Abstract

Objective:

To do feasibility study for setting up a hospital at Rajgarh, Rajasthan.

Specific objective: To study and analyze equipment planning, space planning, manpower planning and financial projection of hospital.

Methodology:

A qualitative and quantitative research methodology used to conduct this study and detailed analysis was performed on data collected thorough detailed interviews and surveys. It is a cross sectional study. It is a retrospective and prospective cohort study. The study was carried out at Rajgarh, Churu district ,Rajasthan 331023. The type of data is secondary data carried out from hospital records ,premises of hospitals. Convenient sampling has been carried out for this hospital study.

Result:

There is high disease burden in Rajgarh,Rajasthan. Patients are not being properly examined by physicians .Standard practice is not followed in hospitals. Patients are not satisfied with majority of them being referred. There is lack of Obstetrics and gynecology services and LSCS surgeries are not carried out. So our hospital which will be set up Rajgrah, Churu district ,Rajasthan will cater all these services.

Conclusion:

The overall health status of facilities at district hospitals and private hospitals is vulnerable. There is lack of infrastructure .There is discrepancy among salary of doctors and nurses which affects quality of work in hospitals .To address the issues,there should be quality of care,patient satisfaction and clinical protocols implemented.

Acknowledgement

I express my sincere thanks to Dr Shankar Das ,Director IIHMR, Dr Pradeep Panda ,Dean Academics and my mentor , Mr Sumesh Kumar ,faculty, IIHMR Delhi who guided me during my dissertation.

I'm highly obliged to Dr Bidhan Das , Director ,Octavo solutions Pvt. Limited, Delhi and my other colleagues who provided me assistance .

I'm grateful to my family and friends who provided me unconditional help during the course of my dissertation and making my dissertation successful.

Dr.Shivani Ralhan







Date: 25/06/2020

TO WHOM IT MAY CONCERN

This is to certify that Ms. Shivani Ralhan has been working in our organization from 1st February, 2020 to April, 2020 as a "Trainee". During this tenure she has successfully completed her dissertation to the best of her abilities. Her conduct has been excellent during this tenure.

We wish her good luck for her future assignments.

Thanks & Regards,



For Octavo Solutions Pvt. Ltd.

A Private Limited Company, Regd. No. U72400DL2007PTC159745 2006-2007, Under Companies Registration Act

G-27, Lower Ground

Phone: +91-11 - 64550707

e-mail:

Corporate Office: contactoctavo@gmail.com

Kailash Colony New Delhi – 110048

40536561 Telefax :+91-11- 41658335

Website:

www.octavosolutions.com







Feedback Form

Name of the Student: Shivani Ralhan

Dissertation Institution: Octavo Solutions Pvt. Ltd

Attendance: Three Months

Objectives met: Met

Deliverables: Achieved

Strength: Communication, Health Programme

Suggestion for Improvement: Must have Patience for learning and Presentation skills

Date: 25th June, 2020 Place: New Delhi



Authorized Signatory (Dissertation)

A Private Limited Company, Regd. No. U72400DL2007PTC159745 2006-2007, Under Companies Registration Act

Corporate Office:

G-27, Lower Ground Phone : +91-11 - 64550707

e-mail:

contactoctavo@gmail.com

Kailash Colony New Delhi – 110048

40536561 Telefax :+91-11- 41658335

Website:

www.octavosolutions.com

Organisation profile

Octavo solutions pvt. Limited

Octavo solutions pvt. Limited is Health and Hospital consultancy firm focuses on providing strategic business evaluations and analysis for health care sector in India and other countries of Southeast Asia, MENA, ASIAN region .

This is the first consulting firm to be accredited with Quality council of India for consulting services in field of healthcare.

The company provides following consultancy services:

- DPR Preparation
- Project Mangement Consultant
- Hospital Plannning
- Designing cost benefit and budgetary guidance
- Healthcare financing
- Healthcare insurance
- Fund raising and business as well as financial anlaysis
- Healthcare equipment planning and procurement
- Drawings and layouts ,infrastructure ,buildings
- Planning of detailed financial plans of large scale hospitals including techno economic evaluations (TEV)
- Hospital Administration
- Hospital Accrediation
- Quality Management
- Capacity Building
- Hospital Mangement Information System

Feasibility study of setting up a hospital at Rajgarh, Rajasthan

Chapter 1: INTRODUCTION

Health status of population is important indicator for social and economic well being .India spends 6 percent of its GDP on healthcare but private sector health spending in India and in Rajasthan when expressed as a share of GDP ,is amongst the highest in the world .The private sector accounts for 78 percent of overall health expenditure and 4.7 percent of GDP .The share of the private sector is somewhat less but is still above international norms when charted against log of per capita GDP for both India as whole and state of Rajasthan .This substantial dependence on the private sector for health financing is even greater for reproductive health services as the discussion below will demonstrate .This situation poses serious problems for public health managers as they confront a scarcity of financial resources and the unmet health care needs of the poor.

1.1 OVERVIEW OF RAJASTHAN HEALTH SITUATION

1.1.1 Status of Health in Rajasthan

There is high disease of burden in Rajgarh, Rajasthan .Rajasthan has highest number of ChronicPulmonary Obstructive disease. Deaths due to COPD are highest in Rajasthan because it is a state where bidi smoking is prevalent. Another leading cause of COPD is cooking on chulha which produces air pollution. Disability adjusted life years was higher due to COPD, ischemia heart disease, Malaria, Pertusis, Tuberculosis etc. The lack of support for outpatient care, insufficient coverage and inaccessibility of empanelled hospitals for rural people. In Rajasthan, people are attracted to government hospitals due to free medicines and free diagnostics. Some patients still shy away from government health sector due to short staffed and poor quality of service .The shortfall of specialists in CHCS was 81 % and of radiographers 64 % .Doctors and nurses willing to serve in rural India is challenging .Government health services must be improved.

IMPORTANT HEALTH INDICATORS

HEALTH INDICATORS – RAJASTHAN		
Parameter	Rajasthan	
Infant mortality rate (IMR) per thousand live birth	41 (NFHS)	
Under five mortality rate (U5MR) per thousand live birth	51(NFHS)	
Maternal mortality ratio (per one lakh live birth)	244(2013)	
Total fertility rate (Births per women)	2.4	
Crude Birth Rate	25.6(SRS 2014)	
Crude Death Rate	6.5(SRS 2014)	

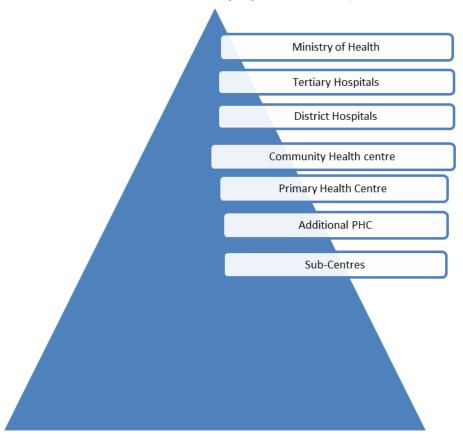
Life expectancy at birth	67.5 years
Sex Ratio (Females per thousand males)	928(census 2011)
Total population (in millions)	75.64
Female literacy rate (2011 census)	52.12 %

1.1.2. Health services and Infrastructure

According to state health MIS , there is lack of healthcare infrastructure. The state of Rajasthan only has 11,487 subcentres while there is requirement of 15,172 subcentres. For PHC the current availability is 2326 whereas the state has 1,528 PHCs .

Healthcare Infrastructure of Rajasthan				
Particulars Required In Position Shortfall				
Sub centre	15172	11487	3685	
Primary Health centre	2326	1528	798	
Community Health Centre	581	382	199	

1.1.3 Health Delivery system in Rajasthan



1.1.4 <u>Literature review</u>

Background:

India has one of the most extensive health infrastructure ,one tenth of patients are allocating secondary and tertiary level public health facilities .There is lack of infrastructure in Rajasthan and high burden of disease .The infant mortality rate decreases sharply with increasing education according to NFHS survey .The infant mortality rate is higher in rural areas than urban areas. The total fertility rate is 2.4 children per women somewhat higher than 2.1 .

1.1.5 Overview of Rajasthan

Rajasthan is a state in northern India. The state covers an area of 342,239 sq km .It is the largest Indian state by area and seventh largest by population. Rajasthan is located on northwestern side of India where it comprises most of inhospitable Thar desert .Rajasthan is bordered by Indian states : Punjab to the north ,Haryana and Uttar Pradesh to the north east ,Madhya Pradesh to the south east and Gujarat to the southwest.

Rajgarh is a town and tehsil in Churu district of northern part of Rajasthan state inIndia .The population of Rajgarh is 1.84 lakhs.



Map of Rajgarh, Rajasthan

1.1.6 Demographic characteristics of Rajasthan

Rajgarh is a small town located in shekhawati region of Rajasthan .Rajgarh has a population of 1.84 lakhs .Literacy rate of Rajgarh is 67.46 % .Rajgarh ,Churu district has a sex ratio of 938 females for every 1000 males. Rajgarh has semi arid climate summers which are hot and dry and monsoons which are highly humid. Rajgarh is not directly accessible by rail and the nearest stations are Mandi, Bhiwani ,Jaipur and Delhi .Delhi has a good transport system.

Employment in Rajgarh, Rajasthan:

Three quarters of women who work are agricultural workers. In urban areas, there is greater occupational diversity.20 percent are agricultural workers ,40 percent are production workers and 14 percent are professionals working in Rajasthan.

Housing Characteristics in Rajasthan:

Ninety one percent of households have electricity in Rajasthan while 46 percent of households do not have a sanitation facility. Eighty six percents of households use an improved source of drinking water while only 36 percent of households have water piped into dwelling, yard or plot.

Anemia among women:

Anemia among women is underlying cause of maternal mortality and perinatal mortality. Anemia results in increased risk of premature delivery. Early detection of anemia can help to prevent complications related to pregnancy and child development programs. NFHS has undertaken HB testing Hemocue system as the procedure.

Family Planning:

Contraceptive knowledge and use

In Rajasthan, the contraceptive use is higher in urban areas than in rural areas. The most common spacing methods are condoms, Nirodhs, Pills . Ninety three percent of sterilized women had their sterilization procedures at public health sector facility or rural hospital.

Vaccination of children:

More than 56 % of children received all basic vaccinations against six major illnesses:

- Tuberculosis
- Diphtheria
- Pertusis

- Tetanus
- Polio
- Measles

Eighty nine percent of children have receive BCG vaccination and other vaccinationations (65 percent have received atleast three doses of DPT vaccine ,72 percent have received and 78 percent have been vaccinated against measles.

1.1.7 Literature review

India has one of the most extensive health infrastructure, a three tier hierarchal system for effective and effective health services to majority of population. There is lack of infrastructure in the healthcare delivery system.

a) Increasing population in Rajasthan

Located in north western part of country it is the largest state in India ,with total area of 3,42,239 sq km. As per 2011 census , population of Rajasthan has increased up to 6.86 crore.

b) <u>Decrease in TFR</u>

The TFR has gradually decreased from 4 to 2.9. The TFR of Rajasthan is currently 2.9 children per women.

c) Drivers of increase in population that needs to be addressed

Increase in population is a cumulative effect of fertility and mortality indicators, along with socio economic determinants.

C1.Reducing early marriage

Focus needs to increase on enrolling girls in school, reducing dropout rates, and providing opportunities for higher education and employment. State departments need to emphasize on increased health and life-skills education in schools, increased counseling of young women by Accredited Social Health Activists (ASHA), Auxiliary Nurse Midwives (ANM), and other door-to-door and mass media campaigns. Recent AHS (2011–12) data shows that a substantially high percentage of currently married women (ages 20–24 years) i.e. 54.1 per cent are married before the legal age of 18 years in Rajasthan. Girls completing schooling and higher education, and being gainfully employed results in their marrying at a later age, planning their families and becoming socially and economically empowered.

C2. Improving maternal mortality ratio

Women who begin childbearing when they are younger than 18, are also at increased risk of complications during their pregnancy and during delivery. Rajasthan's maternal mortality ratio (MMR) was 445. It has come down to 255 (SRS, 2013), a healthy improvement. However, it still continues to be high as compared to India's MMR of 178 (SRS, 2013). The pace of progress will need to be accelerated in order to reach the 12th Five-Year Plan goal of bringing down MMR to 100 by 2017.

C3. Bringing down infant and under five mortality rates

The death rates of infants and children under the age of five in Rajasthan are 49 and 59 respectively (SRS, 2012). Infant mortality rate (IMR) and under-five mortality rate for India are 42 and 52respectively. The state needs to make focused attempts to improve the IMR and under five mortality rate by ensuring universal immunization coverage; early detection and treatment of diarrhea, pneumonia and malnutrition; community activation for wellbeing of children through the Village Health and Nutrition Days; improved access to quality nutrition supplementation at the Anganwadi centers; and reduction in harmful traditional practices for treatment of childhood illnesses.

1.1.8 How is quality of health care determined?

There are various methods for assessing the quality of care:

- Assessing the quality of healthcare in Rajasthan through various quality tools like PDCA (Plan Do Check Act) cycle, six sigma and Benchmarking.
- Provision of free supply of generic medicines under Mukhyamantri Nishulk Dava Yojana. Chief's Minister Free medicines scheme, this scheme provides quality ,generic drugs at no expenses to all and ease significant out of pocket expenditure on healthcare.
- Strengthening the supply chain management.
- E Aushadi is a software for inventory management. It is a web based application which deals with inventory management of stock of various drugs, sutures and surgical items. The e –aushadi software utilizes a property software.

Chapter 2 : Research Methodology

The study design of this study is **cross sectional study**. It is a type of observational study that analyses data from a population at a specific point in time. To sort of the existence magnitude of causal effects of 1 independent variable from a dependent variable at a given point in time.

Cross sectional study differ from case control study in that they aim to provide the entire population under study.

The type of study is retrospective and prospective .A prospective study watches for outcomes ,such as development of disease during that period. A retrospective study looks backward and examines exposures to suspected risks.

The type of data is secondary data from hospital records such as questionnaires.

Data analysis is Ethnographic analysis ,interpretive phenomenology, exploratory findings and qualitative and quantitative data .

The sampling technique is convenience sampling. It is a type of non probability sampling which involves sample being taken from that part of population that is closely available or in contact.

CHAPTER 3: RESULTS AND FINDINGS

Site of hospital: The hospital is located at Rajgarh, Rajasthan app 30 km from Pilani. The railway station in Rajgarh is known as Saadulpur. Rajgarh is a town in Rajasthan. There are other small blocks on site ,previous laboratories and factories.

Location: The hospital will be located in owned property for its operation, which is in process of finalization.

Hospital Planning model: The basis of model will be clustering activities around treatment of patient ,distinction will be made according to care units and supporting units .The primary process will involve grouping of different specializations to provide outpatient care and inpatient services.

S. NO.	MEDICAL	SURGICAL
1.	Medicine	General Surgery
2.	Pediatrics	Ophthalmology
3.	Orthopedics	
4.	Obstetrics and gynecology	
5.	ENT	
6.	Physiotherapy	

Depatments and units of hospital:

1.	Intensive care unit
2.	Labour room
3.	Outpatient department
4.	Inpatient department
5.	Radiology department
6.	Nursing Department

7.	Dietary Department
8.	Kitchen Department (for patients and staff)
9.	SNCU Sick Neonatal care Unit
10.	Pharmacy unit
11,	Operation theatres
12.	TSSU Theatre sterile supply unit
13.	Laundry unit
14.	Pantry

DIAGNOSTICS SERVICES OF HOSPITAL:

S. NO.	LABORATORY	IMAGING
1.	Pathology with all sub specialties	All radiological services including CT Scan and MRI.
2.	Biochemistry	
3.	Microbiology	

HOSPITAL FACILITY PLAN:

The hospital facility plan i.e utility blocks are as follows:

S.NO.	NAME OF WORK AREA	NO OF UNITS
1.	Kitchen (for patients)	1
2.	Kitchen (for staff and visitors)	1
3.	Laundry	1
4.	Electrical panel room	1
5.	Store	1

SWOT ANALYSIS FOR SETTING UP HOSPITAL:

Strengths

- Experienced physician
- Trained, adequate staff
- Central location
- Strong commitment and funds
- Advanced equipments are available.
- Financial resources are available.

Weaknesses

- Patient load
- Lack of transport facilities

Opportunities

- Networking with other hospitals and facilities
- Telemedicine for specialty
- Strong referral system

Threats

- Workforce strike doctors ,nurse
- Decreased revenue reimbursements

MANPOWER PLANNING OF HOSPITAL:

Category & Designation of Staff	No.	Salary per person(INR)	Total (INR)
Medical Staff			
Sr. Consultants	7	125000	875000
Jr. Consultants	7	75000	525000
Nursing Staff			
Nursing Superintendent	1	30,000	30000
Staff Nurse	25	15,000	375000
Technical Staff			
X-Ray	1	16,000	16000
USG	1	16,000	16000
Lab Services	2	15,000	30000
OT	2	15,000	30000
Sterilization	1	12,000	12000
Physiotherapist	1	18,000	18000
Pharmacist	2	12,000	24000
Gas Manifold	1	14,000	14000
Other Staff			
Front Office	2	8,000	16000
Billing	2	8,000	16000
Accounts	1	20,000	20000
Kitchen staff	4	7,000	28000
Maintenance staff	2	8,000	16000
Housekeeping	8	6,000	48000
Security	4	8,000	32000
Drivers	1	8,000	8000
Administrative Staff			
Medical Superintendent	1	100,000	100000
Accounts Manager	1	30,000	30000
HR Manager	1	30,000	30000
Assistant Managers	2	25,000	50000
TOTAL			2359000

SPACE PLANNING OF HOSPITAL:

GROUND FLOOR		
UNITS	AREA IN (SQFT.)	
Reception and waiting area	542	
01	סי	
Sub waiting -1 area 176		
Sub waiting -2 area	90	
Consultancy room(6)	170	
OP pharmacy	232	
Sample collection	226	
Physiotherapy	470	
IMA	GING	
Waiting area	40	
Ultrasound room	180	
X Ray room	265	
WARD		
	RD 1	
Clean utility room	55	
Dirty utility room	55	
Toilet and bath	132	
Duty doctor room	95	
Nurse station	40	
Beds (10)	800	
WARD 2		
Clean utility room	93	
Dirt Utility room	80	
Toilet and Bath	184	
Duty doctor room	92	
Nurse Station	40	
Beds (19)	1520	

FIRST FLOOR		
UNITS	AREA IN SQFT.	
Delivery room	344	
Pre labour room	134	
NICU	187	
OT COMPLEX		
OT1	311	
OT2	272	
Pre OP	210	
Post OP	210	
Anesthesia room	67	

Changing room(3)	42
TSSU	106
OT manager room	57
Janitor closet	39
UPS room	32
	CU
	49
Clean Utility room	
Dirty Utility room	47
Toilet ,Bath	74
Doctor duty room	91
Subwaiting area	396
Nurse superintendent room	40
ICU -6 beds	600
	WARD
Beds (11)	880
Doctors room	113
Nursing superintendent room	40
Toilet,Bath	115
Clean Utility room	42
Dirty Utility room	42
Laborator	ry services
Laboratory room	452
Doctor rest room	255
Equipment room	436
Biomedical Engineering room	121
Medical records department	249
Human Resource office	109
Medical superintendent office	175
Nursing superintendent office	141
Store	37
	F 1

EQUIPMENT PLANNING OF HOSPITAL:

DEPARTMENT	Equipment	Quantity
EMERGENCY DEPARTMI	NT	
OBSERVATION		
	1 Fowler Bed	3
	2 Multi parameter monitor	3
AMBULANCE (BLS)		1
NURSING STATION/NUR	SE ROOM	
	1 B.P apparatus	7
	2 Height & Weighing machine Digital	7
	3 stethoscope	7
	4 crash cart with defibrillator	5
	5 Thermometer	7
	6 syringe pumps	7
	7 infusion pumps	7
	8 X-ray view box	7
	9 CPR Kit	1
1	0 ECG Machine-12 channel	1
DEPARTMENT OF OBS/O		
LABOUR ROOM		
	1 Delivery Table	1
	2 Foetal Doppler	1
	3 Portable Suction Machine	1
	4 Digital weighing machine	1
	5 Gynecological instrument Kit	1 set
	6 Mobile Examination Lamp	1
NICU		
	1 phototherapy unit	2
	2 Neonatal Bassinet	3
OPERATING THEATRE		
	OT 1	
	1 OT Light	1
	2 OT table	1
	3 Cautery Machine	1
	4 Multi parameter monitor	1
	5 Anesthesia Machine	1
	6 Assorted surgical instrument for minor operation sets	1 Set
	7 Syringe Infusion Pump	1
	OT 2	_
	1 OT Light	1
	2 OT table	1
	3 Cautery Machine	1
	4 Multi parameter monitor	1

5	Anesthesia Machine	1
6	Assorted surgical instrument for minor operation sets	1 Set
7	Syringe Infusion Pump	1
TSSU		
1	Flash autoclave	1
	Racks	3
PRE/POST OPERATIVE		
	Bedside Monitor	2
	Crash cart with Defibrillator	1
	Bed	4
MICU/SICU		
	Bed side Monitor	8
	Syringe Infusion Pump	4
	Ventilator	1
	Nebulizer	4
	Suction Machine	1
	ICU Beds	8
MRD		
	Racks	5
OPD		
	Sphygmomanometer with stand	8
	Stethoscope	8
	Weighing machine Digital	8
	Height Measuring Scale	8
	Patient Examination Couch	8
	Pulse Oximeter (Small type)	8
	X-ray View box	8
	Examination Light	8
	Sample Collection Chair	1
	Thermometer	12
	General Examination Kit	10
	Double Step Stool	8
	Patient Examination Stool	8
	Plaster Room Tables S.S	1
	Dressing Trolley	3
	Medicine Trolley	3
	Instrument trolley	3
	Wheel Chair	4
	Doctor's Chair	8
	Patient Trolley	2
	Dental Chair	2
	Dental X-ray	1
	Dental Autoclave	1
	Assorted Instruments and Consumables	1
24	riotorica monumento una consumatrica	1

	I- 4 -4 -5	
	Snellen Chart/Drum with Remote	1
	Trial Lens set with frames	1
	Ophthalmic Chair with near vision chart	1
	Slitlamp Microscope	1
29	A-SCAN	1
PHYSIOTHERAPY		
	Shortwave diathermy	1
	Traction Unit	1
3	Continuous passive movements machine	1
	Wax bath	1
5	Couch	2
RADIOLOGY		
1	X-ray 100 mA	1
2	USG	1
LAB		
1	semi Biochemistry analyzer	1
2	Syringe Needle Destroyer	1
	Binocular Microscopes	1
	Lab Refrigerator (300L)	1
	Electrolyte Analyzer	1
	Haematology Analyzer	1
	Cabinet for 5000 slides	1
	BOD Incubator	1
	Electronic Balance	1
	Urine Analyzer	
LAUNDARY	orme imalyzer	
	Automatic Washing Machine	1
	Stitching Machine	1
	Hard Press	1
KITCHEN	ital u I 1 Coo	
	Food trolley	1
	Refrigerator	1
	Dish washer	1
	Mixing Machine	1
	Burner Range with oven	1
	Bane Marrie	1
	Chimney	1
	Gas Kadai Flyer	1
	Chapati Puffer	
	Insect Killer	1 1
	Grocery Bins	
		2
	Pot Wash Sink	1
	Pot Rack	1
	Plate Rack	2
15	Tea Serving Trolley	1

PHARMACY		
1	Refrigerator	1
2	Racks	20
NON MEDICAL FURNITUR	E	
1	Office Table	7
2	Office chair	7
3	Wooden Almirah	7
4	Visitor Chair	14
5	Waiting Chair- 3 Seater	10

Financial planning of hospital

COVER SHEET			
PROJECTED CAPITAL STRUCTURE	5.00		
PROMOTER'S CONTRIBUTION (25% of Cost of Project)	1.25		
FUND FROM FINANCIAL INSTITUTIONS (75% of Cost of Project)			
DOMESTIC FINANCIAL INSTITUTION	3.75		
COST OF PROJECT			
TOTAL PROJECT COST			
ESTIMATED COST OF LAND	-		
COST OF DEVELOPMENT OF LAND	-		
COST OF CONSTRUCTION (25-60% OF PROJECT COST) MEP, HVAC, FF)	3.00		
FURNITURE AND FIXTURE	0.10		
OFFICE EQUIPMENTS	0.10		
COST OF HOSPITAL EQUIPMENT	1.00		
ADMINISTRATIVE AND CONSULTANCY CHARGES	0.50		
WORKING CAPITAL	0.30		
Total Cost	5.00		

The internal cost of hospital set up is 5 crore.

Manpower planning of hospital:

Manpower Planning is technique for procurement, development, allocation, and utilization of human resources for allocation.

HR planning

The hospital will retain its reputation as long as its staff retain a cutting in technology and management.

We require a good HR, adequate nurses, trained physicians.

Superannuation

Doctors,nurses and technicians should be charted. Their replacements should be planned and trained so that they stey step into shoes the moment they superannuate.

There should be 1 medical officer ,12 physicians ,3 surgeons,12 nurses ,2 receptionist cum cashier ,4 midwife worker ,10 paramedical staff ,

CONCLUSION:

Thus we conclude that we are setting up a hospital in Rajgarh, Rajathan with the objective of benchmarking and quality establishment. Here in our hospital obstetric surgeries and LSCS surgeries are done which is a benefit for the hospital and people living there as in nearby hospitals these surgeries are not carried out

BIBLIOGRAPHY

NFHS survey 3,4

Hospital Administration Sonu goel

Census of India

Guidelines National Rural Health Mission

Donabedian ,The quality of medical care

Jeffrey Robbins ,Hospital checklists