IIHMR UNIVERSITY

Market Assessment Study for an upcoming Eye Hospital in Palanpur, Gujarat

Submitted by:

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Project Setting:

HOSMAC India Pvt. Ltd

Mumbai

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1 Introduction to the Project

Introduction

Project Overview

Introduction

- Setting up a new hospital is a herculean task and requires a lot of preparation.
- It requires a collaborative effort of many people to ensure that the new hospital is a successful venture. This is primarily important since huge financial and human resources are utilized in this effort.
- It is, therefore, imperative that proper planning is done before the commencement of the project. Many factors like the size of the hospital, specialties offered, number of beds, architectural design and economic feasibility need to be taken into consideration.
- A report by **Ernst and Young** suggests that the underlying strategic objectives of feasibility study are to improve the efficiency and quality of the services delivered.
- **Becker's Hospital CFO Report** states that the most common pitfalls in new ventures occur due to the lack of involvement of a comprehensive planning team in the early stages.
- A vital part in setting up a new hospital is, therefore, played by the team that conducts the market research and feasibility study and determines the best possible facility and bed mix for the new venture.
- The major factors to be taken into consideration while hospital planning include the demand supply gap, the competitor profiling, the required facility mix and the allotment of area to each. This project makes an effort to touch upon the major areas.

Project Overview

- The client approached HOSMAC India Pvt. Ltd. with an intention to set up a single specialty eye care Ophthalmology Hospital in Palanpur.
- It is to be noted that the client owns an operational multispecialty hospital in Palanpur and the proposed hospital will be located exactly opposite to the existing facility on a plot area of **6000 sq. feet** owned by the client.
- Certain non- clinical facilities will be shared by the two facilities. These include:
  - Kitchen
  - Laundry
  - Housekeeping
  - Engineering and Maintenance
- The client wishes to understand the ophthalmology market of Gujarat and Palanpur, and India as a whole in order to understand the feasibility of his proposed venture.

Secondary Research- India

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Ophthalmology Market – Overview

Causes of Blindness

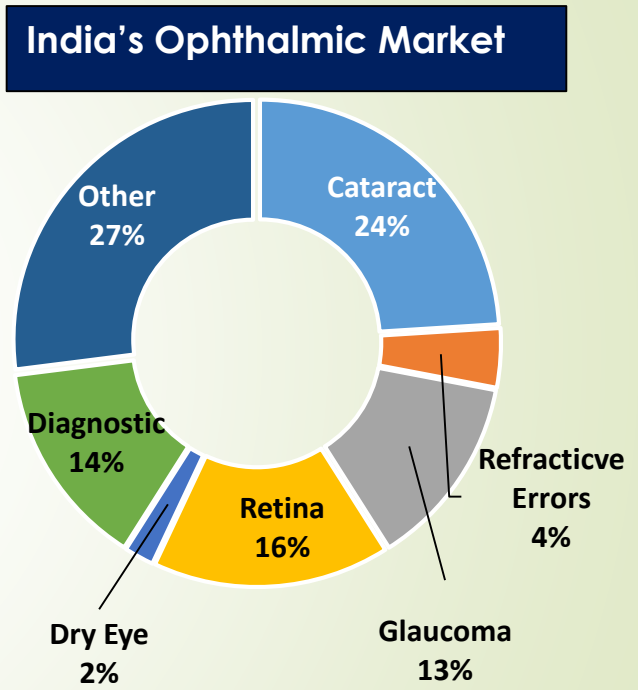
Prevalence of Eye Disorders

Eye Care Delivery Service

Key Growth Drivers

Ophthalmology Market- India

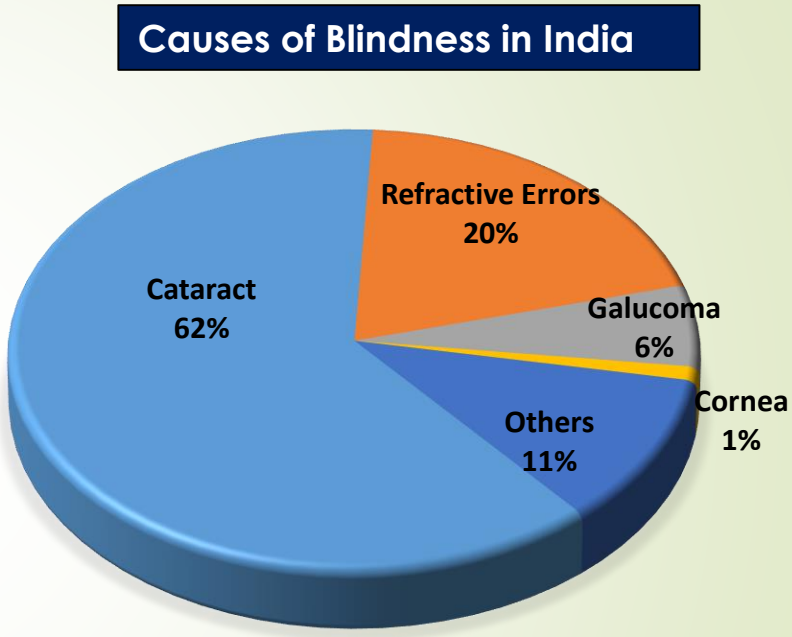
- India currently has around **12 million blind** people against 39 million globally -- which makes India home to **one-third of the world's blind population.**
- It is forecasted by a well known research company, Market Scope, that ophthalmic market in India is worth ~90 billion INR (2016) and shall grow at a **compound annual growth rate (CAGR) of 6.8%** a year to INR 125 billion by 2021.
- Organized / Private Eye Care Market is growing at a CAGR of ~22% from INR 27 billion in 2015 to INR 73 billion by 2020.
- India is one of the fastest growing economies of the world and has large unmet needs for ophthalmic care.
- The major cause of blindness in India is cataract and with increasing life expectancy, rising number of glaucoma and retina cases can be noticed. By 2022, over 145 million Indians will be age 60 or over.
- In revenue terms, the two largest submarkets are **cataract surgery and retina services, followed by diagnostic equipment and glaucoma.**



Source : Eye wire today article, Market Scope research paper, Hindustan Times

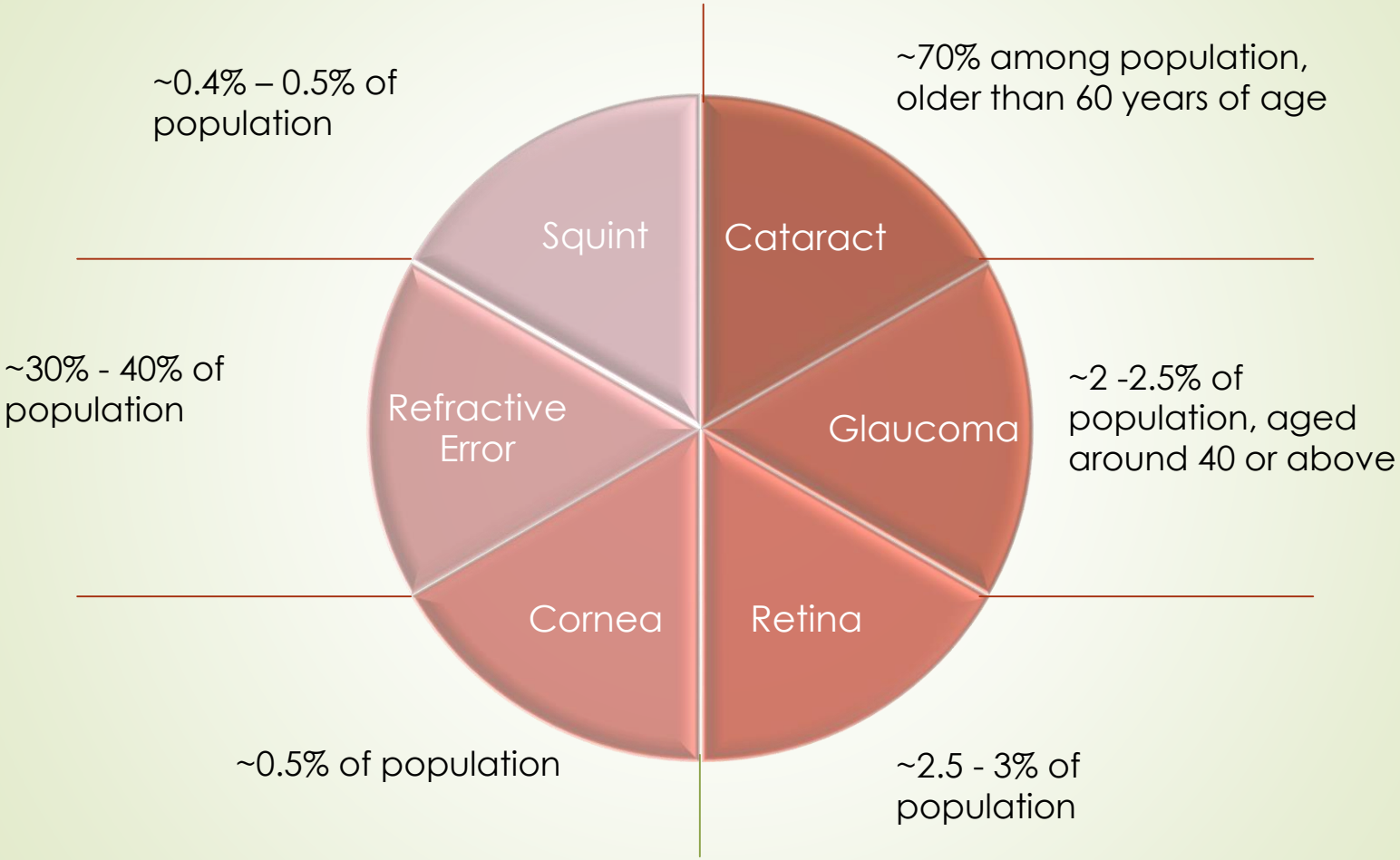
Blindness in India- Causes

- India shoulders the largest burden of global blindness wherein **cataract** and **refraction errors** remain major causes of blindness, **while glaucoma** is emerging as the third largest cause known as **"silent thief of human sight"**
- In India, every year 1 person per 1000 population goes blind due to cataract. There are ~12 million blind people in India with **Cataract** being the cause in almost **63% of the cases**.
- According to the National Programme for Control of Blindness (NPCB) estimates, there are currently **12,000 corneal blind persons** in the country.
- To the exiting burden, nearly **30,000 corneal blindness cases are added** every year
- Beside corneal blindness, 456 million people require vision correction.
- **It is worth noting that nearly 80% of the disease burden causing blindness is completely avoidable.**



Source: WHO, NCBI, The Hindu Articles, Research Gate

Prevalence of Eye Disorders in India

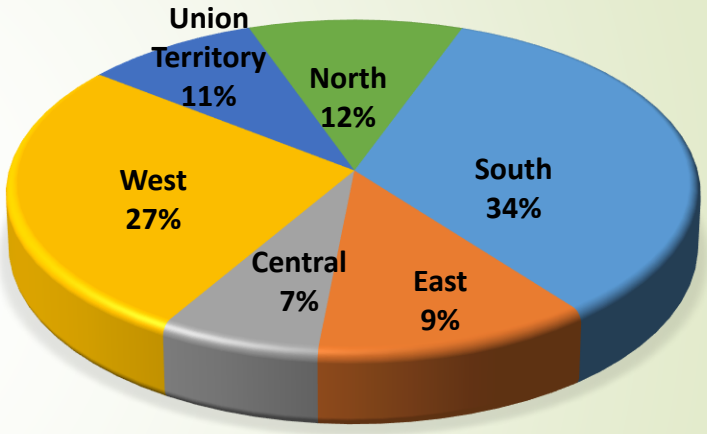


Source: The Hindu, PwC Report

Eye Care Service Delivery in India

- The distribution of eye hospitals in India is focused predominantly in **South and western region.**
- Eye hospitals are set up as a standalone center, chain of hospitals with hub and spoke model or as an unit / department in a multispecialty hospital.
- India has approximately **1300 Eye hospitals** including the major chains wherein most of the major hospitals are present in urban belt.
- Some of the major Eye hospitals / chains in India are Sankara Nethralaya, Aravind Eye Hospitals, L.V. Prasad Eye Institute, Vasan Eye Care, Shroff Eye hospital, Dr. Agarwal's Eye Hospitals, etc.
- While there are many eye hospitals in urban India, primary eye care is not well-established in rural parts of the country.
- There is a huge disparity in eye care service delivery in India; nearly **80% of the ophthalmologists are clustered in urban areas, where only 24% of the population resides.**
- Though the secondary and tertiary eye care facilities have come up in tier – I and II cities, there is still a vacuum in rural India due to the lack of organized primary eye care services.

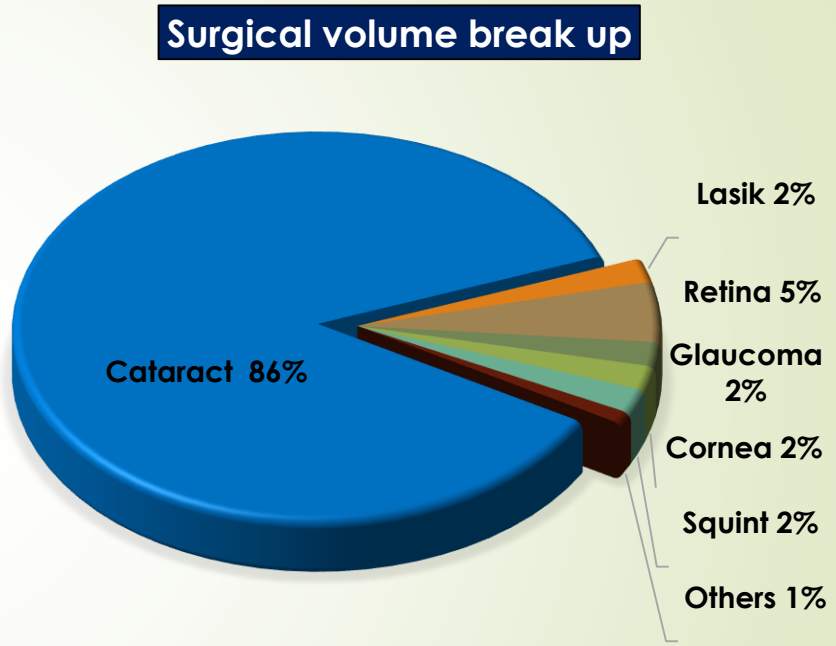
Distribution of Eye Hospitals in India



Source: Indian Vision Institute, Crisil, Hosmac Research

Eye Care Service Delivery in India

- About 65% of surgical performance in the country; mostly cataract surgery; is performed in the private and voluntary sector and only 35% is within the government sector.
- Ophthalmologists performed approximately 7 million cataract surgeries across India in 2017.
- About **15,000 ophthalmologists** and an equal number of trained and recognized mid level personnel (MLP) exist as opposed to the ratio of having at least 4-5 MLP for each ophthalmologist.
- An estimated 40-50% of the ophthalmologists may be surgically inactive within the country.
- The ophthalmologist to population ratio in urban India is 1:25,000 but in rural India it is about 1:250,000 whereas it is believed that an average ratio of **1: 15,000 is adequate.**



Source : Towards developing India WHO document, Newspaper articles, Indian Vision Institute Report, Market Scope Research, vision 2020

Key Growth Drivers

Rising proportion of ageing population	• Currently ~7.4% of India's Population (~89 Million people) is over 60 years of age • Number of people requiring cataracts are expected to grow significantly by 2020
Rising number of diabetic retinopathy cases	• India has the maximum number of diabetes cases in the world, with a prevalence ratio of 4.5% of the population. • Almost two-third of all Type 2 and almost all Type 1 diabetics are expected to develop diabetic retinopathy over a period of time
Emergence of better technology	• It is estimated that 50% of surgeries are performed free of cost or at highly subsidized rates currently; With emergence of latest technologies, doctors are able to perform complex and less time consuming surgeries efficiently enabling them to increase the throughout
Attractive returns on investment on an eye care specialty hospital	• As compared to most other single-specialty hospitals such as cardiology, oncology and so on, a tertiary eye care center requires a capital investment of only Rs. 60-70 million. • A well established tertiary center can earn operating margins of 25-30% once it breaks even.

Source : Crisil, PwC reports

Methodology Adopted

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Study Methodology

Study Objectives

Study Methodology:

Research Questions

Does a demand supply gap exist in Palanpur for Ophthalmology?

What should be the service mix of the proposed facility?

Study Design – Cross Sectional Study

Project Setting- Hosmac India, Pvt. Ltd and onsite in Palanpur, Gujarat

Duration of the study- 2 months

Duration of the study

- The study was carried out for a period of 2 months. The distribution of work is described in the Gantt Chart below.

S.No	Task name	Time (in weeks)	15 Feb-21 Feb	22 Feb- 28 Feb	1 Mar- 7 Mar	8 Mar- 14 Mar	15 Mar- 21 Mar	22 Mar- 28 Mar	29 Mar- 4 Apr	5 Apr- 11 Apr
1.	Understanding the project needs	1								
2.	Preparation of Questionnaire	1								
3.	Secondary Research	2								
4.	Primary data collection	1								
5.	Data Analysis	2								
6.	Report Writing and Presentation	1								

Objectives of the Study

To understand the socio-economic conditions of the area and health needs of the potential catchment area with regards to Ophthalmology

To explore available healthcare facilities and understand the potential competitors in the study area

To analyze the demand-supply gap in the proposed location of the hospital

To propose an idea for an eye hospital best suited for the proposed location.

Study Area

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Gujarat- Overview& Healthcare Landscape

Palanpur- Overview& Healthcare Landscape

Overview - Gujarat

- **Area:** 1,96,024 Sq. km
- **Population:** 60,383,628
- **Literacy Rate:** 79.31%
- **Major Cities:** Ahmedabad, Vadodara, Surat, Rajkot, Bhuj, Junagadh, Jamnagar
- **Key Industries:** Argo and food processing, Dairy, Chemicals and petrochemicals, Textiles and apparels, Engineering and auto, Gems and jewelry, Oil and gas, Pharmaceuticals and biotechnology, IT, Minerals, Ports, power and Tourism.
- **GDP:** $235 billion, second only to Maharashtra and slightly above the national average.

Healthcare Landscape- Gujarat

State Medical Infrastructure

3	19	18	30	129	300	1,208	7,744
Super Specialty facilities	Medical Colleges	District Hospitals	Sub-District hospitals	Mobile Health Unit	Community Health Centers	Primary Health Centers	Sub Centers

Ayush facilities

- Ayurvedic hospitals 40
- Ayu Dispensaries 523
- Homeopathic Hospitals 4
- Homeo Dispensaries 216

Key health Schemes:

- Chiranjeevi Scheme
- Mukhyamantri Amrutam (MA) Yojana
- Centre Aided Health Insurance Scheme
- Rogi Kalyan Samiti

*The state has a total of 19 medical institutions with 2930 seats. It also has 4 self financed optometry institutions with a total of 125 seats.
*In the state budget for 2017-18, US$ 1.08 billion has been allocated by the state government for Health & Family Welfare department under Plan & Non-Plan expenditure

Overview- Palanpur

- **District:** Banskantha
- **Population:** 140344
- **Male population**: 53%
- **Female Population:** 47%
- **Sex ratio:** 912
- **Average Literacy Rate:** 86%
- **Male literacy:** 94%
- **Female Literacy:** 78%
- **Major Religion**: Hinduism
- **Important Languages:** Gujrati, Hindi, English
- **Neighbouring Areas:** Mehsana, Deesa, Patan
- **Major Industries**: Dairy, Textile, Diamond polishing and marble.

Economic Survey of Maharashtra 2014-15 ; Source: Census 2011

Connectivity- Palanpur

- **Railways:**

- Palanpur lies on the Jaipur Ahmedabad Line and comes under the control of Western Railways Zone of Indian Railways.
- It is directly linked to major cities like Chennai, Mumbai, Bangalore, Pune, Dehradun, Jodhpur, Delhi, Muzaffarpur, Bareilly, Jammu, Jaipur, Mysore and Thiruvananthapuram.
- It is also well connected with the major towns and cities of Gujarat like Ahmedabad, Surat, Vadodara, Bhuj, Rajkot, Jamnagar and Porbandar.

- **Road:**

- National Highway 14 passes through Deesa- Palanpur thus connecting it to major cities.
- It is also well connected by road to major towns and cities of the state through state highways.

- **Air:**

- The nearest airport is Deesa airport while the closest International Airport is the Sardar Vallabhbhai Patel Airport, Ahmedabad.

Public Health Infrastructure

District	District Hospital	Sub District Hospital	Community health Centers	Primary Health Centers
Banskantha	1	1	19	88
Mehsana	1	3	14	55
Patan	1	1	15	36

Public Health Infrastructure of Palanpur

Taluka	District Hospital	Sub District Hospital	Community Health Center	Primary Health Center
Palanpur	1	0	1	8
Deesa	0	1	1	11

Data and Methods

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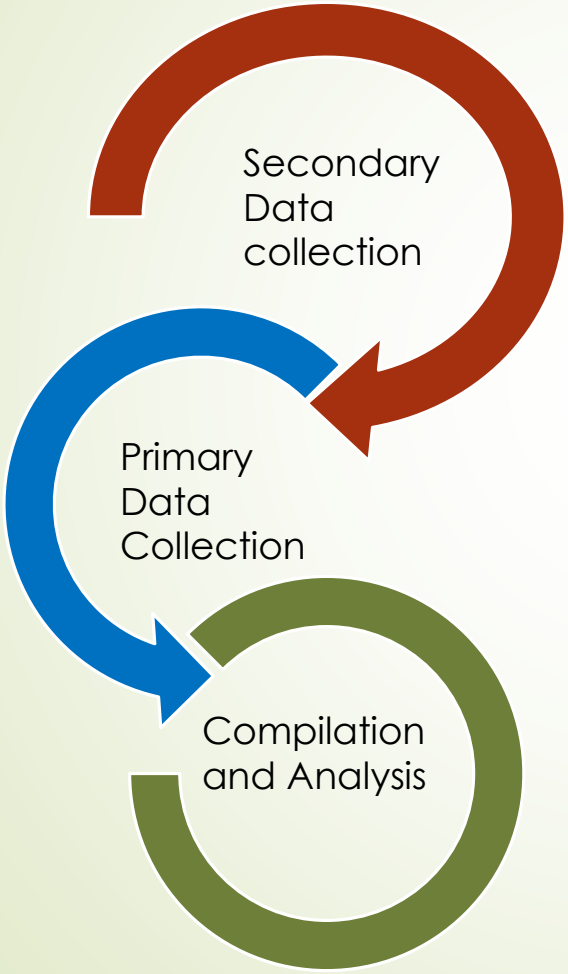
Methodology

Data Collection Methods

Methodology



- Online research, search engine used – Google
- Hosmac Database
- Reports of leading Market Research Organizations

- Survey conducted in March 2018
  - Consultant survey
  - Institutional survey

- Assembling data collected during primary survey
- Team Analysis

Data Collection Methods

Instrument for data collection- Semi structured questionnaire

Qualitative data	**Open ended questions** regarding the existing service mix and stakeholders perception of existing deficiencies in the healthcare services
Quantitative data	**Closed ended questions** regarding the Paying capacity and Insurance penetration categorized into high, medium and low **Open ended questions** regarding the Bed occupancy, patient drainage, productivity details and tariff details

Sampling Technique used- Purposive Sampling

Market Survey Analysis

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Key Survey Findings

Advantages – Palanpur

Market Insights

Primary Survey Findings

- Being the administrative capital of the district, Palanpur is equipped with a variety of healthcare specialties.
- However, it is to be noted that the town has a dearth of multispecialty hospitals.
- A large no. of single and dual specialty clinics are present in the area which cater to the healthcare needs of the population.
- The various single specialty clinics include dental, ophthalmology, gynecology and urology among others.
- On the basis of the primary survey conducted it can be concluded that the town **lacks any super specialty**.
- There is a dearth of various services which include psychiatry, neurophysiology, pediatrics, cardiology and advanced ophthalmology services.
- A new hospital in Mehsana, i.e., Shankus Medicity caters to the oncology needs of the population.

Market Survey Analysis

Onsite Study:
15 March- 21 March, 2018

Data Analysis:

- Both the primary and the secondary data were analyzed to develop a perspective on the Ophthalmology market in Palanpur, Gujrat.
- **Primary catchment area** for the proposed facility would be the **Banskantha district and other surrounding districts of North Gujrat.**
- **Secondary Catchment area** for the proposed facility would be **South Rajasthan.**

Primary Market Survey:

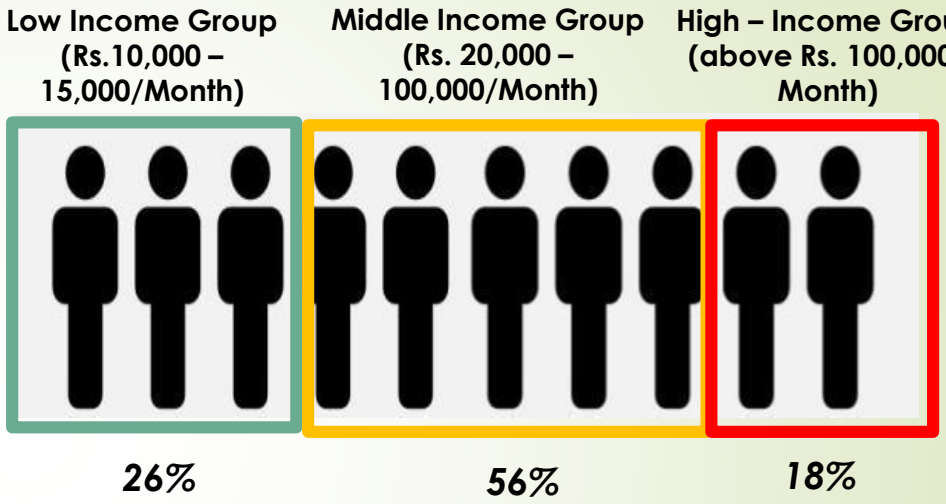
- Personal interviews were conducted with the ophthalmologists and hospital administrators.
- Of the total interviews conducted, ~54% of them were consultants while ~46% were Hospital Administrators

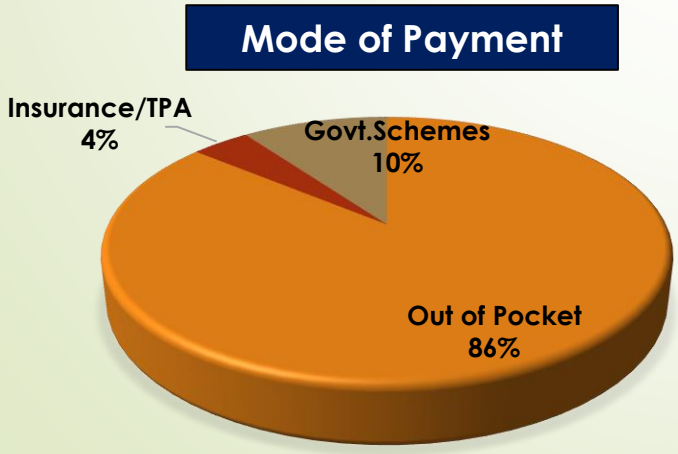
- Dedicated eye care centers and ophthalmologists having their private practice were also interviewed.

Key Survey Findings

Socio – economic conditions

- The socio-economic condition of the service area is important to assess the given market and identify the target consumer group; understand their paying capacity and derive the bed-mix, decide the pricing strategy and accordingly design the tariff structure for the proposed hospital.
- On the basis of the survey, it was found that majority of ~56% population falls in the middle income group.





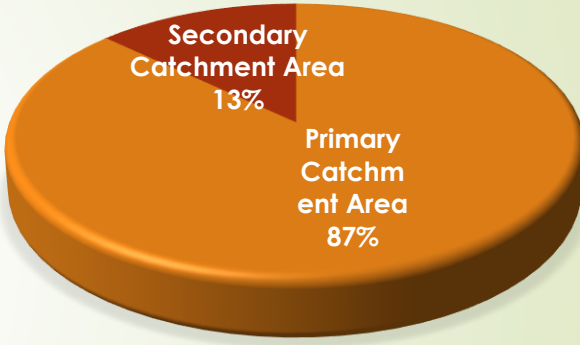
Mode of Payment

- The majority of population of Palanpur pays out of pocket for their healthcare needs.
- Private health insurance has a very low penetration in the target population.
- Government health schemes like RSBY and Mukhyamantri Amrutam constitute the major portion of the insurance.

Patient Drainage- Palanpur

- The primary catchment area for the proposed facility is the Banskantha district and the surrounding districts of North Gujarat.
- The surrounding districts include Deesa, Mehsana, Patan
- The secondary catchment area would be South Rajasthan.
- 87% of the patients in the existing facilities are from the primary catchment area whereas 13% are from the secondary catchment area.
- This huge gap may be attributed to the lack of super specialty in the target area leading to a outward movement of Palanpur
- The outward drainage of patients from Palanpur is towards Ahmedabad for all advance surgeries including the complex cases of ophthalmology.
- The inward drainage towards Palanpur is only for cataract surgeries from the surrounding districts.

Catchment Area



Scope of Retina Services in Palanpur

- It surfaced during the primary survey that there is lack of retina services in and around Palanpur
- There is no full time practitioner for retina which forces the consultants to refer the patients to Ahmedabad for all the cases
- The consultants believe that around 20% of the cases have to be referred to Ahmedabad owing to the absence of retina services in and around the area.
- The only consultant available for Retina is a visiting consultant in "Mohan Eye Hospital" in Deesa who visits once a week.
- Around 60% of the consultants feel that any new set up for ophthalmology should be equipped with retina services.
- Given the background, it can be inferred that there is a potential to develop retinal services in the primary service area as there is a demand supply gap.

Advantages- Palanpur

Few eye care specialty services

- The proposed area has a very few super specialty eye hospitals in the vicinity offering quality care.
- Most of the eye care centers are run by single private practitioners focusing mainly on cataract services.
- Absence of specialties like retina in and around the proposed area

Drainage Area

- Palanpur has a good connectivity with the major towns and cities of Gujarat.
- Due to the connectivity, the town offers a wide catchment area which includes the neighboring towns and cities extending up to Rajasthan.

Available market

- The volume of cataract cases in Palanpur is quite high.
- It is estimated that by 2020, the prevalence and incidence of cataract will increase due to the increasing life expectancy.
- First mover advantage for retina services.

Market Insights

- The market for ophthalmology is highly skill dependant and private practitioners play an equally important role as the healthcare institutions.
- Palanpur is equipped with only one multi specialty hospital, i.e. NH Mavjat Multispecialty Hospital which does not provide ophthalmology services.
- It has been noted that due to the lack of a number of multispecialty hospitals, the healthcare market of Palanpur offers a **good potential for growth**.
- One **major hindrance** that has been unearthed during primary survey is the **affinity of people towards the doctors of their community**, thereby increasing their possibility of favouritism for a particular facility or consultant.
- Besides, the **availability of skilled manpower for advanced ophthalmology** services seems to be a challenge.
- The only consultant offering Retina services is a visiting consultant in Deesa, thereby highlighting that the availability of manpower can pose a serious threat to a new player.

Competitor Analysis

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Key Players - Snapshot

Key Competitors– Facility Mix

Key Competitors- Productivity Details

Key Competitors- Tariff Details

Key Players- Snapshot

Hospital Name	NH Mavjat Multispecialty Hospital	Aman Eye Hospital	Samarpan Eye Hospital	Mahesh Eye Hospital	Jay Eye Hospital	Lion's Hospital
Type of hospital	Multi-specialty	Single Specialty	Single Specialty	Single Specialty	Single Specialty	Multi Specialty
No. beds	100	12	30	10	10	50
Bed Occupancy%	95%	90%	100%	85%	100%	100%
Location	Palanpur	Palanpur	Palanpur	Palanpur	Palanpur	Palanpur

Hospital Name	Divya Eye Hospital	Abha Eye Hospital	Shanku Medicity-SMC	Lion's General Hospital	Bhansali Hospital	Mohan Eye Hospital
Type of hospital	Single Specialty	Single Specialty	Multi Specialty	Multi Specialty	Multispecialty	Single Specialty
No .of beds	8	-	65	300	150	12
Bed Occupancy%	100%	-	90-95%	80%	70-80%	100%
Location	Palanpur	Palanpur	Mehsana	Mehsana	Deesa	Deesa

Facility Mix:

Hospitals / Speciality	NH Mavjat Multispeciality Hospital	Aman Eye Hospital	Samarpan Eye Hospital	Mahesh Eye Hospital	Jay Eye Hospital	Lion's Hospital	Divya Eye Hospital	Abha Eye Hospital	Shanku Medicity-SMC	Lion's General Hospital	Bhansali Hospital	Mohan Eye Hospital
Cataract	✗	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓	✓
Glaucoma	✗	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓	✓
Cornea	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
Neuro Ophthalmology	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
Squint and Uveitis	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
Retina & Orbit	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✓
Refraction services	✗	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓	✓
Diabetic Retinopathy	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
Lasik Procedures	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
Ocular Oncology	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗

Productivity Details

Hospital	Cataract Volume*	Glaucoma volume*	Refraction Services*	OPD*
Aman Eye Hospital	120	60	250	500
Samarpan Eye Hospital	300	150	400	1200
Mahesh Eye Hospital	100	40	150	350
Jay Eye Hospital	120	40	150	400
Lion's Hospital	300	180	500	1800
Divya Eye Hospital	100	30	200	400
Abha Eye Hospital	120	45	250	450
Bhansali Hospital	250	150	1000	2000
Mohan Eye Hospital	150	70	550	1000

* The values are per month

Tariff Details

(In INR)

Hospital	Cataract	Glaucoma	Refraction Services	OPD
Aman Eye Hospital	8000-15000	12000	100-300	200
Samarpan Eye Hospital	4500-10000	8500	100-400	150
Mahesh Eye Hospital	5000-10000	8500	150-300	100
Jay Eye Hospital	5000-6000	7000	100-250	100
Lion's Hospital	4800-20000	15000	150-300	150
Divya Eye Hospital	7000-25000	18000	100-300	200
Abha Eye Hospital	DNA	DNA	DNA	150
Bhansali Hospital	500-1000	800	20-150	10
Mohan Eye Hospital	5000-50000	20000-30000	200-600	250

DNA- DATA Not Available

Proposed Facility Mix

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Proposed Bed and Facility mix

Structural Design

Proposed Facility Mix with Space Programming

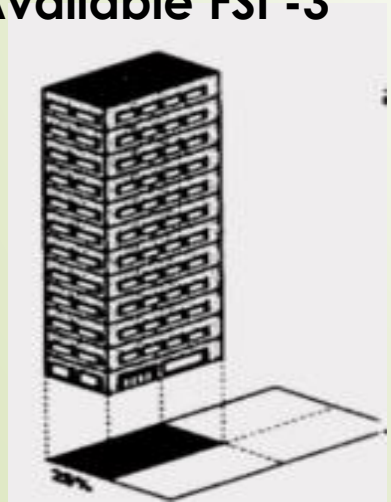
Facility	Number	Unit Area (sq. feet)	Total Area (sq. feet)
Consultation Rooms	4	150	600
Work up rooms/ Counselling rooms	2	100	200
IPD beds (4*5)	20	500	2000
Single room 1 in 1	2	250	500
Operation Theatre	2 (I major, I minor)	600+400	1000
Pre/Post Op Rooms	4	100	400
Changing Area/ Doctors' Rest room	1	100	100
Sample Collection room	1	100	100

Facility	Number	Unit Area (sq.feet)	Total Area (sq.feet)
Reception Desk	1(considering 2 work desks with scope of another one for expansion)	40	120
Waiting Area	1	250	250
MRD	1	200	200
Optical Shop	1	100	100
Pharmacy	1	140	140
CSSD	1	250	250
Cafeteria	1	200	200
Server Room	1	100	100
Store	1	80	80
Diagnostics	1	250	250
Circulation space (staircases, corridors, lift areas, washrooms etc.)	30%		1977
Total Area			**8567**

Structural Design

Plot Size Available

Available FSI -3



Calculations for the Proposed Facility

A	***Plinth Area*** *(@33% of Plot Size Available)*	=	*1,980*	*Sq.ft*
B	***Total Build-up Area of Proposed Facility***	=	*6,590*	*Sq.ft*
C	***Circulation Space*** *(@ 30% of B)*	=	*1,977*	*Sq.ft*
D	***Total Area Required for Proposed Facility*** *(B+C)*	=	*8,567*	*Sq.ft*
E	***Floors Required*** *(D/A)*	~	***4***	

The Way Forward

9

SWOT Analysis
Business Risk Mitigation
Critical Success Factors
Conclusion

SWOT Analysis

Goodwill of the established facility

Sound financial and medical background of the promoter

Competitive pricing and the ability of the trust to subsidize treatment through donor grants

As Ophthalmology is a doctor driven specialty, availability of skilled manpower in Palanpur may pose a challenge

As majority of the patients would avail treatment through govt. schemes, hospital may face cash-flow challenges

Scope of a comprehensive ophthalmology setup

Wide catchment area extending up to Rajasthan

High inward patient volume for cataract

Capitalize on the outward movement for retina surgeries

Threat of New entrants

Longevity and goodwill of the existing private practitioner

Business Risk Mitigation

Risk	Description	Probability of Occurrence	Mitigation
Risk of New Entrants	New players might enter in the market and hospitals like NH may plan to set up an ophthalmology unit	High	• Capitalize on the first mover advantage • Tie up with the well known retina surgeons of Ahmedabad
Dominance of Private Practitioners	The private players dominate the ophthalmology market and pose a strict competition to any new player	High	• Establish a name in the market • Capitalize on the advantage of catering to all income groups • Quality Accreditation

Critical Success Factors

FIRST MOVER ADVANTAGE

MARKET POSITIONING

COMPETITIVE PRICING

QUALITY ACCREDITATION

FOCUSSED MARKETTING STRATEGY

TALENT ACQUISITION

Conclusion

The market for ophthalmology is **a skill dependent market** and both the healthcare organizations and private practitioners play an equally important role.

The secondary research conducted shows that the **market for ophthalmology is set to grow.**

The primary survey research has revealed that the **Palanpur has a demand supply gap for ophthalmology, thereby** offering a good scope of **growth .**

Further, the intention of the client to cover **all the income groups** can prove to be an advantageous step.

Due to a **lack of skilled manpower** in Palanpur for retina services, we suggest an initial **a tie up** with the retina specialists of Ahmedabad. as the patient footfall increases and a brand name is established, it is suggested that full time consultants are engaged.

Therefore, we propose a **holistic approach** towards ophthalmology beginning with services like **cataract surgeries, glaucoma surgeries, refraction and retina services** with scope of future expansion for other advanced services like cornea, diabetic retinopathy and Lasik Services

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