SUMMER TRAINING

AT

KOKILABEN DHIRUBHAI AMBANI HOSPITAL

Kokilaben Dhirubhai Ambani
hospital & medical research institute
Every Life Matters

(1st April 2019 to 31st May 2019)

A Report

By

Zeenat Khan

To Assess the Call Bell Response Time In General Wards

MBA Hospital and Health Management

2018-2020

IIHMR UNIVERSITY

Institute Of Health Management And Research, Jaipur

INSTITUTE OF HEALTH
MANAGEMENT RESEARCH
(WHO Collaborating Centre for District Health System Based on Primary Health Care)

IIHMR UNIVERSITY

CERTIFICATE

This is to certify that **Zeenat Khan** has undergone Summer Training at **Kokilaben Dhirubhai Ambani Hospital, Mumbai** from 1st April 2019 to 31st May 2019.

The candidate herself completed the project assigned to her in summer training. Her approach to project was sincere and proactive. This Summer Training is in partial fulfillment of the course requirement recommended for the award of MBA in Hospital and Health Management.

I wish her success in all her future endeavors.

Piyusha 19/6/19

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Kokilaben Dhirubhai Ambani
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Date: 31st May 2019

INTERNSHIP COMPLETION CERTIFICATE

This is to certify that Ms. Zeenat Khan, a student of MBA Hospital & Health Management, IIHMR Jaipur University has completed her internship under the supervision and guidance of Clinical Administration department of our organization from 1st April 2019 to 31st May 2019.

During this period she has done her project named "Call bell response time". I am pleased to state that she has worked hard in preparing this report and has been able to present a good picture of the concerned work. The information and findings presented in the report seems to be authentic.

Her conduct and character during the above period was found satisfactory.

Dr. Bipin Chevale
General Manager Operations
Kokilaben Dhirubhai Ambani Hospital

ACKNOWLEDGMENT

I would like to adore and heartily appreciate the Support of IIHMR University, academic dean Dr. Ashok kaushik and KOKILABEN DHIRUBHAI HOSPITAL staff and clinical administrators. Summer internship in such big organization, it's truly an honor to learn and meet with this level of healthcare facilities and services, and its only possible through continuous support. I would like to extend my gratitude toward

Dr. RAM NARAIN (executive director), Mr. Bipin Chevale (general manager of IPD), Mrs. Dnayata Pandit, Mr. Vaibhav Patil for allowing the access throughout the hospital and believing in my work. The staff nurses also been very supportive during my work on the floors. It wouldn't be possible without proper guidance, Dnayata mam and Vaibhav sir has help me out with all the department functioning access by personally introducing to every floor in-charge and helping me understand the process.

I have done my project under Vaibhav sir, It would not have been possible for me to understand the process and the hospital to this extent as I have now. Without his continuous support.

And specially thanks to my mentor of IIHMR university Mrs.Piyusha Majumdar for continuous support and always been there just a mail away for my issues regarding projects and for personal support throughout the training.

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ABBREVIATIONS

A&E – Accident and Emergency
HCA -Health Care Assistance
ALOS -Average Length of Stay
CMD - Chief Medical Director
COO -Chief Operating Officer
CGHS -Central Government Health Scheme
CSSD -Central Sterile and Supply Department
CT -Computerized Tomography
ECG -Electro Cardiogram
TMT -Trade Mill test
EEG -Electro Encephalography
EMG -Electro Myograph
HOD-head of department
HRD-human resource department
ICU-intensive care unit
SICU-surgical intensive care unit
MICU-medical intensive care unit
HDU-high dependency unit
PICU-pediatric intensive care unit
NICU-neonatal intensive care unit
OPD-out patient department
IPD-In patient department
KDH-Kokoilaben Dhirubhai Ambani Hospital
MRD-medical report department
ABC- inventory method (highly valuable in consumption, medium , least valuable)
VED – vital, essential, desirable.

Profile of Kokilaben Dhirubhai Ambani Hospital

2.1 The Institution

Kokilaben Dhirubhai Ambani hospital and medical research is the new advance tertiary healthcare facility.as the flagship social initiative of Anil Dhirubhai Ambani group, it is designed to raise India's global standing as a healthcare hub, with emphasis on excellence in clinical services, diagnostic facility and research

An institution that offers comprehensive high-quality healthcare services under one roof through transparent patient-centric care ensuring patient safety, privacy and dignity. An institution where Every Life Indeed Matters.

Inaugurated in January 2009, the hospital is significant initiative from reliance Anil Dhirubhai Ambani group. It is designed to raise India's global standing as a healthcare hub, with emphasis on excellence in clinical services, diagnostic facility and research

The only hospital in Mumbai with **Full Time Specialist System (FTSS)** ensuring easy availability and access to dedicated specialists exclusively attached to Kokilaben Dhirubhai Ambani Hospital.

Kokilaben Dhirubhai Ambani Hospital uses Protocol and Care Pathway based treatment models to ensure the best outcomes for patients. This is made possible with unique Full Time Specialist System that ensures availability and access to dedicated specialists exclusively attached to the hospital.

Kokilaben Dhirubhai Ambani Hospital & Medical Research Institute is fully geared in terms of talent, technology, structure and spirit – to reshape perceptions regarding hospitals and redefine the concept of caring. Indeed, this globally benchmarked institution marks the beginning of a new era in Indian healthcare.

2.2 History

The hospital project was initiated in 1999 by Dr. Nitu Mandke as a large-scale heart hospital. Dr. Nitu Mandke was born in 1948 in a middle-class family. He was the first member in his family, to choose medicine as a profession with a determination to become a heart surgeon.

He joined B. J. Medical College, Pune from where he passed his M.B.B.S. in 1970, came to Mumbai for further studies and completed his Super Specialty course in Cardiovascular Surgery. He spent close to 8 years working with world renowned figures in Cardiac Surgery like Dr. Magdi Yacoub in England and Dr. Kirklin and Dr. Pacifico at the University of Alabama in the United States. He was an all-rounder with exemplary proficiency in sports, arts, languages, mathematics and so on.

With great passion Dr. Mandke built a substantial portion of the hospital building. Sadly his dream was cut short by fate when he succumbed to a massive heart attack in May 2003; leaving a dream unfulfilled and unfinished.

The management of Mandke Foundation approached Reliance Group, who graciously took over this project and developed it into one of the most modern and state-of-the-art multi-specialty tertiary care hospitals; naming the institution as – Kokilaben Dhirubhai Ambani Hospital & Medical Research Institute.

In honor of the initiator, the hospital's Medical Convention Centre has been aptly dedicated to the memory of Dr. Nitu Mandke.

2.3 Vision

We aim to be a global healthcare institution that combines the best in medical treatment with strong ethical principles and a culture of care and compassion.

2.4 Values

Integrity: To deal with the stakeholders: patient, partners, employees, vendors and the community – In a spirit of fairness and integrity

Transparency: To respect the patient rights to know at every touch point by providing information that is clear, concise relevant and easy to understand.

Maximum care: To re-evaluate every hospital system. Process and procedure to ensure the patients and their loved one receive maximum care and comfort.

Self - improvement: To install a process of learning and self-improvement at every level through continuous training, focused research and peer review.

Patient-Dignity: To safeguard the dignity of patient by protecting their individuality and privacy all the time.

2.5 Key statistics of hospital

- Encompassing **10 lakh sq. ft of space spread over 17 floors and two basements**. Its 'intelligent framework' allows for hospital staff to optimize utilization of space and resources.
- Accommodates over **750 inpatient beds**, allows optimal utilization of resources and ensures privacy, dignity, comfort, convenience and the best healthcare to every patient. However, the smooth and seamless movement of people & staff is guaranteed.
- Critical care unit is the **largest number of critical care beds in Mumbai, with 180 ICU beds**. Special technical features in ICUs include ceiling-mounted, dual-arm pendants, which ensure that the space around the patient is not cluttered. Another unique feature is dedicated air supply that keeps the critical care area free of any kind of contamination and infection.
- Kokilaben Hospital has a total of over **240 independent consulting clinics**, with the capacity to handle over **9,000** outpatient consultations every day.

- Movement in the hospital is managed by **30 elevators** —the largest elevator bank for any hospital in India capable of transporting 7,500 persons per hour, with different elevators for inpatients, outpatients, staff and catering.
- Two dedicated elevators ensure quick transfer of patients to Operation Rooms and ICUs.
- The hospital's laboratory is housed on a single floor spread over an area of over 40,000 sq. ft. It offers over 3,000 routine and highly advanced diagnostic, genetic and molecular biology tests and will serve as a referral Centre for second opinions.

UNIQUE IN INDIA

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UNIQUE IN MUMBAI

- Mumbai’s first PET CT scanner that combines computed tomography and positron emission tomography technology in a single a machine.140 ICU beds largest number of critical care unit bed in MUMBAI.
- The hospital's laboratory is housed on a single floor spread over an area of over 40,000 sq. ft. It offers over 3,000 routine and highly advanced diagnostic, genetic and molecular biology tests.
- Largest dialysis Centre in Mumbai with 42 machines.
- Full time specialist system: all doctors are available 24hrs.

2.6 HOSPITAL INFRASTRUCTURE

As per the observation done in the hospital

1.Lower basement

- Medical engineering
- CSSD
- Nuclear medicine
- Nurses changing department
- PET- CT scan
- Radiation Oncology
- SRS

2. Upper basement

- Parking
- Central security office
- Mortuary

3. Ground floor

- Main reception
- Admission counter
- Discharge and billing and medicine Mall
- Gift shop
- Fine dining
- Salon
- International waiting lounge
- Food court
- ATM
- Central report collection center
- Accident and emergency from outside first Gate)

Mezzanine floor

- Administration Department
- Library
- Staff dining

1. First floor

- Clinical administration
- Radiology department
- Health checkup Program
- Laboratory
- Sample collection
- Center for cardiac science
- Centre for bone and joints
- Centre for pulmonary and lung medicine.
- Multi-Specialty OPD

2. Second floor

- Centre for children
- Centre for brain and nervous center.
- Dental clinic.
- Centre for cancer
- Ophthalmology clinic
- ENT clinic
- Gastro-enteric clinic
- Dialysis center.
- Blood bank
- Urology clinic
- Nephrology clinic

3.Third floor

- OT complex.
- Catheterization lab
- ICU
- Interventional Radiology

4.Fourth floor

- Service floor

5.Fifth floor

- Ambulatory surgeries

- Daycare
- Cardiac ICU
- OT Complex 2(7 theatres)
- Refuge area

6. Sixth floor

- Rehabilitation center.
- Convention and exhibition Center.

7. Seventh floor

- IVF center
- Cosmetology And aesthetic center.
- Laboratory Medicine and Pathology
- College of Nursing
- Tissue and bone bank

8. Eighth floor

- Labor and delivery department
- ICU (neonatal and Pediatric)
- Birthing suites
- OT(Obstetric)
- Wards

9. Ninth floor

- In-Patient department (Pediatrics)

10. Tenth floor

- High Dependency unit
- ICU (medical

11. Eleventh floor

- General ward
- nursing college

12. Eleventh to sixteenth floor

- In-patient Department.

3. FUNCTIONING DEPARTMENT IN HOSPITAL

Clinical services	Clinical and support services	Clinical Administrative services	Administrative services
Accident and Emergency	Pharmacy	Nursing department	Human resources
OPD	Imaging	Security	Marketing
Anesthesia	Laboratory medicine	Mortuary	Finance
Critical care	Biomedical waste	Laundry	Material
OT	House keeping	Food and beverages	Engineering
IPD	CSSD	Ambulance services	IT

3.1 CLINICAL SERVICES

Accident and emergency

Emergency department is a **casualty department** is a medical treatment facility specialized in emergency medicine the acute care of patient who present without prior appointment; either by their own or by Ambulance.it is also known as emergency room (ER), emergency ward. Department provide all initial treatment for a broad-spectrum illness and injuries. some of which may be life threatening and require immediate care.

Layout

- 20 bedded
- Each bed is separated by curtain to maintain privacy and it is equipped with following
- Oxygen supply.
- Syringe pump
- Cardiac monitor

Minor Operation Theater

- Anesthesia machine

- Cautery machine
- ETCO2 machine
- Defibrillator
- OT table

Procedure done in minor OT;

- Lumber puncture
- Biopsy
- Bone marrow Aspiration.
- Suturing

This department has its own building and billing and discharge counter, And have

Staff of:

- 1 Team leader
- In charge
- 2-3 doctors, 5 nurses in each shift
- 2 HCA
- Cleaning staff

Separate rooms for

- Resuscitation room
- Medication room
- Teaching room

Ambulances

- 2 cardiac.
- 1 non-cardiac

OUTPATIENT'S DEPARTMENT

KDAH has over 150 consultants with clinical capacity to handle over 5000 patients per day. Two floors are dedicated for OUT PATIENTS care. Each room is separated from one another with separate examination room.

A daycare dialysis unit, endoscopy unit, radiology suites are including, and a blood bank support is available on the same floor. The OPD services here provide over 26 different specialties including six centers of excellence.

- Center for neuroscience
- Center for cardiac science
- Center or bone and joints
- Center for physical medicine and rehabilitation
- Center for cancer
- Center or children

The specialties included:

- Anesthesia
- Gynecology and obstetrics
- Accident and emergency
- Critical care and medicines
- Imaging and radiology
- Pathology including biochemistry
- Hematology
- General surgery
- Dentistry and surgery
- Plastic surgery and reconstructive surgery

<u>HEALTH CHECK-UP</u>

- There is separate department of this, have its own billing and registration counter. It is a part of OPD services provide exclusive diagnostic and preventive screening.
- A package of treatment and screening is provided to the patient which cover whole body screening and can only some screening depend on the package taken.
- This department collaborates with various department to functions smoothly. It co-ordinate with surgery, medicine, pathology, Radiology.

OPEARATION THEATRE

The aim of department of anesthesiology and OT is to provide highest quality of care to patients undergoing various type of surgeries, the OT facility is positioned as a tertiary care center for excellence providing complete services of various surgical specialties. The department is staffed with highly experienced and trained anesthesiologist, surgeons' technicians and nurses. for each OT, there are two scrub nurses and one circulating nurse, Protocol based on approach for quality per operative and post-operative and follow-up care of patients. The complex is divided into three zones sterile, semi sterile and non-sterile zones. complete services to following surgical specialties are provided.

- Cardiac surgery
- Neuro surgery
- Onco surgery
- Orthopedic surgery
- General surgery
- Gynecology and Obstetrics surgery
- Pediatric surgery
- GI Surgery
- Uro Surgery
- Plastic surgery
- Transplantation surgeries

The OT Facility has 22 OTs, they have 618 square feet area & Pendants in all OTs, they use HPEA filters, APA filters Antimicrobial sheets for infection control. every OT is separated from one another to reduce infections. OT works 24*7 here in all three shifts and regularly basis 53-56 surgeries is performed.

IN PATIENT DEPARTMENT

The IPD Provides detailed pre-procedure need their completion and co-ordination with the diagnostic to arrive at the diagnosis and completion of treatment regimens, compressive care in pre-operative and follow-up care and nutritional regimented their scientific amalgamation as per the progressive patient care need. IPD wards are located on floor no. 9,10,11,12,13 ,14 ,15 &16.

The various type of rooms are as follows:

- General Wards
    1. 5 Bed/room
    2. Airconditioned
    3. Nurse call system with two-way communication

- Single Rooms
    1. Area of 320 Sq. Feet
    2. Separate patient and attendant zone
    3. Nurse call system with two-way communication

- Twin Sharing
    1. Bed head panels with medical gases
    2. Television sets
    3. Couch for each patient relative
    4. Nurse call system with two-way communication

- Suits
    1. Area of 750 Sq. Feet
    2. Terrace garden
    3. Exclusive visitor area
    4. Nurse call system with two-way communication

Nurse ad ratio of 1:5 for General ward, 1:2 for single room ,1:3 for twin sharing and 1:1 for suits. There are many others room such janitor rooms, utility rooms, pharmacy rooms and IT rooms are also there.

INTENSIVE CARE UNIT

ICU is a unit which take of patients with most severe and life threating injuries requiring constant and close monitoring and support from special equipment's and medication to ensure normal body functions, there is an adult ICU consist of SICU and MICU Pediatric ICU, transplant ICU and cardiac ICU. Nurse patient ratio for critical patient is 1:1 and for stable patient it is 1:2. ICU coordinates with all Important departments of Hospital.

The ICU has highly trained and qualified staff and nurses. There is a system of closed ICU in KDAH. The space per bed is 320 Sq. Feet in Patient care area.

Human resources of ICU.

Intensive care doctors

- 1 chief intensivist for each ICU
- Junior consultant
- Clinical registrar

Intensive Care nursing staff

- 1 director general manager for ICU
- Nurse in charge
- Team leader
- Senior nursing officer
- Junior nursing officer

Allied Staff

- Physiotherapist
- Dieticians
- Bio medical engineers
- Health care assistant

Visitors timing is 11 AM to 1 PM and 5 PM -7 PM. Only 1 relative at time is allowed.

Equipments used:

- Monitoring equipment

    1. Bed side and Central monitors
    2. ECG recorder
    3. Pulse Oximetry
    4. Spiro meter
    5. Temperature monitors
    6. Blood glucose meter
- Cardiovascular Therapy

    1. CPR trolley
    2. Defibrillators
    3. Infusion pumps
- Respiratory Therapy

    1. Ventilators
    2. Incubation trolley
    3. Mobilisers
- Laboratory Therapy

    1. Blood Gas analyzer
    2. Electrolyte analyzer
- Miscellaneous Equipment’s

    1. Crash Cart
    2. Dressing trolley
    3. Procedure trolley

PEDIATRIC INTENSIVE CARE UNIT

The PICU Looks after all critical pediatric patients, it is located at 8th floor. The ICU is split into two zones for out patients and in patients, the various other rooms includes ante rooms, equipment rooms, cleaning and utility rooms etc.

NEONATAL INTENSIVE CARE UNIT

The NICU is located at 8th floor bedding. the area is divided into two zones. Nursing to patient's ratio is 1:1 for NICU.

CENTER FOR REHABILIATION

The center is located at on dedicated floor with 3000 sq. Ft area with in-patient services, it is located at 8th floor of building, it has its own billing desk, it also consists of day care with following services are available:

- Neurological rehabilitation
- Musculoskeletal rehabilitation
- Cardiac rehabilitation
- Pulmonary rehabilitation
- Pediatric rehabilitation
- Cancer rehabilitation
- Pain rehabilitation
- Women health rehabilitation
- Geriatric rehabilitation

There are many therapy services offered by Department:

- Physical therapy
- Occupational therapy
- Electro therapy
- Exercise psychology
- Rehabilitation nursing
- Orthosis
- Speech and language pathology

IVF Center

Centre for reproductive endocrinology and fertility is located at 7th floor of hospital has separate are for outpatients with infertility and reproductivity endocrine problems.

CERF is equipped with full time consultant reproductive embryologist and infertility expert.

A laboratory and radiology department offering comprehensive range of test which includes some newer cutting-edge tests.

Following medical conditions are addressed at CERF:

a. Reproductive Eccrinology
b. Midlife health care
c. Bone health
d. Adolescent gynecology

There is some other extra facility is also offered by the Hospital for the patients with day care services which are as follows:

- ✔ Diagnostic tests
- ✔ Billing and registration desk
- ✔ Ultra sound facility
- ✔ Phlebotomy services
- ✔ Counselling and support services

Infertility treatment includes:

- Fertility drug to induce ovulation
- Intrauterine insemination
- Third party reproduction
- Sperm cryopreservation
- Embryo cryopreservation
- Blastocyst transfer

3.2 CLINICAL SUPPORT SERVISES

Medical records department

- The responsibility of department is to store files for future reference and to conduct data-based research
- Staff includes:
  - ✔ Head of department
  - ✔ Sr. MRD officer
  - ✔ Data operators
  - ✔ Assistant
  - ✔ HCA
- Open and close audit is done of all files before keeping them for storage
- Issue certificate from the department
- Files are stored based on hospital policy which are as following
  - ✔ Reports -1.5 Year
  - ✔ Death DAMA and MLC files for 20 years
  - ✔ Regular files for five years
- This department has to report following data to Bombay Municipal Corporation (BMC) on regular basis

  - ✔ About birth and death report
  - ✔ Notifiable diseases which includes dengue malaria etc.
  - ✔ MTP and PNDT once in a month
  - ✔ Maternal mortality

There are some laboratories in this department as well which are as follows

- ✔ Central processing laboratory is spread over 40k sq. ft which follows strict internal compliance.
- ✔ Laboratory management system for analytical purposes
- ✔ 24 Hrs. sample collection facility
- ✔ Dedicated courier and logistic services

- ✔ Customized management report
- ✔ An Active IRB and ethics community
- ✔ Constant improvisation and technology innovation using over 150 state of the art Equipments.

BLOOD BANK:

Transfusion medicine is a multi-display area concerned use of blood and blood component is the treatment of human disease. the mission of KDAH is to make available appropriate adequate quantity and high quality of safe blood and blood component to anytime and anywhere in medical community. KDAH adhere to quality norms and focus on the donor satisfaction standard and technique and quality control are precisely maintained as per norms given by ministry of health care Govt. of India.

The department runs round the clock and blood and its product are supplied as an when it is requested. Autologous blood is also accepted. blood donation is accepted via various means.

The blood donors are also educated for related information. All the mandatory screening like HIV is done prior to acceptance of blood.

CENTER STERILE SUPPLY DEPARTMENT

The Centre sterile department (CSSD) plays a key role in providing the items required to deliver quality patient care, Centralizing and reprocessing of reusable device helps in ensuring uniform standard of practices, while also providing for improved work flow. CSSD is heart of hospital infection control and most important unit of clinical support unit. Every CSSD task must be performed for the welfare of patient, coworkers and community.

CSSD main functions are cleaning and drying, assembly packing, storing and distributing instruments as per well described standards and policy.

This are is divided into Three zones.

- ✔ Decontamination area
- ✔ Assembly area
- ✔ Sterile storage area

Staff in CSSD includes a Manager, an executive a senior technical lead ,4 technical officers 10 trainees and 16 Attendees.

PHARMACY

Center pharmacy intends to IP OP and LB, it is of 2 categories Capitals and consumables.

Scope of inventory management

- ✔ Indentation
- ✔ Receiving
- ✔ Storing
- ✔ Distribution

The staff consist of following members

- ✔ 5 Managers
- ✔ 1 Executive
- ✔ 8 Senior officers
- ✔ 24 officers
- ✔ 6 trainee assistants
- ✔ 1 HCA
- ✔ 16 Attendees

HOUSE KEEPING

The objective of housekeeping to maintain standards of cleaning and sanitation and hygiene of entire hospital. Housekeeping services are out sourced to ARA Mark services.

The staff includes Housekeeping manager, assistant manager, executives, supervisors and house boys and girls.

Functions of housekeeping department are:

- ✔ General facility cleaning
- ✔ Routine cleaning of patient's rooms
- ✔ Cleaning washrooms
- ✔ Handling bio medical waste
- ✔ Garbage disposal as per standard and policy
- ✔ Pest control
- ✔ Maintenance of house plants and terrace garden

3.3 CLINICAL ADMINISTRATIVE SERVICES

Stores: material stores functions to supply the right material at the right time. The IP department put up the request for the required material by uploading indents in the HIS. The store manager raises. an order of purchase to be sent at the central procurement stores. The supplies received are inspected based on quantity and expiry the materials. Store is checked periodically for on moving items and the short items. Stock audit carried out twice per year. For inventory control ABC and VED is carried out. FIFO (first expiry first out) method is followed.

Staff

- Assistance manager
- Executive store
- Assistant
- 2HCA

LINEN AND LAUNDARY

The objective of linen and laundry is to provide clean uniforms, linen, to patients. Soiled linen is collected and kept in dirty utility room in a hamper trolley. Infected linen is kept separated in a red bag source 4-genration. After every shift linen trolley is sent to collection room on the ground floor, where it is segregated, counted and sent to the laundry for washing. The key performance indicator is laundry pending, turnaround time for laundry, percentage of discarded linen.

Biomedical Engineering Department

The objective of this department is to provide and suggest usage of new technologies in the diagnosis, treatment. it is also responsible for quality maintenance, proper usage of costly equipment. The department take daily rounds and maintain an update asset register to check every equipment's functioning smoothly. Training programmes for staff is conducted for usage off equipment's.

Staff:

- HOD

- 5 Biomedical Engineers
- Biomedical Technicians
- 4medical Gas Technicians

FOOD AND BEVERAGES

The objective of this department is to deliver healthy and nutritious meals with great hospitality service. They deliver to IP, OPD, and staff. the function of department is:

- In patient meal
- purchase of fruits, vegetables, juices, whole grain and dietary
- FIFO is followed

The purchase food is unloaded in receiving are a, then transfer to washing are where they a wash with antimicrobial liquid before bringing in the kitchen. It is store by perishable and nonperishable item into the refrigerator. The diet summary is handed over to the supervisor in the form of meal sheet. Based on this food is prepared for every patient. for general staff and out patient's canteen prepare decided menu items. Staff include:

- Regional head of support function
- F& b manager cum chef
- Assistance manager

SECURITY

Service rendered by security is surveillance and patrolling of the infrastructure and material, access control in restricted areas. control movement of traffic in premises, reception, conduct of visitors and attenders. assistance in fire control and emergency. issue passes generates report on security matters.it is equipped with CCTV cameras, explosive detectors, alarms, walkie talkie etc. members include:

HOD

Senior officer

Security supervisor

Sr, security assistance

Security guards

Performance indicators are theft percent ,code related incidents

3.4 ADMINISTRATIVE SEVICES

Admission and billing department

The admission and billing department include 1hod, 12 employees. The service provides by his department include:

Registration of patients

Booking and reservation of OT and admissions Discharges.

Front office Manage by duty manager, deputy duty manager, patient care coordinator

2 hep desks

7 front office mange above functions

Third party admission desk

Staff have 1 executive clinical Administrator; customer care officer Manage functions of

- Pre-authorization
- Final approval
- Handling queries
- Cashless admission
- Counselling
- Coordinating with different third parties for admission and discharges

Human Resource department

In KDAH HR function for

- Hiring
- Employee orientation
- Physician and Nurses recruitment
- Personal management
- Benefit and compensation management
- Training and performance monitoring
- Administration –employee meeting
- Work place safety and sanitation

- Claim handling

Quality control department

It functions for:

- Analyze patient feedback forms.
- Analyze different department of hospital and compare them
- Induction and training of staff.
- Infection control of hospital
- Accreditation (NABH, JCI

PROJECT

4. INTRODUCTION TO NURSING CALL SYSTEM

call bell system I a communication between nurses and patients. It can be wireless and wired connections both. From the push of button it deliver a request of call to nurses desk along with bed number and room number of patient.

5. LITERATURE REVIEW

- **The focus of the literature review was to:**
    - investigate the causes of poor staff responsiveness to patient-initiated call lights.
    - to identify interventions other hospitals are utilizing to address the problems with poor staff responsiveness.
    - examine ways to sustain hourly rounding on acute care nursing units.

- **Relationship of Actual Response Time to Call Lights and Patient Satisfaction at 4 US Hospitals:**

  This multihospital study examined patient satisfaction with items of “received help as soon as possible” and “help to the bathroom” and their relationship to the actual response time to call lights. Call light tracking systems have been commonly adopted by the hospitals in the United States. However, hospital-archived, automatic-generated call light data have not been used regularly for quality improvement purposes (eg, improving patients’ experience during hospitalization). Multihospital studies are needed to systematically investigate the relational directions between actual response time to call lights and inpatient satisfaction scores.

- **According to one of NCBI Study:**

Call lights are prevalent in inpatient healthcare facilities across the nation. While call light use directly influences the delivery of nursing care, there remain significant gaps both in research and technology that can impact the quality of care and patient satisfaction. This study examines the perception of nurses and patients on the use of a new call communication solution, Eloquence™, in the acute care inpatient setting. Eighteen patients were recruited for the study and participated in individual semi-structured interviews during their hospital stay. Eighteen nurses were recruited and participated in focus groups for this study.

OBJECTIVES

- To asses the average call bell response time in general wards.
- To study the Variation in the call light response from lessthan a minutes to more than 15 minutes.
- To find the average time taken to respond on each floor , reason for calls , reason for delay in process.

SETTING AND SAMPLING

the study is conducted on 6 floors i.e. (11th -16th) that includes all department in patient, with a staff of 40 RNs and 12 HCA. The nurses to patient ratio during study is 1:8, occasionally it's 1:5.

The system consist of central display of bed number and room number of patients, it generates a a sound of beep until the call is attended every nursing desk is connected to it floor wise

6. METHODOLOGY

Study area: Kokilaben Dhirubhai Ambani Hospital

Study design: Descriptive, observational time-motion study was conducted in general wards of Kokilaben Dhirubhai Ambani hospital and medical research institute. From April, 2019-May 2019. Informed consent was not needed because of observational type of study design. Patient care was not affected by the study and patient information is not used in the study.

Inclusion criteria: all those patients who are admitted in the ward.

Exclusion criteria: patient who are getting the discharge.

Sample technique: the technique used for sampling is simple random sampling

Sample size: 180

Sample type: Convenience Sampling.

Type of study: observational.

Study period: APRIL **–** MAY. (2 months)

Design tool: the tool used for data collecting was self-made tabulated for each day under the following domains of:

- **Patient bed number** – as bed number is displayed on the desktop of call bell system in KDAH
- **Call time –** Time when call get displayed with a sound on desktop
- **Response time –** Time when the patient is attended.
- **Type of patient –** moving or bedridden
- **Reason for call-** nursing assistance needed, HCA call, consultation call
- **Reason for delay-** rounds time, shift change, busy with patient**.**

Data collection: Checklist was prepared, data was collected and recorded by observing and tracking all the bed numbers, time when the call were made and when answered. Also, by daily communicating with the staff for cause of delay and classify them as per discussion and from the patients about query got resolved or not.

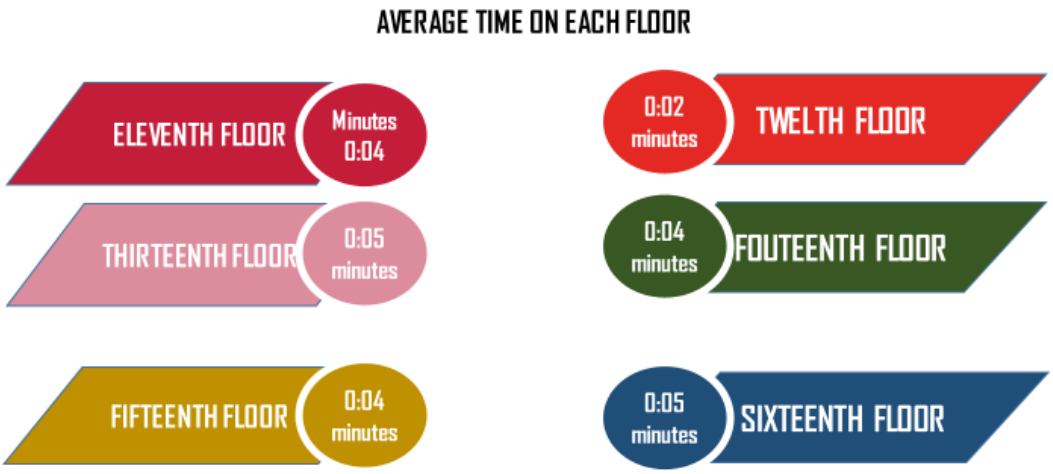
7. FINDINGS

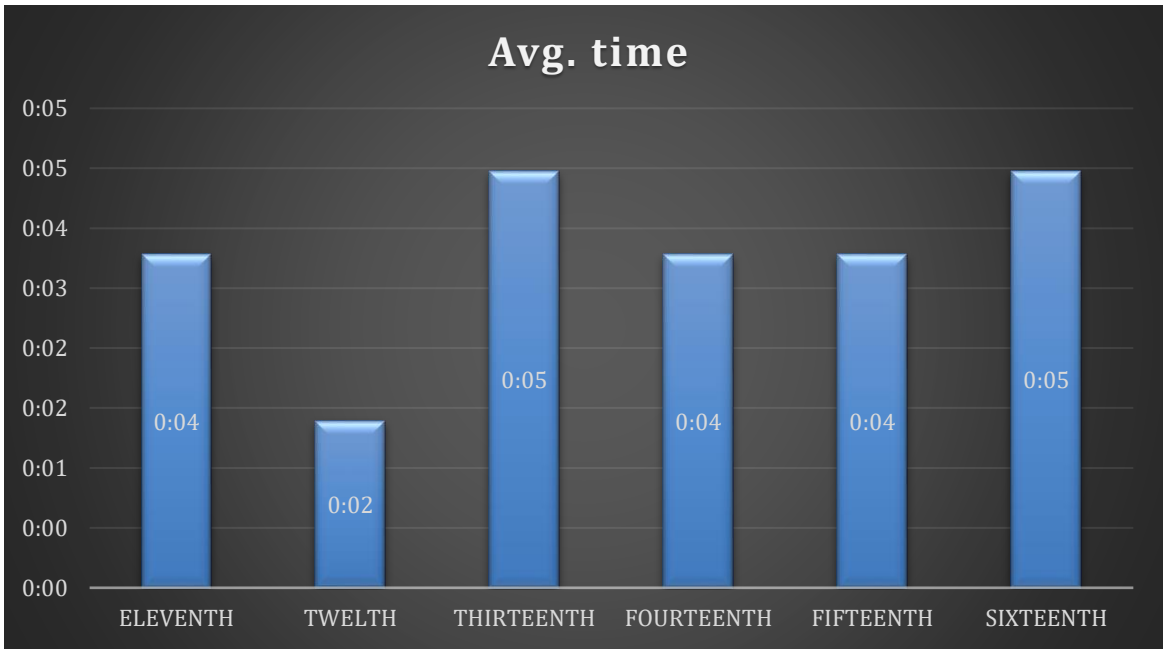
During the study period 180 calls were made from patient's bed side. And the mean time of there is 5 minutes.

Out of which average time taken between:

- From display of call ring on desktop to the seen by staff- **1.5 minute**
- Reaching to the room take **1.5 minutes**
- Resolving the query take **2 minutes**

Average Time Taken On Each Floor:





Graph 1: showing average time taken on each floor

Reasons which take time

- 11th floor: due to double sharing bedroom, patient are more than other floors. Staff ratio is 1:8
- 12th floor: staff ratio is good 1:4, less patient admitted on this floor, good command of team leader

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- 13th floor: a greater number of patients, less staff ratio. Double sharing room talks time to attend every next patient, busy floor most of time.
- 14th -15th floor: better team response, patient number is less compared to the 11-13th floor. Frequent call
- 16th floor: most frequent call due to VIP patients and resolving query take time.

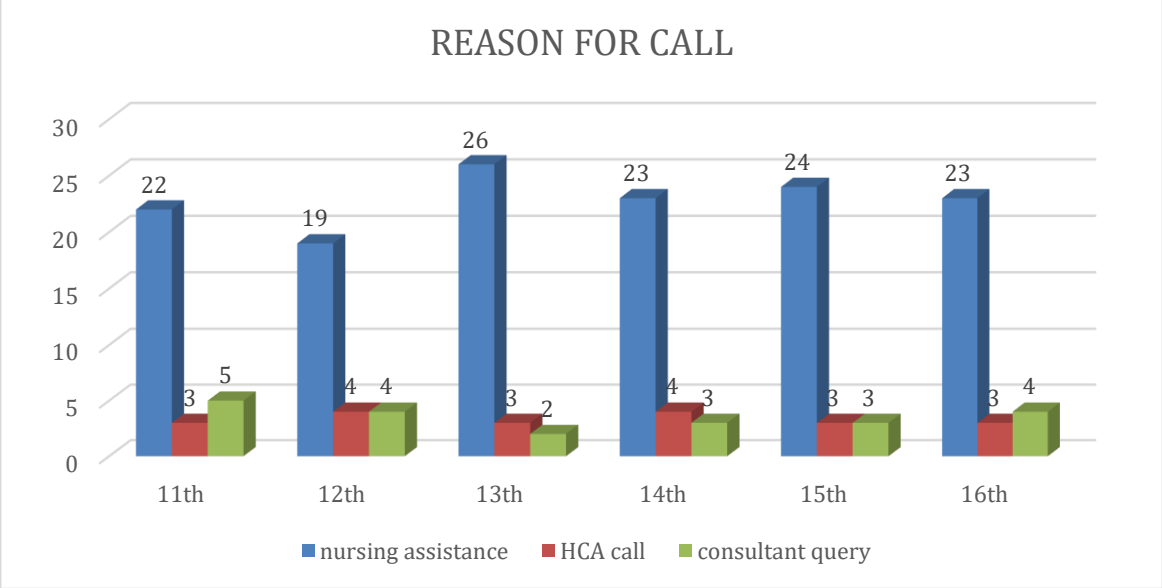
SUGGESTIONS:

- Better nurse-patient ratio in the wards.
- We can educate patient attender to assist if possible or come and ask in case of delay. As sometimes they missed the call-in work stress
- We can implement a different light or signal system for different calls. (medication query, drip change, HCA call, assistance needed, cleaning call).

- Adopting a user-friendly communication system to be used between patients and staff members.
- On shift,staff should be made responsible to take calls.

- The Desktop monitor should be functional to improve responses**.**

REASONS FOR CALL



graph 2: showing reason for the call on each floor

Nursing assistance:

medication query, dressing call, assistance needed, cannula removal, feeding time, diet query.

HCA call: assistance, physiotherapy sessions call.

Consultant query: regarding treatment, medications, surgery.

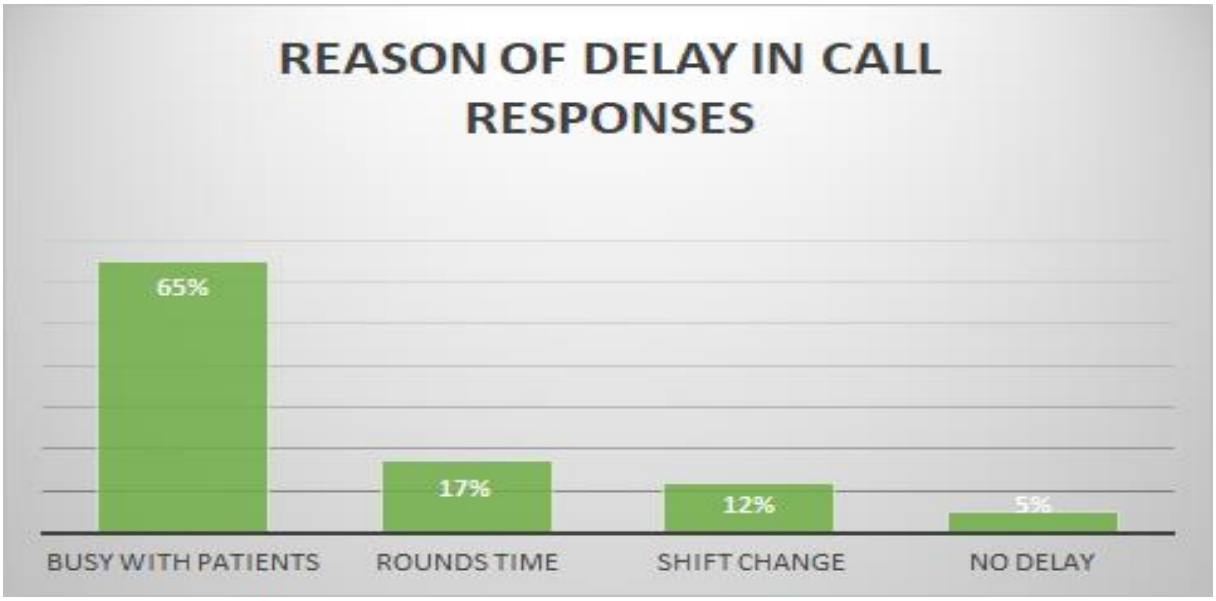
SUGGESTIONS

To reduce the call from patients:

- Half hourly rounds can be taken by nurses of their assigned patients.
- Task-oriented work (dressing, medication, drip change, feeding, physiotherapy appointment call) if done so that query will be reduced.
- The Consultant can be informed about the query by staff. And staff can talk to the consultant directly as consultants take time to come because of their busy schedule of surgeries and OPD's

REASONS FOR DELAY

Reason for Delays	**Number of times**
BUSY WITH PATIENTS	65%
ROUNDS TIME	17%
SHIFT CHANGE	12%
NO DELAY	5%



graph 3: showing reasons of delay

Busy with patients: most of the time nurses are busy with patients and not present on the nurse's desk which causes a delays.

Rounds time: as morning and afternoon hours are busy due to rounds time of doctors, visit of doctors before shifting to OT It takes minimum take 5-7 minutes to attend by doctors.

Shift change: two shift staff gather at the station during the shifts change, call attended on time more of a time but some of get missed or take time due to their work and handing over patients to next staff. more of a time they get busy in writing nurses notes as they must complete it before leaving shift.

SUGGESTION

- On shift, staff should be made responsible to take calls
- Time taken during handing over patient can save through system use, if we can implement keeping all the information related to the patient on the system lie their medications, rounds, emergency signs, vitals rounds and everything they are handing over to the next staff. so, the next staff can directly look into the system anytime rather than understanding all at once.

8. CONCLUSION

- This study concluded the average response time taken to respond responds of delay floor wise , reason for call and reasons for delay.
- The Desktop monitor should be functionals to improve responses.
- On shift staff should be made responsible for taking calls.
- Reasons for call can be minimized by half hourly rounds to the patients rooms

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