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# *Feasibility study of mother & child hospital in NCR region*

*Strictly private and confidential*
***Draft***

*May 2016*

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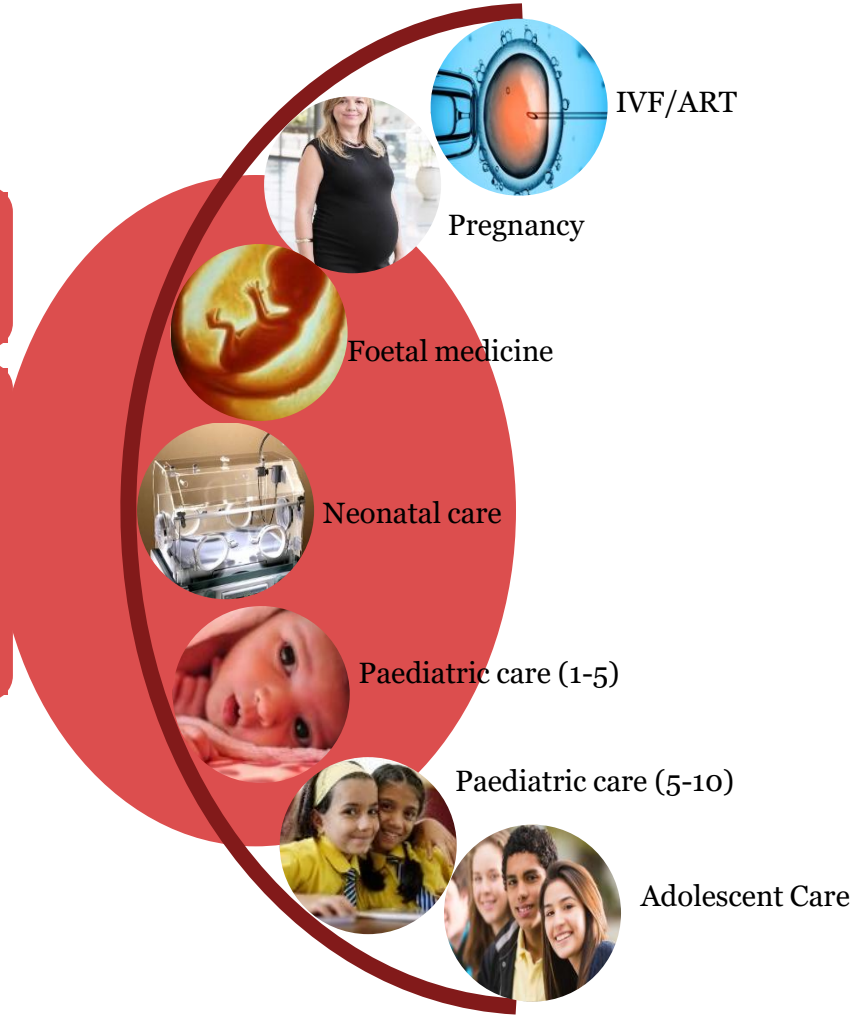
# Contents

- Literature review
  - Indian Healthcare overview
  - Healthcare in Delhi/NCR
- Methodology
- Analysis
  - Technical feasibility
  - Financial feasibility

# *Addressing the need for a world class "Mother and Child Medical Centre" in India*

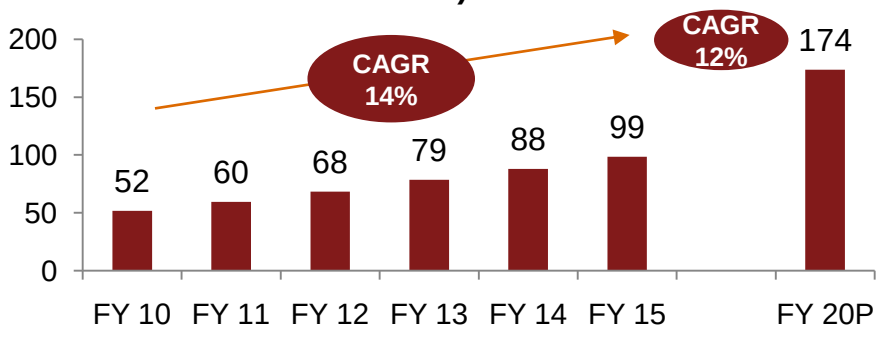
- Fulfil the need for a multi-superspeciality children and women's hospital in North India
- Address the demand for medical care for entire value chain from conception, prenatal, birth, neonatal, paediatric and adolescent under one roof
- Become the pioneer of academics and research in paediatric and paediatric sub specialities in India



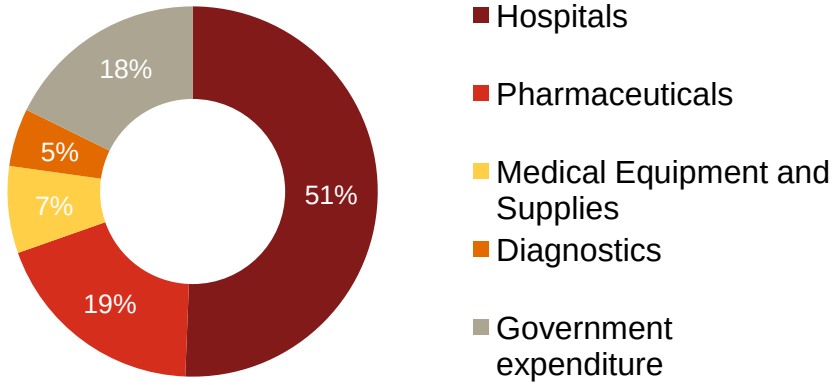
# *Section 1*
# *Indian Healthcare overview*

# *Indian healthcare industry projected to be a c. $175 Bn industry by 2020; driven by sustainable growth factors*

**Market size of healthcare industry in India (USD Bn)**




**Market breakup by revenues (%)**




- Favourable demographics and emerging middle class
- Increasing incidences of lifestyle diseases
- Rising healthcare consumption
- Growing health insurance penetration
- Rapidly organizing health delivery through expansion of traditional healthcare players and entry of non health corporates in healthcare
- Increased investments from PE funds
- Medical value travel advantage
- New & innovative delivery models

Source: WHO report, PwC analysis

# *With a sustainable demand leading to emergence of various private healthcare businesses along the following value chain*

## Multi-Specialty Hospitals


*General surgery*


*Neurology*


*Eye care*


*Critical care*


*ENT*


*Internal medicine*

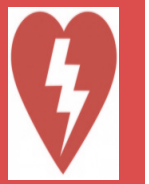

*Transplants*


*Mother & child*

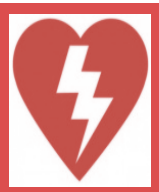

*Oncology*


*Orthopedics*


*Urology*


*Cardiac care*

## Single-Specialty Hospitals

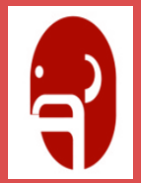

*Cardiac care*


*Orthopaedic*


*Mother & child*


*Dialysis*

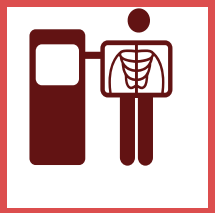

*Eye care*


*Dental*


*Oncology*

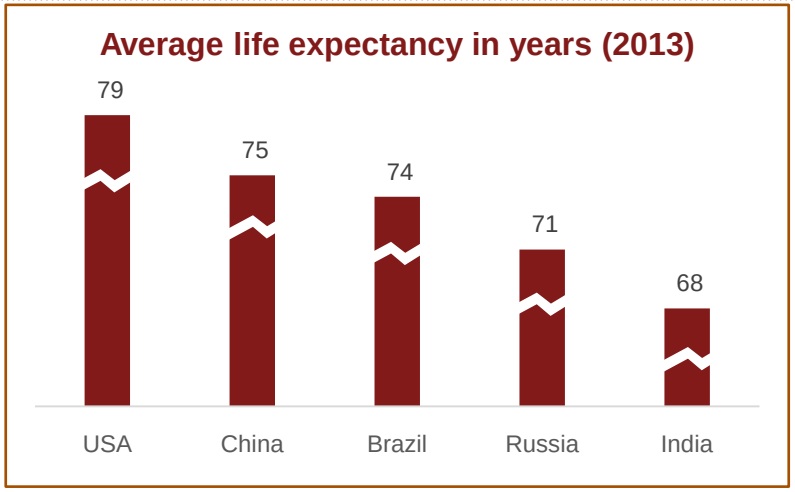
## Diagnostics

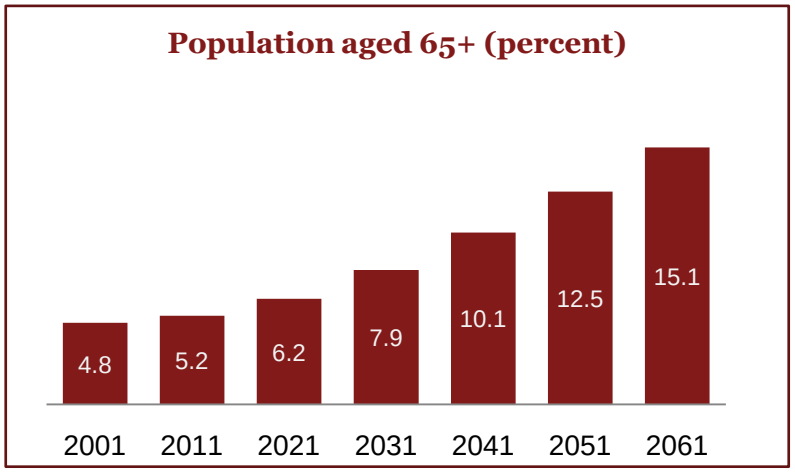

*Laboratory Diagnostics*


*Radiology*

Source: PwC Analysis

# *Demand side growth factor (1/4)- Population dynamics driving demand for healthcare services*



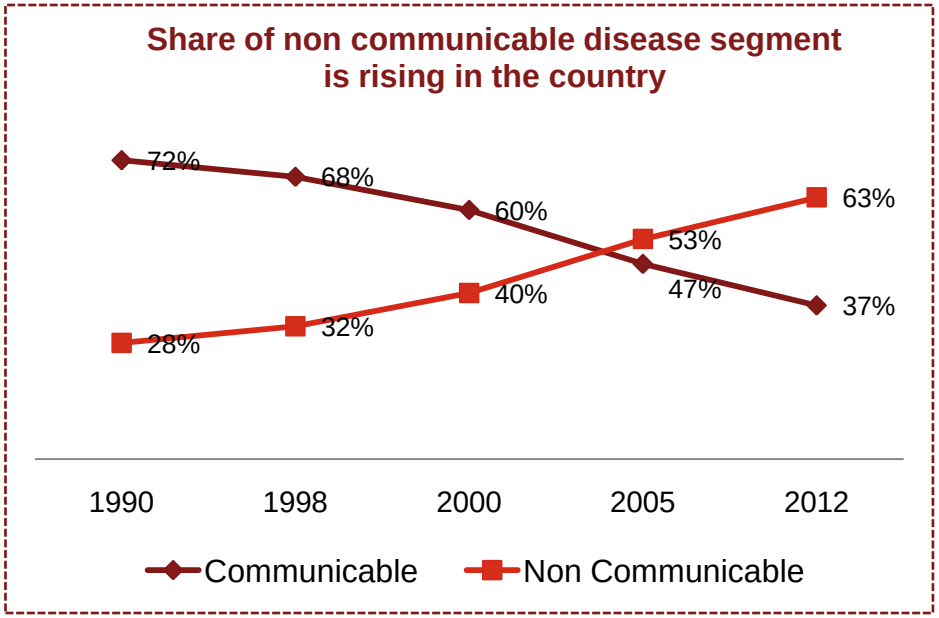




**Increasing life expectancy and ageing of population**

- India's life expectancy has increased from 60.2 years in 2000 to **67.7 years** in 2013 as a result of concerted efforts to tackle communicable diseases.
- As a result, **the proportion of the elderly** in India's population will rise and is expected to increase to nearly 8% by the year 2031.

Source : 'The future population of India', Population Foundation of India

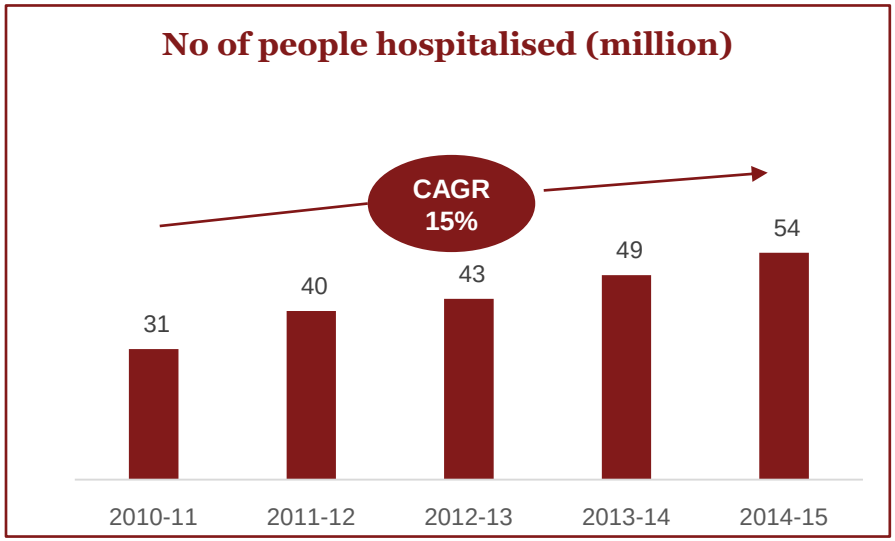
# *Demand side growth factor (2/4)- Dual burden of both Chronic and Acute diseases represent considerable healthcare burden*




- India has 17% of world population and accounts for approximately **21% of global disease burden**
- **Dual disease burden**
- **NCD's constitute 63%** of overall disease burden in India
- Rural India accounts for 70% of communicable disease cases, and over 50% of non-communicable disease cases

Sources: WHO Global disease burden data 2012, PwC Analysis

# *Demand side growth factor (3/4)- Patients demanding better healthcare as awareness rising*

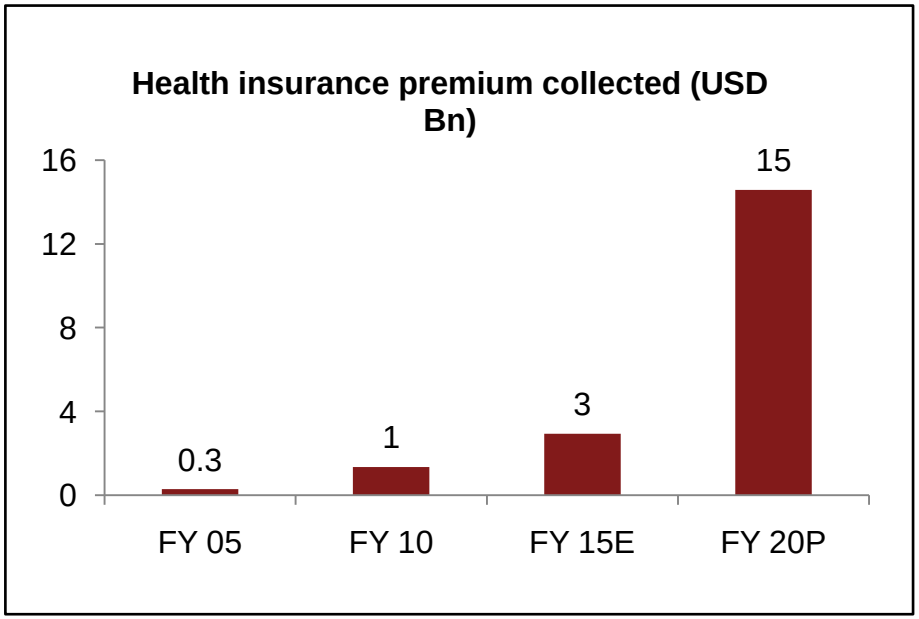



- **Rising awareness of diseases and available treatment options leading to increase in treatments**
- **Hospitalisation cases rising as demand for better healthcare increases**

# Growth factor (4/4)

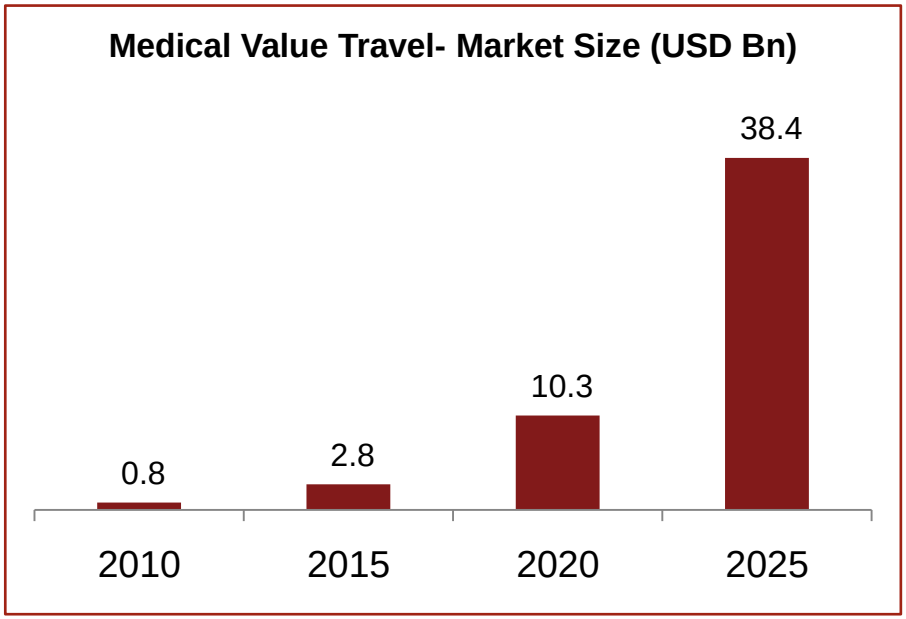
## Growing health insurance penetration

*Health insurance is stimulating the growth of healthcare delivery*




## Growth of Medical Tourism in India

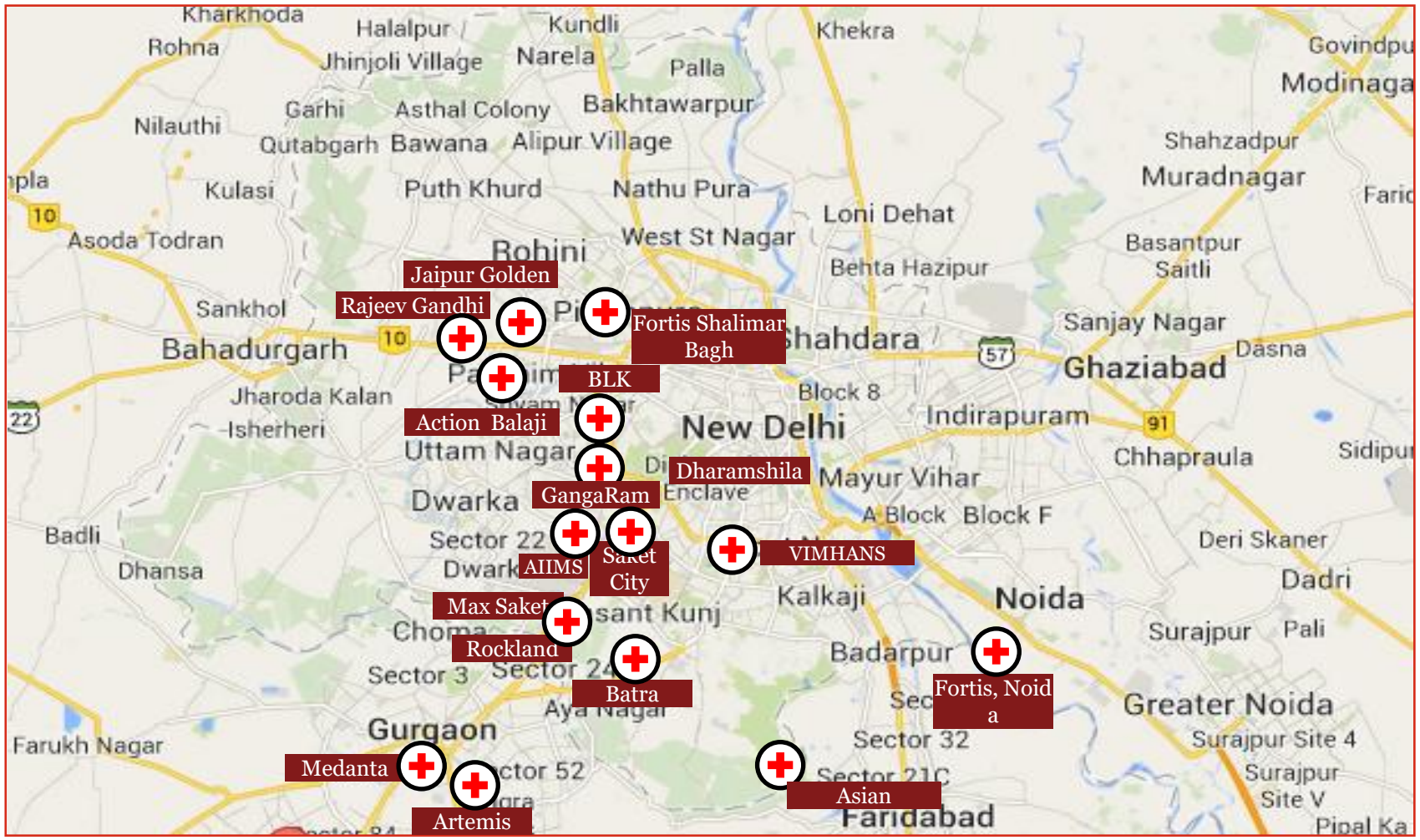
*Medical value travel is growing in India at ~ 35% currently due to quality care available at affordable prices*




Source: IRDA Annual reports, PwC Analysis

# *Section 2*
# *Healthcare in Delhi and NCR*

# *Delhi NCR has emerged as a well developed regional medical hub marked by presence of various quality healthcare facilities*

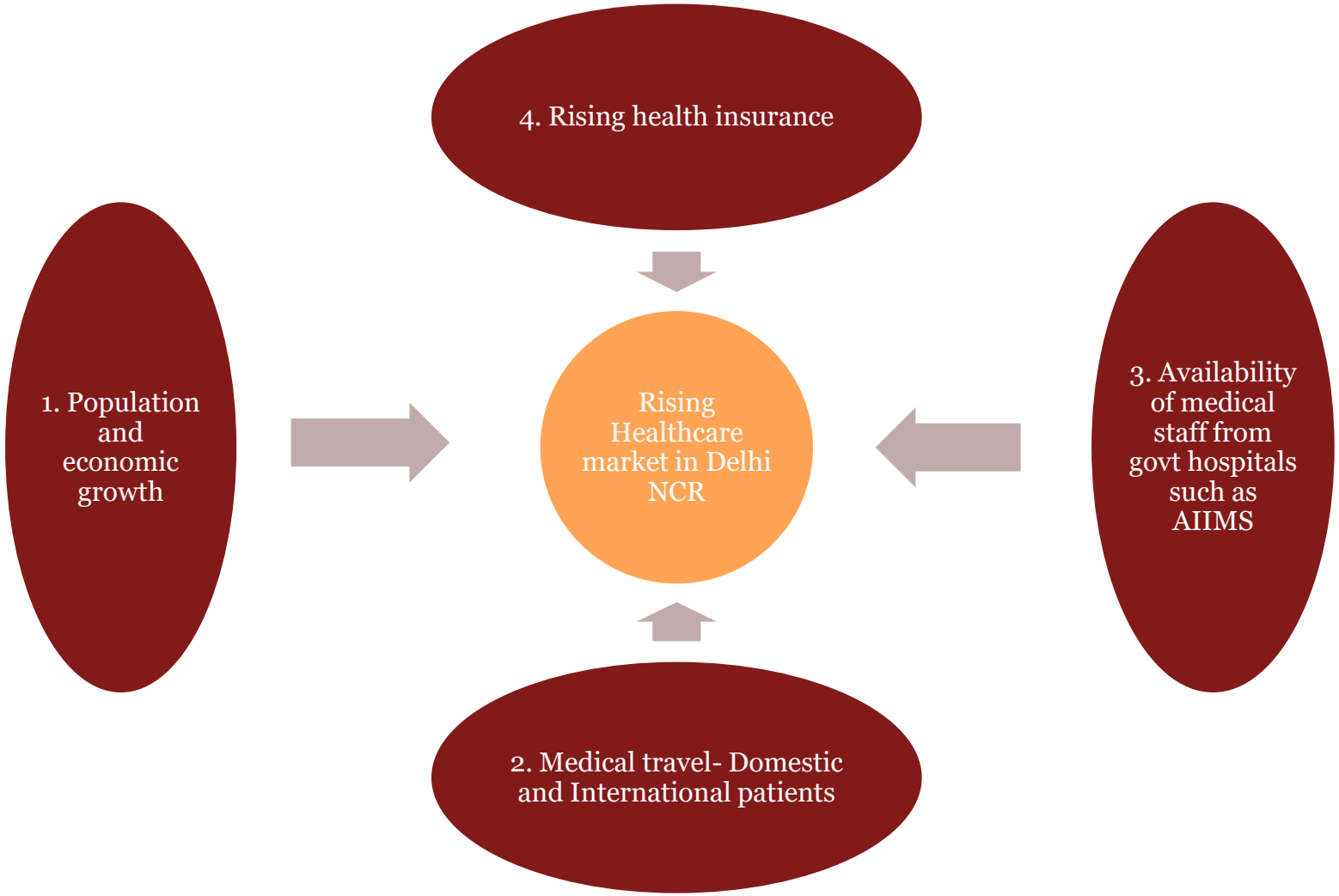



Source: Industry Discussions, PwC Analysis

# *Snapshot of various healthcare delivery formats prevalent in NCR*

| Current status of different Healthcare delivery formats in Delhi NCR | | | | |
|---|---|---|---|---|
| **Healthcare delivery format** | | **Key players** | **Current status** | **Level of penetration of organized players** |
| 1 | **Quaternary care hospital** | Medanta, FMRI, Apollo | These are the top three hospitals in Delhi NCR providing advance medical care ; further extension to the tertiary care services | 4 |
| 2 | **Multispecialty tertiary care hospitals** | Max Saket, Artemis Gangaram, BLK, Fortis hospitals | These are some of the big names in corporate hospital chains providing specialised tertiary care | 4 |
| 3 | **Multispecialty secondary care hospitals** | Columbia Asia | Columbia Asia is the only hospital chain specifically designed for providing advance secondary care in Delhi NCR | 2 |
| 4 | **Nursing homes** | - Multiple - | Delhi NCR has a host of small and medium size doctor promoted /family run nursing homes providing primary and secondary care. These nursing homes act as referral centres for private hospitals | 1 |
| 5 | **Neighbourhood clinics** | HCL Avitas, Nationwide | These are networked multi specialty clinics in Delhi NCR providing the complete continuum of care for chronic and acute diseases | 2 |
| 6 | **Mother and child centre (inc. IVF)** | Fortis la femme Apollo cradle, Cloud nine, Baurn hall (IVF) | These are the one of the best hospitals in women care specializing in high risk pregnancies, advanced gynaecological surgeries. | 1 |
| 7 | **Dialysis centres** | Deepchand, Nephro plus, Rencare | These are some of the dialysis centre/corporate chains. In addition multispecialty hospitals in Delhi NCR have dialysis centres. | 1 |
| 8 | **Single speciality/Short stay surgery centres** | Centre for Sight, Nova, Vasan eye care, RG stone, Orthonova | Delhi NCR has short stay surgery centres and eye care centres providing specialised care | 1 |
| 9 | **Dental clinic** | Clove Dental, Axis dental, Apollo white | While there are a lot of standalone dental clinics, there are some corporate chains in Delhi NCR | 1 |
| 10 | **Diagnostics** | Religare, Dewanchand, Lal path | Delhi NCR has multiple standalone diagnostic centres and corporate chains with standard technology | 0 |

# *What is driving the growth of Delhi NCR as a medical hub?*

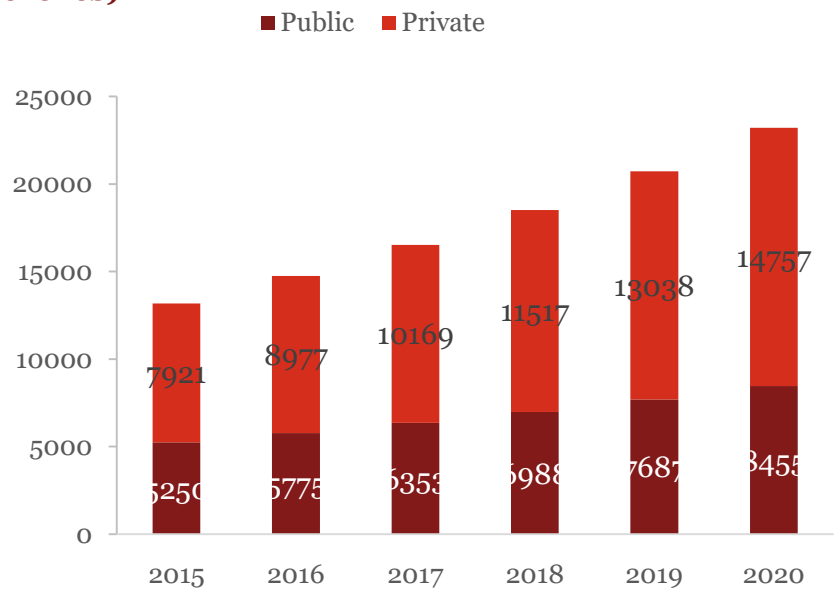


# *NCR caters to healthcare need of ~5.3 crore residents; Patients from neighbouring states are ~33% of total intake at major hospitals*

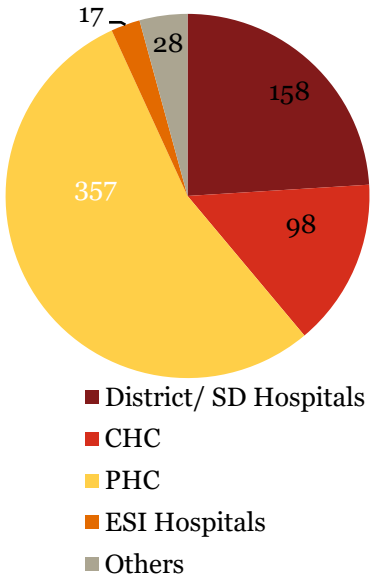
**NCR healthcare delivery market is estimated at INR 13,171 crore, projected to grow at CAGR of 12%**

**NCR is dominated by ~854 nursing homes. The organised healthcare forms an insignificant share of the market, which is dominated by 10-12 major players**

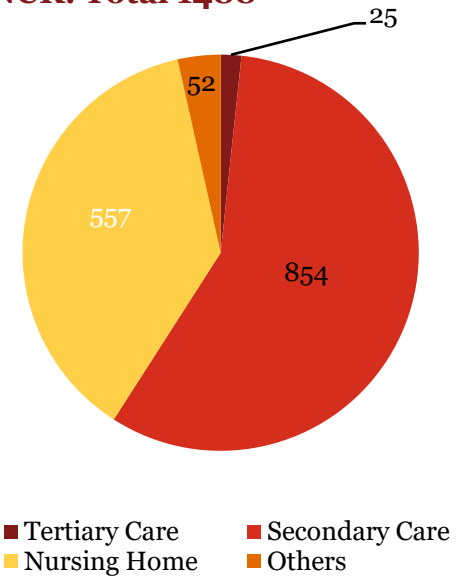
## Market size: Public Vs Private (INR crores)




## Govt health facilities in NCR: 658



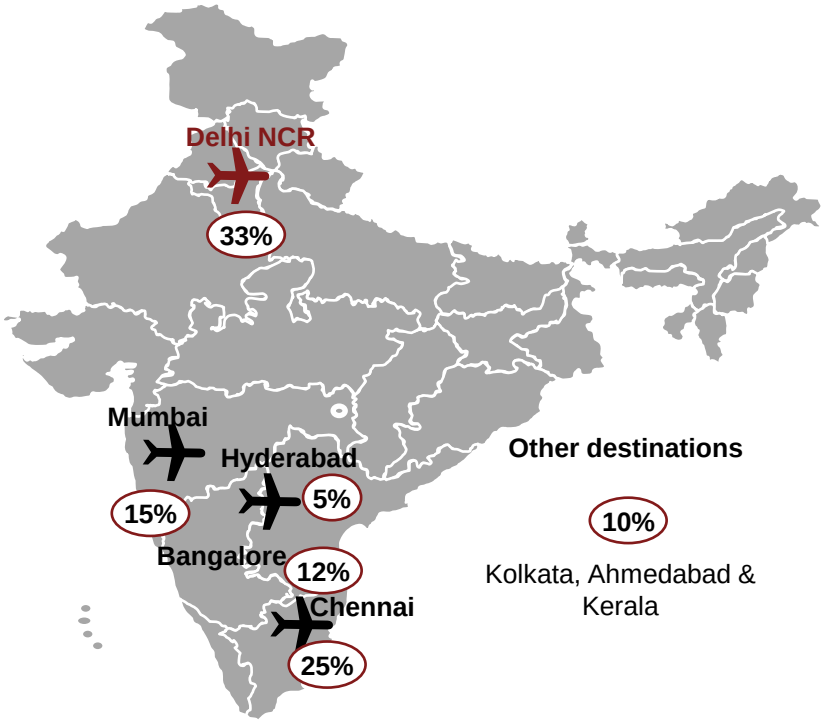

## Pvt health facilities in NCR: Total 1488




Source: Industry Discussions, Statistics from Department of Health & Family Welfare, Government of Delhi, PwC Analysis

# *Presence of maximum accredited modern hospitals makes Delhi the biggest medical travel destination in India*

## City wise volume break-up of medical tourism in India

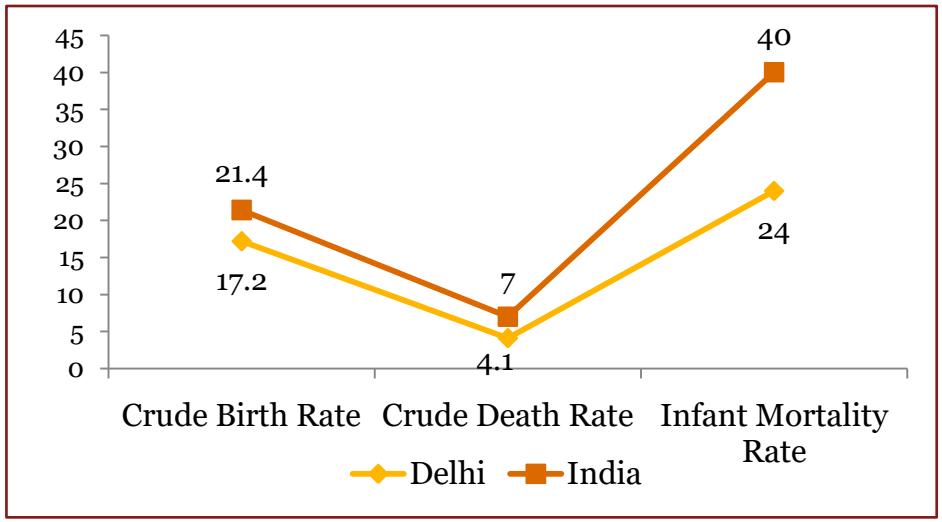


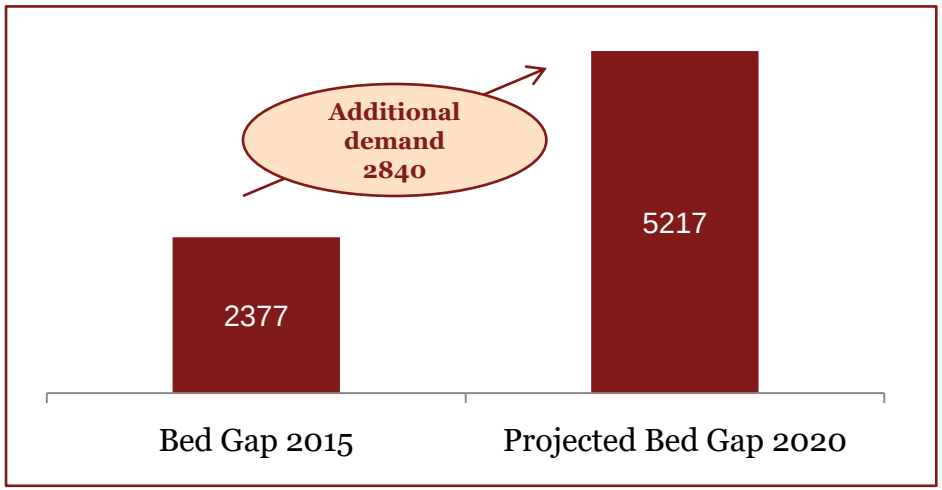

**25-55%**

Premium charged to international patients

Source: Industry Discussions, Statistics from patientsbeyondborders.com

# *With favourable demand dynamics and a significant infrastructure gap, Delhi offers significant opportunity to expand services*




- *As per WHO standards 2.7 beds are required per 1000 persons*
- *There is a planned addition of 2000 beds in NCR in the next five years*
- *Considering the growth in demand and future supply, the gap for the beds is expected to increase to 5,217 beds by 2020*


Source: National Health Profile,

# *Upcoming Green Field Hospital Projects in Delhi NCR*

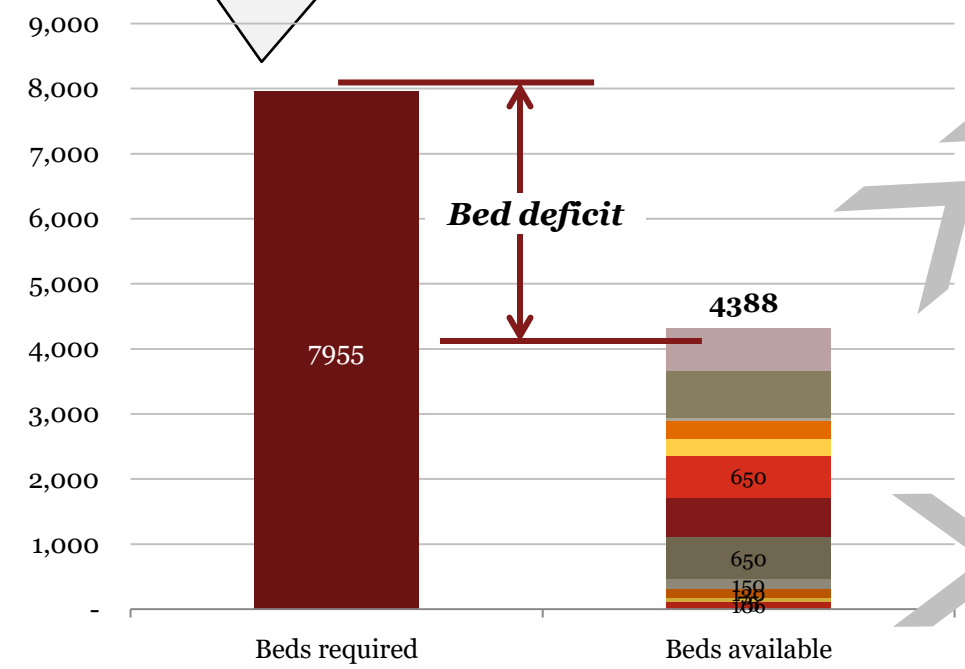
| Name | Number of Beds |
|---|---|
| Manipal Hospital, Dwarka | 300 |
| Multi super Specialty Hospital, Dwarka | 200 |
| Multi super Specialty Hospital, Dwarka | 700 |
| Ortho Nova , South Delhi | 150 |
| Centre for Sight, Dwarka | - |

# *Considering the WHO bed requirement norm, South Delhi has a severe bed deficit – approximately 4388 beds available against the required 7955 beds*

**Key assumptions:**

- South Delhi current population: **3.01 Million residents**
- Expected population growth rate: **1.9% per year**
- WHO benchmark for beds: **2.7 beds per 1,000**

**Bed requirement and availability in South Delhi**

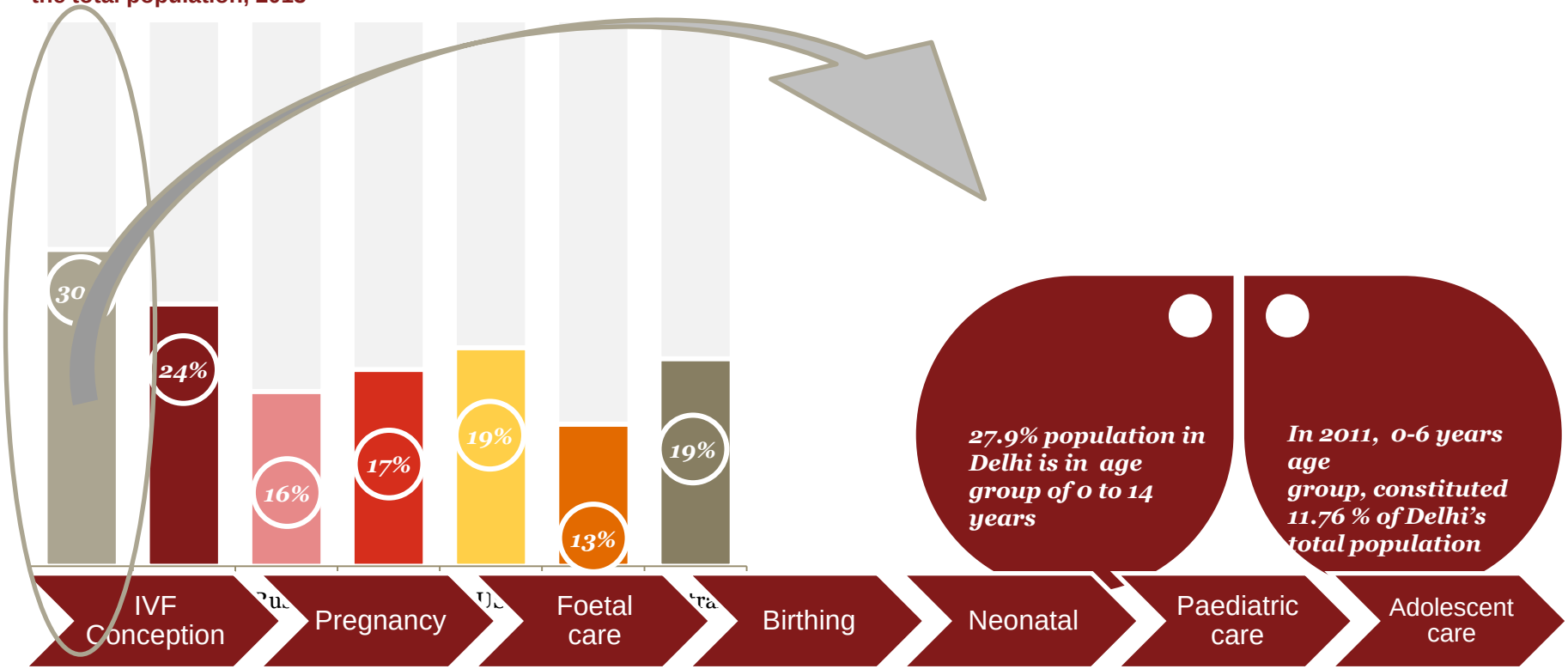



| Hospital | Beds* |
|---|---|
| PSRI | 106 |
| Orthonova Hospital | 75 |
| Rockland Hospital Qutub | 130 |
| Primus Orthopedic Hospital | 150 |
| Batra Hospital | 600 |
| Max Hospital Saket | 600 |
| BLK Hospital | 650 |
| Saket City Hospital | 250 |
| Escorts Heart Institute | 285 |
| Fortis La Femme | 50 |
| ILBS | 132 |
| IP Apollo | 710 |
| Gangaram | 650 |

Source: Centre for Global Health Research, PwC Proprietary Data, WHO, Industry discussions, PwC Analysis

# *India's high percentage of 0 – 14 years age group population gives rise to opportunities across maternal and child care value chain*

**Population between the ages of 0 and 14 as a percentage of the total population, 2013**



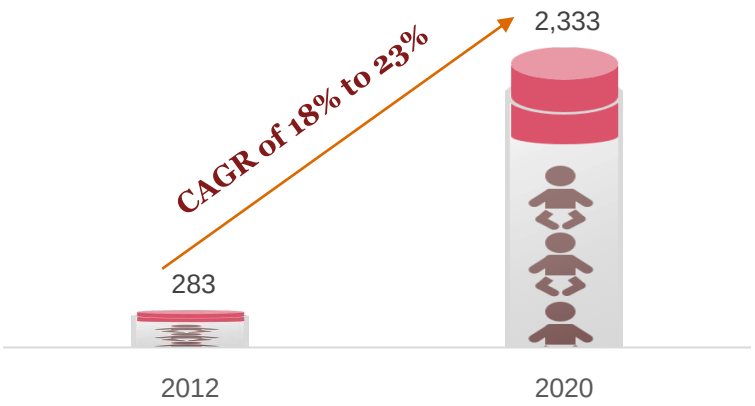

**VALUE CHAIN OF CHILD AND MATERNAL CARE**

Source: 'Health, Nutrition and Population Statistics' accessed 2015 from the World Bank website

# *Largely unorganised Infertility treatment market a lucrative proposition*

IVF Conception → Pregnancy → Foetal care → Birthing → Neonatal → Paediatric care → Adolescent care

**Assisted reproductive technology market (USD mn)**




- **Infertility affecting 10-15% of married couples in India**
- India has around 22-33 million infertile couples..

- There are around 1200 registered ART centres across India,
- Few like Nova have started a chain of IVF centres across India.

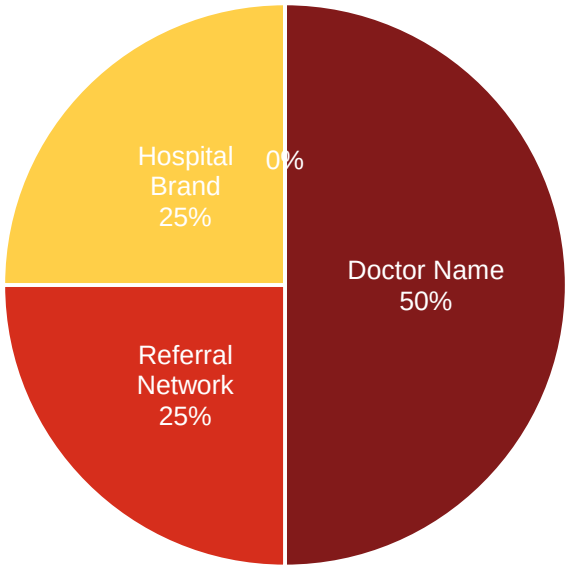
**Leading ART/IVF centres in India**

- Nova IVF
- Akansha Fertility Clinic
- Indira IVF
- BLK Hospital
- Max Hospital
- Hiranandani Hosptial
- Virk Centre for Human Reproduction
- Apollo Hospital for Assisted Reproduction

Source: Primary discussions and PwC Analysis

# *Delhi has emerged as the most attractive destination for IVF/ ART*

Factors impacting patient inflow in Delhi for IVF consultation




- Patient inflow for IVF is not only dominated by name of the doctors but hospital brand name and referral network also form a sizeable part of the inflow at 50%

- This indicates that there is an existing adequate requirement in Delhi NCR region.
- Also looking at the lifestyle, these problems are to increase in the future as well.

Source: EY Report on IVF treatment in India 2014

# Pregnancy

## *Hospitals and health centres are providing specialized services to make pregnancy an experience*

### *Patient education*

#### *Nutrition-focused*

Health pregnancy guide
Health chat transcripts (Online query solving ; Consultation with the doctors)

Nutritional interventional practices for Gestational diabetes, Pregnancy induced hypertension, Increased weight gain

### *Child birth*

### *Health fitness*

Antenatal exercise classes, Women spa
Prenatal and Postnatal massage, Yoga and Fitness, Lamaze breathing

### *Continuum of care*

***Holistic fertility consultations***

***Tele-consultations***

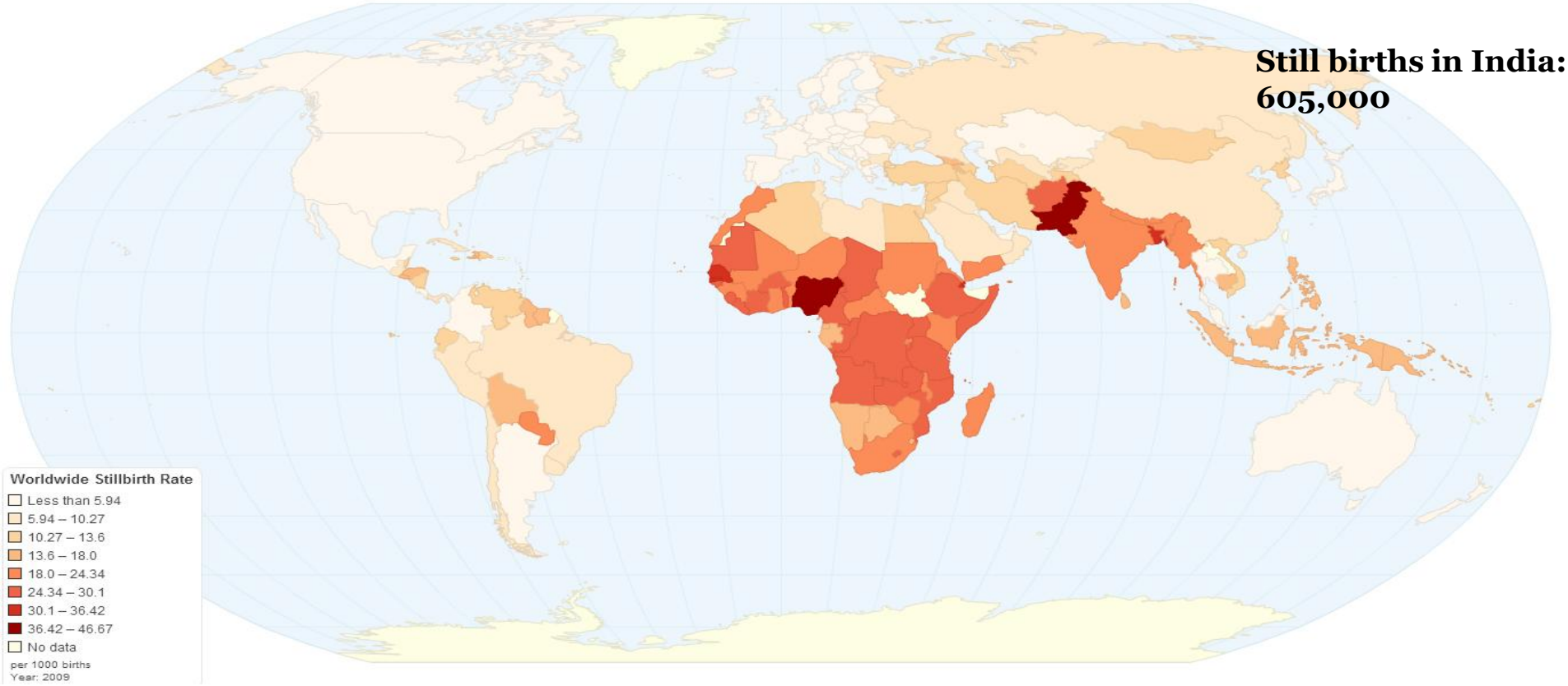
***Water birth, Hypnobi***

Source: PwC Analysis

# Foetal Care

## *Globally, India accounts for the high number of still births and most are avoidable through continuous monitoring and clinical intervention by qualified medical professionals*

IVF Conception | Pregnancy | **Foetal care** | Birthing | Neonatal | Paediatric care | Adolescent care



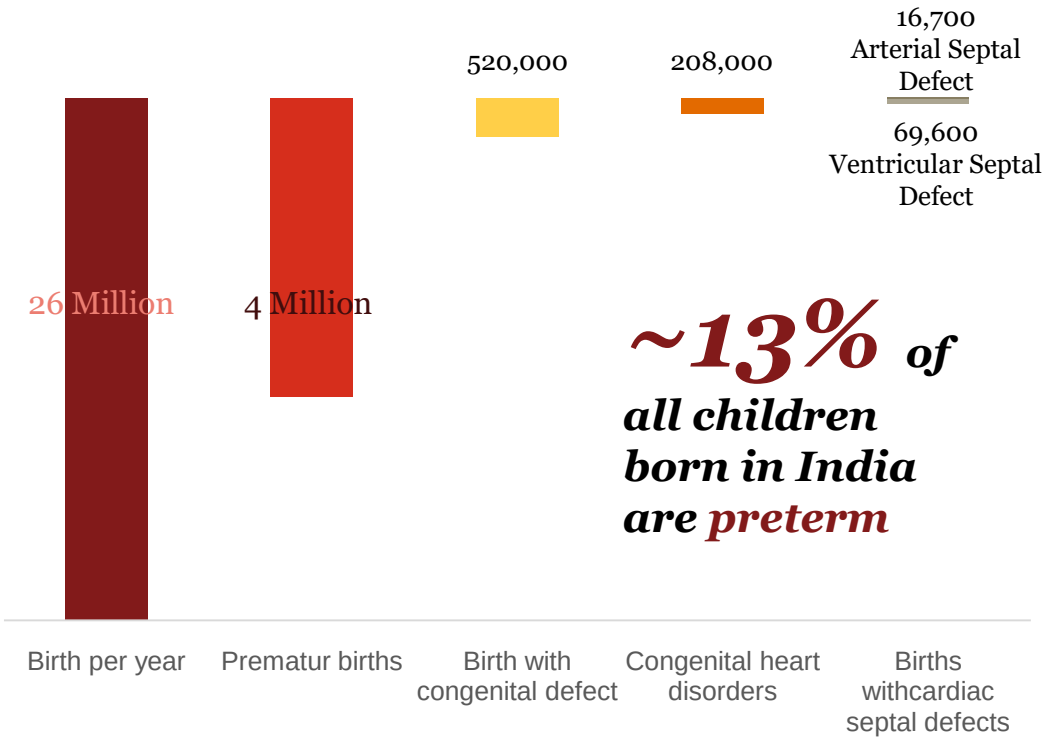

**Still births in India: 605,000**

Source: chartsbin.com/view/1445, PwC Analysis

# *Approximately 24% of prematurely born children across the globe are from India*

IVF Conception | Pregnancy | Foetal care | **Birthing** | Neonatal | Paediatric care | Adolescent care

## Births and congenital disorders



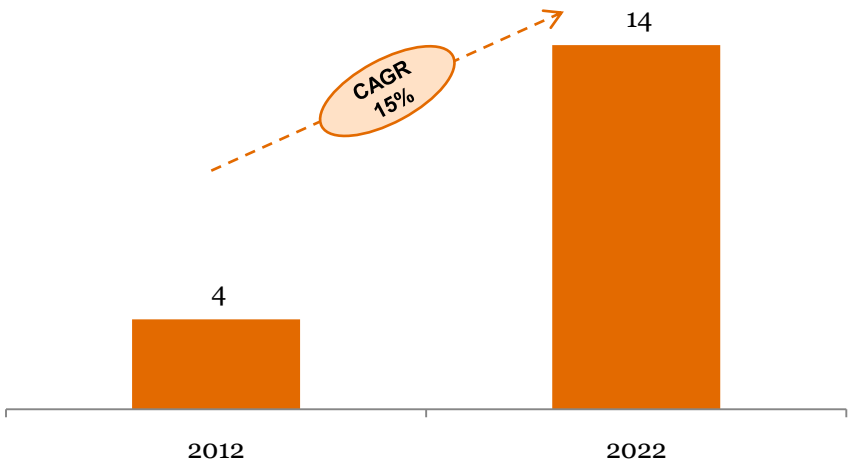

***~13%** of all children born in India are preterm*

- Second most common cause of death among under-five children
- Responsible for 1.1 million deaths every year
- Three causes accounted for 78% of all neonatal death : Prematurity and low birth weight, neonatal infection & birth asphyxia and birth trauma

Source: . The Lancet, Chronic Kidney Disease in Children, Dr. Sanjeev Gulati, MedScape Jan 21, 2015; 3. Census of India, National Health profile 2013; 4. PwC Analysis

# *Birthing and maternal care in India currently presents a large, underserved opportunity…*

**Indian Birthing Market (USD bn)**




**50%+ Indian women fall in the reproductive age group**

**Growth factors**

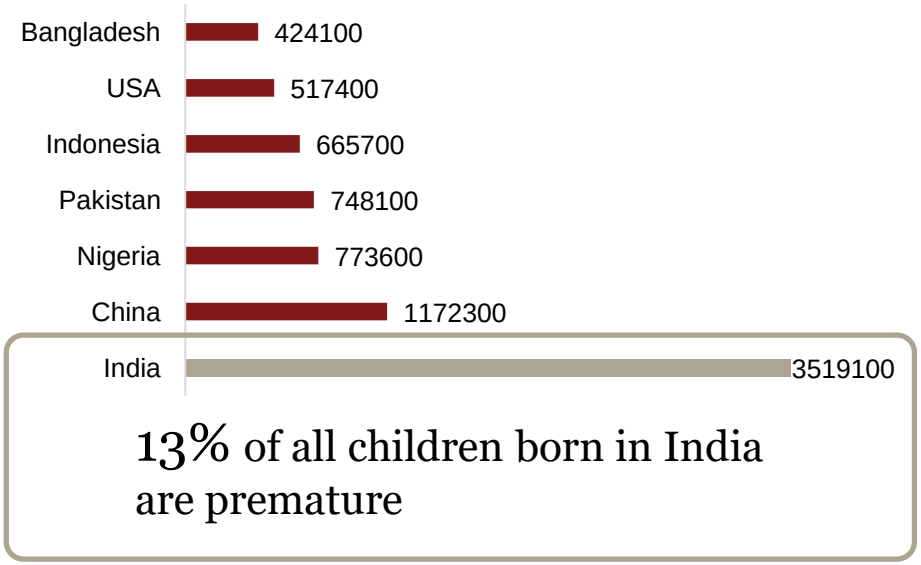
- Strong latent demand for organized birthing care
- Underserved market with few focused, national birthing chains
- Lack of super specialization to provide trauma and surgical care
- Few chains focused on celebrating the birthing experience

Source: Delhi Government's Annual Report on Registration of Birth and Death in 2014, World Health Statistics 2012, Industry Discussions, PwC Analysis

# Neonatal

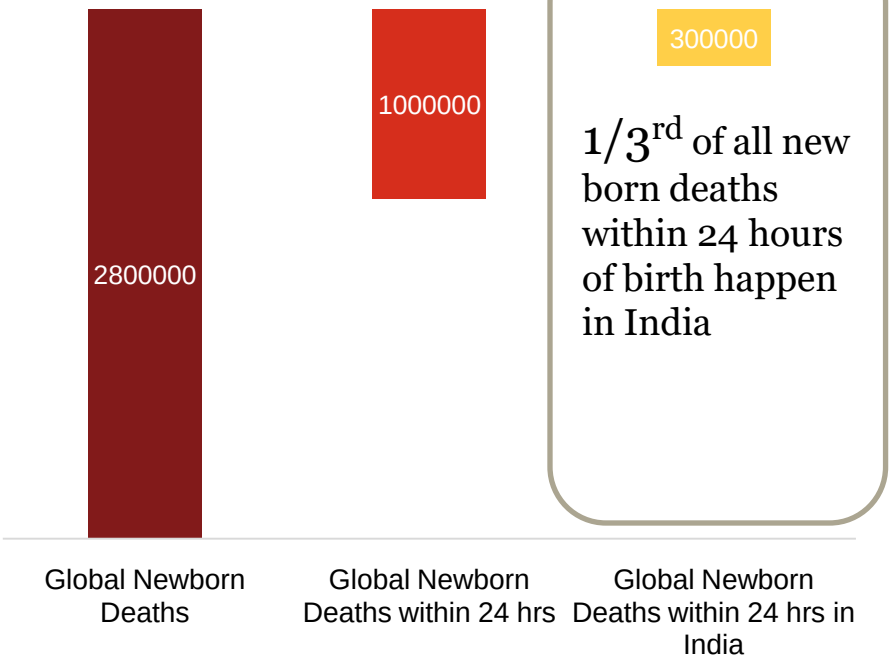
## *Around 779,000 neonates die in India every year, and a large number of them cannot be saved because of shortage of NICU*

No. premature births annually




13% of all children born in India are premature

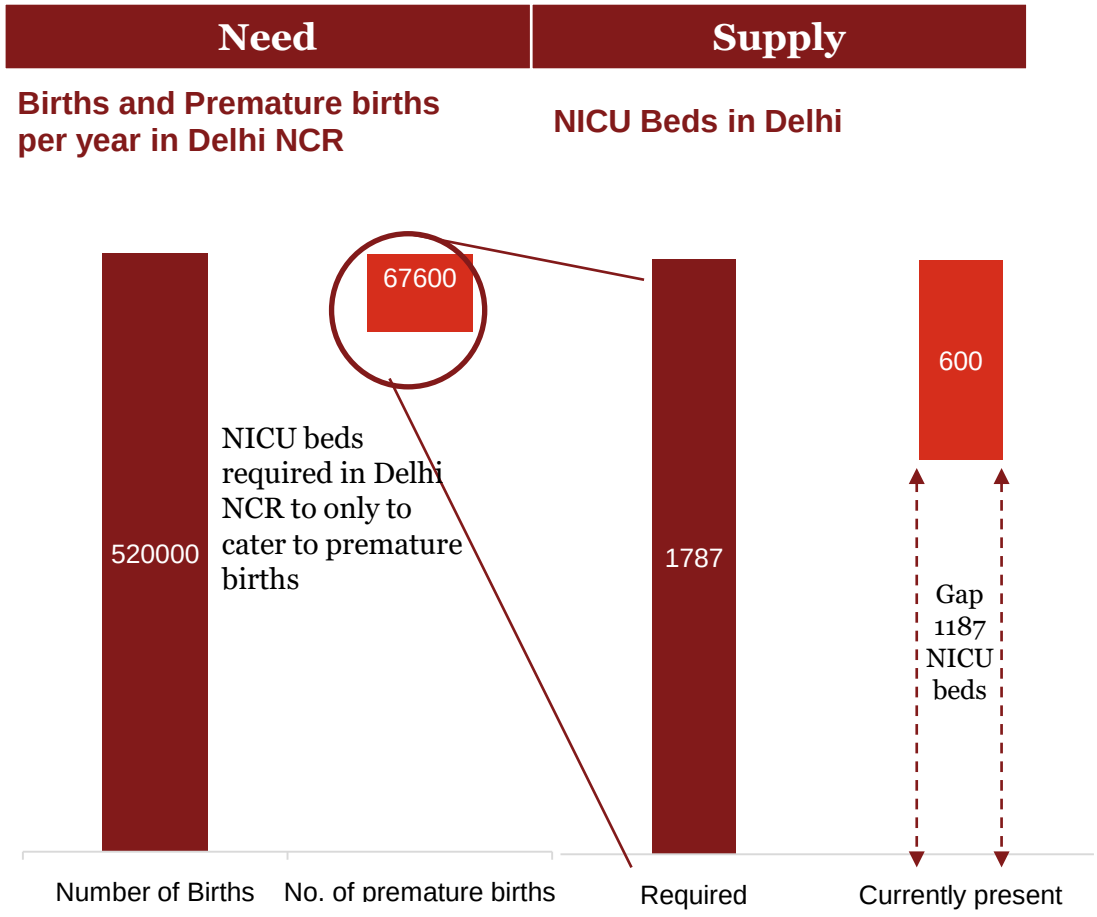
Death of new born within 24 hours of Birth




1/3rd of all new born deaths within 24 hours of birth happen in India

Source: WHO media centre factsheet 2010, WHO health Statistics 2014, DLHS 20019, PwC Analysis

# *Neonatal Intensive Care infrastructure is in short supply in Delhi NCR*




Source: Statistical Abstract of Delhi, 2014, Industry Discussions, PwC Analysis

## Paediatric

# *1.5 lakh infants are born in India every year with congenital heart disease out of which ~78,000 die because of inadequate health care facilities in the country*

- Every year 1.5 lakh infants are born in India with congenital heart disease out of which about **78,000 die** because of inadequate health care facilities in the country.
- The prevalence of neural tube defects such as spina bifida is extremely high in north India (more than 4 per 1000 births), especially in the states of Punjab, Chandigarh, Haryana, New Delhi and Rajasthan

**Rate of selected malformations and total births per annum in India**

| Malformation | Rate per 10,000 | Total / year |
|---|---|---|
| **Spina bifida/ anencephaly** | 40.42 | 109134 |
| **Talipes** | 18.60 | 50220 |
| **Cleft lip and cleft palate** | 15.42 | 41634 |
| **Hydrocephalous** | 11.20 | 30240 |
| **Hypospadias** | 5.71 | 15417 |
| **Tracheo – esophageal fistula and esophageal atresia** | 5.08 | 13716 |
| **Intestinal and anal atresia** | 5.08 | 13716 |
| **Obstructive uropathy** | 4.23 | 11421 |
| **Diaphragmatic hernia** | 3.17 | 8559 |
| **Congenital Dislocation of hips** | 1.59 | 4293 |

Source: WHO Disease burden report 2004,2009, PwC Analysis

# *According to WHO, 20% adolescents have one or more mental and behavioural problems*

| | Number (%) (years) | Median age of start of Consumption | Number of times consumed per wk |
|---|---|---|---|
| Smoking | 12 (3.4) | 15 | 2 |
| Hookah | 22 (6.2) | 13 | 1 |
| Alcohol | 99 (28.2) | 12 | 1 |
| Glue-sniffing | 71 (20.2) | 11 | 3 |
| Cannabis | 2 (0.6) | 11 | 1 |
| Cocaine | 3 (0.9) | 12 | 2 |

Adolescent health programs are fragmentary at present and requires major revamp

Some of the challenges that adolescents have to face are:

- Mental Health
- Nutritional Health
- Accidental and intentional violence
- Substance Abuse
- Reproductive and Sexual Health
- Challenges in parenting

Around **14-20% girls** show **psychiatric morbidity** during puberty and need medical support.

**Substance abuse poses another grave problem in Adolescents**

Substance abuse in adolescence results in both psychological/ mental and medical complications. Most of the healthcare providers in India are under equipped to cater to such needs of the population.

Source: Psychological Changes During Puberty – Adolescent School Girls, Universal Journal of Psychology, 2015

## *What's missing in Delhi NCR paediatric care today?*

- A dedicated Women & Child Super specialty Hospital
- No high end Neo Natal Intensive Care available
- Pediatrics sub specialties are not available under one roof
- No continuum of care
- Present hospitals are not designed for children

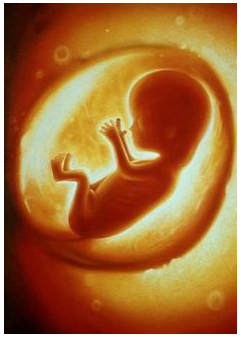
Source: PwC Analysis

# *Methodology*

- Type of study – Descriptive study
- Secondary research involves review of literature, health statistics data from journals
- World Health Organization, fact sheets
- annual reports of the hospitals like Fortis, Apollo, Max,

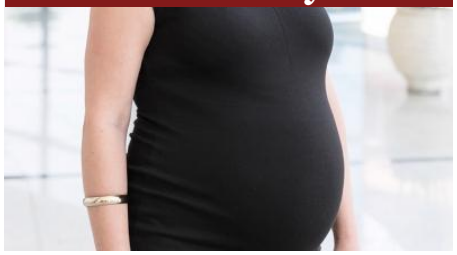
## *Section – The concept*

> Provide exclusive care to mother, foetus, neonatal and children for their tertiary care needs

# *Women & Mother Health Services*

## Maternity



- Regular check-ups
- Training and counselling related to child birth
- High risk pregnancy monitoring and support
- Foetal medicine

## Birthing

- Normal Delivery
- Caesarean Delivery
- Painless Delivery
- Normal delivery post Caesarean

## ART/ IVF

- IVF
- Intrauterine Insemination (IUI)
- Intracytoplasmic Sperm Injection (ICSI)

## Women Health

- Urological problems
- Family Planning
- Menopause related
- Health Check ups
- Gynaecology & Obstetrics

Source: PwC Analysis

# *Children's Health Services*

## Foetal Medicine

- Regular check-ups
- Training and counselling related to child birth
- High risk pregnancy monitoring and support
- Foetal medicine

## Paediatric Medicine

- Preventive medicine/ Vaccinations etc.

## Neonatology

- Neonatal Critical Care
- NICU level I, II and III
- Pre mature neonates

## Paeditric Surgery

- Most common surgeries are hernia, appendix, undecendent testes, hypospadias & imperforate anus
- Includes paed. GI and Uro surgeries

## Paed. Orthopaedics

- Deformity corrections, cerebral palsy, infections & TB spine are most common cases in paediatric orthopaedics

## Paed. Neurosciences

- Brain tumours
- Epilepsy

## Paed. Cardiac Sciences

- Congenital Heart Diseases
- Arterial Septal Defect (ASD), Ventricular Septal Defect (VSD), Patent Ductus Arteriosus (PDA) are most common surgeries/procedures

## Paed. Oncology

- Paediatric Haemato Oncology
- Paediatric Bone Marrow Transplantation
- Paediatric medical oncology

Source: Industry Discussions, PwC Analysis

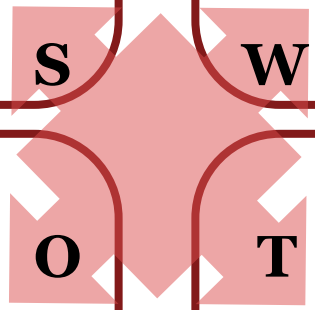
# *SWOT Analysis*

## STRENGTHS

- Proposed site is at premier location in South Delhi
- South district is most affluent of all residential districts of Delhi; Many renowned markets, malls and shopping complexes lie in the region
- International & Domestic airport being in the vicinity of the project site; potential to tap patients from within India and other neighbouring countries

## WEAKNESSES

- Smaller land area limiting options in competitive market of South Delhi and Gurgaon
- It has no brand equity in healthcare space




## OPPORTUNITIES

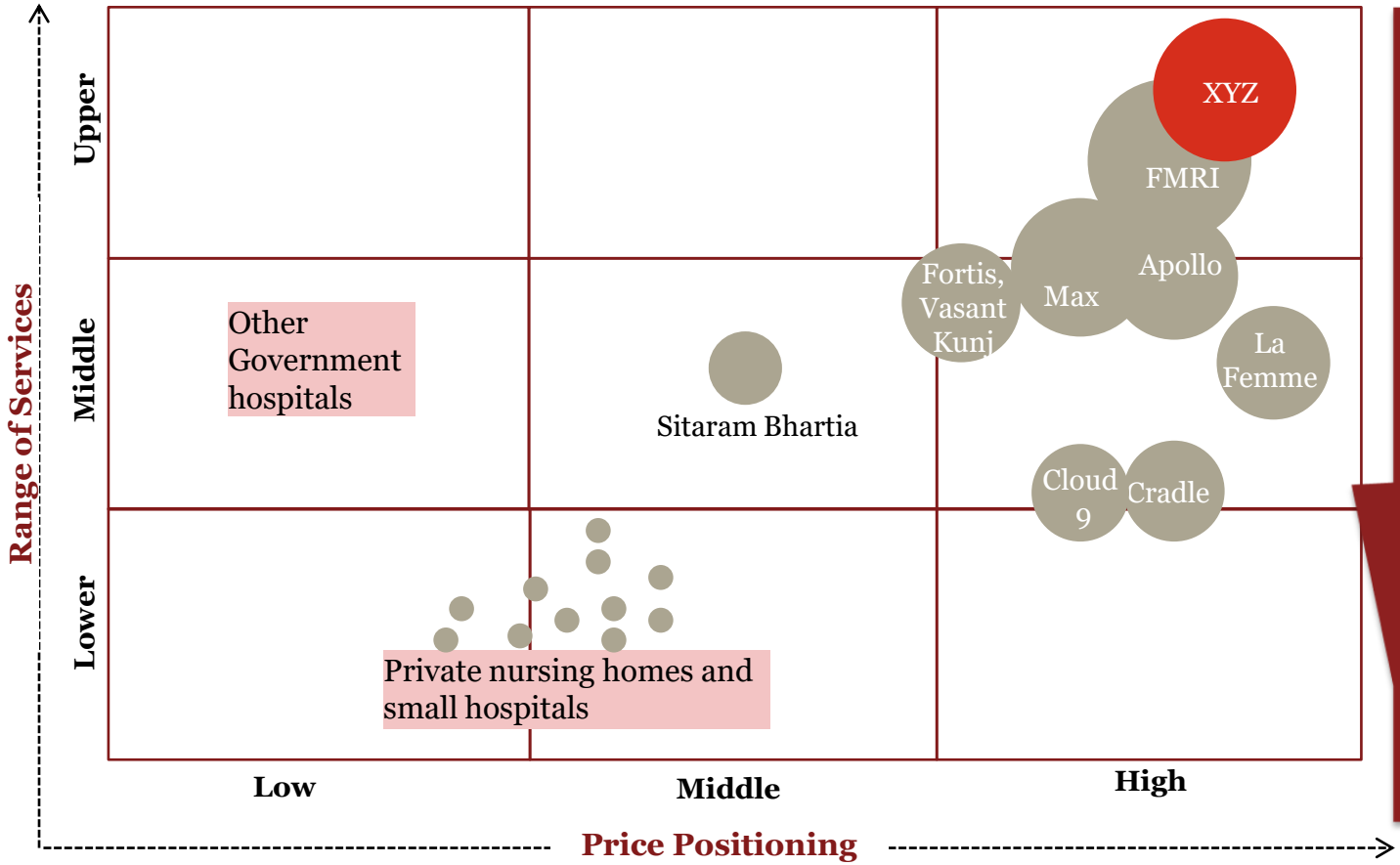
- Easy flow of visiting specialists as some of the best hospitals are located in South Delhi.
- Availability of eminent paediatric super specialist in Delhi NCR
- In absence of any dedicated children's hospital in North India, it could become a destination for paediatric superspecialty services

## THREATS

- Difficult to attract fulltime consultants at reasonable salaries because of hyper competitive market in South Delhi & Gurgaon
- Presence of established hospital brands in close proximity
- From investment point of view gestation period is longer as compared to other industries

Source: PwC Analysis

# *Positioning (XYZ) - Premium care with wide range of services*

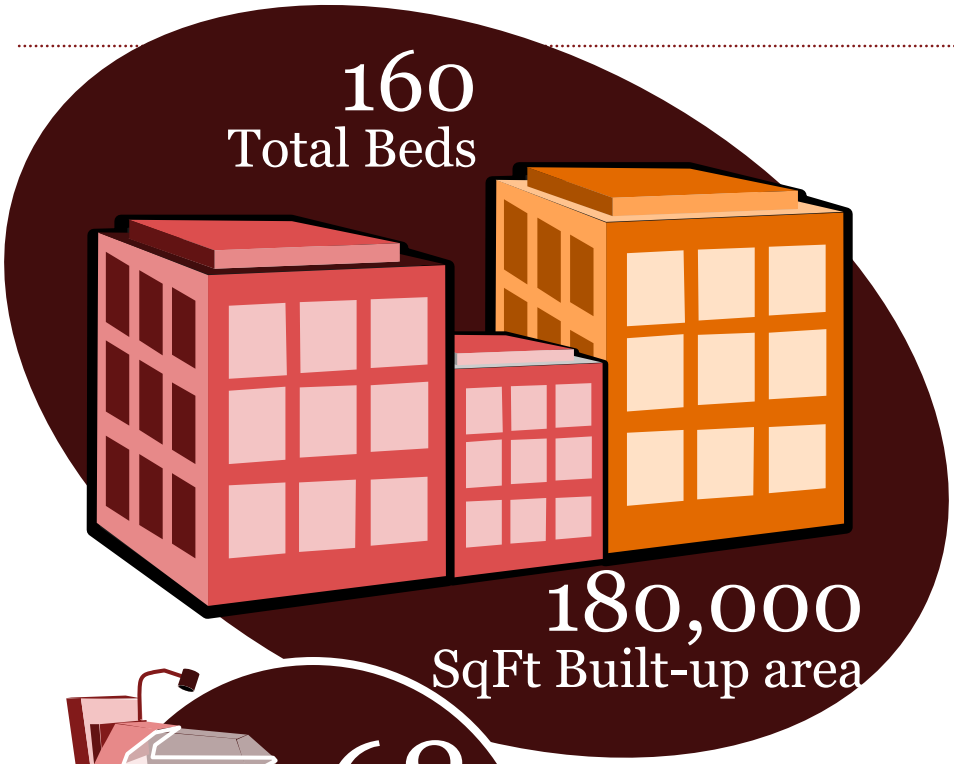



- The affluent population in the region reluctantly goes to multi- super speciality centres as there exists only one standalone Women & Children centre.
- The XYZ can target the affluent population of south Delhi for all their Women and Children

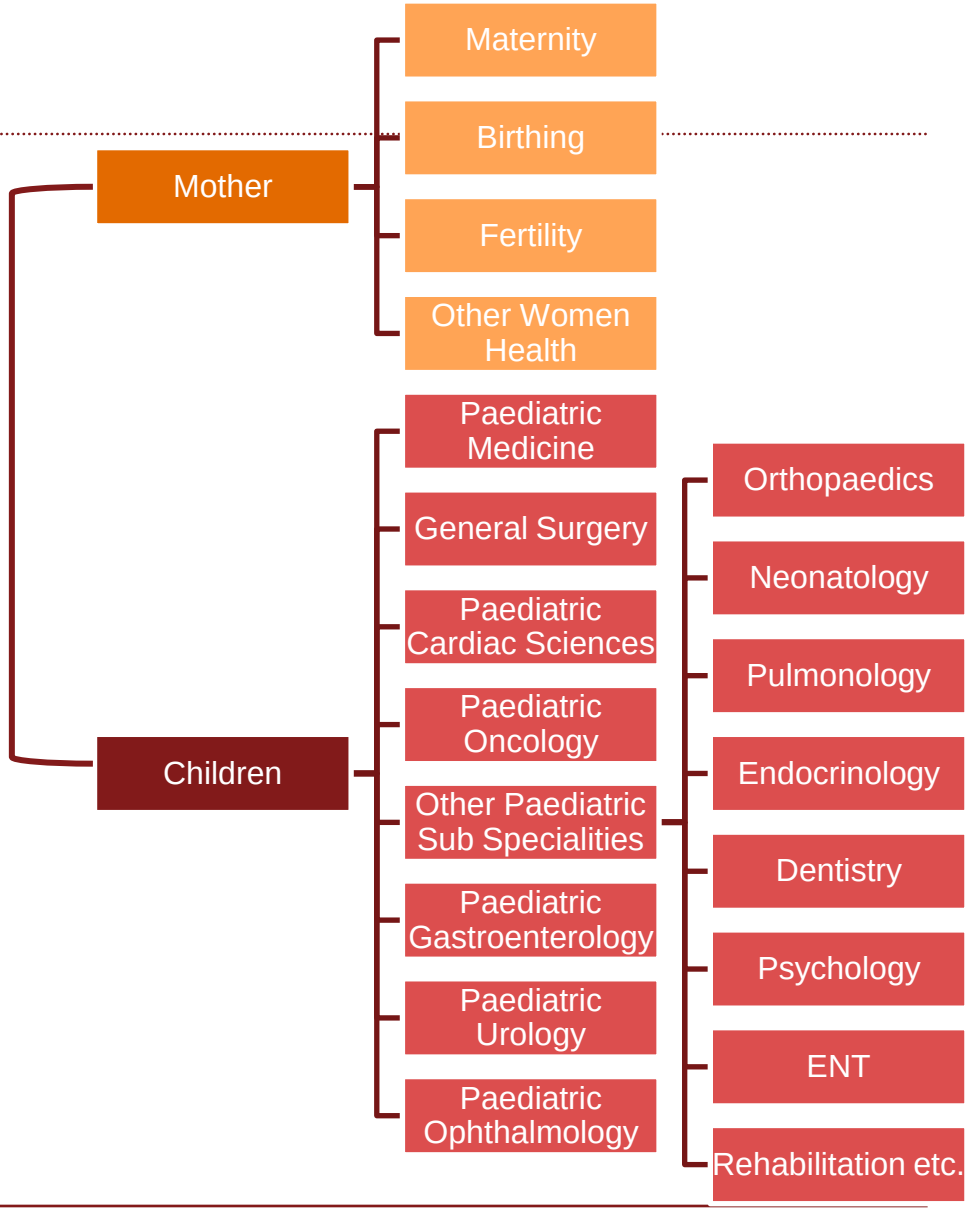
Size of Ball increases with Acuity of Care

*Source: Primary interviews, PwC analysis*

# *"The Mother and Child Hospital", infrastructure and service line plan*







# *Bed Mix*

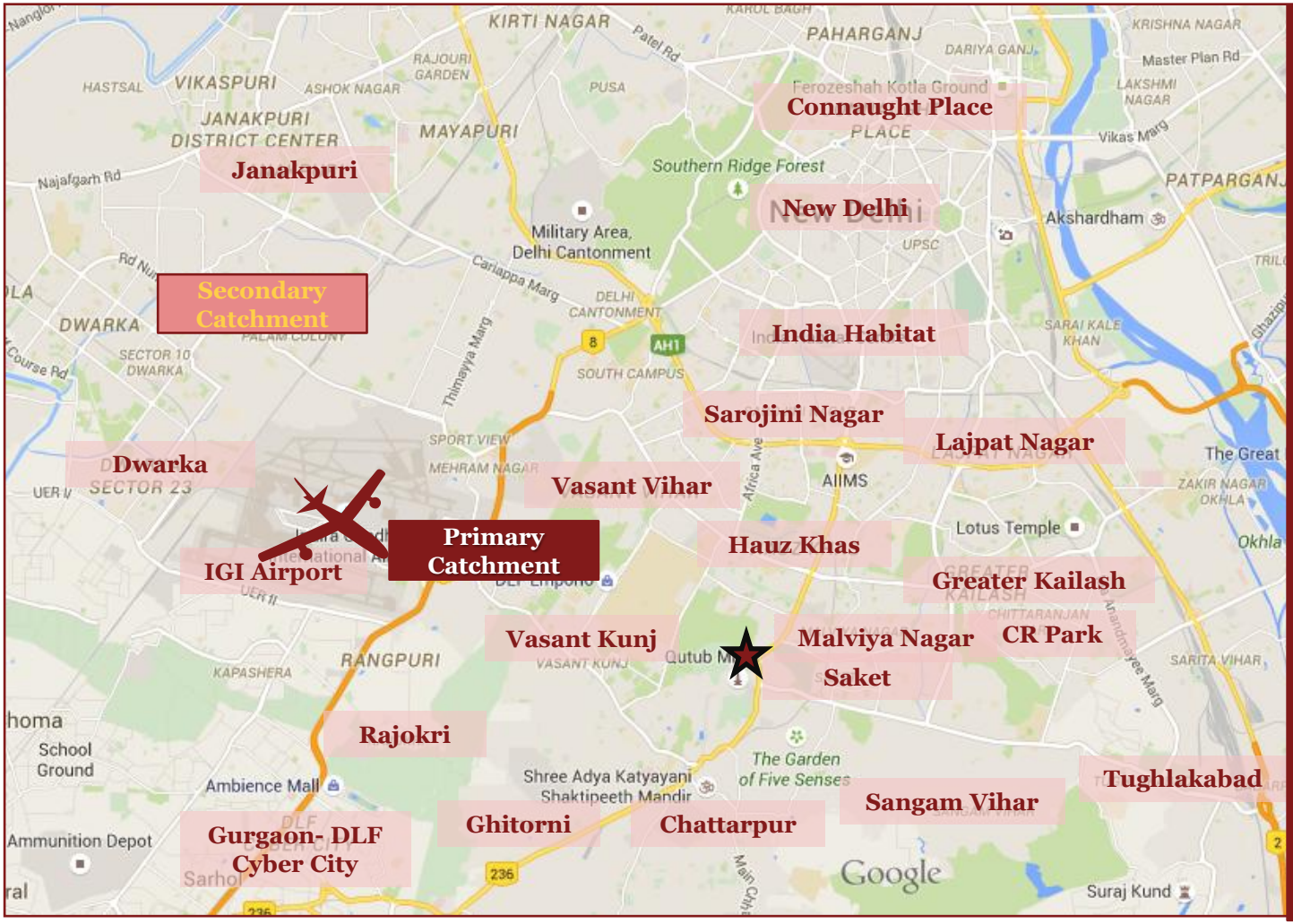
| Room Category | Number of Beds |
|---|---|
| Deluxe | 9 |
| Private Room | 33 |
| Private/ Twin sharing | 24 |
| General | 18 |
| Intensive Care | 76 |
| **Total** | **160** |

| Intensive care beds | Number of Beds |
|---|---|
| NICU Level - 1 | 6 |
| NICU Level - 2 | 12 |
| NICU Level - 3 | 30 |
| PICU | 20 |
| Medical/ Surgical ICU | 8 |
| **Total intensive care beds** | **76** |

This will create the largest neonatal and paediatric intensive care centre in Delhi NCR

Source: PwC Analysis

# *Catchment analysis for Mother & Child format*




The **primary catchment** would include the district of South Delhi & parts of Central & South-West Delhi and has an addressable market of :

- c. 20 lakh women
- 60,000 infants or deliveries per year
- Paediatric population of ~8 lakhs

The **secondary catchment** would include entire Delhi NCR for cases related to gynaecology and fertility

Source: PwC analysis

# *Site Analysis*

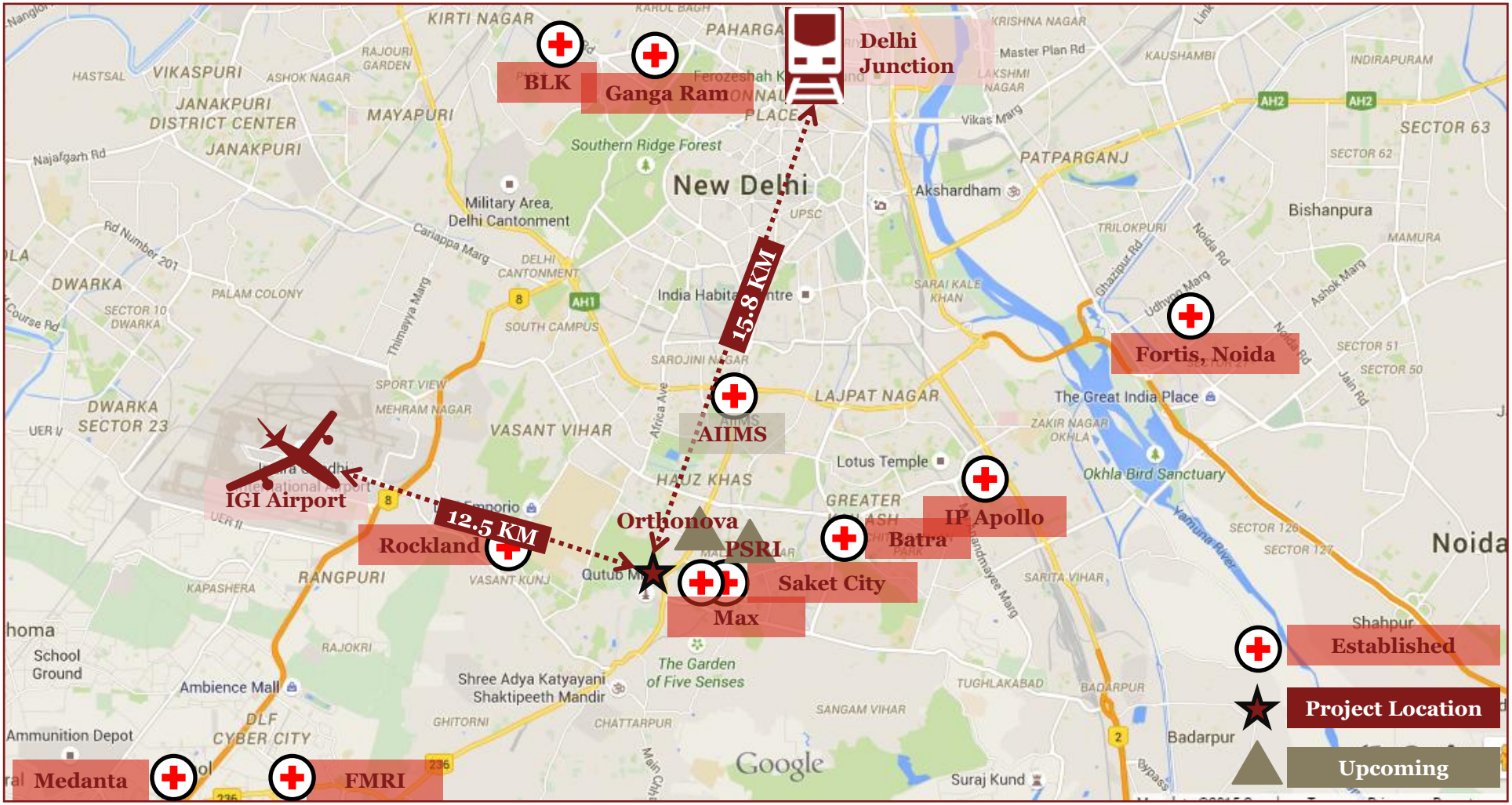

With 4,870 Square metres and a FAR of 3.75 the proposed hospital can have:

Built-up area: 180, 000 Sq. Ft.

Total number of beds: 150-180

Source: Public Information, PwC Analysis, Discussion With Management

# *Analysis of the South Delhi healthcare landscape reveals the favourable location of the proposed project site*




Source: PwC analysis

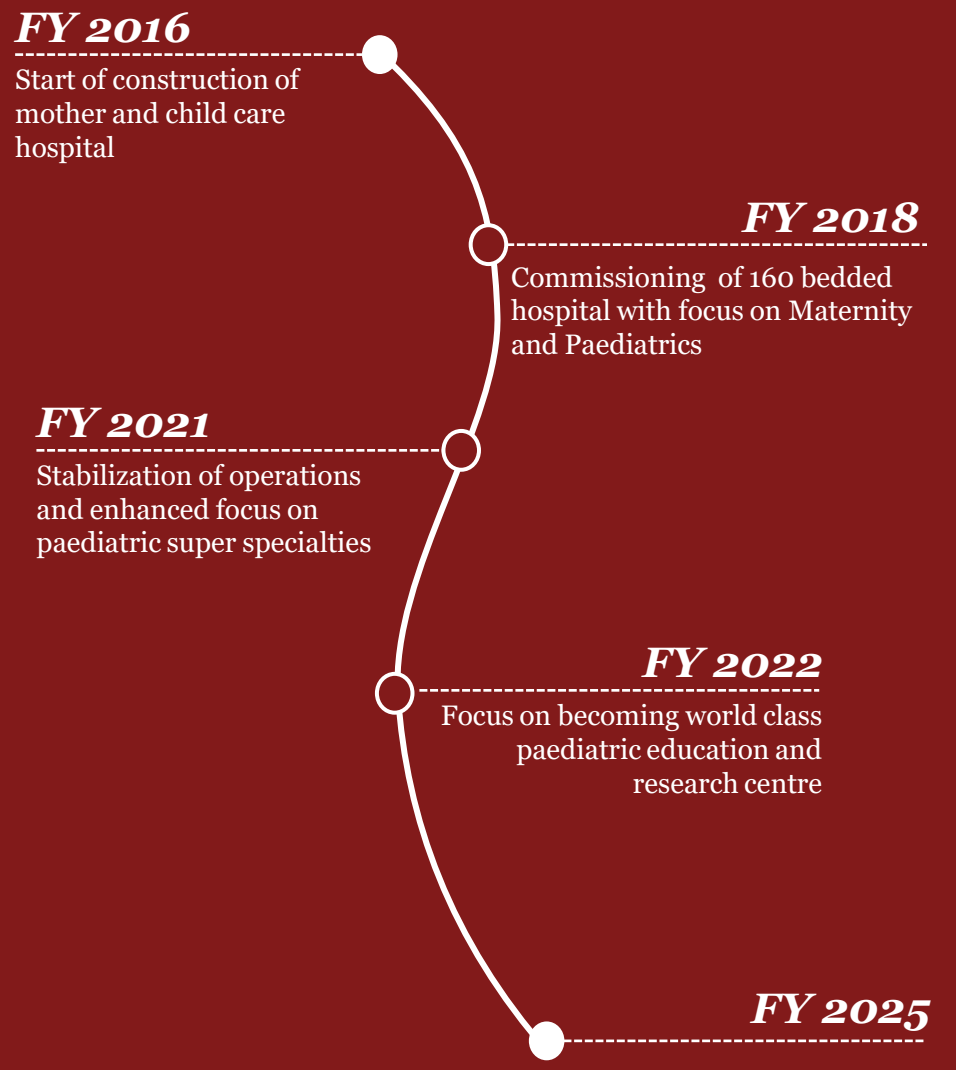
# Roadmap

*Starting as a maternity hospital providing children services to a*

*"Children Super Speciality Hospital,*

*providing maternity services*

Shanti Memorial Hospital's roadmap for growth into a leading paediatric hospital in Delhi NCR




Note: This is a tentative roadmap for growth of Shanti Memorial Hospital. Timelines may be realigned based on operational performance of the hospital

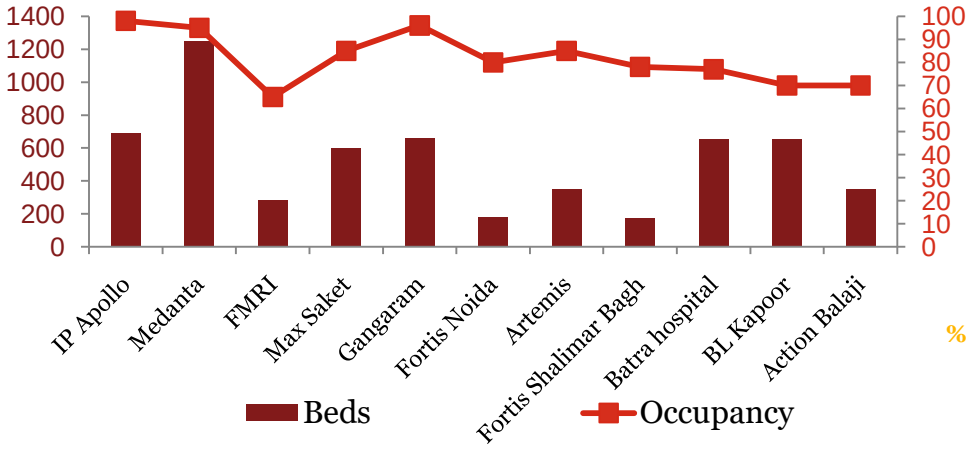
# *Potential risk and mitigation strategies for the hospital project*

| Risk | Mitigation Strategy |
|---|---|
| **No experience of Indian Healthcare Market, No recognized brand name** | Get on-board nationally or globally recognized hospital operator to manage the hospital. It will bring both brand name and a deep understanding of healthcare business |
| **Not very attractive destination for eminent paediatric super specialist consultant** | Engaging a renowned hospital operator will help in winning the trust of the medical fraternity<br>Positioning the hospital as a research focused hospital will enhance the attractiveness amongst the super specialist. They don't get much research opportunities in corporate hospitals.<br>Reasonable autonomy in working is proven way to attract senior eminent consultants<br>Attractive compensation Structure |
| **Intense competition from established multi specialty hospitals with focus on paediatrics** | Establishing a comprehensive dedicated paediatric super specialty hospital with birthing facility. The hospital should be projected as destination for all paediatric care services under one roof<br>Develop a robust NICU, which will help in attracting paediatric patients from birth itself<br>Competitive penetration pricing strategy, initially pricing can be kept lower than competition |
| **Project Delay and Cost over run** | Recruiting a good and efficient project management team<br>Appointment of good architectural firm and Project Management Firm, which can ensure timely completion |

Source: PwC Analysis

# *Comparative analysis of major hospitals in Delhi NCR by Revenue, EBITDA, Occupancy and Bed size*

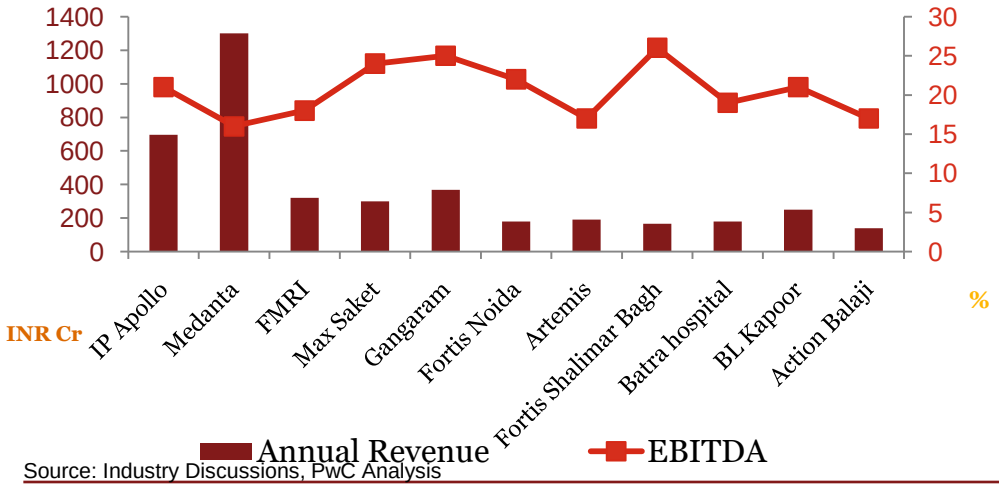
**Occupancy levels of major competitors by size of hospitals**




**Key insights:**

- Medanta , IP Apollo and Gangaram have the highest no. of beds and Occupancy amongst private hospitals in Delhi NCR.
- They cater to the majority of the population coming for treatment from outside Delhi NCR.

**Revenue & profitability of major competitors by size of hospitals**

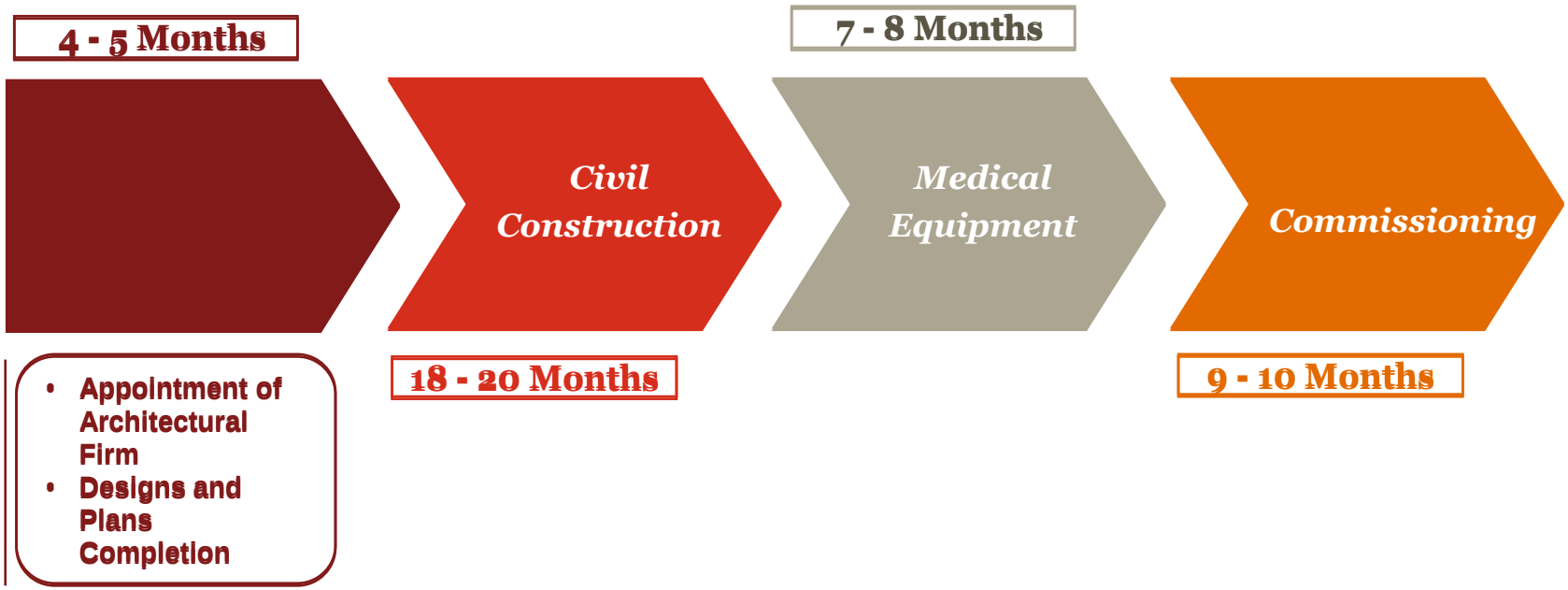



**Key insights:**

- Medanta hospital has the highest revenue amongst all private hospitals in Delhi NCR followed by IP Apollo.
- IP Apollo, Max Saket and Gangaram are the hospitals with better EBITDA margins in comparison to other hospitals ranging between 20-25%

Source: Industry Discussions, PwC Analysis

# *Project Timelines*



# *Project life cycle*

| | | Timeline in Months | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sr** | **Activity** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** | **19** | **20** | **21** | **22** | **23** | **24** |
| **A** | **Turnkey Design Solutions** | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Appointment of Architectural Team | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Approvals from municipality (if any) | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | Design Initiation | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | Design and plans finalized | | | | | | | | | | | | | | | | | | | | | | | | |
| **B** | **Civil Construction** | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Construction Activity Schedule to be confirmed | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Appointment of Project Management Consultancy Firm | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | Project Management Consultancy throughout the project duration | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | **Civil Works – Tenders** | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Awarding of tender and construction | | | | | | | | | | | | | | | | | | | | | | | | |
| | *(Excavation, RCC, Masonry, Cold Shell)* | | | | | | | | | | | | | | | | | | | | | | | | |

# *Project life cycle*

| | | Timeline in Months | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sr** | **Activity** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** | **19** | **20** | **21** | **22** | **23** | **24** |
| **6** | **Electrical Works – Tenders** | | | | | | | | | | | | | | | | | | | | |
| 7 | Negotiation and Awarding work | | | | | | | | | | | | | | | | | | | | |
| 8 | Electrical Works timeline | | | | | | | | | | | | | | | | | | | | |
| | *(includes mechanical, plumbing, fire fighting, electricals, HVAC, elevators, etc)* | | | | | | | | | | | | | | | | | | | | |
| **9** | **Interior Works - Tenders** | | | | | | | | | | | | | | | | | | | | |
| 10 | Negotiation and Awarding work | | | | | | | | | | | | | | | | | | | | |
| 11 | Interior works timelines | | | | | | | | | | | | | | | | | | | | |
| 12 | Snag List / Construction activity detailed check list | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |
| **C** | **Medical Devices and Equipment** | | | | | | | | | | | | | | | | | | | | |
| 1 | Medical Equipment / Devices to be finalized | | | | | | | | | | | | | | | | | | | | |
| 2 | Quotations from vendors | | | | | | | | | | | | | | | | | | | | |
| 3 | Negotiation meetings with the vendors | | | | | | | | | | | | | | | | | | | | |
| 4 | Equipment ordering | | | | | | | | | | | | | | | | | | | | |
| 5 | Installation of Equipment | | | | | | | | | | | | | | | | | | | | |

# *Project life cycle*

| | | Timeline in Months | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sr** | **Activity** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** | **19** | **20** | **21** | **22** | **23** | **24** |
| **D** | **Commissioning Activity** | | | | | | | | | | | | | | | | |
| 1 | Policy Document - Vision, Mission, Policy Statement, etc | | | | | | | | | | | | | | | | |
| 2 | License List Compliance Check | | | | | | | | | | | | | | | | |
| **3** | **Ground level Market assessment** | | | | | | | | | | | | | | | | |
| 4 | Existing hospital tariff study / assessment | | | | | | | | | | | | | | | | |
| 5 | Existing hospital salary study / assessment | | | | | | | | | | | | | | | | |
| 6 | Doctor engagement model | | | | | | | | | | | | | | | | |
| 7 | **Human Resource planning** | | | | | | | | | | | | | | | | |
| 8 | Manpower planning | | | | | | | | | | | | | | | | |
| 9 | Salary structure for Core team | | | | | | | | | | | | | | | | |
| 10 | Preparation of Organogram, JD, JS, Competency Framework | | | | | | | | | | | | | | | | |
| 11 | Recruitment and deployment of Core Team | | | | | | | | | | | | | | | | |
| 12 | Advertisement for employment | | | | | | | | | | | | | | | | |
| 13 | HR planning and recruitment for hospital staff | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |

# *Project life cycle*

| | | Timeline in Months | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sr** | **Activity** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** | **19** | **20** | **21** | **22** | **23** | **24** |
| **14** | **Preparing Hospital tariff structure** | | | | | | | | | | | | | | | | |
| **15** | **Marketing** | | | | | | | | | | | | | | | | |
| **16** | **Drafting SOP's / Manuals** | | | | | | | | | | | | | | | | |
| **17** | **Hospital Information Systems** | | | | | | | | | | | | | | | | |
| | Identification of Broad Level specifications | | | | | | | | | | | | | | | | |
| | Vendor finalization | | | | | | | | | | | | | | | | |
| | Identification of requirements specific to hospital | | | | | | | | | | | | | | | | |
| | Customization of software modules | | | | | | | | | | | | | | | | |
| **18** | **Outsourcing of Support Services** | | | | | | | | | | | | | | | | |
| **19** | **Pre Commissioning** | | | | | | | | | | | | | | | | |
| | *(Ensuring closure of tariff structuring, equipment installation, recruitment, empanelment's, license approvals, SOP's, HIS, etc)* | | | | | | | | | | | | | | | | |
| 20 | Dry run | | | | | | | | | | | | | | | | |
| 21 | Corrective actions if any | | | | | | | | | | | | | | | | |
| 22 | Wet run | | | | | | | | | | | | | | | | |
| **23** | **Post commissioning** | | | | | | | | | | | | | | | | |
| | Ensure the hospital systems & operational processes are in place | | | | | | | | | | | | | | | | |

# Thank You