant assumptions and target market.

9.2. Initial Project Cost Estimates

The details of initial project cost calculated for the proposed business are shown in Table 7.

Table 7: Initial Project Cost Estimate

Description	Cost	Reference
Land	-	9.1.1
Building / Infrastructure	5,333,010	9.1.2
Medical Machinery and Equipment	17,884,000	9.1.3
Hospital Machinery and Equipment	4,059,000	9.1.4
Furniture & fixtures	2,465,000	9.1.5
Office Vehicles	1,242,300	9.1.6
Office equipment	6,355,000	0
Medical Books	1,000,000	9.1.8
Pre-operating costs	764,489	9.1.9
Security Against Building	4,500,000	9.1.10
Legal and Licensing Fee	100,000	9.1.11
Total Capital Cost	43,702,799	
Working capital		
Patient Consumables Inventory	512,313	
Office Consumables Inventory	102,125	
Upfront building rent	1,500,000	
Upfront insurance payment	388,738	
Cash	1,500,000	
Total Working capital	4,003,176	
Total Investment	47,705,975	

9.1.1. Land

The hospital will be established in a rented building to avoid the high cost of land. Suitable locations for setting up a hospital like this can be found on rent. Therefore, no land cost has been added to the project cost. The proposed hospital will be set up on three floors that are parking, ground floor and first floor. Total space requirement for the proposed unit has been estimated as 20,250 sq. ft. The breakup of the space requirement is provided in Table 8.

Table 8: Land Area Breakup

Description	% Break-Up	Number	Area (Sq. Ft.)
Basement			
Parking	33%	1	6,750
Ground Floor			
Reception/ Nurses Counter	1%	1	300
Waiting Area	2%	1	500
Surgical Consultant Room	1%	1	270
Operation Theatre (OT)	3%	2	600
Waiting Area for Operation Theatre (OT)	1%	1	280
Recovery Room	3%	1	640
Admin Department	1%	1	150
Washrooms	1%	5	250
Store Room	2%	1	400
General OPD	2%	1	400
Emergency Room	4%	1	750
Specialist Doctors Consultation Rooms	7%	4	1,440
Blood Bank	1%	1	160
Specialist Doctors Common Room	1%	1	270
Corridor	1%	1	160
Stairs	0.5%	1	100
Lift Area	0.4%	1	80
Sub Total			6,750
First Floor			
Private Room	5%	4	960
Nurses Room	1%	1	210
Procurement Department	1%	1	160

HR Department	1%	1	180
General Ward	5%	1	1,000
ICU Ward	2%	1	400
Diagnostic Lab	3%	1	600
Physiotherapy Room	1%	1	300
Washrooms	2%	10	400
Medical Officer Office	1%	1	240
Medical Store	2%	1	500
Canteen	2%	1	400
Waiting Area	4%	1	800
Kitchen	0.4%	1	80
Prayer Area	1%	1	180
Corridor	1%	1	160
Stairs	0.5%	1	100
Lift Area	0.4%	1	80
Sub Total			6,750
Total Area	100%		20,250

9.1.2. Building

There will be no cost of building since the unit will be started in a rented premise. However, there will be a renovation cost; required to make the building usable for the hospital. The proposed project requires electricity load of 21 KW for which an electricity connection under the General Supply Tariff-Commercial three phase will be required. Building rent of PKR 1,500,000 per month has been included in the operating cost. Building renovation cost is shown in Table 9.

Table 9: Building Renovation Cost

Particulars	Units of Measurement	Total Units	Cost/Unit (PKR)	Total Cost (PKR)
Paint Cost	Liter	417	600	250,200
Labour Cost	Sq. Feet	41,706	10	417,060
Wall Racks	No.	49	15,000	735,000
Lockers	No.	23	30,000	690,000
Woodwork Cost				1,000,000
Curtains	No.	27	5,000	135,000

Blinds	No.	20	5,000	100,000
Glass Door and Partition-Ground Floor	Sq. Feet	1,737	550	955,350
Glass Door and Partition- 1st Floor	Sq. Feet	1,728	550	950,400
Painting & Decorative & Medical Charts				100,000
TOTAL (PKR)				5,333,010

9.1.3. Medical Machinery and Equipment

Table 10 gives details of the medical machinery and equipment required for the project.

Table 10: Medical Machinery & Equipment

Cost Item	No.	Unit Cost (PKR)	Total Cost (PKR)
ICU Equipment			
Ventilator	2	1,800,000	3,600,000
Patients Monitor	6	70,000	420,000
Defibrillator	5	250,000	1,250,000
Suction Machine	5	50,000	250,000
BiPap	5	200,000	1,000,000
Surgery Related Equipment and Tools			
OT Lights with Halogen Bulbs	4	250,000	1,000,000
General Surgery Set	6	35,000	210,000
Appendectomy Set	4	15,000	60,000
Gallstone Surgery Set	4	20,000	80,000
Hernia Surgery Set	4	12,000	48,000
Hemorrhoidectomy Set	4	15,000	60,000
Thyroidectomy Set	4	20,000	80,000
Laparotomy Set	4	22,000	88,000
X-ray Illuminator (2 Film)	6	5,000	30,000
Patient Monitor	8	70,000	560,000
Physiotherapy Equipment			

Therapeutic Ultrasonic	1	750,000	750,000
Electrotherapy TENS Machine	5	10,000	50,000
Vibrators & Massagers	20	3,000	60,000
Foot massager and pain releiver	4	20,000	80,000
Interferential Electric Muscle Stimulator	2	25,000	50,000
Diathermic- Shortwave CDB-1	1	150,000	150,000
Diathermic- Mediumwave CDB-1	1	150,000	150,000
Shoulder Pullies	5	2,000	10,000
Static Cycle	1	50,000	50,000
Magnetic Exercise Cycle	1	60,000	60,000
Gym Ball	5	5,000	25,000
Quadriceps strengthening Machine	2	50,000	100,000
Automated / Digital Traction	1	150,000	150,000
Automated Treadmill	1	100,000	100,000
Diagnostic Lab Equipment			
Digital Water bath	2	25,000	50,000
CBC Analyzer	1	400,000	400,000
Compound Digital Microscope (Mechanical Stage:130×140mm Moving Range 75mm×45mm)	2	45,000	90,000
Ultrasound - Color Doppler Machine (17" LED, Cine loop: 1024 frames)	1	1,050,000	1,050,000
Thermal Ultrasound Printer	1	100,000	100,000
Digital X-Ray Machine (35KW, Main inverted Frequency: 50khz)	1	1,500,000	1,500,000
X-Ray Illuminators	4	5,000	20,000
X-Ray Printer	2	30,000	60,000
Autoclave	2	15,000	30,000
OPD Equipment			
Stethoscope	12	2,500	30,000
Glucose Meter	12	5,000	60,000
Head Torch	12	1,000	12,000
Blood Pressure Monitor Set	12	2,000	24,000
Weigh Scale (310 g, 220 V)	12	11,000	132,000

Medical Thermometer	12	1,000	12,000
Examination Light	8	3,000	24,000
Other Equipment			
ECG Machine	2	150,000	300,000
First aid Kits	10	5,000	50,000
Reflex Hammer	10	100	1,000
Magnifiers	8	1,500	12,000
Dressing Kits	10	300	3,000
Instrument Sterilizer	5	25,000	125,000
Testing Meter (insulin level)	6	10,000	60,000
Medical Oxygen Concentrator	16	100,000	1,600,000
Oxygen cylinders	16	20,000	320,000
Nebulizer	16	3,000	48,000
Generator (24 Kw)	1	1,250,000	1,250,000
Total			17,884,000

9.1.4. Hospital Machinery and Equipment

Table 11 gives details of the medical machinery and equipment required for the project.

Table 11: Hospital Machinery and Equipment

Cost Item	Number of Items	Unit Cost (PKR)	Total Cost (PKR)
Hospital Beds	26	18,000	468,000
Examination Couch	11	12,000	132,000
Adjustable Stool	6	6,000	36,000
Bed Side Table Set	26	16000	416,000
Over Bed Table	30	8,000	240,000
Benches	8	13,000	104,000
Wheel Chair	10	12,000	120,000
Stretcher	10	11,000	110,000
OT Table/Bed	2	120,000	240,000
Equipment Trolley	16	10,000	160,000

ICU Beds	4	200,000	800,000
Attendent's Couch	18	6,000	108,000
Mattress	26	15,000	390,000
Stretcher trolley	4	15,000	60,000
IV Stand With plastic wheel	26	5,000	130,000
Ward screen 4-Fold	14	5,000	70,000
Wheel Chairs	6	25,000	150,000
Bed Pan	30	2,000	60,000
Foot Steps	30	2,000	60,000
Waste Bin	30	2,000	60,000
Medical Waste Bin	6	7,500	45,000
Sound/AnnouncementSystem	1	100,000	100,000
Total			4,059,000

9.1.5. Furniture and Fixture

Table 12 gives details of the furniture and fixture required for the project.

Table 12: Furniture and Fixtures

Cost Item	Number of Items	Unit Cost (PKR)	Total Cost (PKR)
Executive Tables	10	30,000	300,000
Executive Chairs	12	20,000	240,000
General Table	25	25,000	625,000
Reception Counter	1	40,000	40,000
Sofa Set	12	35,000	420,000
General Chairs	84	10,000	840,000
Total			2,465,000

9.1.6. Office Vehicles

Details of vehicles required for the project is given in Table 13.

Table 13: Office Vehicles

Cost Item	Number of Vehicles	Unit Cost (PKR)	Total (PKR)
Bolan Van	1	1,150,000	1,150,000
Bikes	1	80,000	80,000

Registration Charges		1%	12,300
Total			1,242,300

9.1.7. Office Equipment

Details of office equipment of the hospital are given in Table 14.

Table 14: Office Equipment

Cost Item	Number of Items	Unit Cost (PKR)	Total Cost (PKR)
Laptop Computers	5	80,000	400,000
Printers	4	40,000	160,000
Desktop Computer	4	30,000	120,000
Security System (2MP)	30	2,000	60,000
DVR	3	12,000	36,000
LED	12	40,000	480,000
Air Conditioners (1.5 ton Inverter)	34	90,000	3,060,000
Ceiling Fan	38	5,000	190,000
Exhaust Fan	22	3,000	66,000
Water Dispensers	5	20,000	100,000
Wi-Fi / Internet Routers	4	5,000	20,000
Telephone Sets	14	2,000	28,000
UPS (Complete Installation 3000 Inverter)	4	250,000	1,000,000
Private Rooms Refrigerator	7	60,000	420,000
Refrigerator	1	100,000	100,000
Coffee/Tea-maker	1	15,000	15,000
Microwave Oven	2	30,000	60,000
Pump-motor (1.5 HP)	2	20,000	40,000
Total			6,355,000

9.1.8. Medical Books

Details of medical books for the hospital is given in Table 15.

Table 15: Medical Books

Cost Item	Number of Books	Unit Cost (PKR)	Total Cost (PKR)
Medical Books	100	10,000	1,000,000

9.1.9. Pre-Operating Cost

Details of pre operating cost of the hospital is given in Table 16.

Table 16: Pre-Operating Cost

Cost Item	Number of Months	Total Cost (PKR)
Administration expenses	1	530,000
Utilities expenses	1	234,489
Total (PKR)		764,489

9.1.10. Security against Building

Details of security against rented building for the project is given in Table 17.

Table 17: Security against Building

Description	Months	Rent per Month (PKR)	Total (PKR)
Security against Building	3	1,500,000	4,500,000

9.1.11. Legal and Licensing Fee

Details of legal licensing fee required for the project is given in Table 18.

Table 18: Legal and Licensing Fee

Cost Item	Total Cost (PKR)
License Fee For Hospital ⁶	100,000

⁶ <https://www.phc.org.pk/licensingfee.aspx>

9.1.12. Breakeven Analysis

Table 19 shows calculation of breakeven analysis.

Table 19 : Breakeven Analysis

Description	Amount First Year (PKR)	Ratios
Sales (PKR) – A	159,309,000	100%
Variable Cost (PKR) – B	106,982,867	67%
Contribution (PKR) (A-B) = C	52,326,133	33%
Fixed Cost (PKR) – D	42,624,556	27%
Breakeven Revenue (PKR)	42,624,556	
Number of patients at Breakeven	34,840	
Breakeven Capacity	41%	

9.1.13. Revenue Generation

Table 20: Revenue Generation

Services	Revenue (PKR)	Reference
General OPD	8,640,000	Table 21
Emergency	7,776,000	
Specialists OPD	43,200,000	Table 22
OT (Surgeries)	53,955,000	Table 23
General Ward	7,776,000	Table 24
Private Room	12,960,000	
ICU Ward	17,280,000	
Diagnostic Lab	5,616,000	Table 25
Rent received	2,106,000	Table 26
Total Revenue (PKR)	159,309,000	

Table 21: Revenue from General OPD and Emergency

Services	No. of Patients @ 60% Initial Capacity	Service Charges (PKR)	Revenue (PKR)
General OPD	8,640	1,000	8,640,000
Emergency	7,776	1,000	7,776,000

Table 22: Revenue from Specialist OPD

Specialist OPD	No. of Patients @ 60% Initial Capacity	Service Charges (PKR)	Revenue(PKR)
Cardiologist	1,080	2,500	2,700,000
Neurophysician	1,080		2,700,000
Orthopaedic Surgeon	1,080		2,700,000
Gastroenterologist	1,080		2,700,000
Ophthalmologist	1,080		2,700,000
Pulmonologist	1,080		2,700,000
Paediatrics	1,080		2,700,000
Gynaecologist	1,080		2,700,000
Urologist	1,080		2,700,000
Nephrologist	1,080		2,700,000
Dermatologist	1,080		2,700,000
ENT Specialist	1,080		2,700,000
Immunologist	1,080		2,700,000
Endocrinologists	1,080		2,700,000
Psychiatrist	1,080		2,700,000
Physiotherapist	1,080		2,700,000
Total	17,280		43,200,000

Table 23: Revenue from OT

Surgeries	No. of Patients @ 60% Initial Capacity	Service Charges (PKR)	Revenue (PKR)
Appendectomy	130	30,000	3,900,000
Gallstone	130	35,000	4,550,000
Hernia	130	40,000	5,200,000
Hemorrhoids	130	30,000	3,900,000
Laparotomy	169	30,000	5,070,000
Gastrectomy	155	85,000	13,175,000
Bowel/Colon Resection	130	35,000	4,550,000
Thyroidectomy	130	45,000	5,850,000

Percutaneous Nephrolithotomy	194	40,000	7,760,000
Total (PKR)	1,298		53,955,000

Table 24: Revenue from Wards and Rooms

Services	Annual Occupancy (Days)@ 60% Initial Capacity	Service Charges (PKR)	Revenue (PKR)
General Ward	2,592	3,000	7,776,000
Private Room	864	15,000	12,960,000
ICU Ward	864	20,000	17,280,000
Total	4,320		38,016,000

Table 25: Revenue from Diagnostic Lab

Tests	Test Per Year @ 60% Initial Capacity	Charges Per Test (PKR)	Revenue (PKR)
Complete Blood Count (CBC)	4,320	500	2,160,000
ABO Typing Test (Blood Group)	4,320	200	864,000
X-Ray	1,728	700	1,209,600
Ultra Sound	1,728	800	1,382,400
Total	12,096		5,616,000

Table 26: Revenue from Rent

Description	Area (sq. feet)	Rent/ Sq.foot per month (PKR)	Total Income / Month (PKR)	Total Income / Year (PKR)
Rent - Medical Store	500	120	60,000	720,000
Rent- Canteen	400	120	48,000	576,000
Rent- Parking	6,750	10	67,500	810,000
Total			175,500	2,106,000

9.1.14. Variable Cost

Variable costs of the project have been provided in Table 27.

Table 27: Variable Cost

Description of Costs	Amount (PKR)
Patient Consumables (Table 28)	4,649,230
Surgeon Charges (60% of revenue from OT)	32,373,000
Specialist Charges (60% of revenue from Specialists OPD)	25,920,000
Other Consumables (Table 29)	1,225,500
Diagnostic Lab Consumables (Table 30)	273,024
Direct Labour Cost	35,160,000
Electricity	2,813,872
Utilities (Water, Gas, Internet)	722,400
Communications expense (phone, internet etc.)	433,440
Office vehicles running and maintenance expense	1,753,461
Office expenses (stationery, entertainment, janitorial services, etc.)	433,440
Office Consumables	1,225,500
Total (PKR)	106,982,867

Table 28: Patient Consumables

Cost Item	Number of Items	Unit Cost (PKR)	Total Cost (PKR)
Cotton Absorbent (Packs) 500 Grams Pack	433	500	216,500
Bandages Pack (12 Pieces)	649	400	259,600
Syringes (pack of 20)	5,192	40	207,680
Anesthesia (Complete)	1,298	3,000	3,894,000
Surgical Spirit (5L Pack)	65	100	6,500
Tissue Papers/Rolls	433	150	64,950
Total			4,649,230

Table 29: Other Consumables

Cost Item	Unit of Measurement	Number of Items	Unit Cost (PKR)	Total Cost (PKR)
Surgical Face Mask	Packs	416	150	62,400
Surgical Gloves	Packs	208	1,300	270,400
Medical Overall		10	700	7,000
OT Shoes		10	1,000	10,000
Scrubs		4	1,100	4,400
Sterilization Towel		10	1,600	16,000
Povidone-iodine		208	100	20,800
Hand Sanitizer		720	250	180,000
Syringe Needle Cutter		6	300	1,800
Sweeper Kit		2	20,000	40,000
Polythene gloves	Packs	208	50	10,400
Paper Napkins	Packs	360	250	90,000
Mop		12	200	2,400
Bucket		6	500	3,000
Besoms		12	250	3,000
Phenyle		120	160	19,200
Floor Broomer		10	270	2,700
Tissue papers		3,300	90	297,000
Tissue rolls		5,400	20	108,000
Soaps				12,000
Insecticides				15,000
Air Fresheners				15,000
Towels				20,000
Cotton Rolls				15,000
Total				1,225,500

Table 30: Diagnostic Lab Consumables

Cost Item	Number of Items	Unit Cost (PKR)	Total Cost (PKR)
Glass vial	7,200	8	57,600
Glass Slides	144	30	4,320
Lancets	7,200	5	36,000
X Ray Film	2,880	100	288,000
Ultrasound Gel (Grams)	2,880	24	69,120
Total (A)			455,040
Initial Year Capacity Utilization (B)			60%
Initial Year Diagnostic Lab Consumables (C=A*B)			273,024

9.1.15. Fixed Cost Estimate

Table 31 shows the estimated fixed cost of the project.

Table 31: Fixed Cost Estimate

Description of Costs	Annual cost (PKR)
Administration expense	14,448,000
Administration benefits expense	1,488,240
Building rental expense	18,000,000
Promotional expense	796,545
Insurance expense	388,738
Professional fees (legal, audit, consultants, etc.)	1,593,090
Depreciation expense	5,737,046
Amortization of pre-operating costs	152,898
Amortization of legal, licensing, and training costs	20,000
Total (PKR)	42,624,556

9.1.16. Financial Feasibility Analysis

The financial feasibility analysis provides the information regarding projected IRR, NPV and payback period of the study, which is shown in Table 32.

Table 32: Financial Feasibility Analysis

Description	Project
IRR	53%
NPV (PKR)	153,897,153
Payback Period (years)	2.56
Projection Years	10
Discount rate used for NPV	15%

9.1.17. Financial Feasibility Analysis with 50% Debt

The financial feasibility analysis provides the information regarding projected IRR, NPV and payback period of the study on the basis of Debt: Equity Model (50:50), which is shown in Table 33.

Table 33: Financial Feasibility Analysis with 50% Debt

Description	Project
IRR	52%
NPV (PKR)	173,422,454
Payback Period (years)	2.65
Projection Years	10
Discount rate used for NPV	13%

9.1.18. Human Resource

For the 1st year of operations, the hospital shall require the workforce at a salary cost shown in Table 34.

Table 34: Human Resource Requirement

Post	No. of Employees	Monthly Salary (PKR)	Total Salary per Month (PKR)	Annual Salary (PKR)
CEO	1	250,000	250,000	3,000,000
Admin and HR Manager	1	100,000	50,000	1,200,000
Admin Assistant	2	50,000	100,000	1,200,000

Accounts and Finance Manager	1	100,000	50,000	1,200,000
Assistant Accountant	2	40,000	80,000	960,000
Procurement Officer	1	70,000	70,000	840,000
Assistant Procurement Officer	1	40,000	40,000	480,000
HR Assistant	1	40,000	40,000	480,000
Store Keeper	2	40,000	80,000	960,000
Technical Staff				0
General Physician	2	175,000	350,000	4,200,000
Junior Doctor	5	100,000	500,000	6,000,000
Anaesthesiologists	2	40,000	80,000	960,000
Nurses	29	40,000	1,160,000	13,920,000
OT Staff	4	50,000	200,000	2,400,000
X-Ray Technician / Radiological Technologist	1	50,000	50,000	600,000
X-Ray Technician - Printing	1	50,000	50,000	600,000
Sonographer (Ultrasound Technician)	1	50,000	50,000	600,000
Lab Technician	2	50,000	100,000	1,200,000
Lab Assistants	2	30,000	60,000	720,000
Receptionist	2	40,000	80,000	960,000
Sweeper	6	22,000	132,000	1,584,000
Security Guard	15	22,000	330,000	3,960,000
Office Boy	6	22,000	132,000	1,584,000
Total	90			49,608,000

10. CONTACT DETAILS

Names of some relevant medical and surgical equipment suppliers are provided in Table 35.

Table 35: Suppliers of Equipment & Supplies

Name	Item	Contact No	E.mail/Website
Advance Systems – Karachi, Islamabad, Lahore	Surgical Equipment	02134553632 0512854026 04237429665	www.advancesystems.com.pk
Medco – Peshawar	Medical Equipment	091-2212702	www.medco.net.pk
Strongman Medical Products – Faisalabad	Medical/ Surgical Supplies	0418810078	www.strongmanonline.com
Health Care Supplies – Karachi	Hospital Supplies	02134820375	www.healthcaresupplies.com.pk
Medtronic – Ireland	Medical Solutions	+35314381700	www.medtronic.com
Johnson & Johnson – USA	Medical Devices	+17325240400	www.jnj.com
Terumo Corporation, Japan	Medical Tools and Equipment	+81333748111	www.terumo.com
Abbot Laboratories, Pakistan	Diagnostic Tools	042 35854141	www.pk.abbott
Coloplast Group , Denmark	Medical Devices	+4549111111	www.coloplast.com

11. USEFUL LINKS AND CONTACTS

Table 36: Useful Links

Name of Organization	Website
Small and Medium Enterprises Development Authority (SMEDA)	www.smeda.org.pk
National Business Development Program (NBDP)	www.nbdp.org.pk
Ministry of National Health Services Regulations and Coordination	www.nhsrsc.gov.pk/
Specialized Healthcare and Medical Education Department Lahore	health.punjab.gov.pk/
Government of Punjab	punjab.gov.pk/
Government of Sindh	sindh.gov.pk/
Government of Balochistan	balochistan.gov.pk/
Government of KPK	kp.gov.pk/
Government of Gilgit Baltistan	gilgitbaltistan.gov.pk/
Government of Azad Jammu & Kashmir	ajk.gov.pk/
Ministry of National Health Services Regulations and Coordination	www.nhsrsc.gov.pk
World Health Organization	www.who.int
National Institute of Health	www.nih.org.pk/
Pakistan Medical Commission	www.pmc.gov.pk
Security and Exchange Commission of Pakistan	www.secp.gov.pk
State Bank of Pakistan	www.sbp.gov.pk

Table 37: Healthcare Commissions - Contact Numbers

Name of Organization	Website	Contact
Islamabad Healthcare Regulatory Authority	https://ihra.gov.pk	051-9199902
Punjab Healthcare Commission	https://www.phc.org.pk	042-99333161
Sindh Healthcare Commission	http://shcc.org.pk	111-117-422
Khyber Pakhtunkhwa Healthcare Commission	http://hcc.kp.gov.pk	091-9213242
Balochistan Healthcare Commission	https://balochistan.gov.pk/departments/health/	081-9202287
Directorate of Health Services Gilgit Baltistan	-	05811-920280
Department of Health Services Azad Jammu & Kashmir	https://health.ajk.gov.pk	0582-2920015

12. ANNEXURES

12.1. Income Statement

Calculations	SMEDA									
Income Statement										
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
General OPD	8,640,000	10,302,240	12,211,588	14,400,952	16,907,358	19,772,450	23,043,046	25,362,713	27,915,892	30,726,092
Specialists OPD	43,200,000	51,511,200	61,057,942	72,004,759	84,536,788	98,862,251	115,215,230	126,813,563	139,579,462	153,630,461
Emergency	7,776,000	9,272,016	10,990,430	12,960,857	15,216,622	17,795,205	20,738,741	22,826,441	25,124,303	27,653,483
Operation Theatre	53,955,000	64,179,873	76,128,593	89,832,604	105,524,219	123,464,736	143,636,765	158,096,199	174,011,216	191,528,346
General Ward	7,776,000	9,272,016	10,990,430	12,960,857	15,216,622	17,795,205	20,738,741	22,826,441	25,124,303	27,653,483
Private Room	12,960,000	15,453,360	18,317,383	21,601,428	25,361,036	29,658,675	34,564,569	38,044,069	41,873,839	46,089,138
ICU Ward	17,280,000	20,604,480	24,423,177	28,801,904	33,814,715	39,544,900	46,086,092	50,725,425	55,831,785	61,452,184
Diagnostic Lab	5,616,000	6,696,456	7,937,533	9,360,619	10,989,782	12,852,093	14,977,980	16,485,763	18,145,330	19,971,960
Rent received	2,106,000	2,318,004	2,551,350	2,808,186	3,090,876	3,402,025	3,744,495	4,121,441	4,536,333	4,992,990
Revenue	159,309,000	189,609,645	224,608,425	264,732,164	310,658,018	363,147,539	422,745,659	465,302,056	512,142,463	563,698,137
<i>Cost of sales</i>										
Surgeon Charges	32,373,000	38,507,924	45,677,156	53,899,563	63,314,531	74,078,841	86,182,059	94,857,719	104,406,730	114,917,007
Specialist Charges	25,920,000	30,906,720	36,634,765	43,202,856	50,722,073	59,317,350	69,129,138	76,088,138	83,747,677	92,178,277
Patient Consumables	4,649,230	5,527,263	6,556,657	7,737,289	9,089,178	10,634,839	12,367,743	13,612,762	14,983,114	16,491,414
Other Consumables	1,225,500	1,348,867	1,484,653	1,634,108	1,798,608	1,979,668	2,178,955	2,398,303	2,639,732	2,905,465
Diagnostic Lab Consumables	273,024	325,551	385,886	455,070	534,272	624,809	728,160	801,462	882,142	970,945
Direct Labour Cost	35,160,000	38,570,520	42,311,860	46,416,111	50,918,474	55,857,566	61,275,749	67,219,497	73,739,788	80,892,548
Electricity	1,853,444	2,020,934	2,203,559	2,402,687	2,619,810	2,856,553	3,114,690	3,396,154	3,703,054	4,037,686
Total cost of sales	101,454,198	117,207,779	135,254,536	155,747,682	178,996,946	205,349,627	234,976,494	258,374,036	284,102,237	312,393,341
Gross Profit	57,854,802	72,401,867	89,353,889	108,984,482	131,661,072	157,797,912	187,769,165	206,928,020	228,040,226	251,304,796
<i>General administration & selling expenses</i>										
Administration expense	14,448,000	15,849,456	17,386,853	19,073,378	20,923,496	22,953,075	25,179,523	27,621,937	30,301,265	33,240,487
Administration benefits expense	1,488,240	1,632,599	1,790,961	1,964,685	2,155,259	2,364,319	2,593,658	2,845,243	3,121,232	3,423,991
Land lease rental expense	-	-	-	-	-	-	-	-	-	-
Building rental expense	18,000,000	19,800,000	21,780,000	23,958,000	26,353,800	28,989,180	31,888,098	35,076,908	38,584,599	42,443,058
Electricity	960,428	1,047,219	1,141,852	1,245,038	1,357,548	1,480,225	1,613,988	1,759,838	1,918,869	2,092,271
Utilities (Water, Gas, Internet)	722,400	792,473	869,343	953,669	1,046,175	1,147,654	1,258,976	1,381,097	1,515,063	1,662,024
Communications expense (phone, internet etc.)	433,440	475,484	521,606	572,201	627,705	688,592	755,386	828,658	909,038	997,215
Office vehicles running and maintenance expense	1,753,461	2,086,970	2,472,190	2,913,819	3,419,309	3,997,044	4,653,021	5,121,425	5,636,981	6,204,437
Office expenses (stationery, entertainment, janitorial services)	433,440	475,484	521,606	572,201	627,705	688,592	755,386	828,658	909,038	997,215
Office Consumables	1,225,500	1,342,740	1,471,195	1,611,939	1,766,148	1,935,110	2,120,235	2,323,071	2,545,311	2,788,813
Promotional expense	796,545	948,048	1,123,042	1,323,661	1,553,290	1,815,738	2,113,728	2,326,510	2,560,712	2,818,491
Insurance expense	388,738	330,427	272,116	213,806	155,495	97,184	38,874	663,378	563,871	464,365
Professional fees (legal, audit, consultants, etc.)	1,593,090	1,896,096	2,246,084	2,647,322	3,106,580	3,631,475	4,227,457	4,653,021	5,121,425	5,636,981
Depreciation expense	5,737,046	5,737,046	5,737,046	5,737,046	5,737,046	5,737,046	4,786,102	9,079,653	9,079,653	9,079,653
Amortization of pre-operating costs	152,898	152,898	152,898	152,898	152,898	-	-	-	-	-
Amortization of legal, licensing, and training costs	20,000	20,000	20,000	20,000	20,000	28,823	28,823	28,823	28,823	28,823
Subtotal	48,153,225	52,586,939	57,506,792	62,959,662	69,002,453	76,000,428	82,013,254	94,538,219	102,795,880	111,877,824
Operating Income	9,701,577	19,814,927	31,847,097	46,024,820	62,658,619	81,797,484	105,755,911	112,389,800	125,244,346	139,426,972
Gain / (loss) on sale of machinery & equipment	-	-	-	-	-	-	4,471,000	-	-	-
Gain / (loss) on sale of office equipment	-	-	-	-	-	-	1,588,750	-	-	-
Gain / (loss) on sale of office vehicles	-	-	-	-	-	-	310,575	-	-	-
Earnings Before Interest & Taxes	9,701,577	19,814,927	31,847,097	46,024,820	62,658,619	81,797,484	112,126,236	112,389,800	125,244,346	139,426,972
Earnings Before Tax	9,701,577	19,814,927	31,847,097	46,024,820	62,658,619	81,797,484	112,126,236	112,389,800	125,244,346	139,426,972
Tax	2,515,552	6,055,225	10,266,484	15,228,687	21,050,517	27,749,119	38,364,183	38,456,430	42,955,521	47,919,440
NET PROFIT/(LOSS) AFTER TAX	7,186,025	13,759,703	21,580,613	30,796,133	41,608,102	54,048,365	73,762,053	73,933,370	82,288,825	91,507,532

12.2. Balance Sheet

Calculations											SMEDA
Balance Sheet											
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Assets											
Current assets											
Cash & Bank	1,500,000	10,813,670	21,587,438	33,697,986	47,154,598	54,625,644	71,351,142	101,638,303	184,327,790	275,327,531	381,874,545
Accounts receivable		-	-	-	-	-	-	-	-	-	-
Patient Consumable Inventory	512,313	600,140	702,266	818,872	951,838	1,103,276	1,272,905	1,401,044	1,542,082	1,697,319	-
Office Consumables Inventory	102,125	111,895	122,600	134,328	147,179	161,259	176,686	193,589	212,109	232,401	-
Pre-paid building rent	1,500,000	1,650,000	1,815,000	1,996,500	2,196,150	2,415,765	2,657,342	2,923,076	3,215,383	3,536,922	-
Pre-paid insurance	388,738	330,427	272,116	213,806	155,495	97,184	38,874	663,378	563,871	464,365	-
Total Current Assets	4,003,175	13,506,132	24,499,421	36,861,492	50,605,260	58,403,128	75,496,948	106,819,390	189,861,237	281,258,537	381,874,545
Fixed assets											
Land	-	-	-	-	-	-	-	-	-	-	-
Renovation Cost	5,333,010	4,799,709	4,266,408	3,733,107	3,199,806	2,666,505	2,133,204	1,599,903	1,066,602	533,301	-
Machinery & equipment	17,884,000	15,201,400	12,518,800	9,836,200	7,153,600	4,471,000	1,788,400	30,941,072	26,299,911	21,658,750	17,017,590
Hospital Machinery & equipment	4,059,000	3,247,200	2,435,400	1,623,600	811,800	5,849,690	4,679,752	3,509,814	2,339,876	1,169,938	-
Furniture & fixtures	2,465,000	2,095,250	1,725,500	1,355,750	986,000	616,250	246,500	3,536,422	3,005,958	2,475,495	1,945,032
Office vehicles	1,242,300	1,055,955	869,610	683,265	496,920	310,575	124,230	1,782,270	1,514,930	1,247,589	980,249
Office equipment	6,355,000	5,401,750	4,448,500	3,495,250	2,542,000	1,588,750	635,500	10,994,773	9,345,557	7,696,341	6,047,125
Medical Books	1,000,000	800,000	600,000	400,000	200,000	1,441,165	1,152,932	864,699	576,466	288,233	-
Security Against Building	4,500,000	4,500,000	4,500,000	4,500,000	4,500,000	4,500,000	4,500,000	4,500,000	4,500,000	4,500,000	4,500,000
Total Fixed Assets	42,838,310	37,101,264	31,364,218	25,627,172	19,890,126	21,443,935	15,260,518	57,728,953	48,649,300	39,569,648	30,489,995
Intangible assets											
Pre-operation costs	764,489	611,591	458,694	305,796	152,898	-	-	-	-	-	-
Legal, licensing, & training costs	100,000	80,000	60,000	40,000	20,000	144,117	115,293	86,470	57,647	28,823	-
Total Intangible Assets	864,489	691,591	518,694	345,796	172,898	144,117	115,293	86,470	57,647	28,823	-
TOTAL ASSETS	47,705,975	51,298,987	56,382,332	62,834,460	70,668,284	79,991,180	90,872,760	164,634,813	238,568,183	320,857,008	412,364,540
Liabilities & Shareholders' Equity											
Current liabilities											
Accounts payable		-	-	-	-	-	-	-	-	-	-
Total Current Liabilities	-	-	-	-	-	-	-	-	-	-	-
Shareholders' equity											
Paid-up capital	47,705,975	47,705,975	47,705,975	47,705,975	47,705,975	47,705,975	47,705,975	47,705,975	47,705,975	47,705,975	47,705,975
Retained earnings		3,593,012	8,676,358	15,128,485	22,962,309	32,285,206	43,166,785	116,928,838	190,862,209	273,151,033	364,658,565
Total Equity	47,705,975	51,298,987	56,382,332	62,834,460	70,668,284	79,991,180	90,872,760	164,634,813	238,568,183	320,857,008	412,364,540
TOTAL CAPITAL AND LIABILITIES	47,705,975	51,298,987	56,382,332	62,834,460	70,668,284	79,991,180	90,872,760	164,634,813	238,568,183	320,857,008	412,364,540

12.3. Cash Flow Statement

Calculations	SMEDA										
Cash Flow Statement											
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Operating activities											
Net profit		7,186,025	13,759,703	21,580,613	30,796,133	41,608,102	54,048,365	73,762,053	73,933,370	82,288,825	91,507,532
Add: depreciation expense		5,737,046	5,737,046	5,737,046	5,737,046	5,737,046	6,183,417	4,786,102	9,079,653	9,079,653	9,079,653
amortization of pre-operating costs		152,898	152,898	152,898	152,898	152,898	-	-	-	-	-
amortization of training costs		20,000	20,000	20,000	20,000	20,000	28,823	28,823	28,823	28,823	28,823
Patient Consumable Inventory	(512,313)	(87,827)	(102,126)	(116,606)	(132,966)	(151,438)	(169,628)	(128,139)	(141,038)	(155,236)	1,697,319
Office Consumables Inventory	(102,125)	(9,770)	(10,705)	(11,729)	(12,851)	(14,080)	(15,427)	(16,903)	(18,520)	(20,292)	232,401
Pre-paid building rent	(1,500,000)	(150,000)	(165,000)	(181,500)	(199,650)	(219,615)	(241,577)	(265,734)	(292,308)	(321,538)	3,536,922
Advance insurance premium	(388,738)	58,311	58,311	58,311	58,311	58,311	58,311	(624,504)	99,507	99,507	464,365
Accounts payable		-	-	-	-	-	-	-	-	-	-
Other liabilities		-	-	-	-	-	-	-	-	-	-
Cash provided by operations	(2,503,175)	12,906,682	19,450,126	27,239,033	36,418,921	47,191,223	59,892,283	77,541,698	82,689,487	90,999,741	106,547,013
Financing activities											
Issuance of shares	47,705,975	-	-	-	-	-	-	-	-	-	-
Purchase of (treasury) shares											
Cash provided by / (used for) financing activ	47,705,975	-	-	-	-	-	-	-	-	-	-
Investing activities											
Capital expenditure	(43,702,799)	-	-	-	-	(7,434,972)	-	(47,254,537)	-	-	-
Acquisitions											
Cash (used for) / provided by investing activ	(43,702,799)	-	-	-	-	(7,434,972)	-	(47,254,537)	-	-	-
NET CASH											
	1,500,000	12,906,682	19,450,126	27,239,033	36,418,921	39,756,251	59,892,283	30,287,161	82,689,487	90,999,741	106,547,013

13. KEY ASSUMPTIONS

13.1. Operating Cost Assumptions

Table 38: Operating Cost Assumptions

Description	Details
Building rent growth rate	10%
Furniture and fixture depreciation	15%
Vehicle depreciation	15%
Office equipment depreciation	15%
Inflation rate	10.1%
Wage growth rate	9.7%
Electricity price growth rate	9%
Office equipment price growth rate	9.6%
Office vehicle price growth rate	6.2%

13.2. Revenue Assumptions

Table 39: Revenue Assumptions

Description	Details
Service charges growth	10.1%
Initial year capacity utilization	60%
Capacity utilization growth rate	5%
Maximum capacity utilization	90%

13.3. Financial Assumptions

Table 40: Financial Assumptions

Description	Details
Project life (Years)	10
Debt: Equity	0:100
Discount Rate	15%

13.4. Debt Related Assumptions**Table 41: Debt Related Assumptions**

Description of Cost	Details
Project Life (Years)	10
Debt: Equity	50:50
Discount Rate	13%
Debt Tenure	5 years
Grace Period	1 Year
Interest Rate (KIBOR+3%)	10.3%

13.5. Cash Flow Assumptions**Table 42: Cash Flow Assumptions**

Description	Details
Accounts receivable cycle (in days)	-
Accounts payable cycle (in days)	-

Small and Medium Enterprises Development Authority

HEAD OFFICE

4th Floor, Building No. 3, Aiwan-e-Iqbal Complex, Egerton Road, Lahore
Tel: (92 42) 111 111 456, Fax: (92 42) 36304926-7

www.smeda.org.pk, helpdesk@smeda.org.pk

REGIONAL OFFICE PUNJAB	REGIONAL OFFICE SINDH	REGIONAL OFFICE KPK	REGIONAL OFFICE BALOCHISTAN
3 rd Floor, Building No. 3, Aiwan-e-Iqbal Complex, Egerton Road Lahore, Tel: (042) 111-111-456 Fax: (042) 36304926-7 helpdesk.punjab@smeda.org.pk	5 TH Floor, Bahria Complex II, M.T. Khan Road, Karachi. Tel: (021) 111-111-456 Fax: (021) 5610572 helpdesk-khi@smeda.org.pk	Ground Floor State Life Building The Mall, Peshawar. Tel: (091) 9213046-47 Fax: (091) 286908 helpdesk-pew@smeda.org.pk	Bungalow No. 15-A Chaman Housing Scheme Airport Road, Quetta. Tel: (081) 831623, 831702 Fax: (081) 831922 helpdesk-qta@smeda.org.pk