MARKET ASSESSMENT STUDY FOR AN UPCOMING HOSPITAL IN DAKAR, SENEGAL.

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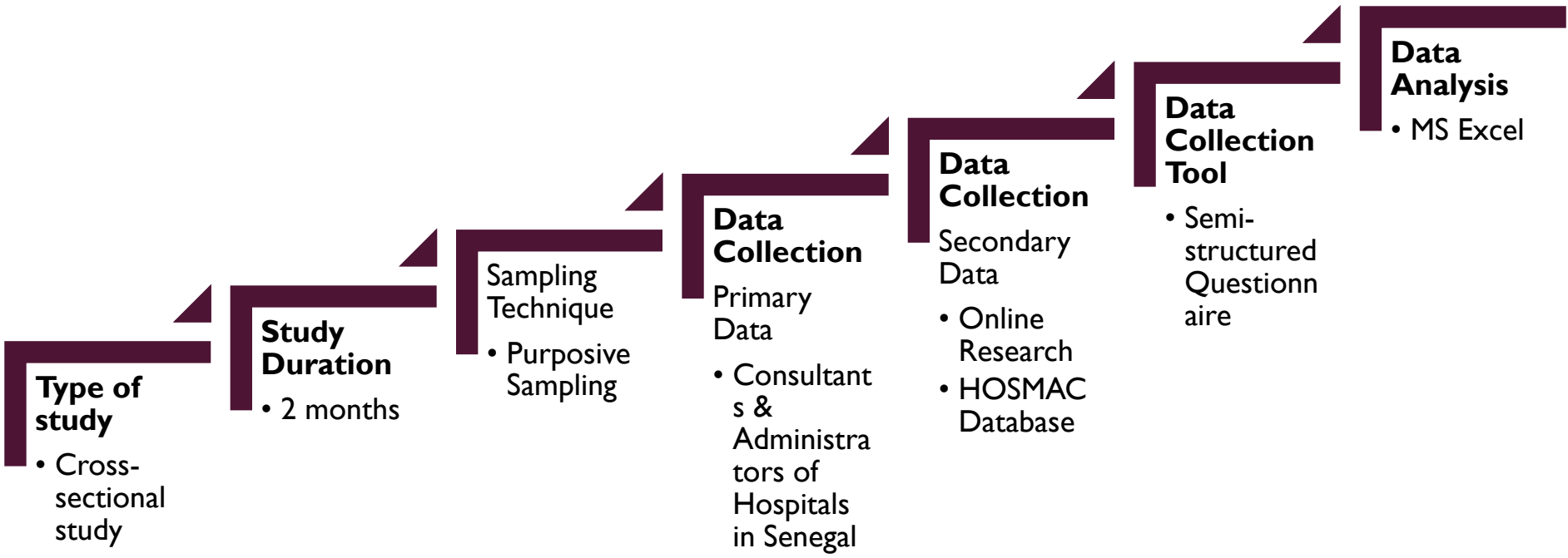
ABOUT THE PROJECT

- Client plans to set-up a 150 bed state-of-art multispecialty tertiary care hospital in Dakar, Senegal and had approached HOSMAC India Pvt. Ltd. to conduct market assessment study for same.
- The study provides demographic, economic and health profile of Senegal, comparing it with its neighboring countries namely The Gambia, Mauritania, Mali, Guinea, Guinea-Bissau.
- The study describes the entire health system of Senegal, the healthcare indicators of the West African countries and burden of diseases prevalent in the region.
- The secondary data collected through the internet from websites, various reports by international health organizations and that of ministry of health of Senegal.
- The competitor profile of the hospitals present in the Senegal has been discussed on the basis of their services provided and their productivity.
- A proposed service mix is provided considering the market for the same based on the data collected through the primary and the secondary research.

PROJECT OBJECTIVE

- To study the demographic profile, healthcare market and key competitor profile of the region.
- To understand the healthcare market scenario of Dakar, Senegal.
- To suggest recommendation based on the data obtained and conclusion for the same.

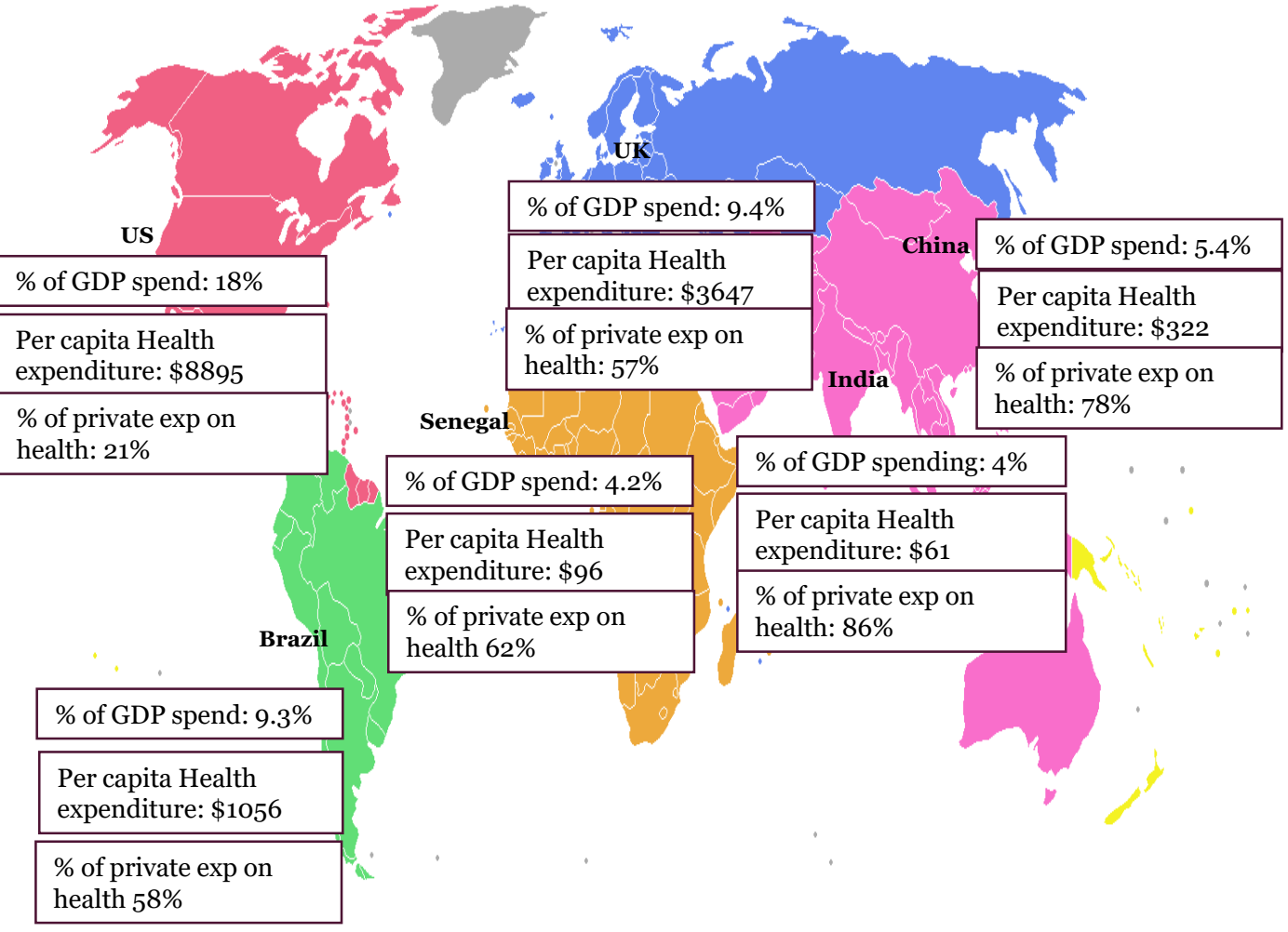
METHODOLOGY



SECONDARY RESEARCH

GLOBAL HEALTHCARE SCENARIO // AFRICAN HEALTHCARE SCENARIO

GLOBAL HEALTHCARE SCENARIO



- As seen from the number when compared on parameters like % spend of GDP towards healthcare, Senegal spends almost 4.2% of GDP which is more than India.
- At $ 96, Per Capita Health expenditure is also on the lower side when compared to most of the countries like US, UK, Brazil.
- % of private out of pocket expenditure is 62% as compared to 57% in UK and 21% to US.

Source: World Bank data 2012

AFRICAN HEALTHCARE SCENARIO

- Sub Saharan Africa accounts for 11% of the global population and carries 24% of the global disease burden. However, it accounts for only 1% of the global health expenditure.

- In spite of funding from various national and international organizations, more than 50% of finance for healthcare expenditure comes through out-of-pocket expenses, i.e., from a population consisting of largely lower economic background.

- The Gross National Income(GNI) per capita of Africa showed an average annual growth percent of 10.4 in the last decade.

- The average real Gross Domestic Product(GDP) of Africa rebounded from 2.2% in 2016,further to 3.6% in 2017, and is projected to grow at 4.1% every year in 2018 and 2019.

- Influenzas and stroke remain the major cause of death in Africa followed by heart diseases, malaria and tuberculosis. Further, there is lack of facilities and well developed infrastructure to deliver basic healthcare services.

- The government has taken significant measures to improve access to quality care. Healthcare sector has also seen emergence of private players due to the growing needs of the population, with an in-flow of both domestic and foreign investments. Recently, private sector is experiencing an increase in investment especially in the field of pharma, hospitals and diagnostics.

Source: The Business of Health in Africa, International Financial Corporations, 2017.

SECONDARY RESEARCH

SENEGAL

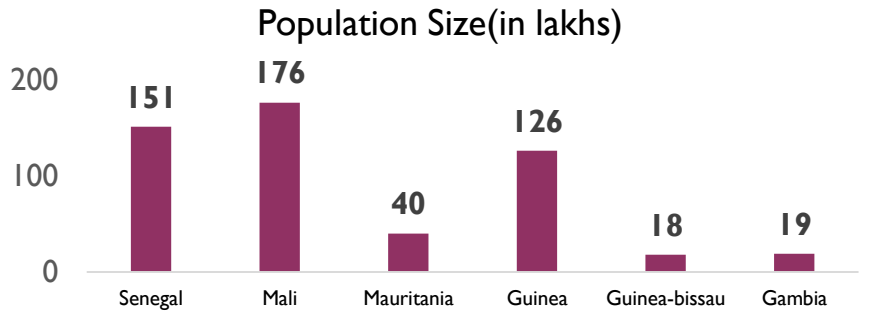
OVERVIEW

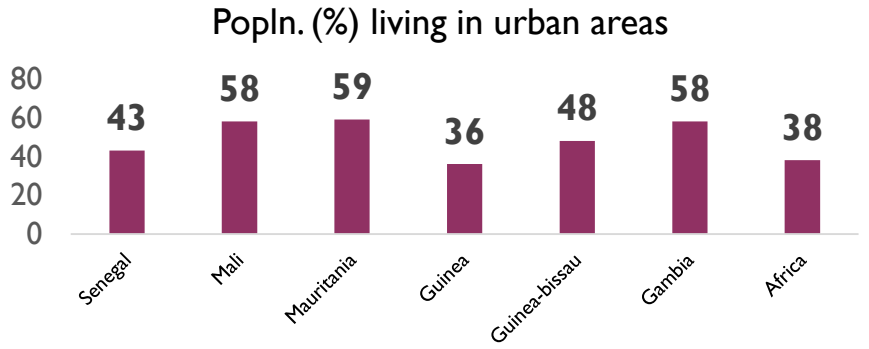
- Senegal is a country in West Africa with a national territory of 196,722 km sq.
- It is bordered by Mali in the west, Mauritania in the north, Guinea in the south-east and Guinea-Bissau to the south-west. It completely borders The Gambia, except for a narrow coastline at the western region, which separates the southern region from the rest of the country.
- Senegal has been subdivided into 14 regions, each being administered by a Regional Council.
- Senegal's population is estimated at 15.3 million in 2016 with people under the age of 24 representing more than 60% of the population.
- It ranked 147th in World Banks's Doing Business Report, 2017 for ease of doing business, a six position improvement from 2016 for being one of the top world's business reformers and business environment improvers.
- Areas that need urgent attention include health and basic education, for which Senegal ranks 126th in World Economic Forum's Global Competitive ness report, 2016-2017.
- The country is a famous tourist destination and received more than 10 lac tourist in year 2015 from various countries.

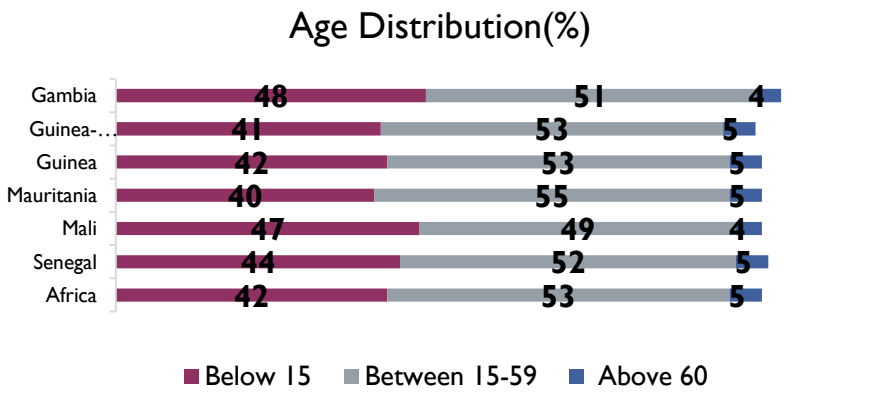
Source: Our Africa; Deloitte Invest in Senegal, March 2017

DEMOGRAPHIC PROFILE

- The population of Senegal in 2016 was more than 15 million and had 43% of the country population living in urban areas by 2013 which was ahead the African average of 38%.
- It is second biggest country based on population in western region.
- Over 44% of the population in Senegal is below 15 years of age, while the percent of elder population (over 60 years) in Senegal form only 5% of the total population.
- Despite universal primary school enrollment, the literacy rate of the country stands at 55.6%.
- Senegal's economic and political capital is Dakar, the largest city in Senegal at the westernmost tip of the country.



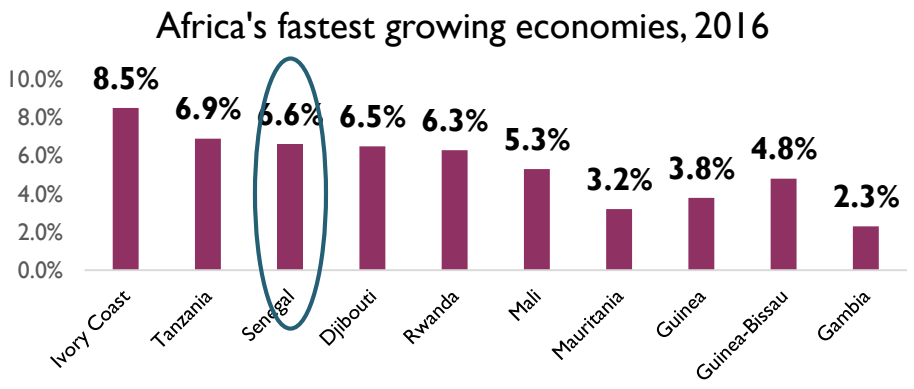




Source: Senegal Annual Health Statistics Report 2016; WHO 2013

ECONOMIC PROFILE

Profile	
GDP (current US$) (billions)(2016)	14.68
GDP growth (annual %)	6.6
Total expenditure on health as a % of GDP	4.2
Per capita expenditure on health	96.0
Govn. Expenditure(%) of Total Health Expenditure	38

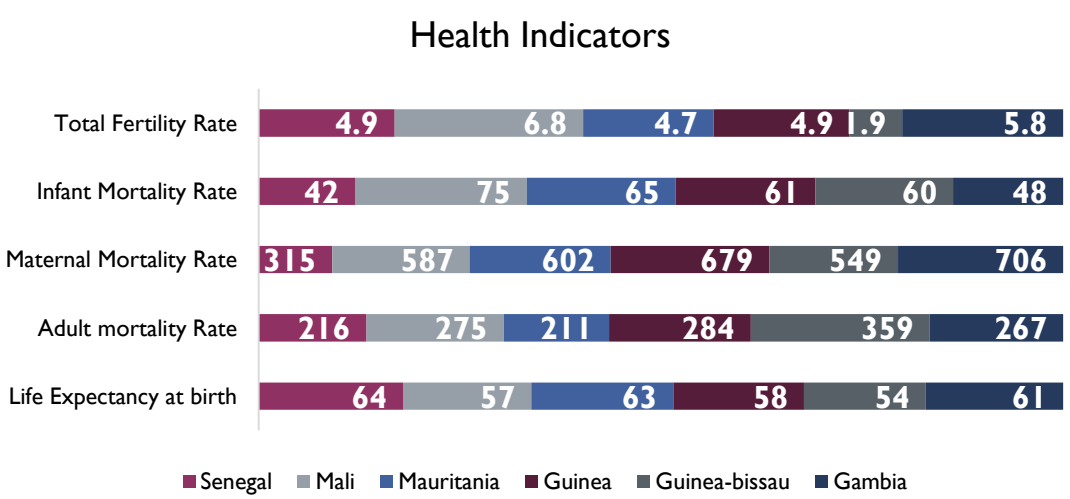


- Senegal is economically stronger than its neighbors due to a diversified industrial base and well-developed infrastructure making it economic hub of the region.
- The Gross National Income (GNI) per capita of Senegal is higher for Senegal than its neighboring Countries, only closely behind Mauritania.
- Senegal has put in place a series of economic reforms as a part of the "Emerging Senegal Plan 2014" which focuses on inclusive growth and accelerates progress of Senegal towards becoming an emerging economy by 2035, for the development of health, drinking water and infrastructure development
- According to IMF report, for health care companies looking for markets in to expand, and for investors looking to invest in health care businesses, there is a $11–$20 billion in private health care expansion that represents a significant opportunity.

Source: Senegal Annual Health Statistics Report 2016; Deloitte Invest In Senegal, March 2017

HEALTHCARE SCENARIO

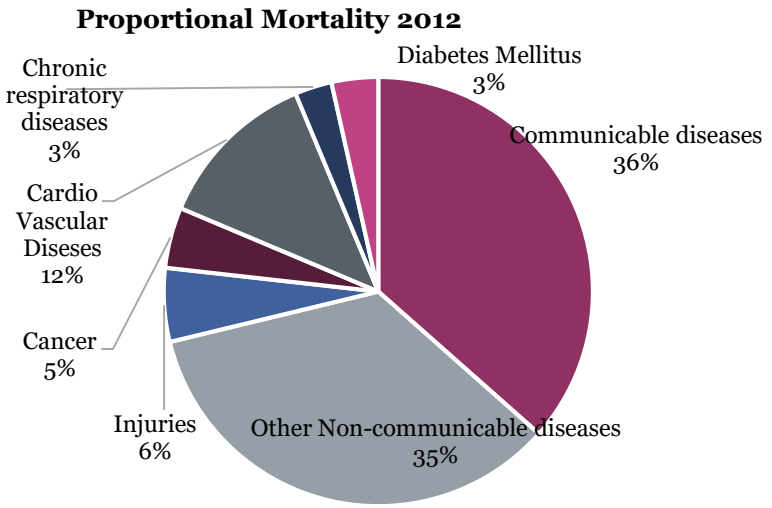
Health Indicators	2000	2015
Life Expectancy at Birth(years)	58	67
Life expectancy at age 60 (years)	16	17
Maternal mortality ratio	480	315
Under-five Mortality Rate	137	47
Adult Mortality Rate	280	216

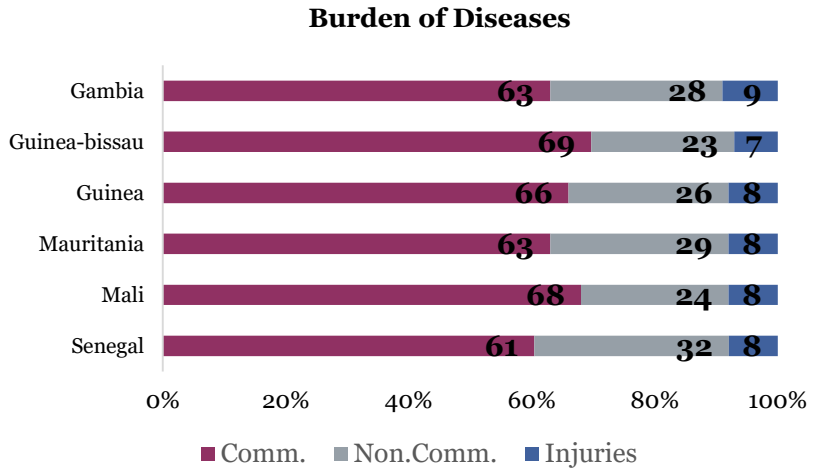


- Senegal's healthcare system has made significant advancements which can be seen in life expectancy rates which shows life longevity is on the increase, while the steady decline in the mortality rates shows the effectiveness of healthcare schemes in the region.
- Almost all (93%) pregnant women in Senegal receive some antenatal care (ANC) from a skilled care provider (doctor, midwife, or nurse).
- This ability of the Senegalese population of availing advanced healthcare facilities is indicated by the increased birth rate and a decrease in the mortality rates of the country.
- However, according to a WHO report, the percent of out of pocket expenditure for healthcare services in Senegal was double of Africa in 2013.

Source: Senegal Health Factsheet,2016; Demographic and Health Survey, Senegal 2010-11

DISEASE BURDEN





- Malaria and Tuberculosis are the leading causes of death due to communicable diseases .
- The incidence of HIV has reduced down to 0.01 in 2015 in Senegal, while the incidence rate is still higher in the bordering countries of Senegal.
- The rate of deaths due to road traffic accidents amount up to 20 per 100,000 population.
- The burden of noncommunicable diseases is increasing at a significant rate, affecting a large no. of population of Senegal. However, the burden of disease for communicable diseases is large.
- The higher mortality due to non communicable disease is due to lack of adequate healthcare services in the region providing necessary treatment for the same.

Source: Senegal Health Factsheet 2016; Africa Annual Health Statistics, 2016; World Bank, Senegal Overview,2014

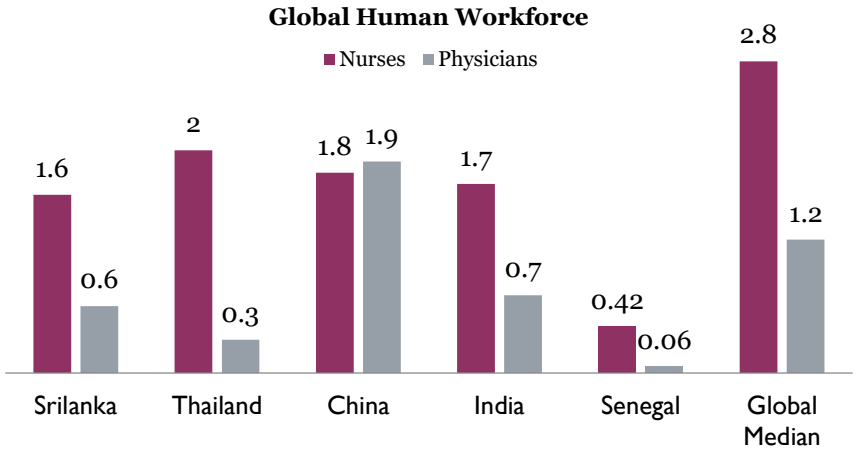
HEALTHCARE INFRASTRUCTURE

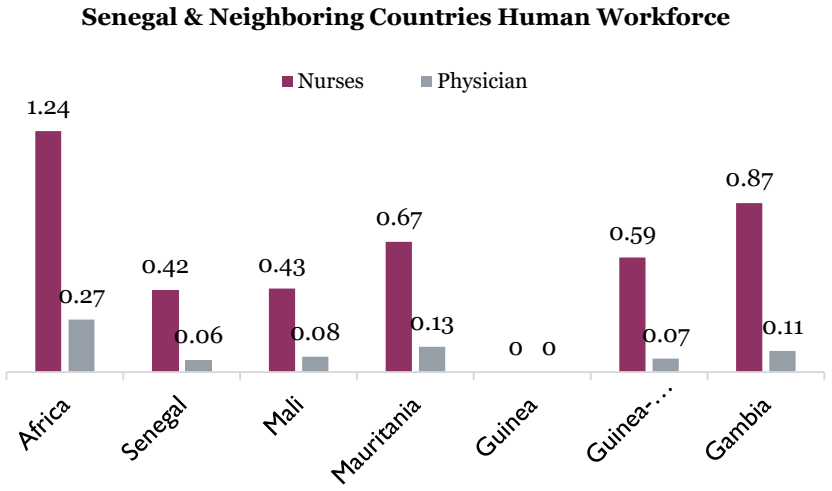
Public (1200)	Private(442)	Armed(43)
• 9 National Hospital • 13 Regional Hospitals • 6% District Level Health Centers(72) • 90% Health Posts(1106)	• 2 Private Hospitals • 43 Private Clinics • 356 Health Professional Clinics • 11 Health Posts • 30 Ambulatory Services	• 1 National Hospital • 16 Base Centers • 14 Labs • 12 Health posts

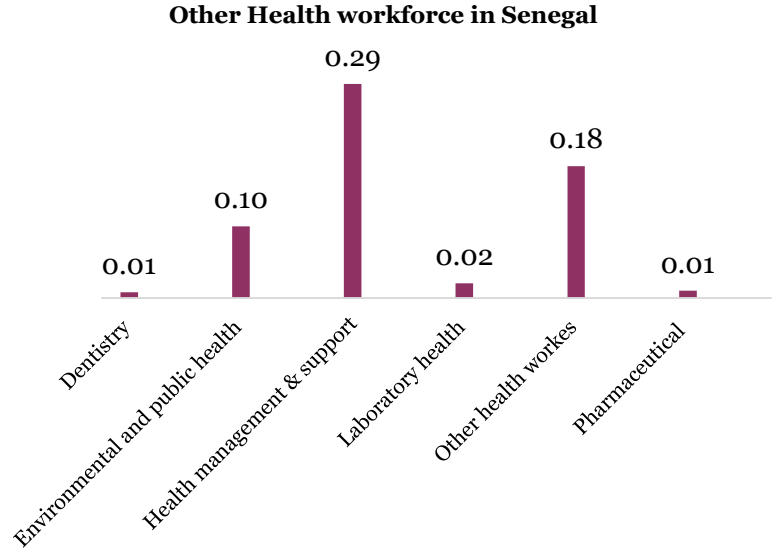
- The national health system in Senegal is divided into three levels: regional hospitals, district health centers and health posts while rural healthcare systems have health points below health posts.
- Some of the major barriers to healthcare utilization include lack of information and transport facilities, low number of healthcare facilities and social and religious barriers.
- Access to quality healthcare series is a challenge for many Senegalese population, mainly from rural and semi-urban areas, because of high out-of-pocket expenditure.
- The 9 national hospitals of Senegal are located in the capital city of Senegal namely Dakar, while the only two private hospitals in the country are located in Thies.

Source: Deloitte Invest in Senegal, March 2017; Senegal Private Health Sector Assessment, Jan 2016

HEALTHCARE HUMAN WORKFORCE COMPARISON







- It can be inferred from the data that Senegal falls behind in the number of nurses and physicians from other West African countries and is also far behind the ranks of other countries like India and China,
- While, we can assume that Senegal has qualified nursing staff, adequate training of these health providers would be required for achieving the goal of quality health service delivery.

NOTE: The data for Guinea was not available

Source: Africa Health Statistics,2016; Senegal Annual Health Factsheet,2016

SECONDARY RESEARCH

DAKAR

DEMOGRAPHICS

- Population(2013): 1.1 million[Dakar city]
- Population (2013): 3.1 million[Dakar region]
- Percentage to the country population: 23%
- Annual Population Growth Rate(2012):5.8%
- 44.5% of the population of region of Dakar is under the age of 20.
- Sex ratio in Dakar Region(2011): 100.2%
- 49% of the urban population of Senegal lives in Dakar region
- It's bustling and cosmopolitan atmosphere makes it one of Africa's most important and vibrant cities.
- The Dakar Region encompasses the City of Dakar, and all its suburbs along the Carpe Verde Peninsula, including the Metropolitan area of Dakar.
- 55% of Senegal's GDP is produced in Dakar itself.

Source: Senegal Data Portal; Hospital Reform in Senegal,2012; Africa Research Institute March 2016

HEALTHCARE SCENARIO

Dakar Health system					
11 Hospitals	19 Health Centers	122 Dispensaries	41 Health Units	524 Pharmacies	692 Private Clinics

- The healthcare scenario in Dakar is dominated by the public sector where 9 of the 11 hospitals are national hospitals, while 92% hospitals of Senegal are located in and around Dakar.
- The private sector mostly comprises of health clinics and units owned and run private health practitioners.
- The data reviewed is suggestive that hospitals in Dakar serve as a referral center for patients from other cities in the country.
- The proportion of poor patients availing hospital facilities was 3%, while they make up 51% of the Senegalese population.

Source: World Bank Report, 2012; MOHSW

HEALTHCARE SCENARIO

- Dakar is home to all the 9 national hospitals of Senegal. In regard to private hospital, there are only 2 in Senegal present in the region of Thies.
- Besides, other hospitals as well established in the region, as Army Hospital, Main Hospital, Pikine Hospital etc.
- It is to be noted that the no.of hospital beds in the country are not adequate to meet the requirement of 11,470 beds as suggested by WHO.
- Le Dantec Hospital has 509 beds, followed by Fann hospital with 313 beds and Hoggy Hospital with 236 beds.
- Dakar being the largest city, having a considerably stronger healthcare market than the rest of the country, cater to the need of population not restricted to Dakar but also the population of the adjoining areas and of the country.
- Considering the patient drainage to the city, and the availability of health infrastructure, a significant bed deficit is seen.

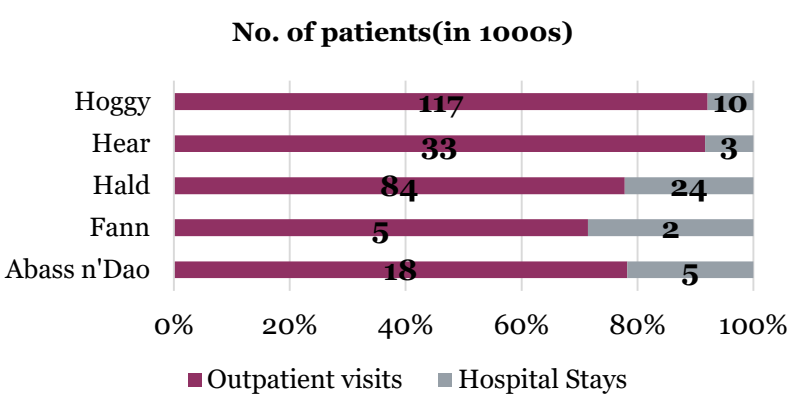
Name of Hospital	Region	No. of Beds
Le Dantec(HALD)	Dakar	509
Fann Hospital	Dakar	313
Hoggy Hospital	Dakar	236
Abass Ndao Hospital	Dakar	178
HEAR (Albert Royer)	Dakar	118

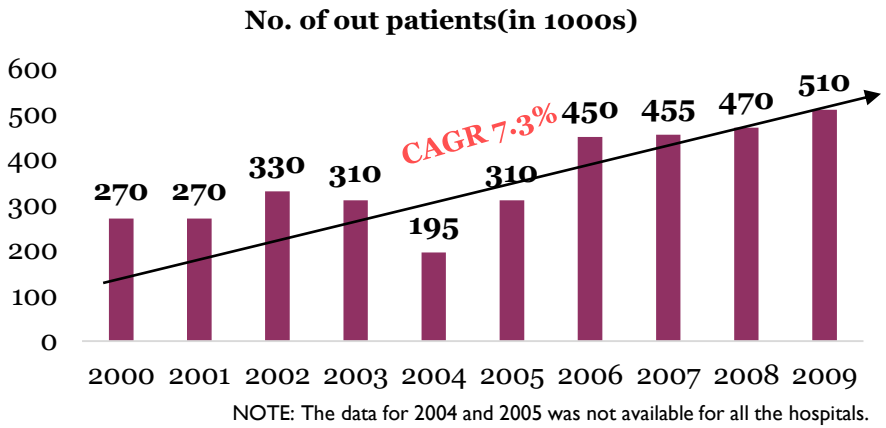
Parameters	
Population	3100000
Total number of Hospital beds (approx.)	2219
Bed availability ratio per 1,000 population	0.72
Number of beds required as per WHO norm of 3.7 beds/1000	11,470
Bed deficit	9,251

- ❑ Approx. number of hospital beds in the region is 2219
- ❑ This number can be assumed to be higher as a no. of beds may not be in a functional condition.
- ❑ The bed deficit is around 9251 considering the WHO norm with a bed availability ratio of 0.72.

Source: Ministry oh Health, 2009; World Bank Data

HEALTHCARE SCENARIO





NOTE: The data for 2004 and 2005 was not available for all the hospitals.

- The number of out patient visits in hospitals in Dakar is comparatively higher than compared to the no. of patients being admitted in the hospital.
- A World Bank report suggested a CAGR of 3% increase in the hospital stay of patients in Dakar, owing to the low-income population in the region, the morbidity pattern and low quality of hospital care provided.
- The Compound Annual Growth Rate(CAGR) of number of outpatients in Dakar is 7.3% from 2000-2009. At the same rate of growth the no. of outpatients in Dakar would amount to approx. 961,540 in 2018.
- The lesser CAGR in the hospitalization rate than the outpatients between the same period may be due to two reasons:
  a. Patients from higher income group would for out patient treatment prefer local hospitals, while for in-patient treatment patients were moving out of country.
  b. Patients from lower economic background due to non-availability of the government funds or schemes, were not able to avail the inpatient services provided by the hospital.

Source: HNP Discussion Paper, June 2012

MARKET SURVEY ANALYSIS

COMPETITOR PROFILE // CATCHMENT AREA // PAYING CAPACITY

COMPETITOR PROFILE

Sr. No.	Name of the Hospital	Operational Beds	Location	Type of Hospital
1	Fann Hospital	313	Dakar	Multi Super Specialty
2	Dantec Hospital	509	Dakar	Multi Super Specialty
3	Principle Hospital	304	Dakar	Multi Super Specialty
4	Yoff Hospital	236	Dakar	Multi Super Specialty
5	Abbas Hospital	178	Dakar	Multi Super Specialty
6	Ordre-de-Malte	50	Dakar	Multi-Super Specialty
7	HEAR Hospital	118	Dakar	Super Specialty

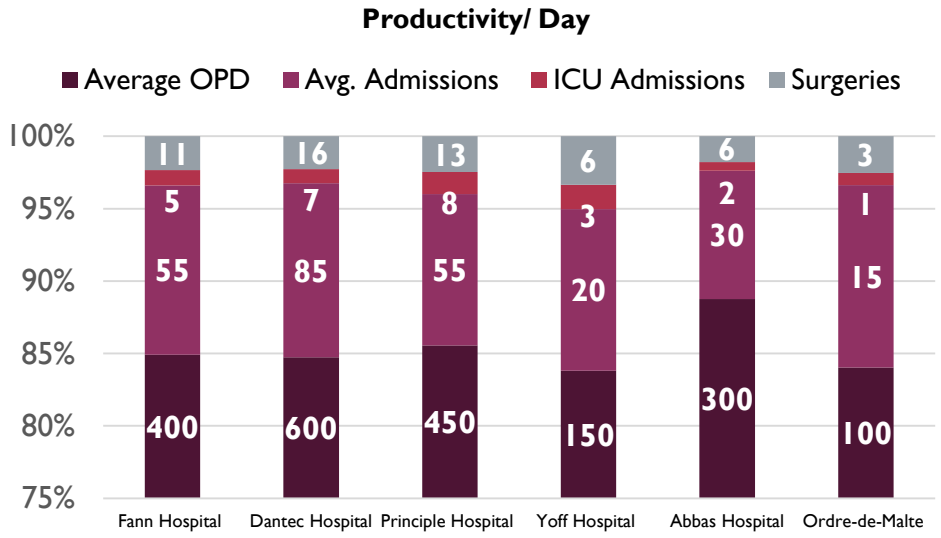
- Le Dantec is currently the biggest hospital in Senegal in terms of bed-size, while Principle Hospital is the National Army hospital of Senegal.
- Yoff Hospital, a formerly private hospital is currently a 230 bedded hospital providing multi specialty services.
- HEAR Hospital is the only children's hospital in the region catering to the needs of the community as a single super specialty unit.

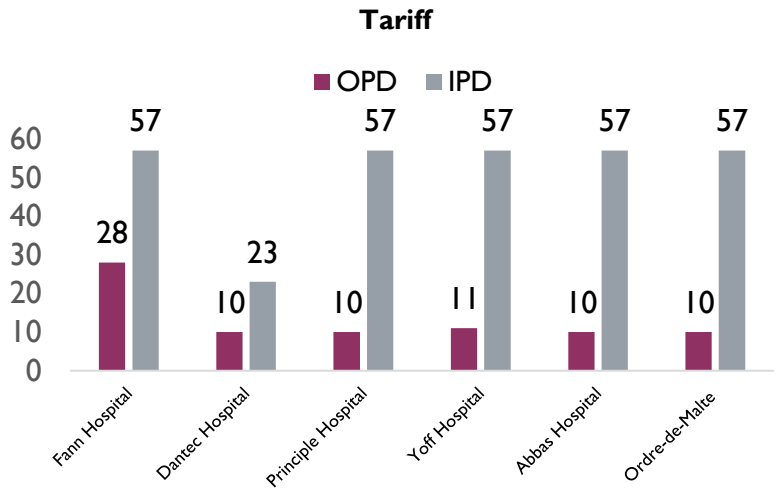
COMPETITOR PROFILE-SERVICE MIX

	Fann hospital	Dantec Hospital	Principle Hospital	Yoff Hospital	Abbas Ndao Hospital	Ordre de Malte
Cancer		+	+			
Cardiology	+	+	+	+	+	
Dentistry	+	+	+		+	+
Dermatology		+	+			
Emergency				+	+	
ENT	+					+
Gastroenterology		+	+		+	+
Gynecology & Obstetrics	+	+	+	+	+	+
Infectious diseases	+					+
Internal Medicine		+	+	+	+	+
Nephrology		+	+			+
Neurology	+					
Opthalmology		+	+		+	
Orthopedics		+	+			
Padiatrics	+	+	+	+	+	
Psychiatry	+		+			
Surgery	+	+	+	+	+	+
Urology		+	+		+	+

- The surgeries conducted by Yoff and Ordre de Malte are minor surgeries and procedures, while Dantec and Principle hospital provides surgery for specialized services. Fann Hospital is the only hospital in the region providing CVTS.

COMPETITOR PROFILE-PRODUCTIVITY





- The average OPD per day is comparatively higher in the hospitals of Dakar than the average admissions per day. Similarly, the no.of ICU admissions is also comparatively lower than the available no. of beds for critical care.

- Dantec Hospital has lower charges for outpatient services and admission being a public hospital, however, the no. of admissions/day though comparatively higher is still very less compared to the high no. of outpatients visiting the hospital. The conversion of OPD to IPD was on an average of 1 inpatient per 6 outpatients in Senegal.

- This could be suggestive of delivery of poor quality services provided by the hospitals owing to unavailability of skilled manpower, or the unwillingness of the patients to receive inpatient care at these hospitals who seek quality treatment outside of Senegal.

CATCHMENT AREA

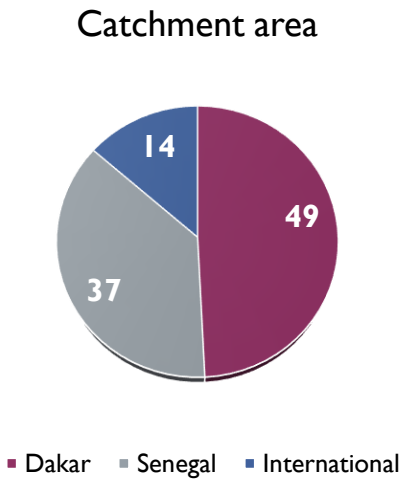
- Around 49% of patients visiting hospitals in Dakar are those from the Dakar region, in and around the city, while patients from Senegal comprise ~37% of the total visiting population where as the Dakar hospitals cater to an average of 14% of international patients visiting Senegal.

- Dakar is a preferred medical tourism destination for many African countries having a comparative advantage on costs, quality, availability and accessibility of healthcare services.

- Patients from the neighboring countries of Senegal visit Dakar as The Gambia, Guinea, Mali, Mauritania, Carpe Verde to name a few.

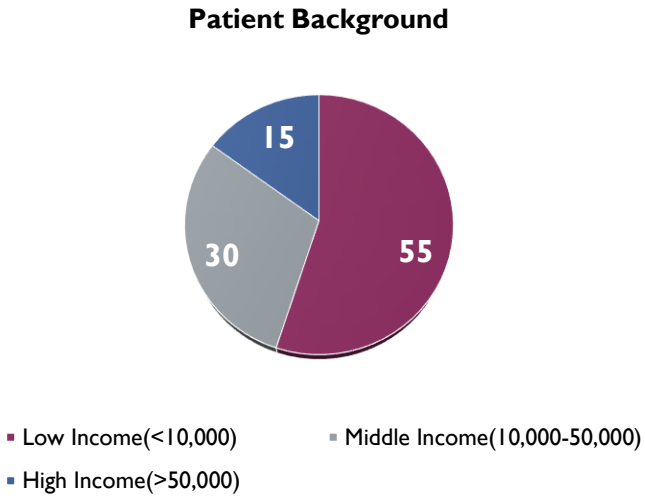
- The public health system in the neighboring countries of Senegal are in a state of crisis with under resourced and over burdened staff. While modern healthcare facilities are virtually non-existent in Guinea-Bissau, Dakar acts a profitable destination for many from Guinea, than to travel to Conakry (the capital) seeking healthcare services.

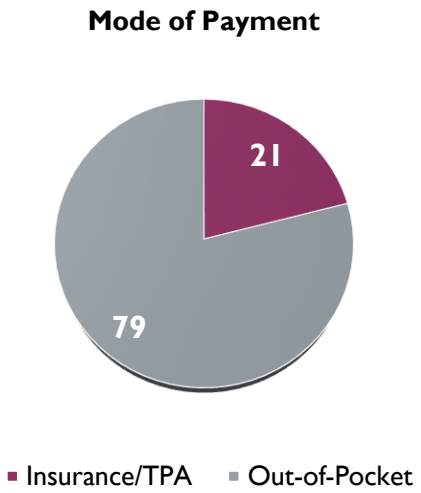
- With the lack of availability of required services in the region, the patients are referred to hospitals in France, Europe. However, there is also a considerate no. of patient drainage to South Africa, India, Nigeria, Kenya, France and other European countries.



PAYING CAPACITY

- The less percent of high income population visiting the hospital is in correspondence to the comparatively less no. of inpatients in the Dakar hospitals than the no. of patients visiting OPD.
- The percent of patients paying out-of-pocket was 79%, while those availing services through insurance/ TPA are 21%. The population availing insurance under the CBHI government scheme were only 4%.
- The data is suggestive of the paying capacity of the population visiting the hospital for treatment. The comparatively higher no. of low income population availing services suggest the demand in the country for quality delivery of healthcare services.
- The percent of high income population availing healthcare in Dakar is comparatively less than the aggregation of urban population in the city, suggestive of the drainage of the population from Senegal to abroad for medical tourism.





CONCLUSION

- Senegal currently offers a stable political environment, a favorable geographic position and strong institutions with growing opportunities for foreign investment. Dakar with its attractive geographical position can act as a center of referral, with advanced technology to deliver quality services in the region.

- The health system of Senegal is traditional with approximately 80% of health institutions comprising of health centers and health posts distributed around the country while tertiary health care centers being located in capital region of the country.

- The demand of healthcare services in the country is suggestive of its high no. of patients in the hospitals which currently have a bed deficit of 9,251 beds.

- The demand for oncology care in the region is high as suggestive of the primary research with higher utilization of services of cardiology, gynecology, orthopedic, trauma and neurology.

- The no. of patients availing medical tourism in Dakar are ~51% comprising of both international and domestic tourists and act as a major catchment area for the hospitals present in the region.

- The drainage of patients outside Senegal is also considerably high seeking quality advanced healthcare services outside the country.

RECOMMENDATION

SERVICE MIX

THRUST AREAS

- Oncology
- Cardiology and CVTS
- Neurology & Neuro Spine Surgery
- Mother & Child Care
- Gastroenterology
- Nephrology & Urology
- Orthopedics and Trauma

OTHER SPECIALITIES

- General Medicine & Surgery
- Ophthalmology
- E.N.T.
- Pulmonology
- Dental Sciences
- Psychiatry

OTHER CLINICAL AREAS

- OPD Unit
- Emergency care services
- Surgical Suites
- Cath lab
- Laboratory Medicine
- Radiology Services
- Physiotherapy & rehabilitation
- Blood Bank
- Dialysis
- Endoscopy

NON CLINICAL AREAS

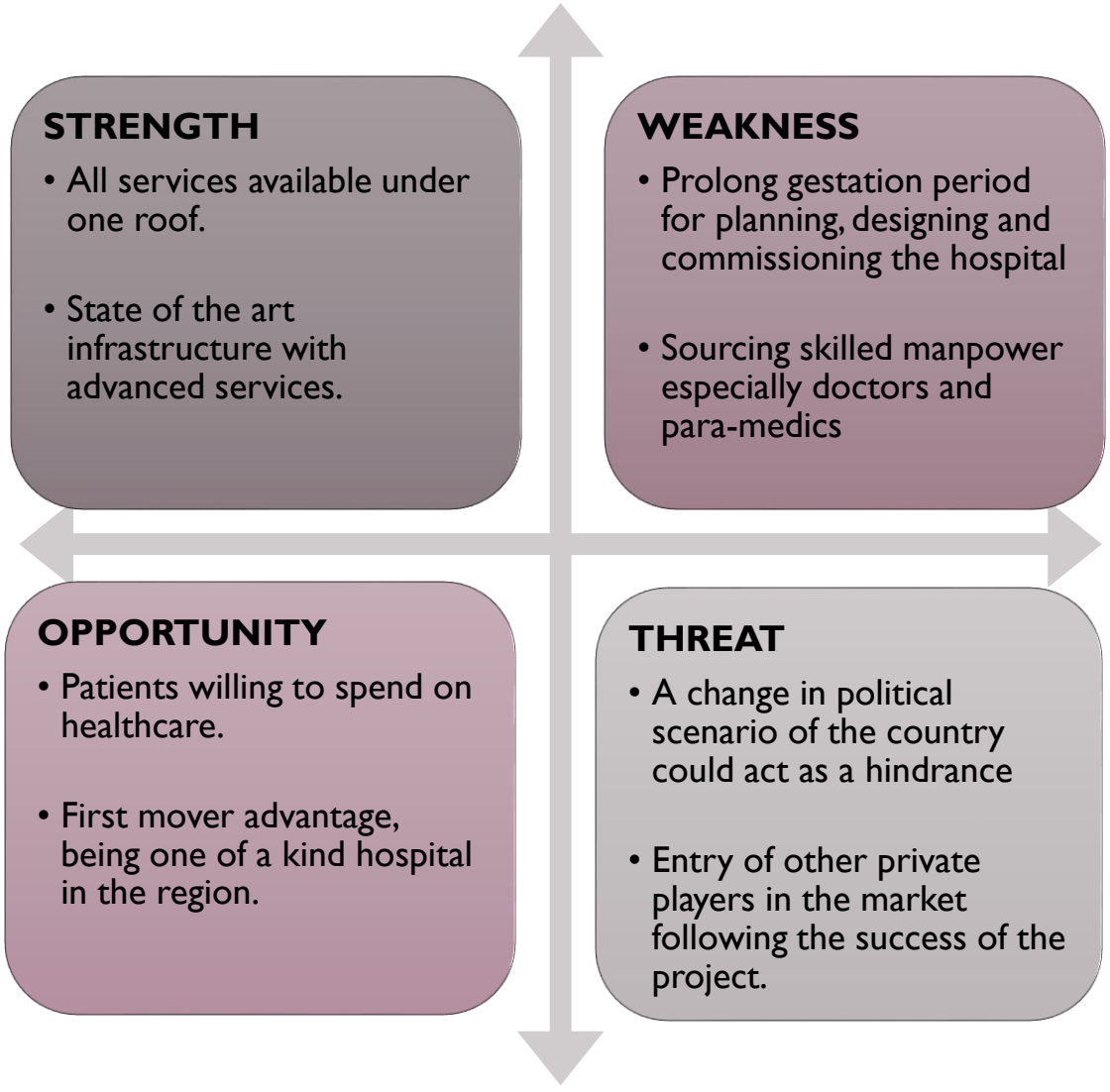
- Pharmacy
- Laundry
- CSSD
- PACS
- Kitchen
- MRD
- Housekeeping
- Security
- Cafeteria
- Bio-Medical Waste

FACILITY MIX

Critical Care Beds	**38**
MICU	10
SICU	10
PICU	8
HDU	10
In-Patient Beds	
Deluxe Room (1 in 1)	20
Twin Sharing (2 in 1)	28
General Wards(8 in 1)	64
Sub Total: Revenue Beds	**150**
Service beds	
Emergency Beds	5
Cath lab recovery beds	2
Chemotherapy Beds	4
Ambulatory / Day Care Beds (Medicine)	10
Dialysis beds	6
Pre OP - Surgical Suite	5
Post OP - Surgical Suite	5
Sub Total: Service Beds	**37**
TOTAL Beds (Revenue+service)	**197**

OPD Rooms	***20***
Operation Theatres	**8**
Procedure Suite	
Cath lab	1
Endoscopy Suite	2
Radio Imaging Lab	
CT Scan	1
MRI	1
PET CT	1
X-Ray	2
Portable X-Ray	3
BMD	1
CR System	1
Ultrasound with Color Doppler	1
Portable - USG with Color Doppler	2
Mammography	1
Pathology Lab	
Biochemistry, Hematology, Clinical Pathology. Histo-pathology, Serology, Microbiology	
Blood Bank	

SWOT ANALYSIS



THANK YOU