SUMMER TRAINING AT
APOLLO HOSPITALS, APOLLO HEALTH CITY
JUBILEE HILLS, HYDERABAD

10th May 2021 to 2nd July 2021

A report by,

Dr. Shahnawaz Khan
IIHMR-U/01/2020-22/1190
MBA- HM 25 (2020-2022)

A report on resource optimization by Apollo Health City Hyderabad for COVID 19 isolation services- Apollo Kavach Stay-I

Acknowledgements

The two months that I spent at Apollo hospitals, Hyderabad are one of the crucial learnings of my life. They helped me to grow as a person and understand life with unique perspective. I am glad that I was given an opportunity to be a part of this environment which taught me something new each time. This project is the outcome of the experiences, learning and passion towards the subject and the confidence that my dear ones have shown in me.

I am extremely grateful to my mentor Mr. Sandesh Kumar Sharma, Associate Professor, IIHMR University, for his timely and explicit guidance. He has been extremely kind and patient to support me with my project.

I take this opportunity to express my heartfelt gratitude and admiration towards the people who have helped me during this journey. I extend my profound gratitude to Mr. Suresh Reddy Chintala, Ms. Poonam Reddy and Mr. Naveen Kumar for providing me with the opportunity to work here and meet the wonderful professionals and colleagues who led me through this internship period.

I am ineffably indebted to my mentor Dr. Tarun Kondabolu (Deputy General Manager, Operations) who has been my driving force and the support system during this internship period. Without his exemplary guidance monitoring and constant encouragement, this project would have not been completed with such grace in its due course of time. I should always carry and remember the blessing, help and guidance given by him for long in the journey of life which I am about to embark. I should carry and be reminded of his blessings, assistance, and direction throughout the journey of life on which I am about to undertake.

I am indebted to Mr. Md. Tameem Ansari (Business Analyst) who has always been a guiding light whenever I have been shaded by darkness. Thank you for showing faith in me and making me realise my potential. Your words of wisdom and motivation has always acted as a stimulus for me and have driven me towards excellence.

Lastly, I would like to thank everyone who helped me directly or indirectly in making this project a success.

Apollo Health City
HYDERABAD

Regd. Office : Apollo Hospitals Enterprise Limited, No. 19, Bishop Gardens, Raja Annamalaipuram, Chennai - 600 028.
Corporate Identity Number (CIN) : L85110TN1979PLC008035

02st Jul, 2021

TO WHOM SO EVER IT MAY CONCERN

This is to certify that **Dr.Shahnawaz Khan** of IIHMR University Jaipur has completed his Project on "**A Study Apollo Kavach Resource Optimization through Hotel beds for COVID Isolation**" at Apollo hospitals, Hyderabad. He has done his Internship from 10th-May-2021 to 02nd-Jul-2021 in **Operations & Marketing** department. During the period we found his performance to be good and regular in his duties.

We wish all the success in his future endeavors.

For **Apollo Hospitals Enterprise Limited**

E.POONAM REDDY
MANAGER
HUMAN RESOURCES

Contents

Abbreviations

AHEL- Apollo Hospitals Enterprise Limited

USA- United States of America

UAE- United Arab Emirates

NABL- National Accreditation Board for Testing and Calibration Laboratories

ISO- International Organization for Standardization

HACCP- Hazard Analysis and Critical Control Point

AAHRP- Accreditation of Human Research Protection programs Inc.

E.N.T- Ear, Nose and Throat

OPD- Out Patient Department

IPD- In Patient Department

ER- Emergency Room

CCU- Critical Care Unit

US- Ultra Sonology

CT- Computed tomography

MRI- Magnetic Resonance Imaging

RT-PCR- Reverse Transcriptase Polymerase Chain Reaction

F & B- Food and beverages

COVID 19-Corona Virus Disease 2019

Organisation Profile

Apollo Hospitals Enterprise limited (AHEL) is among Asia's leading private healthcare service and facilities providers. With the concentrated efforts not only on speciality and super specialties in over 50 departments in and at Chennai was a brain child of Dr. Pratap C Reddy. In year 1985, 46 more beds were commissioned at Chennai.

In 1988, the Apollo Hyderabad was brought to the light of the sector. Built catering to a primary motive of providing the population the world class healthcare with a firm belief in the values of excellence, expertise, empathy, and innovation. Today, Apollo hospitals Hyderabad has taken its place as the most renowned and trusted all-inclusive Health city in Asia, specializing in the entire buffet from illness to wellness and holistic care.

The benchmark as far as specialized skill, expectations, and results are concerned Apollo Hospitals has put up a gold standard performance uplifting the benchmark with the Apollo Health City. It covers the entire range from sickness to wellbeing and is along these lines a wellbeing city and not a clinical city. Foundations for Heart Diseases, Cancer, Joint Diseases, Emergency, Renal Diseases, Neurosciences, Eye and Cosmetic Surgery are largely focusing of greatness and are prepared to offer the best consideration in the most secure way to each persistent independent of anything. Aside from patient consideration, each centre devotes a lot of energy in resource and time planned research aimed forestalling infection and further developing results when the illness happens.

From the second one shows up at Apollo Health city, Hyderabad the individual turns out to be essential for the custom of recognized medical care. Apollo is pushing ahead towards driving the world in the diagnostics and treatment of sickness and to deliver the upcoming extraordinary doctors, medical caretakers, and researchers. We are propelled to give the best medical care and administration to all patients with an extra intercession called the special attention.

We know that diligent care does not only involve good medicine. Apollo Health City, Hyderabad is striving to go from good medicine towards good health. Being the first city in Asia, it provides the momentum for more such institutes to be catered at and place Hyderabad on the global map of quality healthcare.

Apollo Hospitals, Hyderabad handles near 100,000 patients every year. Global patients from Tanzania, the USA, the UAE, Kenya, Oman, and adjoining Asian nations are treated by the clinic consistently.

International and National Accreditations

Joint Commission international

Apollo Hospitals, Hyderabad is one of the very few hospitals in South India to be accredited with Joint Commission International (JCI) accreditation, the international gold standard. They acquired this Gold Standard of Quality after going through a rigorous review of the procedure for critical criterion like all the essential aspects like patient safety and consistently improving quality. It had been always of utmost importance because it reinforces our commitment of providing with the best of the healthcare services. JCI accreditation is effective from 17th April 2021 through 16 April 2024.

NABL

Apollo Hospitals, Hyderabad is one of the hospitals to receive NABL certification in six individual categories which are as follows- Chemical Pathology, Clinical Biochemistry, Microbiology and Serology, Histopathology Haematology and Immunohematology, and Cytopathology.

ISO 22000:2005 – HACCP Certification

The Department of Food and Beverage at Apollo Hospitals (AH), Hyderabad called the Apollo Sindoori is the first F & B Department in any Hospitals in India to get the renowned ISO 22000:2005 – HACCP certification, which is bestowed by the British Standards Institution (BSIUK).

The ISO 22000:2005 - HAACP last review was led July 27-29, 2011, and the AGH F&B adjusted to all principles and rules. The ISO 22000:2005 – HAACP affirmation is legitimate for a very long time. The extent of the study and certificate incorporates "Receipt, Storage, Preparation and Delivery of Cooked and Uncooked Food for In House Patients, Outdoor Patients and Food and Beverage Outlets."

The ISO 22000 (HAACP) is sanitation the board framework wherein food handling is tended to through the examination and control of natural, synthetic, and actual dangers from crude material creation, obtainment, and dealing with, to assembling, dispersion, and utilization of the completed item. The proposals and rules were being carried out since last one and half year. It included foundational arranging and documentation, thorough interaction improvement and conveyance of safe food to our patients and customers.

AAHRPP accreditation

Apollo Hospitals have been bestowed with a cent percent accreditation for 3 years by the Association for the Accreditation of Human Research Protection programs, Inc. (AAHRPP the global Gold Seal awarded to institutions which maintain the highest international standards in research.

The hospital under the AHEL banner accredited are Apollo Hospitals Chennai (Apollo Main Hospital, Apollo Specialty hospital, Apollo Hospitals Vanagaram, Apollo First Med hospital, Apollo Tondiarpet Hospital, Apollo Hospitals Ahmedabad, and Apollo Children's Hospital), Apollo Hospitals Hyderabad

(Apollo Health City Jubilee Hills, Apollo Hospitals DRDO, Apollo Specialty Hospitals Madurai Apollo Hospitals Hyderguda and Apollo Hospital Secunderabad), and Indraprastha Apollo hospital, New Delhi.

Centre of Excellence

The Apollo Hospitals, Apollo Health City, Jubilee Hills Hyderabad has dedicated Centres of Excellence for several specialities and even super specialities. It encompasses unique and state of the art facilities across several locations and each is a citadel of excellence.

These includes Centre of Excellence for-

1. Cardiology
2. Orthopaedics
3. Spinal sciences
4. Cancer care
5. Neurosciences
6. Gastroenterology
7. Organ transplantation
8. Nephrology and urology
9. Critical care
10. Bariatric surgery
11. Robotics based surgical interventions
12. Preventive Medicines
13. 24 hours emergency
14. Colorectal surgery

Departments

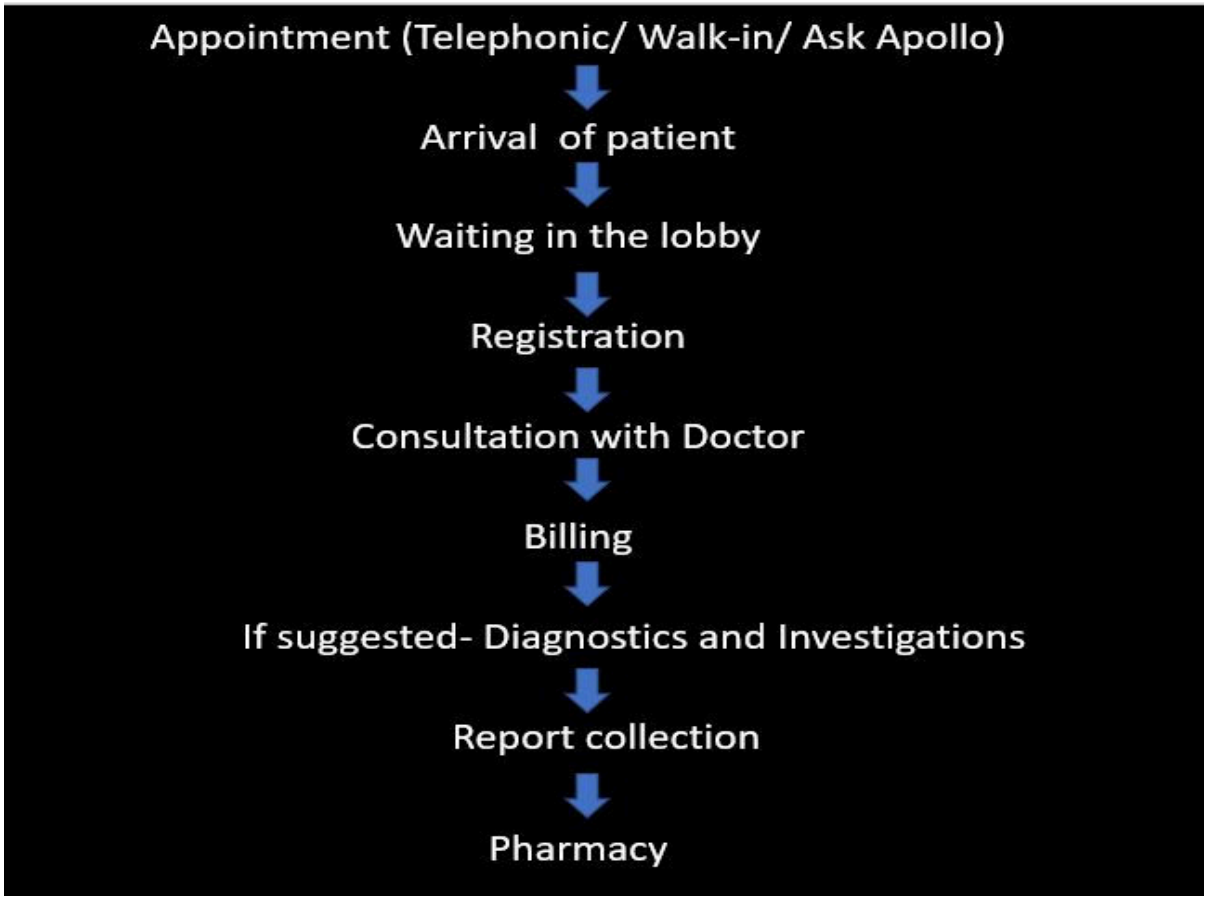
1. Emergency
2. Radiology
3. Operation theatre
4. Critical care unit
5. Gastroenterology
6. Orthopaedics
7. Neurosciences
8. Obstetrics and Gynaecology
9. Pulmonology
10. Oncology
11. Preventive measures
12. Ophthalmology
13. Bariatrics
14. Paediatrics and Neonatology
15. Physiotherapy
16. Nephrology
17. E.N.T
18. Laboratory
19. Radiology

20. Blood bank
21. Information Technology
22. Marketing and Corporate relations
23. Finance and Accounts
24. Human Resource Management
25. Medical records
26. Biomedical engineering
27. Laundry Services
28. Food and Beverages

Outpatient Department

The OPD is the first point of contact between the patient and the hospital.

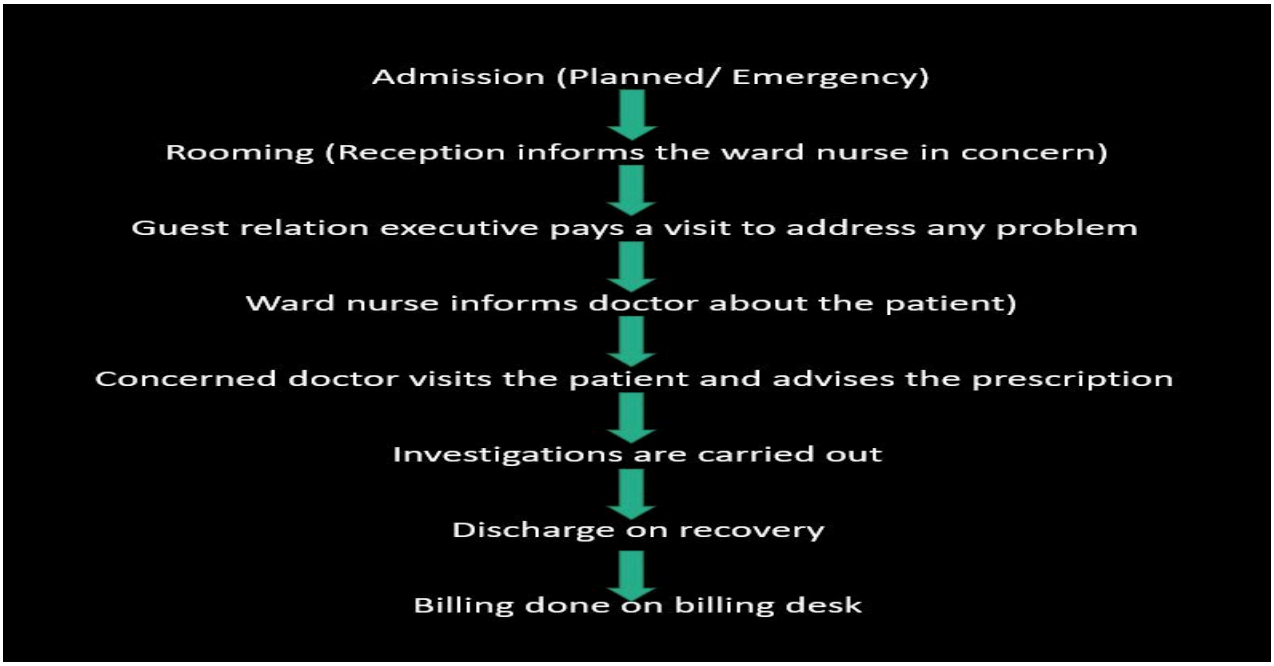
The general OPD process in Apollo hospital Jubilee Hills, Hyderabad is given below:



Inpatient Department (IPD)

The IPD is the department where the patients are admitted in the hospital. This means that the IPD patients are those who spend a minimum one night in the hospital for their treatment.

The general process flow for the IPD patients in Apollo Hospitals, Jubilee Hills, Hyderabad is as follows:



Emergency Medicine Department

Emergency medicine department (EMD) stands as the frontline care division for the patients coming to the hospital and is provides fast/ quick access, required transport and treatment at pre-hospital care also including high quality emergency care services to all patients coming up.

ER or the Emergency Room is one of the most active and vital department. Consisting of the emergency physicians, nurses, housekeeping, and other staff, they operate 24X7 and 365 days. When taken into consideration, the ER is typically unanticipated, the department must be sufficient enough to provide initial treatment for a wide range of illnesses and injuries, some of which can be threat of the human life leading to requirement of immediate medical attention.

There is total 20 beds in the ER (including isolation bedroom). Access to the emergency room is dedicated and separate from the main entrance. For security 24 hours security personals controls the access.

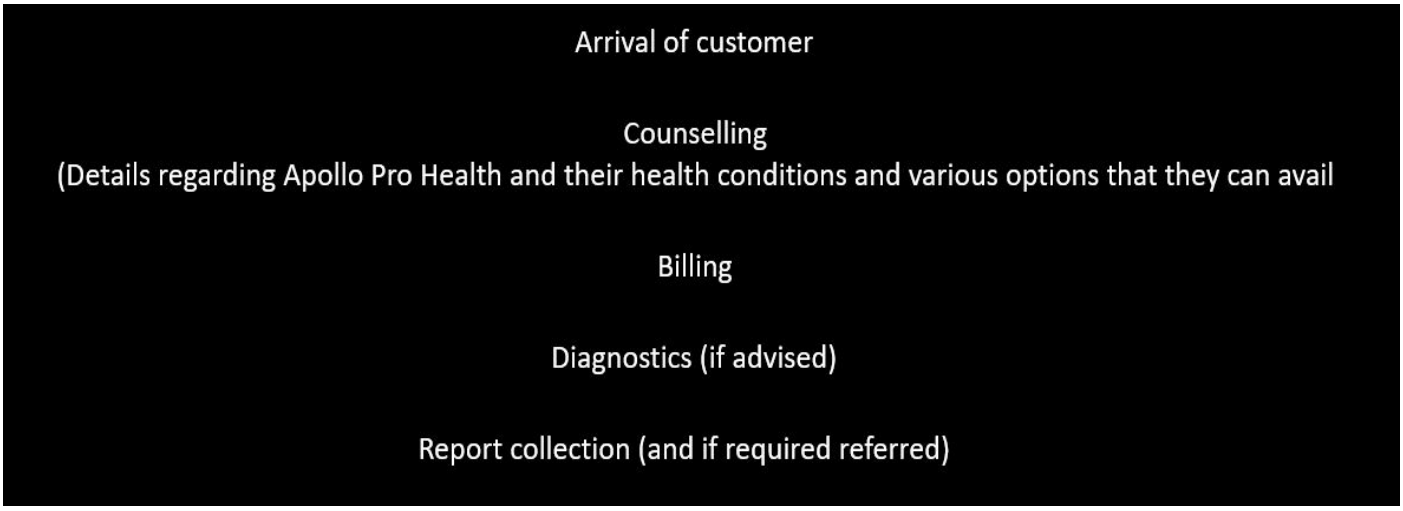
The emergency medicine department is located on the ground floor. The ER floor area is divided into the following areas:

1. Triage room
2. Isolation room
3. Registration desk
4. Attendant's waiting area
5. Nursing and in-house billing desk
6. Resuscitation area
7. Treatment area
8. Clean utility, Dirty utility, and Toilets
9. Emergency physician consultation room
10. Decontamination area

Personalized Health Check-up

With today's sedentary lifestyle and no time for physical exercises and in addition to its environmental degradation, majority of the population is prone to lifestyle disorders. Apollo's Personalized Health Check-

up also known as Apollo's Pro Healthcare preventive health check-up plans for the customers. Here individuals can avail personalized/ tailored to fit plans according to assessment and needs. The operational procedure of Apollo's Pro health is as follows.



Critical Care Units

The critical care units provide with the highest quality care to the patients with critical illness. The members of the critical care consultants group provide consultation to the patients.

In Apollo Hospitals, Apollo Health City, Jubilee Hills; the following critical care units are segregated as:

1. Medical CCU
2. Surgical CCU
3. CATH CCU
4. Neonatal CCU
5. Neuro CCU
6. BMT CCU
7. Burns CCU
8. CT Post-Operative CCU

Operation theatre

The hospital has 18 OTs which are categorized into three sections:

Section	Floor	Number of OTs	Timing	Day off
Main Block	1	10	24X7	None
International Block	-1 (Basement 1)	4	0800 hours to 2000 hours	Sunday and Public holidays
Cardio-thoracic	1	4	0800 hours to 2000 hours	Sunday and Public holidays

Cancer (Oncology Institute

The Apollo Cancer Institute is in the Apollo Health City Campus but as a separate unit from the main block of the Apollo Hospitals.

The total bed count is 26, which is as follows:

1. General Ward- 11 beds
2. Single room- 9 beds
3. Deluxe room- 3 beds
4. Glass door room- 3 beds

Blood bank

Apollo Hospitals Hyderabad has a licensed blood bank with Component and Pheresis lab. It successfully meets the blood transfusion requests even for rare blood groups. It offers 24 hours service and has an excellent diagnostic and support service. It also offers fresh transfusions for emergency/ traumatic cases.

Radiology Department

The primary objective of the radiology department is to provide imaging diagnostic services helping the physicians plan the treatment of the patient.

The department is well equipped with state-of-the-art equipment and provides the following facilities:

1. Conventional Radiology
    a. Plain radiography
    b. Barium swallow, meal, follow through.
    c. IVP, RGU, MCU
2. Imaging facilities
    a. US including doppler.
    b. CT Scan
    c. MRI including MR angiography.
    d. Mammography
3. Invasive procedure
    a. Percutaneous needle therapy
    b. Percutaneous drainage procedure

Laboratory Services

The hospital laboratory services provide essential diagnostic services which help the physician making decisions related to the treatment of the patient.

The sample collection from the patients on Outpatient basis is done through the sample collection department. Whereas for the Inpatient department the samples are directly dispatched through the sample dispatch boys.

The internal bifurcation in the Hospital laboratory is:

1. Biochemistry
2. Haematology

3. Microbiology
4. Transfusion services
5. Immunology
6. Surgical pathology
7. Cytology
8. Histopathology
9. Radioimmunoassay

Central Sterile Services Department (CSSD)

The CSSD is located on the third floor of the hospital. The department is functional 24X7. There are multiple methods of sterilization followed based on the pre-determined protocols for sterilization and disinfection. The inventory for CSSD is as follows-

Method of sterilization	Number of equipment available
Steam	3
Plasma	3
Ethylene oxide	1

Medical records department

The medical department is in the basement-3 level. The hospital stores physical records of the patients i.e., hard copies of the files. The files are stored according to the registration number of the patient. The hospital also maintains digital copies of the same by scanning them and storing them in the central servers.

The records are kept for duration as directed by the government. It is as follows:

1. OPD records- 3 years
2. IPD records- 10 years
3. Medico-legal cases- 15 years
4. Death records- 15 years
5. Birth records- 18 years

Post the allocated duration, the records are shredded based on rules as posted by Central Government and health department as per the Health Insurance Portability and Accountability Act.

Information technology (I.T) department

The IT department is in the Basement-3 level. This department was outsourced from Tata Consultancy Services (T.C.S) but in past two years the contractual staff was converted into full time staff for Apollo Hospitals Enterprise Limited.

Biomedical engineering department

The biomedical engineering department is located on the fifth floor of the main hospital block. This department is outsourced from Channel Biomed. Their functions include-

1. Repair faulty equipment with least possible downtime and financial loss.
2. Follow planned preventive maintenance of the equipment regularly as per schedule.
3. Training staff for the optimal usage of equipment.
4. Coordinate with purchase, finance department and operations department for procurement of equipment and spares as required.

Finance department

As the Apollo Hospitals Enterprise Limited is comprising of a chain of corporate hospitals and clinics, it is of utmost importance to maintain the financial status and audit it regularly. The finance department on the 4th floor of international block works in proximity with the Corporate Relations department. The AHEL have a separate section on their website displaying financial reports for the investors to have a look at prospects. They prepare and upload unaudited quarterly reports and audited annual reports.

Food and Beverages

For a hospital it is essential to provide clean, healthy, and hygienic food services for the patients as well as the staff, residents, and visitors. The dietary needs of the patients are assessed daily by the dieticians upon prescriptions from the consultants which in turn results in forming a diet chart for each patient.

Apollo Hospitals Hyderabad maintains the food and beverages services by Apollo Sindoori, which turns out to be one of the leading hospital caterers in India. They work in coordination with dieticians to provide services to the patients according to their specific needs. A choice between Indian and continental cuisines are available to have taste of.

Project Report

Introduction:

COVID-19 pandemic has spread on earth taking lives, pulling down economies, and spreading worldwide havoc and panic like a wildfire. With growing number of COVID-19 cases in India, we all must do what it takes to deal with this single most unprecedented global event of our lifetimes.

To address the requirements for monitored isolation at home, it's not exclusive for all all COVID-19 patients with symptoms will require hospitalization, Apollo Hospitals Group initiated with a pioneer COVID-19 home care services naming Stay I @HOME.

To guarantee reasonable, safe abode, Apollo Hospitals has united with Deutsche bank, State Bank of India, Hindustan Unilever, Oyo Rooms, Lemon Tree, Ginger inns and Zomato and has dispatched a social effect drive. The functioning conventions, working and observing system have been created, and the undertaking was declared on 30th March 2020. As a feature of stage 1, we dispatched 100 rooms in Hyderabad, Bengaluru, Kolkata, Chennai, Mumbai, and Delhi.

Title:

An assessment of resource optimization by Apollo Kavach programme of Apollo Hospitals for utilizing hotel beds as a substitute to hospital beds for isolation services and providing medical facilities to patients with COVID 19 RT-PCR positive status for the population of India during the pandemic.

Rationale:

During the COVID-19 pandemic the hospitals are struggling to provide for medical in-patient services to patients flooding in with RT-PCR Positive status. The biggest challenge remains providing beds and isolation facilities to 'mild to moderately' symptomatic patients due to the humongous population of our county and when compared to the medical structure of the same turns out to be vastly insufficient.

During this period of struggle Apollo Hospitals has come up with a project utilising the back-end support of the Hospital facilities and the front-end support from the Apollo 24/7 online availability. In this a project was launched by the name Apollo Kavach, which utilizes the poor performing hotel and hospitality industry and forming tie-ups with them to use their potential for providing the population with services which benefits both the population as well as the hospitality industry for the greater good.

Research Question

The title of the project identifies the 5 W's of a research question

1. What- Resource optimization and expansion of operations,
2. When- During COVID 19 Pandemic,
3. Who- By Apollo Hospitals for the COVID 19 RT-PCR Positive patients and contacts with asymptomatic status,
4. Where- Indian subcontinent specifically 8 major cities,
5. Why- To cope with the shortfall in bed counts when compared to the large population requiring medical facilities for managing COVID-19 disease and isolation.

Objectives:

- To understand the coping mechanism of hospitals in shortfall of bed allocation for COVID-19 patients and how they deal with provisions of the medical facilities.
- To analyse resource allocation, utilization, and delays in allocation of resources for patients requiring services.
- To analyse the expense mapping and inputs for profit maximization.

Study Design:

The study design is:

1. Descriptive
2. Applied
3. Cross-sectional

The research approach is quantitative. The data collection was done using secondary data obtained from central Apollo Kavach online tracker.

Sampling:

The sampling technique used is non-probability, convenience sampling. Data was obtained from the online Apollo Kavach tracker from 8th April 2021 to 21st June 2021 and taken into consideration for this study. The sample size for the research is 2868.

Methodology:

The study aims for studying the pattern of resource utilization done during the pandemic by Apollo Hospitals Hyderabad for providing the isolation services in hotels with a sample size of 2867 people.

The study was conducted at Apollo Hospitals Hyderabad which were supervising the following cities:

1. Hyderabad
2. Bengaluru
3. Mumbai
4. Chennai
5. New Delhi
6. Pune
7. Indore
8. Guwahati

Data collected in a tabular format with following entities- City, Facility name, Room number, Room type, Guest Credentials, Date of entry, Date of exit and Number of days stayed.

The utilization was ascertained by an online tracker for all patient check-ins and check-outs including days stayed and medical expenses incurred to the patients. Graphical representation of the same is made available and in addition to it the human resources deployed were also compared with respect to city-wise facilities and the proportion of consumables in inventory is also taken into consideration.

Data Collection:

The data for the study was collected and combined from the online tracker of Apollo Kavach and Stay-I hotels.

Apollo - Project Kavach

Stay I @HOME

Stay I @HOME is a restoratively administered detachment at home help presented by Apollo Homecare. The administrations depend on the most recent rules from the Indian Council of Medical Research (ICMR)/ in collaboration with Ministry of Health and Family Welfare (MoHFW), which suggests disconnection for patients in home who are pre-indicative or have very. gentle manifestations else are either sure or associated with COVID-19.

Services

Stay I @HOME is a well-established and planned program for medical care and consultation services that is necessary to take care of COVID-19 patients to complete the 14 days of home quarantine period.

- CLINICAL NEEDS

1. Observing the indispensable signs, like heartbeat, temperature, respiratory rate, oxygen immersion levels

2. Monitoring of COVID side effects according to the rules of ICMR

3. For patients with comorbidities evaluation and the board for instance Hypertension, Asthma, Diabetes, COPD, Bronchitis, and any Heart-related issues.

- EDUCATION & AWARENESS

1. The team works with patient and the family members to educate everyone on
2. Do's and don'ts to be followed during the confinement time frame.
3. The parts just as the obligations of the guardian
4. The methodology for surface cleaning, disinfecting the room, garbage removal, and so forth
5. The patient's very own cleanliness and security
6. Downloading and working the Arogya Setu APP
7. High alerts to advise the doctor.
8. Utilization of pack given to disengagement for both patient's and parental figures.

- DIETARY AND NUTRITION NEEDS

1. Week after week nourishment appraisal and direction on building insusceptibility by nutritionist.
2. Furthermore, follow-up calls by an expert dietician.

- MOTIVATION AND ENGAGEMENT

1. A mentor will be apportioned to patient every day in your space of your advantage to assist you with beating the fatigue.
2. Drawing in the patients arranged, shock and gathering exercises like games, tests, persuasive discussions, and so on in view of the preferences.

- MENTAL HEALTH AND WELLNESS

1. Itemized Mental Health Assessment by an expert analyst to survey the passionate solidness.
2. Direction will be given to address the pressure factors, for example, financial weakness/forlornness and sadness.

- MOVEMENT AND MOBILITY

1. Every day appraisals on actual capacities by our master physiotherapist.
2. Day by day virtual recovery meetings (30 minutes) directed by proficient physiotherapist.
3. Unique spotlight on breathing activities utilizing YOGA and motivating force spirometry.

- SUPPORT SERVICES

1. If there should arise an occurrence of any deteriorating of side effects or any new turn of events, our group drove by a doctor will direct you to a higher degree of treatment.

Roles and Responsibilities of a Patient

- ❖ The parental figure needs to guarantee proper objects and materials to be identified and committed for the patient.
- ❖ The parental figure should screen patient's day by day signs and manifestations and track something similar.
- ❖ The parental figure will be ascertained by the family and will be the solitary individual to have association with the COVID-19 positive patient's detachment room.

Roles and Responsibilities of a Caregiver

- This parental figure needs to follow severe rules of hand washing, cleanliness, utilizing the cover, and so forth while cooperating with the patient.
- A guardian ought to give 24X7 consideration to the patient and follow every one of the rules laid by ICMR.

Apollo Stay I @ Home- Isolation Plans

- 14 days @ Rs.300/Day for 14 days
- BASIC PLAN of Rs.4199/-

Service Provider	Frequency	Type of consult	No. of consults
Consultant	Alternative day	Over the net	7
Nursing Supervisor	Daily	Telecommunication	14

- Advance Plan: Focus on clinical, emotional, dietary, mobility and immunity needs – 14 days @ Rs.600/Day
- ADVANCE PLAN – 8399/-

Service Provider	Frequency	Type of consult	No. Of Consults
Consultant	Alternative day	Over the net	7
Nursing Supervisor	Daily	Telecommunication	14
Motivational	Alternative day	Virtual	7
Telephonic Rehab	Week-1: Daily Week-2: Alternate day	Virtual	10
Dietician	Weekly once	Virtual	2
Counsellor	Weekly once	Virtual	2

Apollo Stay I@Home (Kit)

(Rs. 5999/-only)

1.Thermometer (Digital)

2. 3-Ply Mask

3. Surgical rubber gloves

4. Paper gloves

5. Sanitizer- ADH rub

6. Surface Disinfection spray

7. Waste and garbage Disposal Bags

8. Spirometer (Incentive)

9. Anti-Bacterial/ alcohol wipes

10. Note Pad

11. Pen

12. Pulse Oximeter.

Process of Enrolling in the program

- Visit the site (Apollo Hospitals Enterprise Limited, n.d.) for selecting on the web or call the helpline for Stay I @Home on - 1800-102-8586.
- Or on the other hand download the 24|7 App and select home help and enlist.
- Enrolment should likewise be possible by contacting Apollo Home Care work area at any of the Apollo Hospitals (Hyderabad, Chennai, Delhi, Kolkata, Bengaluru), or call the helpline-1800-102-8586.
- After enrolment, an organizer will impart to present you across the program.
- On the off chance that you have picked home disengagement unit, - Within only 6 hours of the enrolment, a home segregation pack will be conveyed to the location assigned. The pack will have 2 parts:
- One for the parental figure
- Other for the patient.
- After this a committed doctor will be doled out as a Single Point of Contact (SPOC) all through the Home Isolation Program.
- Instructive material will be given to the patient and guardian.
- Media transmission will be made each day according to the bought in program to keep a tab on your wellbeing and prosperity during the Home Isolation.
- A plan of virtual collaborations will be shared through Email and WhatsApp.
- In the event of crisis if your condition declines: Call your allocated SPOC. Post appraisal, a choice whether to proceed with care at home, or move patient to an office will be taken. Report it promptly to your doctor in-control.

Stay I @ Hotel

Social distancing and Isolation care are generally basic to break the chain of spreading COVID19 sickness. Deprived for a more centred medicinally regulated segregated consideration, Apollo has dispatched Project Stay-I. Undertaking Stay-I is an imaginative program to upgrade the conflict against COVID-19 by making seclusion rooms in inns with light clinical oversight for isolate. They guarantee individuals recuperate without spreading COVID-19 and are managed on the off chance that they need to move to clinical offices at the ideal opportunity. This guarantees that individuals who are not basically wiped out ought not involve the clinic beds and opening up the scant asset for more basic patient.

The complete supply chain, standard operational procedures, functions, and framework to monitor for Stay-I is developed and managed at Apollo Hospitals Hyderabad.

A visitor who requires to book a room under Stay-I needs to visit the site www.apollohospitals.com and fill out the structure. Visitors can likewise call the 24 I 7 helpline number 18605000202 to profit this office. After getting the subtleties, the Apollo Hospitals group would return to the visitor with a confirmation of the booking made and registration necessities inside 3 hrs.

- Sanitised rooms
- Doorstep delivery of medicine
- Doorstep Sample collection
- Free Wi- Fi
- Contactless Food delivery
- Virtual doctor Consultations and rounds

Round-the-Clock Virtual Consultation

We have dispatched an intelligent web stage Apollo 24 I 7 which is India's biggest start to finish omnichannel medical care stage that is empowering clients from any piece of the nation to utilize Apollo administrations from their cell phones. The stage as of now offers a full bunch of medical services administrations – 24x7 counsel with Apollo specialists across specialities, quick and opportune home conveyance of meds, symptomatic test booking, computerized wellbeing records and the sky is the limit from there.

Apollo 24 I 7 has been made with the conviction that mastery is for everybody with an intend to furnish people with approved information and top tier assets to deal with their wellbeing, prosperity, and security. With expanded collection of wellbeing information, we predict a bigger portion of dynamic to be founded on artificial knowledge with regards to keeping up with our wellbeing. Subsequently, we are finding a way proactive ways to give our clients it's benefits consistently.

Literature review

1. Assessing healthcare capacity in India- https://www.mercatus.org/publications/covid-19-policy-brief-series/assessing-healthcare-capacity-india
    a. Author- Shruti Rajgopalan, Abishek Choutagunta
    b. Date- 07-April-2020
    c. Key findings- Given the way that India's private-area medical care framework has more ability to battle COVID-19 than government offices, India should depend on and boost reactions from the private area and common society. This is best done by rapidly expanding the financial plans made accessible to battle COVID-19 and by eliminating bottlenecks, for example, single-point acquisition offices and cost and amount controls on fundamental clinical hardware.
    d. Key words- India COVID-19 preparedness, India COVID-19 lockdown, public health, economics, quarantine, economy, economic crisis
2. Healthcare delivery in India amid the Covid-19 pandemic: Challenges and opportunities- https://ijme.in/articles/healthcare-delivery-in-india-amid-the-covid-19-pandemic-challenges-and-opportunities/?galley=html
    a. Author- Pragati B Hebbar, Angel Sudha, Vivek Dsouza, Lathadevi Chilgod, Adhip Amin
    b. Date- 31-May-2020
    c. Key observations- Utilizing innovation for conference, further developing readiness, giving drugs at doorsteps, Streamlining travel during lockdown periods and Effective and straightforward correspondence.
    d. Key words- Covid -19, Indian health system, OPD services, teleconsultation, lockdowns, ethical challenges, healthcare access, co-morbidities
3. Capacity-need gap in hospital resources for varying mitigation and containment strategies in India in the face of COVID-19 pandemic- https://www.sciencedirect.com/science/article/pii/S2468042720300415
    a. Author- Veenapani Rajeev Verma ,Anuraag, Saini, Sumirtha Gandhi, Umakant Dash, Shaffi Fazal-u-din Koya
    b. Date- Infectious Disease Modelling Volume 5 2020, Pages 608-621
    c. Key findings- We figured the flood limit, which is controlled by direction of cases and foundation committed to COVID-19 patients by getting to the timeframe around which Indian medical clinics will confront genuine emergency as far as accessibility of beds and ventilators. The limit need hole during busy time if the social separating measures and limitations is proceeded for rest of the year for gentle, extreme, and basic cases is introduced as warmth map. Shaded boxes propose the degree of wellbeing foundation that should be moved up to meet the genuine need during busy time. As referenced before, flood limit is probably going to change across various testing situations. For instance, when the current social separating measures are considered with current testing inclusion of 900,000 every day and current TTP of 9.7%, our ability and need side projections demonstrate that the Indian medical services framework is confronting a colossal shortfall as far as the accessibility of medical care foundation, particularly for serious and basic case. We processed the flood limit, which is controlled by direction of cases and framework devoted to COVID-19 patients by getting to the timeframe around which Indian medical clinics will confront genuine emergency as far as accessibility of beds and ventilators. The limit need hole during busy time if the social separating measures and limitations is proceeded for rest of the year for gentle, extreme, and basic cases is introduced as warmth map. Shaded boxes propose the degree of wellbeing foundation that should be moved up to meet the genuine

need during busy time. As referenced before, flood limit is probably going to change across various testing situations. For instance, when the current social separating measures are considered with current testing inclusion of 900,000 every day and current TTP of 9.7%, our ability and need side projections demonstrate that the Indian medical services framework is confronting a tremendous shortfall as far as the accessibility of medical services foundation, particularly for extreme and basic causative and straightforward correspondence

d. Key words- Capacity-need gap, Numerical model, COVID-19, PolicyIndia

4. Monitoring and Surveillance of COVID-19 Survival and Stay Characteristics: A Need for Hospital Preparedness in India- https://www.cambridge.org/core/journals/disaster-medicine-and-public-health-preparedness/article/monitoring-and-surveillance-of-covid19-survival-and-stay-characteristics-a-need-for-hospital-preparedness-in-india/075A402F2B9D85A6C4103B8B82976122
    a. Author- Ajit Deo Burma, Vinayak Mishra, Sumit Kumar Das, Mohana Balan Parivallal, Senthil Amudhan, Girish N. Rao
    b. Date- 20-August-2020
    c. Key findings- As the COVID-19 pandemic is advancing, the stay and endurance attributes may change in view of progress in infection qualities or change in affirmation/release models. Preferably, the prerequisite for clinic assets is arranged dependent on information from the nearby setting in light of the fact that the age structure, COVID-19 areas of interest, and medical clinic beds are not uniform the nation over
    d. Key words- communicable disease, community health planning, hospital bed capacity, hospital records.
5. Network-based Modelling of COVID-19 Dynamics: Early Pandemic Spread in India- https://www.medrxiv.org/content/10.1101/2021.03.16.21253772v1
    a. Author- Rupam Bhattachayya, Sayantan Banerjee, Shariq Mohammed, Veera Baladandayuthapani
    b. Date- 16-03-2021
    c. Key findings- The social texture comprises of broad family and cultural organizations. The test is thinking of prompt reactions, like fast lockdowns, that will lastingly affect numerous classes of society, particularly the metropolitan poor. What is required is a strong and manageable methodology, with local affectability and public availability. Pushing ahead, a system is required which makes India's thickness its benefit in managing COVID-19 and future pandemics. Utilizing innovative foundations, like utilizing the huge portable organization of India — guarantees that the updates about friendly removing, handwashing and cleanliness are not ignored. This can likewise guarantee that testing is vital (impractical to test everybody), contact following is quick (when an individual is tried positive it is somewhat simple to follow past contacts and detach them promptly), and isolate is savvy (right degree of isolate dependent fair and square of hazard).
    d. Key words- Compartmental Modes, COVID-19, Forecasting, Network dynamics, Network Modelling.
6. A Closer Look into Global Hospital Beds Capacity and Resource Shortages During the COVID-19 Pandemic- https://www.sciencedirect.com/science/article/pii/S002248042030812X
    a. Author- Brendon Sen-Crowe, Mason Sutherland BS, Mark McKenney, Adel Elkbuli
    b. Date- 24-11-2020
    c. Key findings- Global COVID-19 death rates are possible influenced by numerous components, including emergency clinic assets, staff, and bed limit. Higher pay districts of the world have more noteworthy ICU, intense consideration, and emergency clinic bed limits. Required detailing of ICU, intense consideration, and clinic bed limit/inhabitancy and

data identifying with Covid ought to be executed. Receiving a layered basic consideration approach and focusing on the extension of room, staff, and supplies may serve to expand the nature of care during resurgences and future fiascos.

   d. Key words- COVID-19, Bed capacity, Hospital resources, Global health

7. Effects of the COVID-19 pandemic in India- An analysis of policy and technological interventions- https://www.sciencedirect.com/science/article/pii/S2211883720301465
   a. Author- Isha Goel, Seema Sharma, Smita Kashiramka
   b. Date- Health Policy and Technology; Volume 10,Issue 1, March 2021, Pages 151-164
   c. Key findings- The spread of COVID-19 in India was at first portrayed by less cases and low case casualty rates contrasted and numbers in many created nations, essentially because of a severe lockdown and a segment profit. Be that as it may, monetary requirements constrained a stunned lockdown leave procedure, bringing about a spike in COVID-19 cases. This factor, combined with low spending on wellbeing as a level of total national output (GDP), made commotion due to insufficient quantities of clinic beds and ventilators and an absence of clinical faculty, particularly in the general wellbeing area. By the by, mechanical advances, upheld by a solid examination base, contained the harm coming about because of the pandemic.
   d. Key words- India, Pandemic, Health, Policy
8. The J-IDEA Pandemic Planner- A Framework for Implementing Hospital Provision Interventions During the COVID-19 Pandemic- https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7610624/
   a. Author- Paula Christine, Josh D'Aeth, Alessandra Lossen, Ruth McCabe, Dheeya Rizmie, Nora Schmit, Shevanthi Nayagam, Marisa Miraldo, Paul Aylin, Alex Bottle, Pablo N. Perez-Guzman, Christl A. Donelly, Azra C. Ghani, Neil M. Ferguson, Peter J. White, Katharina Hauck.
   b. Date- P.M.C, U. S Library of Medicine Med Care, May 2021
   c. Key findings- The consequences of the contextual analysis show that while field medical clinics ease the weight on the quantity of beds accessible, this intercession is purposeless except if the shortage of basic consideration attendants is tended to first.
   d. Key words- COVID-19, adult critical care, hospital provision interventions, health systems capacity, hospital capacity, pandemic response, critical care.
9. Apollo Hospitals and Project Kavach: Insights from How India's Largest Private Health System Is Handling Covid-19- https://catalyst.nejm.org/doi/full/10.1056/CAT.20.0677
   a. Author- Anupam Sibal, Hari Prasad, Sangita Reddy, P. Murali Doraiswamy
   b. Date- 24 February 2021
   c. Key findings- Venture Kavach was intended to mediate proactively at each stage — identification, testing, segregation, and treatment — and was considered fruitful by and large. In the Apollo framework, 55,199 patients (6,081 in serious consideration units) have been treated for Covid-19, and the inpatient death rate has diminished from 3.02% (June–August 2020) to 2.38% (September–November 2020). While similar insights are not accessible to us from other Indian emergency clinics, these rates contrast well and those in Western countries.
10. Innovative ideas to sustain in Covid-19 lockdown-A case study- https://www.ipinnovative.com/media/journals/JManagResAnal-7-2-84-881.pdf
   a. Author- Ravitheja Jampani, Vasireddy Yasaswini
   b. Date- Journal of Management Research and Analysis, April-June 2020
   c. Key findings- The idea of private isolation wards to tackle lack of beds in hospitals with support from some of the hospitality providers is also a good innovative thought.

d. Key words- Covid-19 crisis, Survival in covid-19, Innovative ideas during covid-19, New jobs during Covid pandemic

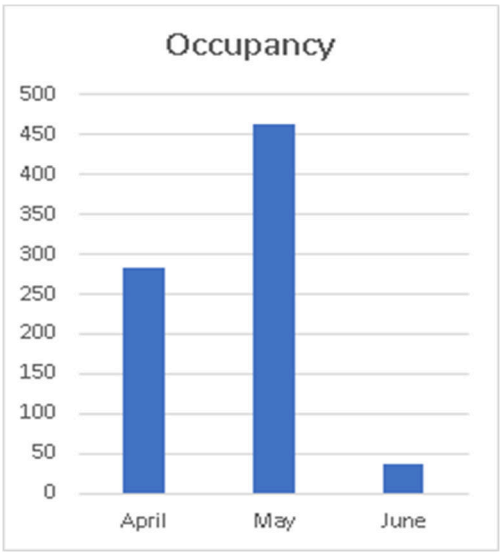
11. A Systematic Review of Smartphone Applications Available for Corona Virus Disease 2019 (COVID19) and the Assessment of their Quality Using the Mobile Application Rating Scale (MARS)- http://hdl.handle.net/123456789/10796
    a. Author- Vikas Aggarwal, Durga Prasanna Mishra, Ashish Goel, Latika Gupta
    b. Date- 2020
    c. Key findings- Our pursuit recognized 63 applications that are presently being utilized for COVID-19. Of these, 25 were chosen from the Google play store and Apple App store in India, and 19 each from the UK and US. 18 applications were created for sharing exceptional data on COVID-19, and 8 were utilized for contact following while 9 applications showed highlights of both. On MARS Scale, generally scores went from 2.4 to 4.8 with applications scoring high in spaces of usefulness and lower in Engagement. Future advances ought to include creating and testing of versatile applications utilizing evaluation apparatuses like the MARS scale and the investigation of their effect on wellbeing practices and results.

Data Analysis and Interpretation

ANALYSIS 1: State wise occupancy

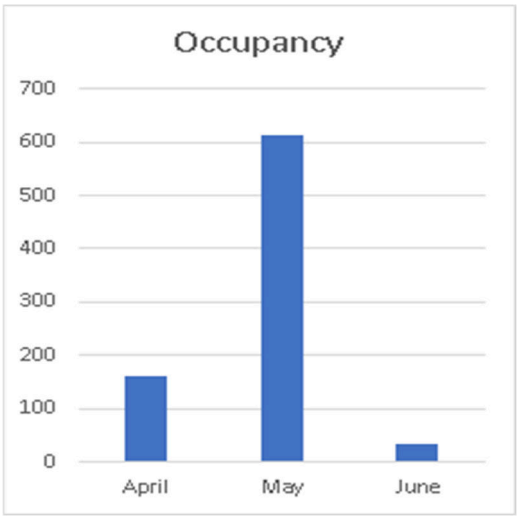
Bengaluru – 782

Month	Occupancy
April	284
May	462
June	36



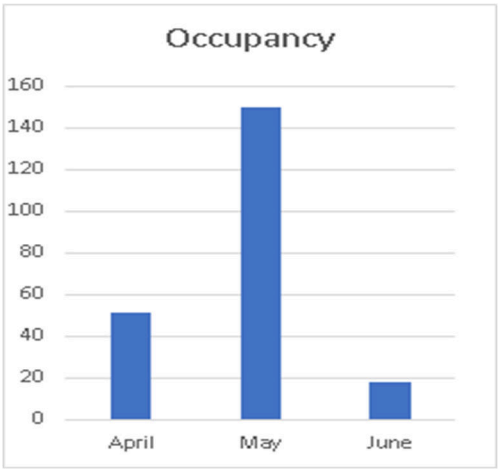
Chennai- 808

Month	Occupancy
April	162
May	613
June	33



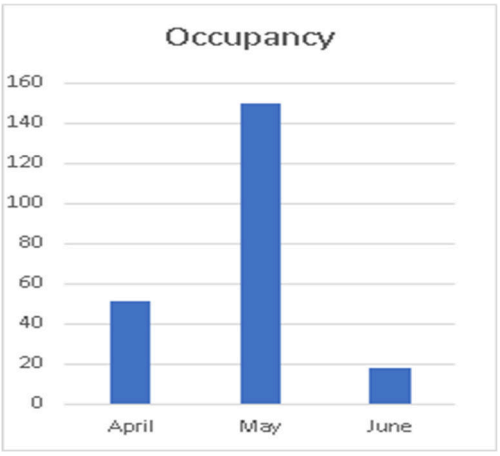
Guwahati-219

April	51
May	150
June	18



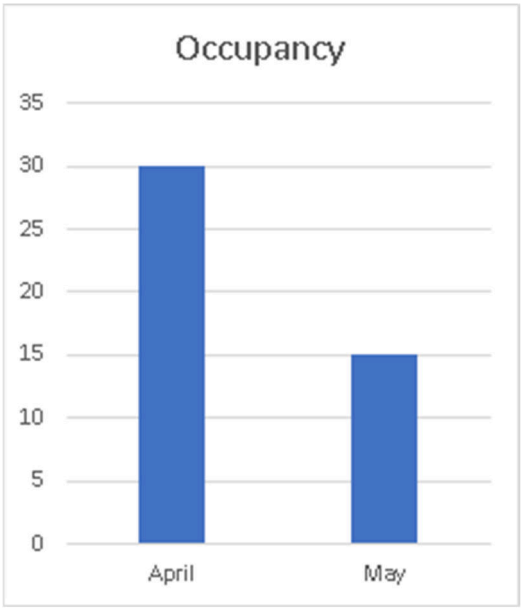
Hyderabad-464

April	95
May	318
June	51



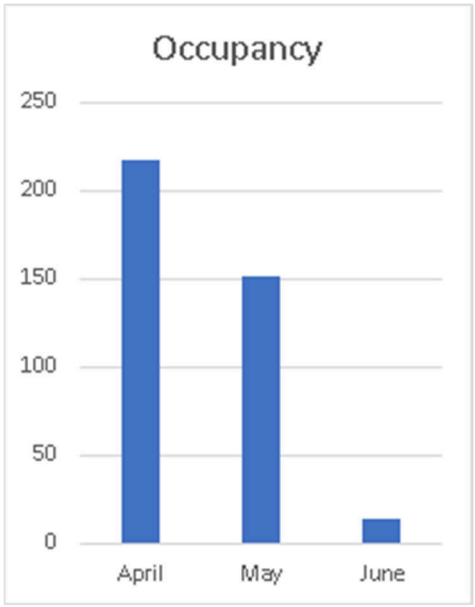
Indore– 45

Month	Occupancy
April	30
May	15



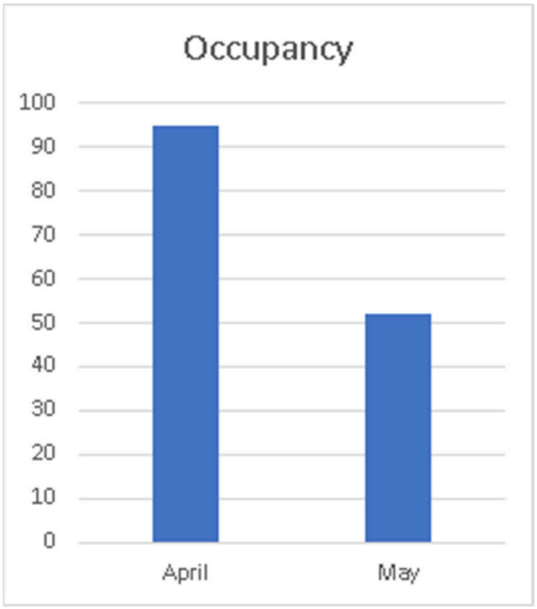
Mumbai- 382

Month	Occupancy
April	217
May	151
June	14



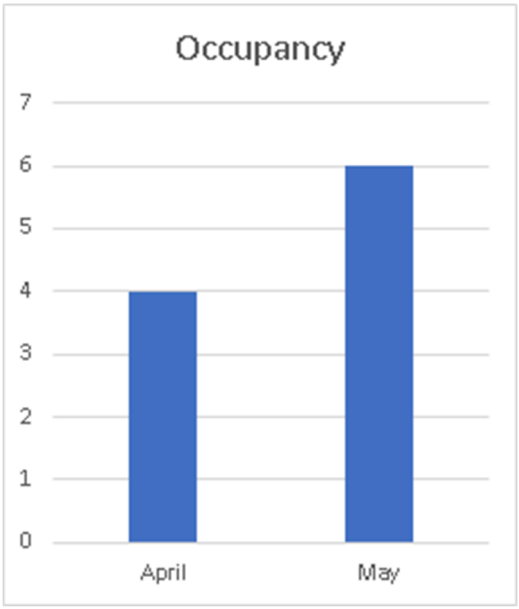
New Delhi– 147

Month	Occupancy
April	95
May	52



Pune-10

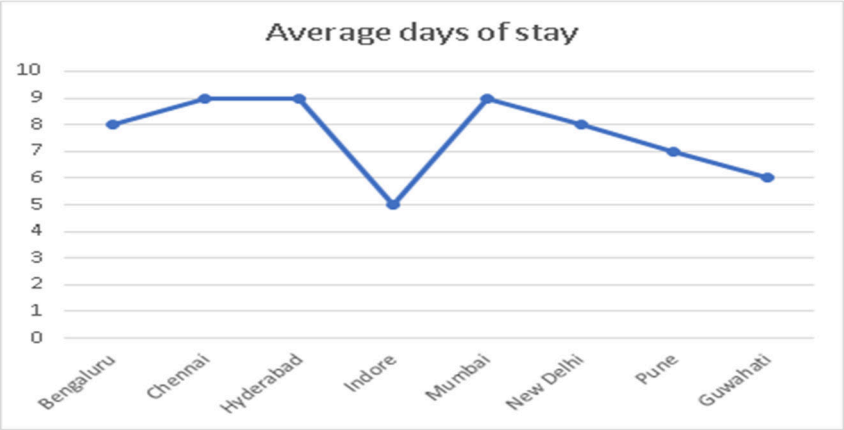
Month	Occupancy
April	04
May	06



Interpretation: The above charts depict the effect of the rise and dip in the number of COVID positive cases on the facilities of the different states. It has been observed that the number of patients seeking isolation peaked during the month of May in Bengaluru, Chennai, Guwahati, Hyderabad, and Pune. However, New Delhi, Mumbai and Indore show higher number of patients during the month of May.

ANALYSIS 2: Average days of stay

City	Average number of days
Bengaluru	08
Chennai	09
Hyderabad	09
Indore	05
Mumbai	09
New Delhi	08
Pune	07
Guwahati	06

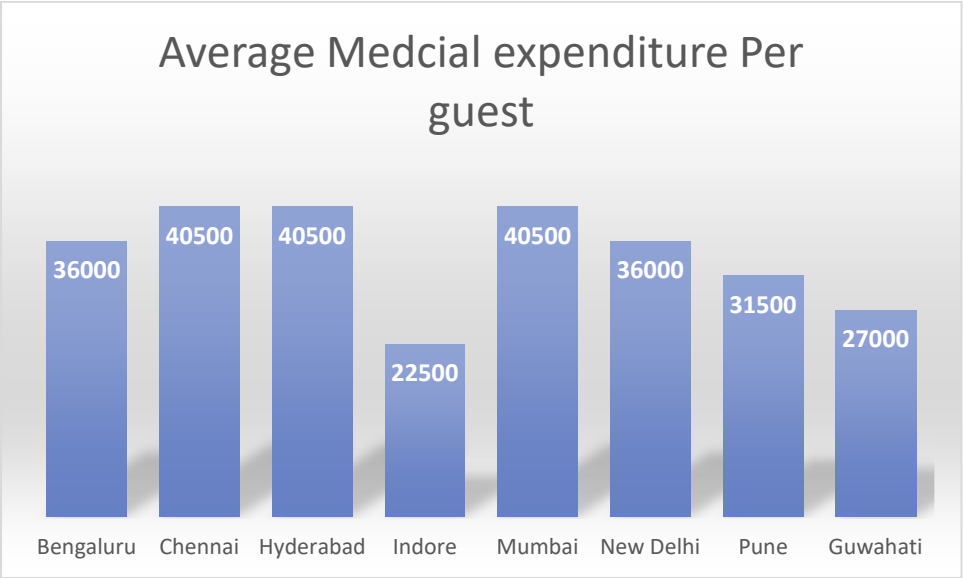


Interpretation: The average number of days the patients were seeking isolation was eight days in Bengaluru and New Delhi while Chennai, Hyderabad and Mumbai saw an average of 9 days. Patients in Indore, Guwahati and Pune were isolated for an average of five, six and seven days, respectively.

ANALYSIS 3: Average Medical expenditure by patients in Project Kavach:

City	Average Medical expenditure Per guest
Bengaluru	36000
Chennai	40500
Hyderabad	40500
Indore	22500
Mumbai	40500
New Delhi	36000
Pune	31500

Guwahati 27000

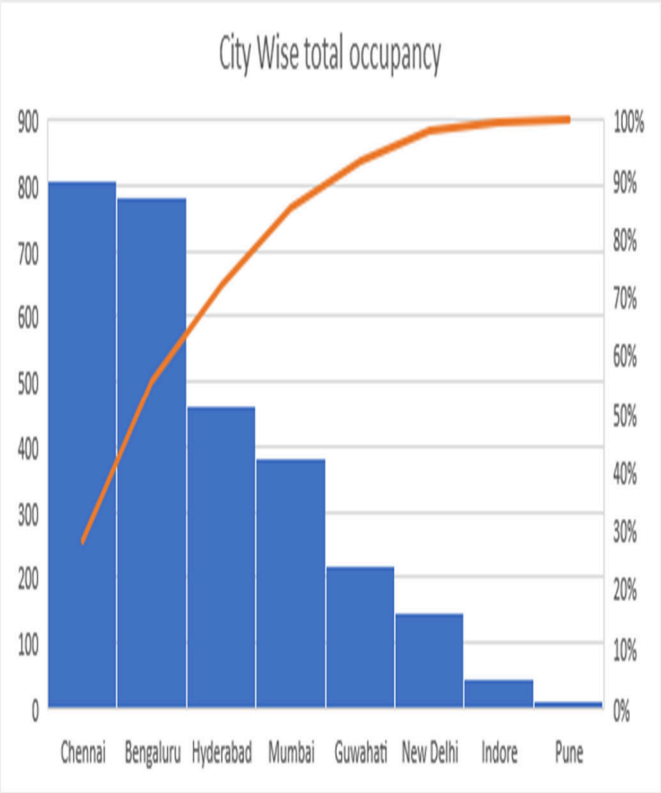


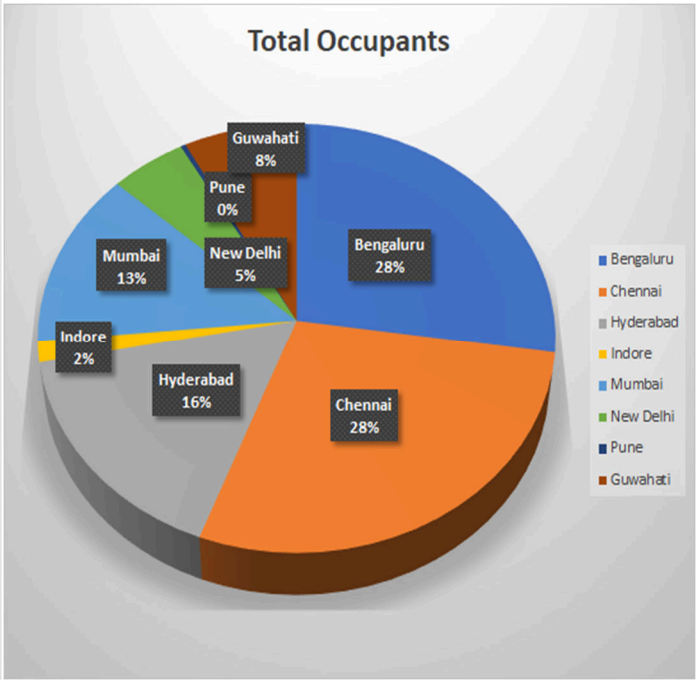
Interpretation:

The revenue generation from the charged medical fees were highest from the cities of Mumbai, Hyderabad and followed by Chennai. Reason behind the higher generation is the higher number of rooms available in these cities by inclusion of more hotel facilities in those cities.

ANALYSIS 4: Percentage of total occupants

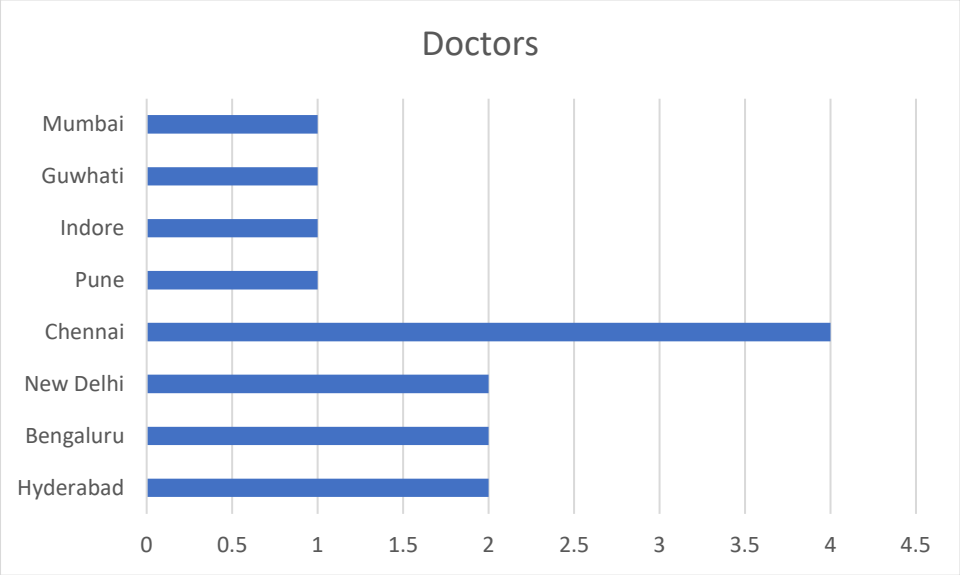
City	Total Occupants
Bengaluru	782
Chennai	808
Hyderabad	464
Indore	45
Mumbai	382
New Delhi	147
Pune	10
Guwahati	219

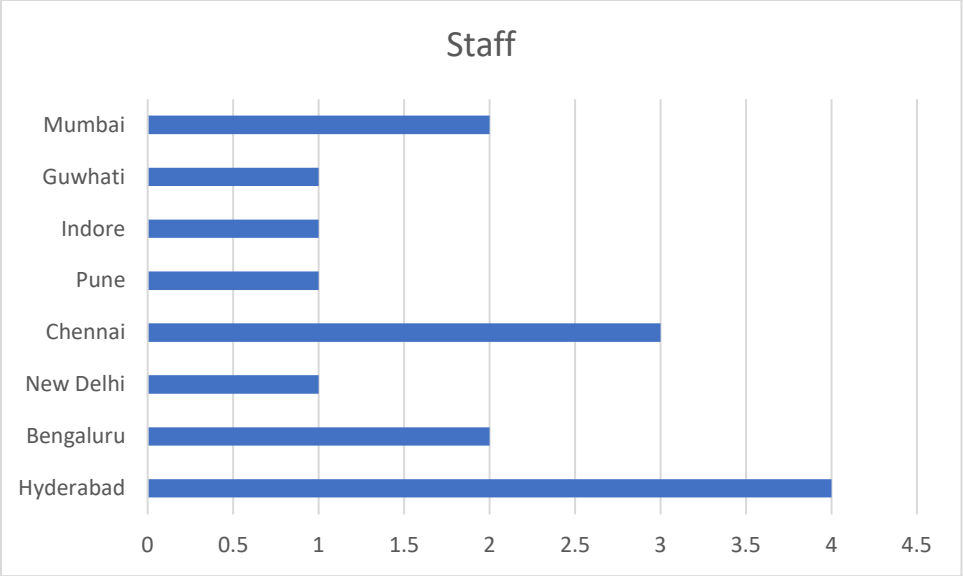


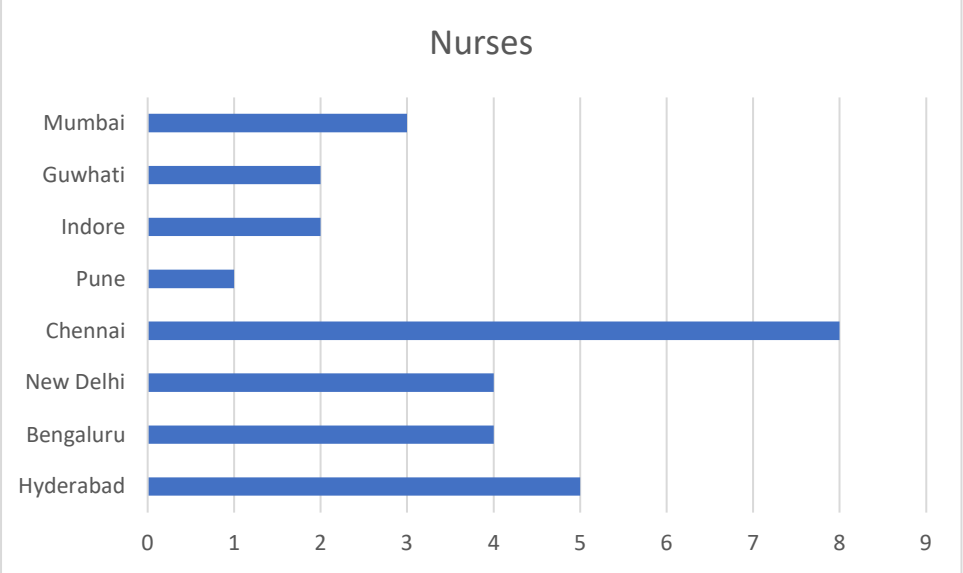


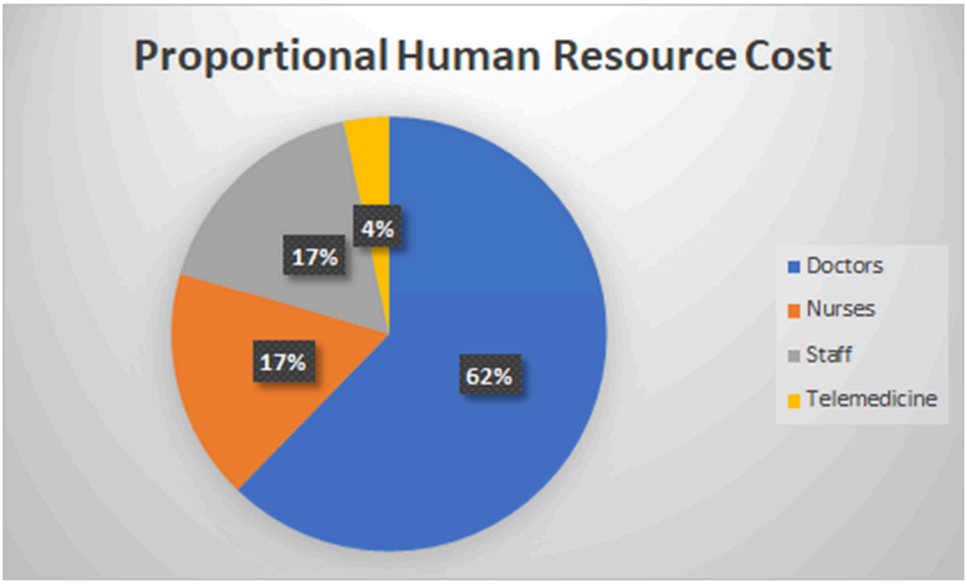
Interpretation: The above representation depicts that in Chennai and Bengaluru the number of patients seeking isolation has been the highest. Hyderabad, Mumbai, and Guwahati also showed a considerable percentage of patients utilising the Apollo Kavach Stay-i programme. The programme showed the least engagement in Indore, New Delhi, and Pune.

ANALYSIS 5: Cost of Human Resource & Manpower Utilization




Staff
Mumbai
Guwhati
Indore
Pune
Chennai
New Delhi
Bengaluru
Hyderabad
0
0.5
1
1.5
2
2.5
3
3.5
4
4.5

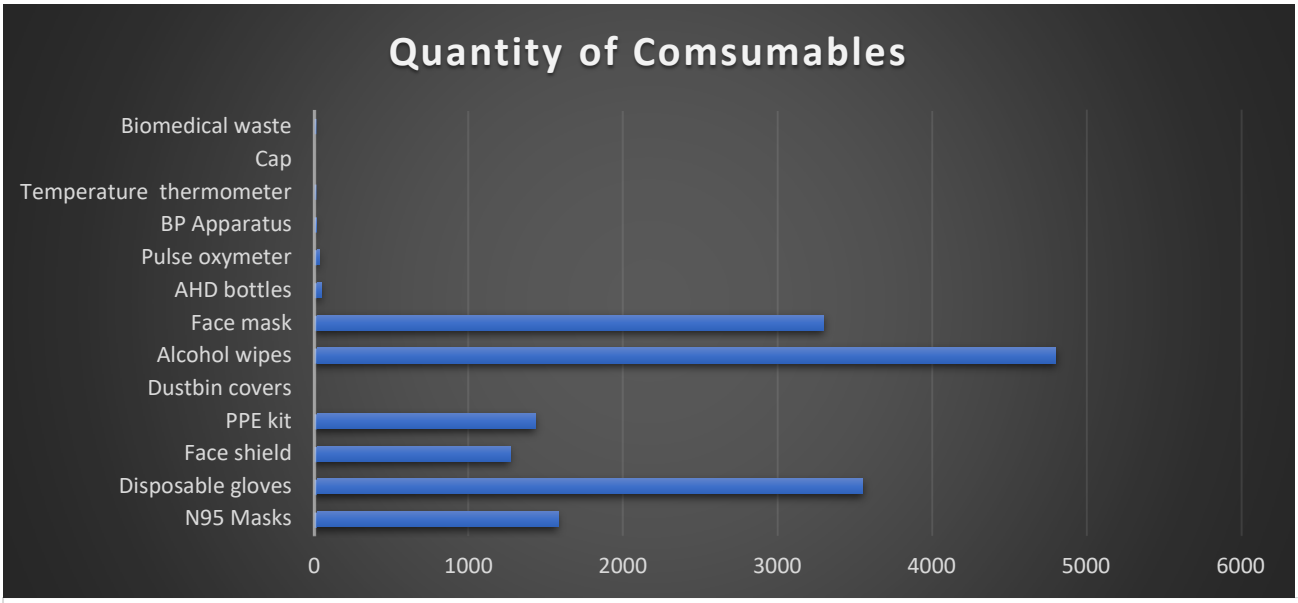

Nurses
Mumbai
Guwhati
Indore
Pune
Chennai
New Delhi
Bengaluru
Hyderabad
0
1
2
3
4
5
6
7
8
9

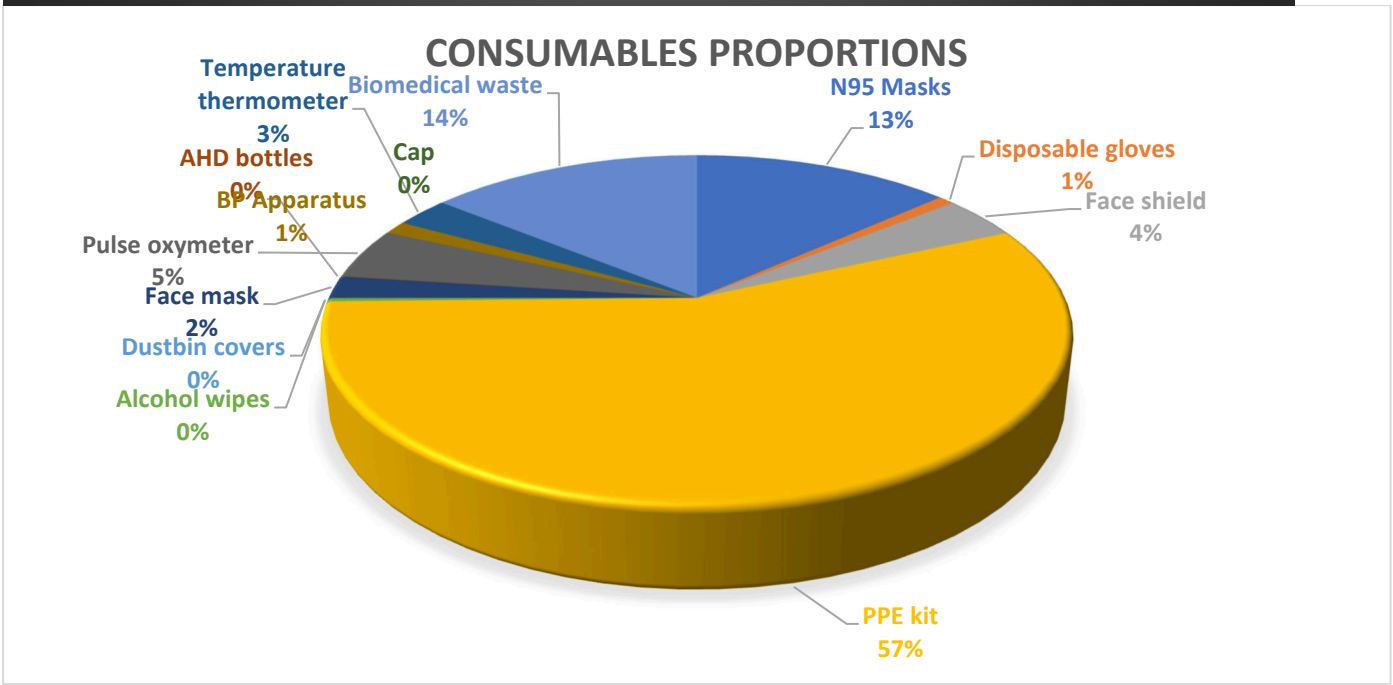

Proportional Human Resource Cost
4%
17%
17%
62%
Doctors
Nurses
Staff
Telemedicine

Interpretation: A good example of human resource optimization in the city-wise count of Doctors, Staff and Nurses is displayed by Apollo Project Kavach. With a count of 1 doctor and 2 nurses per isolation facility helped managing the medical supervision services and providing optimal care with it.

Overall, through the pie chart it is depicted that the maximum expenditure was on the doctors followed by nurses and staff. The cost of Telemedicine has been the least.

ANALYSIS 6: Consumables utilization





The Highest proportion allotted to the consumables was for PPEs which are essential for the medical staff on duty for interacting with the patients under isolation followed by the N95 Masks. This depicts the level of care provided for the human resources under the Apollo Kavach so that optimal results without absentees can be managed and the continual care can be provided.

Critical Analysis

Analysis 1- As per the City wise occupancy with the monthly trend of COVID 19 Pandemic Wave 2 in Summer 2021; The Project Kavach had a delayed start which caused the provision of the facilities to reach late in the mid/ peak time of the wave. There may be certain reasons to it including time lapsed in forming contracts with hotel facilities or forming memorandum of understandings with the corporates.

The utilization was sub-par when compared to the number of beds expanded using the hotel facilities. Only facilities in cities like Chennai, Hyderabad and Bengaluru were able to maintain a uniform trend of occupancy whereas even metro city like New Delhi suffered bitterly even in maintaining the utilization of beds. There may be factors which may have resulted into it, such as underperforming hotel services which made the contracts difficult to maintain due to poor customer satisfaction or central cause at the end of the Apollo 24I7 call centre which may be insufficient in tracking all the requests.

Analysis 2- The days stayed by a patient varied from 24 days to even 1 day. This may be contributed highly by the poor customer satisfaction on the hotel's end which may have forced many patients to have early checkouts.

The isolation period as per then ICMR guidelines for 2021 was of 10 days from the day of RT-PCR with at least 3 consecutive afebrile days before discharge. But the average length of days was lower than 10 in every city. Only two cities Hyderabad and Mumbai were able to present approximately 9 days on average stayed in the facility. Whereas Indore performed the worst in terms of average days stayed with approximately 5 days stayed on average by the patients.

During this period multiple employers required the daily status reports of their employees as occupants under the Apollo Kavach project. But initially the data always came in with a higher number of discrepancies which affected the time management as the immediate queries must be resolved for the employers with utmost urgency. The cause was the lack of coordination between the hotel facilities in a city with the Apollo's Supervisor for the city. This issue was resolved only after intervention and daily queries raised by Apollo Hospitals Hyderabad; which resulted in a streamlined flow of data input from cities and hotel facilities and smoother output and communication with the employers regarding the status of the employees; thus, lesser data discrepancies.

Analysis 3- Average medical fees generated was the lowest in the city of Indore due to its direct relation with the average days stayed in the facility. The highest average came from the cities of Hyderabad and Mumbai but specifically for the room type of Single occupancy. Chennai showed a well-balanced average with both the room types Sharing and single generated a comparable medical fees average which in turn results in a higher total medical fees generation.

Analysis 4- The proportion of utilization rates varied vastly from city to city. The basic reason being the vast differences between the population size and the level of commercial development of the cities. Cities such as Chennai and Mumbai saw a greater footfall of patients whereas the cities like Indore and Pune cannot maintain the utilization proportion. Exceptionally, New Delhi, being the capital city and one of the most commercially active cities in India also lacked optimization proportion.

Analysis 5- The cost of human resource had been the one of the biggest expenditures when compared to the other factors. But without the proper aid if medical staff (doctors and nurses) and the non-medical staff the project can never accomplish the basic objective- The provision of medical supervision to the patients. The added proportion of teleconsultation might have shown the advantage of providing subsidiary support in the

time of isolation for the patients as Apollo 24I7 also provides in for regular counselling and assessment of the psychological state of the patients in isolation especially the ones in single occupancy room type.

Analysis 6- The consumables utilized withing the period of approximate 2 month included all the personal protective equipment necessary for the medical and the hotel facility staff for their own safety. All the costs and supplies were borne by Apollo Hospitals so to ensure the best of supply chain management for such equipment with the best possible quality and ample quantity.

For everyday 3 PPEs with 3 N95 masks and 3 face shields were provided to the medical staff at the beginning of the day's medical examination rounds. With that the Antiseptic hand rubs and alcohol swabs were also made available for sanitizing. Every facility was provided with one infrared thermometer and 1 blood pressure apparatus or sphygmomanometer as well as a pulse oximeter for vitals of every occupant utilizing the facility. This ensured a proper medical supervision for the patients and having the correct surveillance to act; accordingly, also facilitating the evaluation for the number of days required to stay isolated and discharge.

Recommendations

a. **Faster channel for re-initiating and enrolling corporates**- Being a new and innovative project from a hospital the initiation time for the project may vary from city to city as per the COVID-19 case findings. Thus, there must be a channel to incorporate more corporates- new and old through Memorandum of Understanding or using an addendum for already incorporated corporates will save some time.
b. **Search engine optimization for more digital outreach to general population**- For outreach of the programme to general public was minimal; we saw maximum of the patients coming in from already tied up corporates. The Apollo 24I7 team must be able utilize the digital marketing platform for the masses and setting up strong channel for better search engine optimization which may include-
    i. Introducing indexing
    ii. Improving snippets in search titles
    iii. Adding structured markup for data
c. **Teaching and orientation for patients in isolation to complete recommended period of isolation**- The advised time for isolation by ICMR is 10 days from the day of contact or Positive RT-PCR report and discharged only with 3 consecutive days of afebrile condition. But the patients were discharges ranging from 1 day to 22 days. The lesser the day under isolation maximizes the risk of spreading and contracting COVID-19 disease. Therefore, a proper orientation must be provided to the patients/ guests under isolation so that they complete the minimum number of days as in the guidelines of ICMR.
d. **Feedback mechanism for hotel isolations to improvise services and care**- There must be availability of a feedback mechanism at the central operations to get details of services and facilities provided to the patients upon discharge. This will ensure the better performance if taken into concern in terms of Quality improvement and Patient care. As currently no feedback is taken and analysed within the stay facilities which came out to be the biggest reason of patients not willing to stay longer due to lack of services up to the general benchmark.
e. **Recruiting efficient and capable city supervisors from within the Apollo bodies**- Proper selection of candidates for the post of City-supervisors must be made, this will ensure a proper inflow and outflow of data from the hotel to the central operations and vice-versa, respectively.

Conclusion

Even though the project is in its adolescence stage it came up as a good example of Expanding operations, Optimizing resources and Profit maximization. The inclusion of a new project under the lead of Apollo Hospitals Enterprise Limited operated from the Apollo Hospitals, Apollo Health City Jubilee Hills, Hyderabad has opened of scope for further expansion of operations for medical facilities and services by utilizing already available infrastructure in the corporate field. The manner used to utilise the available provisions from the hospitals and providing them at the time of pandemic further enriches the quality of the services offered by the Apollo hospitals. This also includes the count of manpower brought in using contract basis employment and providing them with accommodation and other necessities on the facilities itself shows the importance given to the human resources from Apollo Hospitals. The revenue generated within this period was approximately Rs. 9,93,57,250.00 which in turn upon taking out the costs of hotel expenses (Rs. 6,66,44,000.00), Consumables (Rs. 25,51,478.00) and the cost of human resources (Rs. 62,55,000.00) returned the organization with an approximate profit of Rs. 2,39,06,772.00 which amounts to 32% of the revenue generated; this can be taken up as a profit maximization example for the project.

With the taking up of various improvement suggestions the operational flow can be smoothened and henceforth the optimization in terms of time, efforts and revenues can furthered be enhanced.

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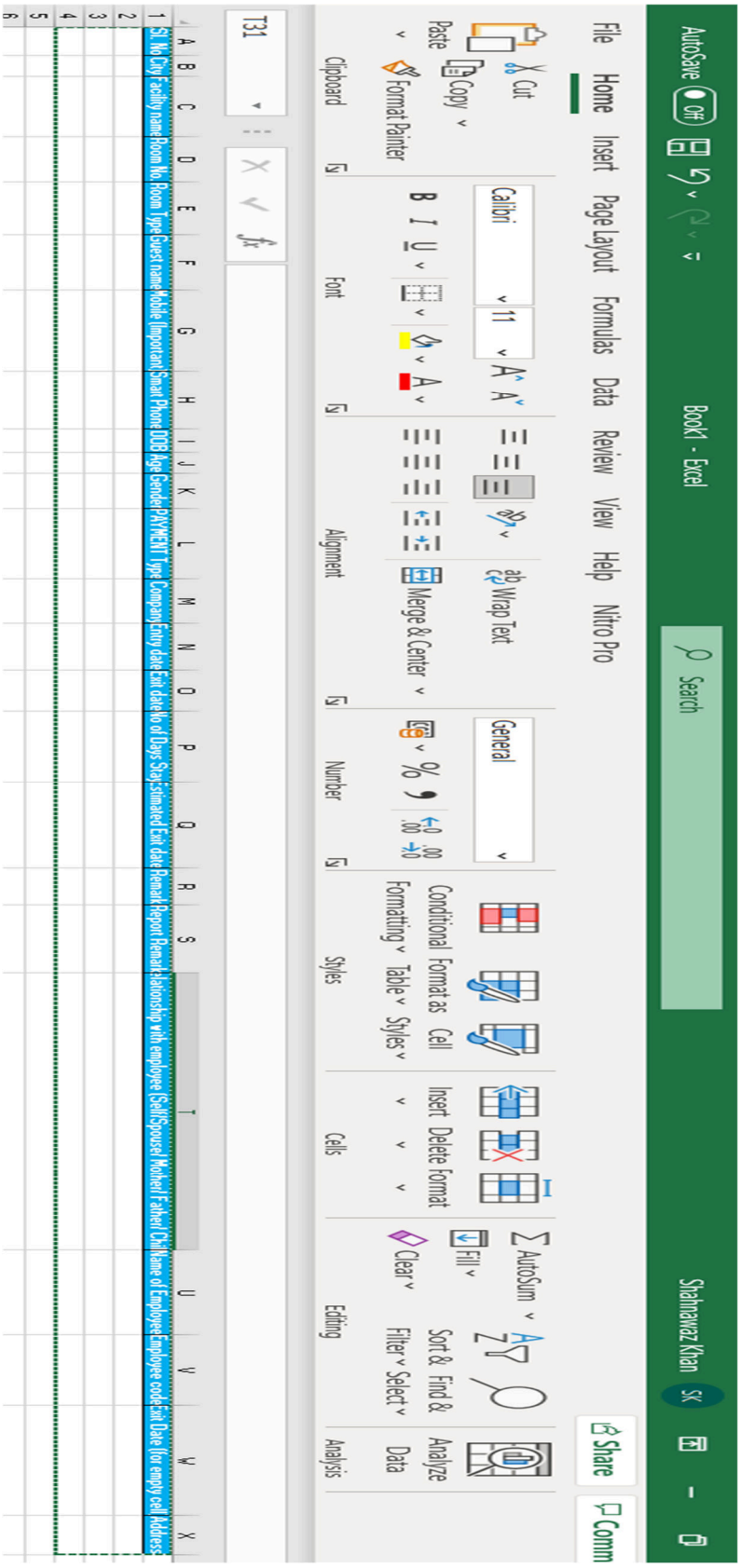
Annexure-1

S. No.	Name of Department	Date(s) of visit	% Time spent	Interacted with
1	Human Resources	10-May-2021	1.78%	Mr. Suresh Reddy (Regional Manager, Human Resources), Mrs. Poonam Reddy (Manager, Human Resources), Mr Naveen Kumar (Manager, Learning and training HR)
2.	Operations	11-May-2021 to 30-May-2021	35%	Mr. Srinagesh Akella (Manager, Operations), Dr. Tarun Kondabolu (Deputy Manager, Operations), Mr. Tameem Ansari (Business Analyst)
3.	Hospital vaccination site	31-May-2021 to 4-June-2021	8%	Mrs. Geetha Rani (Senior executive, Operations), Mrs. Sreeleyka (Executive, Operations)
4.	NOVOTEL HICC Apollo's Mass Vaccination Site	5-June-2021 to 17-June-2021	23%	Mr. Tejasvi Roa Verapalli (C.O.O), Mr. I.S Rao (Chief Marketing Officer), Mr. Venkat K. A Reddyvari (Deputy Manager, Corporate Relations)
5.	Marketing department	18-June-2021 to 26-June-2021	16%	Mr. I.S Rao (Chief Marketing Officer), Mr. Venkat K. A Reddyvari (Deputy Manager, Corporate Relations), Mr. Mallikarjun K (Manager, Corporate Relations), Mr. Srikant M (Assistant Manager, Corporate Relations)
6.	Finance Department	27-June-2021 to 2-July-2021	10%	Mr. Sudhir Kumar Sahu (Deputy General Manager, Finance and Account), Mr. Prasad A. Babu (Manager,

				Finance and Accounts), Mr. Pavan Kumar Gunda (Senior Executive, Finance and Accounts)

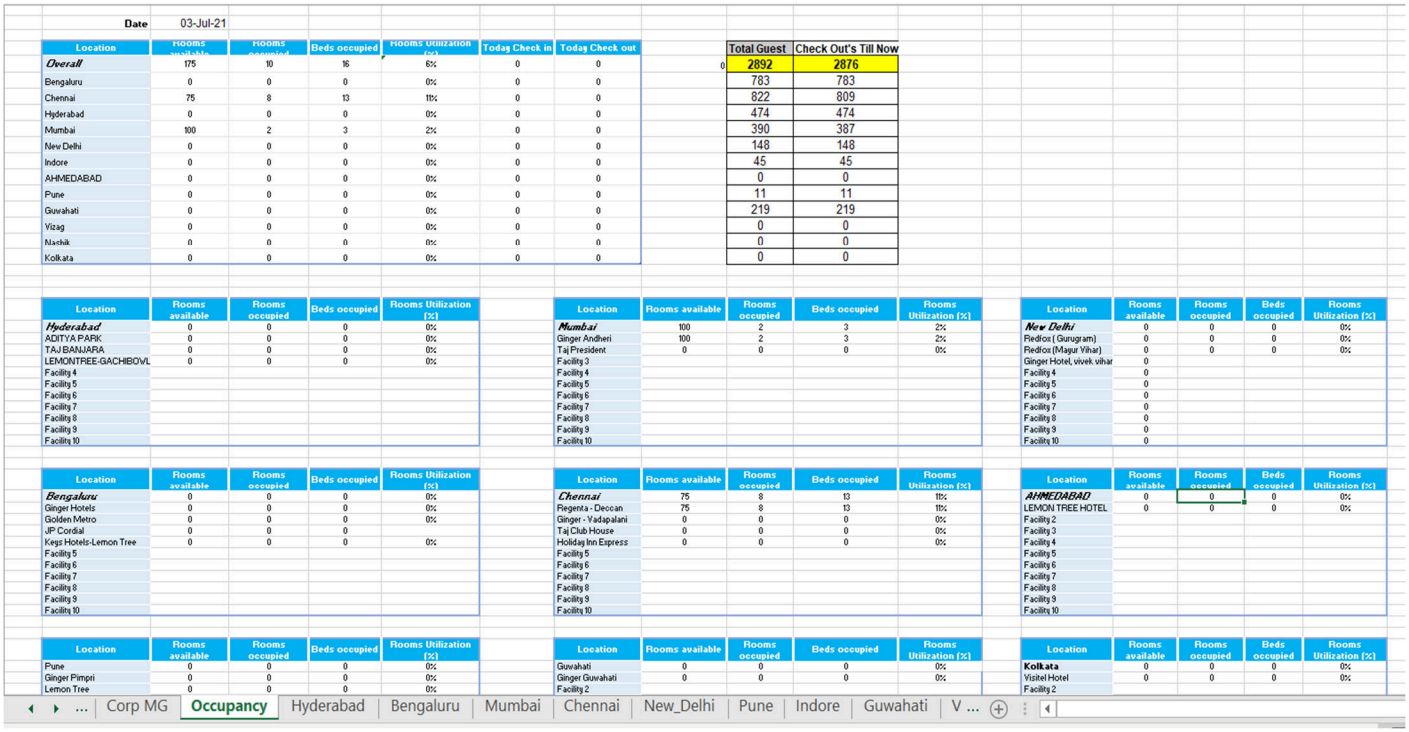
Annexure-2

Secondary Data source- Apollo Kavach Stay-I @Hotels Tracker:



Annexure-3

Occupancy Tracking Sheet



Date 03-Jul-21

Location	Rooms available	Rooms occupied	Beds occupied	Rooms Utilization (%)	Today Check in	Today Check out
Overall	175	10	16	6%	0	0
Bengaluru	0	0	0	0%	0	0
Chennai	75	8	13	11%	0	0
Hyderabad	0	0	0	0%	0	0
Mumbai	100	2	3	2%	0	0
New Delhi	0	0	0	0%	0	0
Indore	0	0	0	0%	0	0
AHMEDABAD	0	0	0	0%	0	0
Pune	0	0	0	0%	0	0
Guwahati	0	0	0	0%	0	0
Vizag	0	0	0	0%	0	0
Nashik	0	0	0	0%	0	0
Kolkata	0	0	0	0%	0	0

Total Guest	Check Out's Till Now
2892	2876
783	783
822	809
474	474
390	387
148	148
45	45
0	0
11	11
219	219
0	0
0	0
0	0

Location	Rooms available	Rooms occupied	Beds occupied	Rooms Utilization (%)
Hyderabad	0	0	0	0%
ADITYA PARK	0	0	0	0%
TAJ BANJARA	0	0	0	0%
LEMONTREE-GACHIBOWL	0	0	0	0%
Facility 4				
Facility 5				
Facility 6				
Facility 7				
Facility 8				
Facility 9				
Facility 10				

Location	Rooms available	Rooms occupied	Beds occupied	Rooms Utilization (%)
Mumbai	100	2	3	2%
Ginger Andheri	100	2	3	2%
Taj President	0	0	0	0%
Facility 3				
Facility 4				
Facility 5				
Facility 6				
Facility 7				
Facility 8				
Facility 9				
Facility 10				

Location	Rooms available	Rooms occupied	Beds occupied	Rooms Utilization (%)
New Delhi	0	0	0	0%
Redfox (Gurugram)	0	0	0	0%
Redfox (Magur Vihar)	0	0	0	0%
Ginger Hotel, vivek vihar	0			
Facility 4	0			
Facility 5	0			
Facility 6	0			
Facility 7	0			
Facility 8	0			
Facility 9	0			
Facility 10	0			

Location	Rooms available	Rooms occupied	Beds occupied	Rooms Utilization (%)
Bengaluru	0	0	0	0%
Ginger Hotels	0	0	0	0%
Golden Metro	0	0	0	0%
JP Cordial	0	0	0	
Keys Hotels-Lemon Tree	0	0	0	0%
Facility 5				
Facility 6				
Facility 7				
Facility 8				
Facility 9				
Facility 10				

Location	Rooms available	Rooms occupied	Beds occupied	Rooms Utilization (%)
Chennai	75	8	13	11%
Regenta - Deccan	75	8	13	11%
Ginger - Yadapalani	0	0	0	0%
Taj Club House	0	0	0	0%
Holiday Inn Express	0	0	0	0%
Facility 5				
Facility 6				
Facility 7				
Facility 8				
Facility 9				
Facility 10				

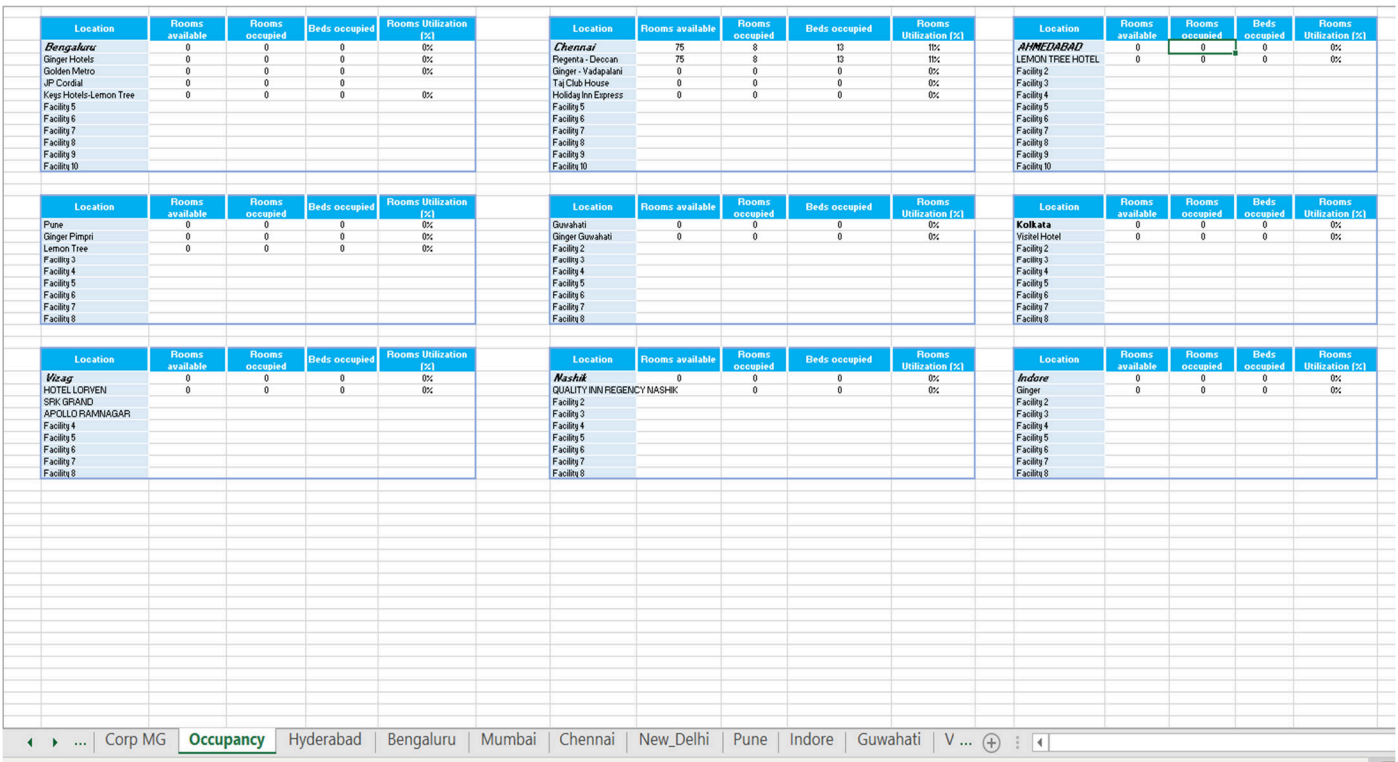
Location	Rooms available	Rooms occupied	Beds occupied	Rooms Utilization (%)
AHMEDABAD	0	0	0	0%
LEMON TREE HOTEL	0	0	0	0%
Facility 2				
Facility 3				
Facility 4				
Facility 5				
Facility 6				
Facility 7				
Facility 8				
Facility 9				
Facility 10				

Location	Rooms available	Rooms occupied	Beds occupied	Rooms Utilization (%)
Pune	0	0	0	0%
Ginger Pimpri	0	0	0	0%
Lemon Tree	0	0	0	0%

Location	Rooms available	Rooms occupied	Beds occupied	Rooms Utilization (%)
Guwahati	0	0	0	0%
Ginger Guwahati	0	0	0	0%
Facility 2				

Location	Rooms available	Rooms occupied	Beds occupied	Rooms Utilization (%)
Kolkata	0	0	0	0%
Visitel Hotel	0	0	0	0%
Facility 2				

Corp MG | Occupancy | Hyderabad | Bengaluru | Mumbai | Chennai | New_Delhi | Pune | Indore | Guwahati | V ...



Location	Rooms available	Rooms occupied	Beds occupied	Rooms Utilization (%)
Bengaluru	0	0	0	0%
Ginger Hotels	0	0	0	0%
Golden Metro	0	0	0	0%
JP Cordial	0	0	0	
Keys Hotels-Lemon Tree	0	0	0	0%
Facility 5				
Facility 6				
Facility 7				
Facility 8				
Facility 9				
Facility 10				

Location	Rooms available	Rooms occupied	Beds occupied	Rooms Utilization (%)
Chennai	75	8	13	11%
Regenta - Deccan	75	8	13	11%
Ginger - Yadapalani	0	0	0	0%
Taj Club House	0	0	0	0%
Holiday Inn Express	0	0	0	0%
Facility 5				
Facility 6				
Facility 7				
Facility 8				
Facility 9				
Facility 10				

Location	Rooms available	Rooms occupied	Beds occupied	Rooms Utilization (%)
AHMEDABAD	0	0	0	0%
LEMON TREE HOTEL	0	0	0	0%
Facility 2				
Facility 3				
Facility 4				
Facility 5				
Facility 6				
Facility 7				
Facility 8				
Facility 9				
Facility 10				

Location	Rooms available	Rooms occupied	Beds occupied	Rooms Utilization (%)
Pune	0	0	0	0%
Ginger Pimpri	0	0	0	0%
Lemon Tree	0	0	0	0%
Facility 3				
Facility 4				
Facility 5				
Facility 6				
Facility 7				
Facility 8				

Location	Rooms available	Rooms occupied	Beds occupied	Rooms Utilization (%)
Guwahati	0	0	0	0%
Ginger Guwahati	0	0	0	0%
Facility 2				
Facility 3				
Facility 4				
Facility 5				
Facility 6				
Facility 7				
Facility 8				

Location	Rooms available	Rooms occupied	Beds occupied	Rooms Utilization (%)
Kolkata	0	0	0	0%
Visitel Hotel	0	0	0	0%
Facility 2				
Facility 3				
Facility 4				
Facility 5				
Facility 6				
Facility 7				
Facility 8				

Location	Rooms available	Rooms occupied	Beds occupied	Rooms Utilization (%)
Vizag	0	0	0	0%
HOTEL LORVEN	0	0	0	0%
SRK GRAND				
APOLLO RAMNAGAR				
Facility 4				
Facility 5				
Facility 6				
Facility 7				
Facility 8				

Location	Rooms available	Rooms occupied	Beds occupied	Rooms Utilization (%)
Nashik	0	0	0	0%
QUALITY INN RIEGENCY NASHIK	0	0	0	0%
Facility 2				
Facility 3				
Facility 4				
Facility 5				
Facility 6				
Facility 7				
Facility 8				

Location	Rooms available	Rooms occupied	Beds occupied	Rooms Utilization (%)
Indore	0	0	0	0%
Ginger	0	0	0	0%
Facility 2				
Facility 3				
Facility 4				
Facility 5				
Facility 6				
Facility 7				
Facility 8				

Corp MG | Occupancy | Hyderabad | Bengaluru | Mumbai | Chennai | New_Delhi | Pune | Indore | Guwahati | V ...